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Summary

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Coming into force of Acts

Gouvernement du Québec

O.C. 1255-2018, 17 August 2018

An Act to implement the 2030 Energy Policy and to amend various legislative provisions (2016, chapter 35)
— Coming into force of Chapter IV of the Act

Coming into force of Chapter IV of the Act to implement the 2030 Energy Policy and to amend various legislative provisions

WHEREAS the Act to implement the 2030 Energy Policy and to amend various legislative provisions (2016, chapter 35) was assented to on 10 December 2016;

WHEREAS, under section 24 of the Act, the Act came into force on 10 December 2016, except:

(1) Chapter I, which came into force on 1 April 2017, except sections 1, 2, 6, 22 to 24, 27 to 29, 32 to 38, 40 to 42, 44, 47, 48 and 79 of the Act respecting Transition énergétique Québec (chapter T-11.02) enacted by it, which came into force on 9 January 2017;

(2) sections 11 to 14, which come into force on the date of coming into force of the rules of procedure applicable to mediation adopted by the Régie de l'énergie under section 113 of the Act respecting the Régie de l'énergie (chapter R-6.01), as amended by section 16 of the Act to implement the 2030 Energy Policy and to amend various legislative provisions;

(3) the provisions of Chapter IV, which enacts the Petroleum Resources Act (chapter H-4.2), which come into force on the date or dates to be set by the Government;

WHEREAS the Government, by Order in Council 226-2017 dated 22 March 2017, set 1 April 2017 as the date of coming into force of section 250 of Chapter IV of the Act to implement the 2030 Energy Policy and to amend various legislative provisions, except as regards paragraphs 1 and 2 of section 17.12.22 of the Act respecting the Ministère des Ressources naturelles et de la Faune (chapter M-25.2) introduced by that section;

WHEREAS it is expedient to set the fifteenth day following the date of publication of this Order in Council as the date of coming into force of Chapter IV of the Act to implement the 2030 Energy Policy and to amend various legislative provisions which enacts the Petroleum Resources Act, except section 250 of the Chapter, except as regards paragraphs 1 and 2 of section 17.12.22 of the Act respecting the Ministère des Ressources naturelles et de la Faune (chapter M-25.2) introduced by that section;

IT IS ORDERED, therefore, on the recommendation of the Minister of Energy and Natural Resources:

THAT the fifteenth day following the date of publication of this Order in Council be set as the date of coming into force of Chapter IV of the Act to implement the 2030 Energy Policy and to amend various legislative provisions which enacts the Petroleum Resources Act, except section 250 of the Chapter, except as regards paragraphs 1 and 2 of section 17.12.22 of the Act respecting the Ministère des Ressources naturelles et de la Faune (chapter M-25.2) introduced by that section.

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Regulations and other Acts

Gouvernement du Québec

O.C. 1242-2018, 17 August 2018

Environment Quality Act
(chapter Q-2)

Compensation for adverse effects on wetlands and bodies of water

Regulation respecting compensation for adverse effects on wetlands and bodies of water

WHEREAS the Act respecting the conservation of wetlands and bodies of water (2017, chapter 14) was assented to on 16 June 2017;

WHEREAS the Act introduces in the Environment Quality Act (chapter Q-2) new rules applicable to an authorization application for an activity carried out in wetlands and bodies of water, in particular compensation measures for adverse effects on wetlands and bodies of water;

WHEREAS the Act also provides for the compensation regime applicable to an authorization application for an activity that has adverse effects on wetlands and bodies of water until provided otherwise by a government regulation made under section 46.0.12 of the Environment Quality Act (chapter Q-2);

WHEREAS, under sections 46.0.3, 46.0.5, 46.0.12 and 95.1 of the Environment Quality Act (chapter Q-2), the Government may, by regulation, provide a framework for the compensation regime provided for in the Environment Quality Act (chapter Q-2), in particular to exempt, subject to the conditions, restrictions or prohibitions the Government determines, certain activities from the requirement to compensate, to provide for the calculation method of the amount of the financial contribution payable as compensation and to provide for the cases in which a financial contribution may be replaced by work carried out to restore or create wetlands and bodies of water;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft Regulation respecting compensation for adverse effects on wetlands and bodies of water was published in Part 2 of the *Gazette officielle du Québec* of 23 May 2018 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, on the recommendation of the Minister of Sustainable Development, the Environment and the Fight Against Climate Change:

THAT the Regulation respecting compensation for adverse effects on wetlands and bodies of water, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

Regulation respecting compensation for adverse effects on wetlands and bodies of water

Environment Quality Act
(chapter Q-2, ss. 46.0.3, 46.0.5, 46.0.12 and 95.1)

CHAPTER I
GENERAL

1. This Regulation provides the rules applicable to the compensation regime for adverse effects on wetlands and bodies of water provided for in Division V.1 of Chapter IV of the Environment Quality Act (chapter Q-2), herein called the "Act". It determines in particular the activities that are exempt from the requirement to compensate, the calculation method of the amount of the financial contribution payable as compensation and the cases in which the financial contribution may be replaced by work carried out to restore or create wetlands and bodies of water.

2. This Regulation applies to the entire territory of Québec situated south of the 49th parallel, except the part of the territory covered by section 133 of the Act.

North of the 49th parallel, it applies

(1) to the part of the territory covered by the St. Lawrence Estuary and the Gulf of St. Lawrence, including île d'Anticosti;

(2) to part of the territory situated south of the St. Lawrence Estuary and of the Gulf of St. Lawrence; and

(3) to the territories listed in Schedule I.

3. Where this Regulation applies, it covers every immovable, including immovables in a reserved area or an agricultural zone established under the Act respecting the preservation of agricultural land and agricultural activities (chapter P-41.1).

4. For the purposes of this Regulation, the words "littoral zone", "lakeshore" and "riverbank" and "floodplain" have the same meaning assigned to them by the Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains (chapter Q-2, r. 35).

In addition, unless provided otherwise, the St. Lawrence Estuary, the Gulf of St. Lawrence and the seas surrounding Québec are, in accordance with the third paragraph of section 46.0.2 of the Act, included in the term "watercourse".

Lastly, every body to which the Government or a minister appoints the majority of the members, to which, by law, the personnel is appointed in accordance with the Public Service Act (chapter F-3.1.1), or at least half of whose capital stock is derived from the Consolidated Revenue Fund, is a "public body".

CHAPTER II
ACTIVITIES EXEMPT FROM THE REQUIREMENT TO COMPENSATE

5. The following projects and work are exempt from the payment of a financial contribution payable under the first paragraph of section 46.0.5 of the Act to compensate for adverse effects on wetlands and bodies of water:

(1) projects that result in a loss of the surface area of a wetland or body of water equal to or less than 30 m^2;

(2) work to improve the ecological functions of a wetland or body of water;

(3) except where work is also carried out in a wetland or in the littoral zone or the shore or bank of a lake or watercourse:

(a) work carried out in the 0-20 year floodplain of a lake or watercourse, if it is demonstrated that the work will not result in a decrease of the flood routing capacity;

(b) work carried out in the 20-100 year floodplain of a lake or watercourse;

(c) work in the floodplain of a lake or watercourse whose 0-20 and 20-100 year floodplain are not distinguished from one another, if it is demonstrated that the work will not result in a decrease of the flood routing capacity;

(4) work carried out after an activity referred to in section 31.0.12 of the Act;

(5) activities exempted from the the environmental impact assessment and review procedure under section 31.7.1 of the Act and work carried out following such activities;

(6) work subject to a general authorization within the meaning of section 31.0.5.1 of the Act and work referred to in section 105 of the Municipal Powers Act (chapter C-47.1);

(7) work related to the construction or alteration of a building used by a municipal fire safety service, a police force, a 9-1-1 emergency centre or a secondary emergency call centre governed by the Civil Protection Act (chapter S-2.3);

(8) work for the maintenance dredging of a channel developed for navigation purposes, a port or municipal, commercial or industrial wharf, and the release of sediment in open water related to the work, where it is carried out on a site where such releases have already been authorized;

(9) work for the maintenance or stabilization of an outlet or a water withdrawal facility;

(10) work related to slope stabilization work by means of phytotechnologies carried out on the shore, bank or littoral zone of a lake or watercourse;

(11) work for beach nourishment to counter the effects of erosion;

(12) the establishment and operation of a cranberry or blueberry farm;

(13) where the activities are carried out in a forest other than a forest in the domain of the State, except activities referred to in subparagraphs *a* and *b* of paragraph 1 of section 1 of the Regulation respecting the application of the Environment Quality Act (chapter Q-2, r. 3),

(a) forest development activities referred to in subparagraphs *a* to *e* of paragraph 2 of section 3 of the Regulation respecting the application of the Environment Quality Act (chapter Q-2, r. 3) carried out in a peatland;

(b) forest development activities carried out in a treed swamp.

For the purpose of this section, the term "forest development activities" has the same meaning as that assigned by paragraph 1 of section 4 of the Sustainable Forest Development Act (chapter A-18.1).

CHAPTER III
CALCULATION OF THE FINANCIAL CONTRIBUTION

6. The amount of the financial contribution is calculated using the following formula:

AC = (cw + vl) x S

Where

AC = amount of the financial contribution payable as compensation for adverse effects on a wetland or body of water

cw = cost per square metre for the creation or restoration of a wetland or body of water, calculated using the following formula:

$cw = bc \times \Delta I_f \times R$

Where

bc = basic cost for the creation or restoration of a wetland or body of water

ΔI_f = factor representing the adverse effects on the wetland or body of water, calculated using the following formula:

$\Delta I_f = I_{f\,INI} - I_{f\,FIN}$

Where

$I_{f\,INI}$ = factor representing the initial state of the portion of the wetland or body of water affected by the activity

$I_{f\,FIN}$ = factor representing the final state of the portion of the wetland or body of water affected by the activity, calculated using the following formula:

$I_{f\,FIN} = I_{f\,INI} \times NI$

Where

NI = factor representing the impact of the activity on the portion of the wetland or body of water affected by the activity

In the case of a wetland, the factor ΔI_f is determined in accordance with the parameters provided for in Schedule II.

In the case of a body of water, the factor is determined in accordance with the parameters provided for in Schedule III.

R = regional variation factor, determined based on the activity site in accordance with Schedule IV

vl = value of the land per square metre calculated using the average value of vacant land in the territory of the regional county municipality concerned, or the entity in lieu thereof, as determined in Schedule IV, or, in the case of lands in the domain of the State, calculated at a value of $0.8307 per square metre

SA = surface area in square metres of the portion of the wetland or body of water in which the activity is carried out, excluding the surface area occupied by existing works or structures

7. The basic cost for creating or restoring a wetland or body of water "bc" is set at $20/m^2$.

The cost is adjusted on 1 January of each year according to the rate calculated in the manner provided for in section 83.3 of the Financial Administration Act (chapter A-6.001).

The adjustment is reduced to the nearest dollar if it contains a fraction of a dollar less than $0.50; it is increased to the nearest dollar if it contains a fraction of a dollar equal to or greater than $0.50.

The Minister publishes the results of the adjustment by a notice in the *Gazette officielle du Québec* or by any other means the Minister considers appropriate.

8. For the purpose of calculating the financial contribution, the surface area of the portion of the wetland or body of water subject to compensation for the loss of wildlife habitat is exempt from the surface area of the portion of the wetland or body of water in which the activity is carried out.

9. Where an activity is carried out in a wetland situated in any of the following bodies of water, the financial contribution is calculated as follows:

(1) in the littoral zone of a lake or watercourse, in accordance with the parameters provided for in Schedule III applicable to the littoral zone and at the value of factor "R" determined in Schedule IV applicable to a body of water;

(2) in the lakeshore or riverbank, in accordance with the parameters provided for in Schedule III applicable to the lakeshore or riverbank and at the value of factor "R" determined in Schedule IV applicable to a body of water;

(3) in a floodplain of a lake or watercourse, in accordance with the parameters provided for in Schedule II applicable to a wetland and at the value of factor "R" determined in Schedule IV applicable to a wetland.

CHAPTER IV
REPLACEMENT OF THE FINANCIAL CONTRIBUTION

10. The Minister may, in accordance with the second paragraph of section 46.0.5 of the Act, allow the replacement of all or part of the payment of the financial contribution by work carried out to restore or create wetlands or bodies of water in the case of the following work:

(1) work related to a road infrastructure, a bike path, a hiking trail, a water management or treatment facility referred to in section 32 of the Act or an electric power transmission and distribution network, where the work is carried out by a department, a public body or an entity that has jurisdiction on any of the territories listed in Schedule IV;

(2) exploration work referred to in section 108 of the Regulation respecting mineral substances other than petroleum, natural gas and brine (chapter M-13.1, r. 2);

(3) work for mining mineral substances within the meaning of section 1 of the Mining Act (chapter M-13.1), other than petroleum, natural gas and brine;

(4) cultivation of a parcel of land for market crops production and the expansion of such a parcel of land;

(5) work carried out in an industrial park, within the meaning of section 32 of the Act respecting the exercise of certain municipal powers in certain urban agglomerations (chapter E-20.001), or as part of the development of such park.

To do so, the applicant must, when informed of the amount of the required financial contribution, submit to the Minister a plan of the work to restore or create wetlands or bodies of water that the applicant proposes to carry out to replace that financial contribution.

11. The holder of a ministerial authorization is required to pay the financial contribution where the replacement work referred to in section 10 has not been carried out within the time periods set out in the authorization.

CHAPTER V
REIMBURSEMENT OF THE FINANCIAL CONTRIBUTION

12. In addition to the case provided for in section 46.0.9 of the Act, the Minister may reimburse, in whole or in part, the financial contribution paid by the holder of a ministerial authorization in the following cases:

(1) the work resulted in a loss of surface area in a wetland or body of water less than that authorized;

(2) the work was subject to compensation for a loss of wildlife habitat after the issue of the authorization.

The amount of the reimbursable contribution corresponds, as the case may be, to the surface area of the wetland or body of water that has not been affected by the work or the surface area subject to compensation for the loss of wildlife habitat.

In the case provided for in subparagraph 1 of the first paragraph, the application for reimbursement of the authorization holder must be accompanied by a study signed by any of the persons referred to in paragraph 1 of section 46.0.3 of the Act confirming the boundaries and surface area of the portion of the wetland or body of water affected by the work.

In the case provided for in subparagraph 2 of the first paragraph, the application for reimbursement must be accompanied by proof that the adverse effects on the wetland or body of water was subject to compensation for the loss of wildlife habitat.

Where the application for reimbursement is accepted, the Minister, depending on the applicable situation, amends or revokes the authorization concerned.

CHAPTER VI
FINAL

13. Where a cranberry or blueberry farm ceases to operate, the wetlands or bodies of water affected must be returned to the state they were in before the operation began or to a state approaching it, according to the conditions provided for that purpose in the authorization.

14. This Regulation is assessed 2 years after it comes into force and every 5 years thereafter on the basis of the progress in the applicable scientific and technical knowledge on that matter.

15. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*, except subparagraph 3 of the first paragraph of section 5, paragraphs 2 and 3 of section 9 and subdivisions 2 and 3 of Divisions I and II of Schedule III that take effect on the date on which paragraph 1 of section 5 of the Regulation respecting certain transitional measures to carry out the Act to amend the Environment Quality Act to modernize the environmental authorization scheme and to amend other legislative provisions, in particular to reform the governance of the Green Fund (chapter Q-2, r. 32.1) is revoked.

SCHEDULE I
(*s. 2*)

TERRITORY IN WHICH THE REGULATION APPLIES NORTH OF THE 49TH PARALLEL AND NORTH OF THE St. LAWRENCE ESTUARY AND THE GULF OF ST. LAWRENCE

Administrative region 02: Saguenay—Lac-Saint-Jean

Girardville
Notre-Dame-de-Lorette
Saint-Edmond-les-Plaines
Saint-Eugène-d'Argentenay
Sainte-Jeanne-d'Arc
Saint-Stanislas
Saint-Thomas-Didyme

Administrative region 09: Côte-Nord

Aguanish
Baie-Comeau
Baie-Johan-Beetz
Baie-Trinité
Blanc-Sablon
Bonne-Espérance
Chute-aux-Outardes
Côte-Nord-du-Golfe-du-Saint-Laurent
Franquelin
Godbout
Gros-Mécatina
Havre-Saint-Pierre
La Romaine (Indian reserve)
Longue-Pointe-de-Mingan
Maliotenam
Mingan
Natashquan
Nutashkuan
Pakuashipi
Pessamit
Pointe-Lebel
Pointe-aux-Outardes
Port-Cartier
Ragueneau
Rivière-au-Tonnerre
Rivière-Saint-Jean
Saint-Augustin
Sept-Îles
Uashat

SCHEDULE II
(*s. 5 and 6*)

ADVERSE EFFECTS ON WETLANDS – DETERMINATION OF THE VALUE OF FACTORS "$I_{f\ INI}$" AND "NI"

DIVISION I
INITIAL STATE OF THE WETLAND

1. The factor representing the initial state of the wetland "$I_{f\ INI}$" is determined according to the table below. The factor is the factor that corresponds to the component of the most degraded wetland.

Initial state of the portion of the wetland affected by the activity				
Components	**Undegraded** $I_{f\ INI} = 1$	**Slightly degraded** $I_{f\ INI} = 0.8$	**Degraded** $I_{f\ INI} = 0.6$	**Very degraded** $I_{f\ INI} = 0.3$
Vegetation	Vegetation characteristic of wetlands occupying the entire surface area inventoried	Vegetation characteristic of wetlands occupying 33% to 99% of the surface area inventoried	Vegetation characteristic of wetlands occupying less than 33% of the surface area inventoried	N/A
Soil	Hydric mineral soil occupying the entire surface area inventoried OR Hydric organic soil with part of the profile that is not sapric over the entire surface area inventoried	Hydric soil over 33% to 99% of the surface area inventoried OR Hydric organic soil whose whole profile is sapric over the entire surface area inventoried	Soil, hydric or not, disturbed or ploughed less than 5 years before, over the entire affected portion of the wetland OR Soil, hydric or not, excavated and put back in place less than 5 years before, over more than 33% of the affected portion of the wetland OR Hydric soil occupying less than 33% of the surface area inventoried	Soil not hydric over the entire surface area inventoried OR Filling over hydric soil over the entire affected portion of the wetland OR Sealed soil over the entire affected portion of the wetland
Water	Hydrological regime characteristic of wetlands occupying the entire surface area inventoried	Hydrological regime characteristic of wetlands over 33% to 99% of the surface area inventoried OR Presence of drainage works in the wetland or at less than 30 m from the wetland	Hydrological regime characteristic of wetlands over less than 33% of the surface area inventoried	N/A

DIVISION II
IMPACT OF THE ACTIVITY ON THE WETLAND

2. The factor representing the impact of the activity on the wetland "NI" is determined according to the table below. The factor is the factor that corresponds to the component of the wetland for which the impact is most significant.

Impact of the activity over the portion of the wetland affected by the activity				
Components	**Negligible** **NI = 0.9**	**Low** **NI = 0.6**	**High** **NI = 0.1**	**Very high** **NI = 0**
Vegetation	Undisturbed vegetation	Disturbed or destroyed vegetation over less than 20% of the affected portion of the wetland	Disturbed or destroyed vegetation over more than 20% of the affected portion of the wetland	N/A
Soil	Compacted soil or soil subject to rutting over less than 5% of the affected portion of the wetland	Compacted soil or soil subject to rutting over 5% or more of the affected portion of the wetland OR Soil affected by work that does not change, in the entire affected portion of the wetland, the direction of the flow of water	Disturbed, ploughed or excavated soil OR Soil affected by work that changes, in the entire affected portion of the wetland, the direction of the flow of water	Removed, covered or sealed soil in the entire affected portion of the wetland
Water	Undisturbed hydrological regime	Disturbed hydrological regime over less than 5% of the affected portion of the wetland	Disturbed hydrological regime over 5% to 40% of the affected portion of the wetland	Disturbed hydrological regime over more than 40% of the affected portion of the wetland

3. For the purpose of determining the importance of the impact of an activity on the “water” component, drainage work is deemed to disturb the hydrological regime of the wetland over a distance of 30 m on either side of the location where the work is carried out.

SCHEDULE III
(*s. 6 and 9*)

ADVERSE EFFECTS ON BODIES OF WATER – DETERMINATION OF THE VALUE OF FACTORS "$I_{f\ INI}$" AND "NI"

DIVISION I
INITIAL STATE OF THE BODY OF WATER

§ 1 — The littoral zone

1. The factor representing the initial state of the portion of the littoral zone affected by the activity "$I_{f\ INI}$" is, in all cases, set at 1.5.

§ 2 — The lakeshore or riverbank

2. The factor representing the initial state of the portion of the lakeshore or riverbank affected by the activity "$I_{f\ INI}$" is determined according to the table below. The factor corresponds to the dominant state.

Where none of the situations described in the table applies, the initial state used to determine factor "$I_{f\ INI}$" is "Degraded".

Initial state of the portion of the lakeshore or riverbank affected by the activity		
Undegraded **$I_{f\ INI}$ = 1.2**	**Degraded** **$I_{f\ INI}$ = 1**	**Very degraded** **$I_{f\ INI}$ = 0.8**
Soil or vegetation in its natural state over more than 66% of the affected portion of the lakeshore or riverbank OR Soil vegetated by planting or by seeding, excluding cut herbaceous vegetation, over more than 66% of the affected portion of the lakeshore or riverbank	Herbaceous vegetation cut over more than 33% of the affected portion of the lakeshore or riverbank	Disturbed soil or vegetation absent over more than 66% of the affected portion of the lakeshore or riverbank

§ 3 — The floodplain

3. The factor representing the initial state of the portion of the floodplain affected by the activity "$I_{f\ INI}$" is determined according to the table below. The factor corresponds to the dominant state.

Where none of the situations described in the table applies, the initial state used to determine factor "$I_{f\ INI}$" is "Degraded".

Initial state of the portion of the floodplain affected by the activity		
Undegraded **$I_{f\ INI}$ = 1**	**Degraded** **$I_{f\ INI}$ = 0.6**	**Very degraded** **$I_{f\ INI}$ = 0.3**
Soil or vegetation in its natural state over more than 66% of the affected portion of the floodplain OR Soil vegetated by planting or by seeding, excluding cut herbaceous vegetation, over more than 66% of the affected portion of the floodplain	Soil that is disturbed, but not backfilled, over more than 33% of the affected portion of the floodplain OR Herbaceous vegetation cut over more than 33% of the affected portion of the floodplain	Vegetation absent over more than 66% of the affected portion of the floodplain OR Filling over more than 33% of the affected portion of the floodplain

DIVISION II
IMPACT OF THE ACTIVITY ON THE BODY OF WATER

§ 1 — The littoral zone

4. The factor representing the impact of the activity on the portion of the littoral zone affected by the activity "NI" is determined according to the table below. The factor is the factor that corresponds to the component of the littoral zone for which the impact is the most significant.

Impact of the activity on the portion of the littoral zone affected by the activity			
Components	**Low** **NI = 0.7**	**High** **NI = 0.3**	**Very high** **NI = 0**
Vegetation	Plant associations or aquatic macrophyte stands destroyed over less than 20% of the affected portion of the littoral zone of the lake or watercourse	Plant associations or aquatic macrophyte stands destroyed over 20% to 75% of the affected portion of the littoral zone of the lake or watercourse	Plant associations or aquatic macrophyte stands destroyed over more than 75% of the affected portion of the littoral zone of the lake or watercourse
Soil	Digging or dredging over a distance of less than 5 times the width of the watercourse and not more than 30 m OR Presence of a stabilization work for the catchment of sediments in the affected portion of the littoral zone of the lake or watercourse OR Presence of a stabilization work in a gentle slope for the dissipation of the energy of the waves from the St. Lawrence Estuary, the Gulf of St. Lawrence or the seas surrounding Québec	Digging or dredging over a distance of 5 to 10 times the width of the watercourse and not more than 60 m OR Digging or dredging in the St. Lawrence Estuary, the Gulf of St. Lawrence or the seas surrounding Québec OR Discharge in open water of dredged sediments	Digging or dredging over a distance of more than 10 times the width of the watercourse or more than 60 m OR Digging or dredging in the littoral zone of the lake OR Natural substratum removed over more than 20% of the affected portion of the littoral zone of the lake or watercourse OR Modification of the longitudinal slope or fluvial style of the affected portion of the littoral zone of the watercourse OR Presence of any stabilization work not described in this table OR Destruction, even partial, of spawning areas OR Channelling, even partial, of the affected portion of the littoral zone of the lake or watercourse
Water	Filling carried out over a distance of not more than	Filling over a distance of more than 5 times the width of the	Filling reducing by more than 20% the width of the watercourse

	5 times the width of the watercourse and not more than 30 m	watercourse or more than 30 m OR Filling in the St. Lawrence Estuary, the Gulf of St. Lawrence or the seas surrounding Québec	OR Presence of a structure or work, other than a stabilization work, in the littoral zone of the lake or watercourse OR Filling carried out in the littoral zone of the lake

5. Any filling carried out over the entire width of the littoral zone of a watercourse that operates to eliminate the flow of water, increases the value of the factor ΔI_f by 0.5.

6. Any transversal structure or work that prevents the free movement of fish or bottom sediments in the littoral zone of a lake or watercourse, increases the value of the factor ΔI_f by 0.1.

§ 2 —The lakeshore or riverbank

7. The factor representing the impact of the activity of the portion of the shore or bank affected by the activity "NI" is determined according to the table below. Where the activity has different impacts, the applicable factor is the factor that corresponds to the most significant impact.

Where none of the situations described in the table applies, the impact used to determine factor "NI" is "Low".

Impact of the activity on the portion of the lakeshore or riverbank affected by the activity		
Low **NI = 0.7**	**High** **NI = 0.3**	**Very high** **NI = 0**
Vegetation destroyed over less than 20% of the affected portion of the lakeshore or riverbank	Vegetation destroyed over 20% to 75% of the affected portion of the lakeshore or riverbank OR Filling carried out over 20% or more of the affected portion of the lakeshore or riverbank	Vegetation destroyed over more than 75% of the affected portion of the lakeshore or riverbank OR Presence of a structure or work over 20% or more of the affected portion of the lakeshore or riverbank

§ 3 — The floodplain

8. The factor representing the impact of the activity over the portion of the floodplain affected by the activity "NI" is determined according to the table below. Where the activity has different impacts, the applicable factor is the factor that corresponds to the most significant impact.

Impact of the activity on the portion of the floodplain affected by the activity		
Low **NI = 0.7**	**High** **NI = 0.3**	**Very high** **NI = 0**
Vegetation destroyed over less than 20% of the affected portion of the floodplain	Vegetation destroyed over 20% to 75% of the affected portion of the floodplain	Vegetation destroyed over more than 75% of the affected portion of the floodplain OR Presence of a structure, work or filling in the affected portion of the floodplain

SCHEDULE IV

(*s. 6, 9 and 10*)

CALCULATION OF THE FINANCIAL CONTRIBUTION – DETERMINATION OF THE VALUE OF FACTORS "R" AND "vl"

1. In the case of an activity carried out in the littoral zone of a lake or watercourse that is not situated in the territory of a regional county municipality, the value of factor "R" is, in all cases, set at "1".

Activity site	Factor R Wetlands	Factor R Bodies of water
Municipalité régionale de comté d'Abitibi (vl = $0.08/m^2)		
Amos	0.3	0.8
Barraute	0.3	0.8
Berry	0.3	0.8
Champneuf	0.3	0.8
La Corne	0.3	0.8
La Morandière	0.3	0.8
La Motte	0.3	0.8
Lac-Chicobi	0.3	0.8
Lac-Despinassy	0.3	0.8
Landrienne	0.3	0.8
Launay	0.3	0.8
Pikogan (Indian reserve)	0.3	0.8
Preissac	0.3	0.8
Rochebaucourt	0.3	0.8
Saint-Dominique-du-Rosaire	0.3	0.8
Sainte-Gertrude-Manneville	0.3	0.8
Saint-Félix-de-Dalquier	0.3	0.8
Saint-Marc-de-Figuery	1.0	1.0
Saint-Mathieu-d'Harricana	0.3	0.8
Trécesson	0.3	0.8
Municipalité régionale de comté d'Abitibi-Ouest (vl = $0.02/m^2)		
Authier	0.3	0.8
Authier-Nord	0.3	0.8
Chazel	0.3	0.8
Clermont	0.3	0.8
Clerval	1	1
Duparquet	0.3	0.8
Dupuy	1	1
Gallichan	0.3	0.8
La Reine	1	1
La Sarre	1	1
Lac-Duparquet	0.3	0.8
Macamic	0.3	0.8
Normétal	0.3	0.8
Palmarolle	1	1
Poularies	1	1
Rapide-Danseur	0.3	0.8
Rivière-Ojima	0.3	0.8
Roquemaure	0.3	0.8
Sainte-Germaine-Boulé	1.2	1.4
Sainte-Hélène-de-Mancebourg	1	1
Saint-Lambert	0.3	0.8
Taschereau	0.3	0.8
Val-Saint-Gilles	0.3	0.8
Municipalité régionale de comté d'Acton (vl = $0.77/m^2)		
Acton Vale	1.6	1.6
Béthanie	1	1
Roxton	1	1
Roxton Falls	1	1
Sainte-Christine	1	1
Saint-Nazaire-d'Acton	1.2	1.4

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Théodore-d'Acton	1.2	1.4
Upton	1.2	1.4
Municipalité régionale de comté d'Antoine-Labelle (vl = $1.47/m^2)		
Baie-des-Chaloupes	0.3	0.8
Chute-Saint-Philippe	0.3	0.8
Ferme-Neuve	0.3	0.8
Kiamika	0.3	0.8
La Macaza	0.3	0.8
Lac-Akonapwehikan	0.3	0.8
Lac-Bazinet	0.3	0.8
Lac-De La Bidière	0.3	0.8
Lac-de-la-Maison-de-Pierre	0.3	0.8
Lac-de-la-Pomme	0.3	0.8
Lac-des-Écorces	0.3	0.8
Lac-Douaire	0.3	0.8
Lac-du-Cerf	0.3	0.8
Lac-Ernest	0.3	0.8
Lac-Marguerite	0.3	0.8
Lac-Oscar	0.3	0.8
Lac-Saguay	0.3	0.8
Lac-Saint-Paul	0.3	0.8
Lac-Wagwabika	0.3	0.8
L'Ascension	0.3	0.8
Mont-Laurier	0.3	0.8
Mont-Saint-Michel	0.3	0.8
Nominingue	0.3	0.8
Notre-Dame-de-Pontmain	0.3	0.8
Notre-Dame-du-Laus	0.3	0.8
Rivière-Rouge	0.3	0.8
Saint-Aimé-du-Lac-des-Îles	0.3	0.8
Sainte-Anne-du-Lac	0.3	0.8
Municipalité régionale de comté d'Argenteuil (vl = $0.70/m^2)		
Brownsburg-Chatham	0.3	0.8
Gore	0.3	0.8
Grenville	0.3	0.8
Grenville-sur-la-Rouge	0.3	0.8
Harrington	0.3	0.8
Lachute	1.6	1.6
Mille-Isles	0.3	0.8
Saint-André-d'Argenteuil	1.2	1.4
Wentworth	0.3	0.8
Municipalité régionale de comté d'Arthabaska (vl = $1.74/m^2)		
Chesterville	1	1
Daveluyville	1	1
Ham-Nord	1	1
Kingsey Falls	1	1
Maddington Falls	1	1
Notre-Dame-de-Ham	0.3	0.8
Saint-Albert	1.2	1.4
Saint-Christophe-d'Arthabaska	1	1
Sainte-Clotilde-de-Horton	1	1
Sainte-Élizabeth-de-Warwick	1.2	1.4
Sainte-Hélène-de-Chester	0.3	0.8
Sainte-Séraphine	1.2	1.4
Saint-Louis-de-Blandford	1	1
Saint-Norbert-d'Arthabaska	1.2	1.4
Saint-Rémi-de-Tingwick	1	1
Saint-Rosaire	1	1
Saint-Samuel	1.2	1.4
Saints-Martyrs-Canadiens	0.3	0.8
Saint-Valère	1.2	1.4
Tingwick	1.2	1.4
Victoriaville	2	2

Activity site	Factor R Wetlands	Factor R Bodies of water
Warwick	1.2	1.4
Municipalité régionale de comté d'Avignon (vl = $0.28/m^2)		
Carleton-sur-Mer	0.3	0.8
Escuminac	0.3	0.8
L'Ascension-de-Patapédia	0.3	0.8
Listuguj (Indian reserve)	0.3	0.8
Maria	0.3	0.8
Matapédia	0.3	0.8
Nouvelle	0.3	0.8
Pointe-à-la-Croix	0.3	0.8
Ristigouche-Partie-Sud-Est	0.3	0.8
Rivière-Nouvelle	0.3	0.8
Ruisseau-Ferguson	0.3	0.8
Saint-Alexis-de-Matapédia	0.3	0.8
Saint-André-de-Restigouche	0.3	0.8
Saint-François-d'Assise	0.3	0.8
Municipalité régionale de comté de Beauce-Sartigan (vl = $3.95/m^2)		
La Guadeloupe	0.3	0.8
Lac-Poulin	1	1
Notre-Dame-des-Pins	0.3	0.8
Saint-Benoît-Labre	1	1
Saint-Côme - Linière	0.3	0.8
Saint-Éphrem-de-Beauce	1	1
Saint-Évariste-de-Forsyth	0.3	0.8
Saint-Gédéon-de-Beauce	0.3	0.8
Saint-Georges	1.6	1.6
Saint-Hilaire-de-Dorset	0.3	0.8
Saint-Honoré-de-Shenley	1	1
Saint-Martin	0.3	0.8
Saint-Philibert	0.3	0.8
Saint-René	0.3	0.8
Saint-Simon-les-Mines	0.3	0.8
Saint-Théophile	0.3	0.8
Municipalité régionale de comté de Beauharnois-Salaberry (vl = $9.52/m^2)		
Beauharnois	2	2
Sainte-Martine	1.2	1.4
Saint-Étienne-de-Beauharnois	1.2	1.4
Saint-Louis-de-Gonzague	1.2	1.4
Saint-Stanislas-de-Kostka	1.2	1.4
Saint-Urbain-Premier	1.2	1.4
Salaberry-de-Valleyfield	2	2
Municipalité régionale de comté de Bécancour (vl = $0.62/m^2)		
Bécancour	1	1
Deschaillons-sur-Saint-Laurent	1	1
Fortierville	1.2	1.4
Lemieux	0.3	0.8
Manseau	0.3	0.8
Parisville	1.2	1.4
Sainte-Cécile-de-Lévrard	1.2	1.4
Sainte-Françoise	1	1
Sainte-Marie-de-Blandford	0.3	0.8
Sainte-Sophie-de-Lévrard	1	1
Saint-Pierre-les-Becquets	1.2	1.4
Saint-Sylvère	1.2	1.4
Wôlinak (Indian reserve)	1	1
Municipalité régionale de comté de Bellechasse (vl = $5.80/m^2)		
Armagh	0.3	0.8
Beaumont	1.6	1.6
Honfleur	1.2	1.4
La Durantaye	1.2	1.4
Notre-Dame-Auxiliatrice-de-Buckland	0.3	0.8
Saint-Anselme	1.2	1.4

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Charles-de-Bellechasse	1.2	1.4
Saint-Damien-de-Buckland	0.3	0.8
Sainte-Claire	1	1
Saint-Gervais	1.2	1.4
Saint-Henri	1.2	1.4
Saint-Lazare-de-Bellechasse	1	1
Saint-Léon-de-Standon	0.3	0.8
Saint-Malachie	0.3	0.8
Saint-Michel-de-Bellechasse	1.2	1.4
Saint-Nazaire-de-Dorchester	0.3	0.8
Saint-Nérée-de-Bellechasse	0.3	0.8
Saint-Philémon	0.3	0.8
Saint-Raphaël	0.3	0.8
Saint-Vallier	1.2	1.4
Municipalité régionale de comté de Bonaventure (vl = $0.44/m^2)		
Bonaventure	0.3	0.8
Caplan	1	1
Cascapédia - Saint-Jules	0.3	0.8
Hope	0.3	0.8
Hope Town	0.3	0.8
New Carlisle	0.3	0.8
New Richmond	0.3	0.8
Paspébiac	0.3	0.8
Rivière-Bonaventure	0.3	0.8
Saint-Alphonse	0.3	0.8
Saint-Elzéar	0.3	0.8
Saint-Godefroi	0.3	0.8
Saint-Siméon	0.3	0.8
Shigawake	0.3	0.8
Municipalité régionale de comté de Brome-Missisquoi (vl = $2.21/m^2)		
Abercorn	0.3	0.8
Bedford (town)	1.2	1.4
Bedford (township)	1.2	1.4
Bolton-Ouest	0.3	0.8
Brigham	1	1
Brome	0.3	0.8
Bromont	1.6	1.6
Cowansville	2	2
Dunham	0.3	0.8
East Farnham	2	2
Farnham	1.6	1.6
Frelighsburg	0.3	0.8
Lac-Brome	0.3	0.8
Notre-Dame-de-Stanbridge	1.2	1.4
Pike River	1.2	1.4
Saint-Armand	1.2	1.4
Sainte-Sabine	1.2	1.4
Saint-Ignace-de-Stanbridge	1.2	1.4
Stanbridge East	1	1
Stanbridge Station	1.2	1.4
Sutton	0.3	0.8
Municipalité régionale de comté de Charlevoix (vl = $4.76/m^2)		
Baie-Saint-Paul	0.3	0.8
Lac-Pikauba	0.3	0.8
Les Éboulements	0.3	0.8
L'Isle-aux-Coudres	1.6	1.6
Petite-Rivière-Saint-François	0.3	0.8
Saint-Hilarion	0.3	0.8
Saint-Urbain	0.3	0.8
Municipalité régionale de comté de Charlevoix-Est (vl = $1.56/m^2)		
Baie-Sainte-Catherine	0.3	0.8
Clermont	0.3	0.8
La Malbaie	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Mont-Élie	0.3	0.8
Notre-Dame-des-Monts	0.3	0.8
Sagard	0.3	0.8
Saint-Aimé-des-Lacs	0.3	0.8
Saint-Irénée	0.3	0.8
Saint-Siméon	0.3	0.8
Municipalité régionale de comté de Coaticook (vl = $0.54/m^2)		
Barnston-Ouest	1	1
Coaticook	1	1
Compton	1.2	1.4
Dixville	1	1
East Hereford	0.3	0.8
Martinville	1	1
Sainte-Edwidge-de-Clifton	1	1
Saint-Herménégilde	0.3	0.8
Saint-Malo	0.3	0.8
Saint-Venant-de-Paquette	0.3	0.8
Stanstead-Est	1	1
Waterville	1	1
Communauté maritime des Îles-de-la-Madeleine (vl = $0.43/m^2)		
Grosse-Île	1	1
Les Îles-de-la-Madeleine	1	1
Municipalité régionale de comté de D'Autray (vl = $0.43/m^2)		
Berthierville	1.6	1.6
La Visitation-de-l'Île-Dupas	1.2	1.4
Lanoraie	1	1
Lavaltrie	1.6	1.6
Mandeville	0.3	0.8
Saint-Barthélemy	1.2	1.4
Saint-Cléophas-de-Brandon	1.2	1.4
Saint-Cuthbert	1.2	1.4
Saint-Didace	0.3	0.8
Sainte-Élisabeth	1.2	1.4
Sainte-Geneviève-de-Berthier	1.6	1.6
Saint-Gabriel	1.2	1.4
Saint-Gabriel-de-Brandon	0.3	0.8
Saint-Ignace-de-Loyola	1	1
Saint-Norbert	1	1
Municipalité régionale de comté de Deux-Montagnes (vl = $10.49/m^2)		
Deux-Montagnes	2	2
Kanesatake (Indian reserve)	1.6	1.6
Oka	2	2
Pointe-Calumet	2	2
Sainte-Marthe-sur-le-Lac	2	2
Saint-Eustache	2	2
Saint-Joseph-du-Lac	1.6	1.6
Saint-Placide	1	1
Municipalité régionale de comté de Drummond (vl = $4.55/m^2)		
Drummondville	1.6	1.6
Durham-Sud	1	1
L'Avenir	1	1
Lefebvre	1	1
Notre-Dame-du-Bon-Conseil (village)	1.2	1.4
Notre-Dame-du-Bon-Conseil (parish)	1.2	1.4
Saint-Bonaventure	1.2	1.4
Saint-Cyrille-de-Wendover	1.2	1.4
Sainte-Brigitte-des-Saults	1.2	1.4
Saint-Edmond-de-Grantham	1.2	1.4
Saint-Eugène	1.2	1.4
Saint-Félix-de-Kingsey	1.2	1.4
Saint-Germain-de-Grantham	1.2	1.4
Saint-Guillaume	1.2	1.4
Saint-Lucien	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Majorique-de-Grantham	1.2	1.4
Saint-Pie-de-Guire	1.2	1.4
Wickham	1	1
Ville de Gatineau (vl = $12.25/m^2)		
Gatineau	2	2
Municipalité régionale de comté de Joliette (vl = $4.46/m^2)		
Crabtree	1.6	1.6
Joliette	2	2
Notre-Dame-de-Lourdes	1.6	1.6
Notre-Dame-des-Prairies	2	2
Saint-Ambroise-de-Kildare	1.2	1.4
Saint-Charles-Borromée	2	2
Sainte-Mélanie	1	1
Saint-Paul	1.6	1.6
Saint-Pierre	2	2
Saint-Thomas	1.2	1.4
Municipalité régionale de comté de Kamouraska (vl = $0.46/m^2)		
Kamouraska	1.2	1.4
La Pocatière	2	2
Mont-Carmel	0.3	0.8
Petit-Lac-Sainte-Anne	0.3	0.8
Picard	0.3	0.8
Rivière-Ouelle	1.6	1.6
Saint-Alexandre-de-Kamouraska	1	1
Saint-André	1	1
Saint-Bruno-de-Kamouraska	0.3	0.8
Saint-Denis-De La Bouteillerie	1.2	1.4
Sainte-Anne-de-la-Pocatière	1.2	1.4
Sainte-Hélène-de-Kamouraska	1.2	1.4
Saint-Gabriel-Lalemant	0.3	0.8
Saint-Germain	1.2	1.4
Saint-Joseph-de-Kamouraska	0.3	0.8
Saint-Onésime-d'Ixworth	0.3	0.8
Saint-Pacôme	1.6	1.6
Saint-Pascal	1.2	1.4
Saint-Philippe-de-Néri	1.2	1.4
Municipalité régionale de comté de La Côte-de-Beaupré (vl = $1.59/m^2)		
Beaupré	2	2
Boischatel	2	2
Château-Richer	1	1
Lac-Jacques-Cartier	0.3	0.8
L'Ange-Gardien	1	1
Sainte-Anne-de-Beaupré	1	1
Saint-Ferréol-les-Neiges	1	1
Saint-Joachim	1	1
Saint-Louis-de-Gonzague-du-Cap-Tourmente	1	1
Saint-Tite-des-Caps	1	1
Sault-au-Cochon	0.3	0.8
Municipalité régionale de comté de La Côte-de-Gaspé (vl = $0.11/m^2)		
Cloridorme	0.3	0.8
Collines-du-Basque	0.3	0.8
Gaspé	0.3	0.8
Grande-Vallée	0.3	0.8
Murdochville	2	2
Petite-Vallée	0.3	0.8
Rivière-Saint-Jean	0.3	0.8
Municipalité régionale de comté de La Haute-Côte-Nord (vl = $0.07/m^2)		
Colombier	0.3	0.8
Essipit (Indian reserve)	0.3	0.8
Forestville	0.3	0.8
Les Bergeronnes	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Les Escoumins	0.3	0.8
Longue-Rive	0.3	0.8
Portneuf-sur-Mer	0.3	0.8
Sacré-Coeur	0.3	0.8
Tadoussac	0.3	0.8
Municipalité régionale de comté de La Haute-Gaspésie ($vl = \$0.43/m^2$)		
Cap-Chat	0.3	0.8
Coulée-des-Adolphe	0.3	0.8
La Martre	0.3	0.8
Marsoui	0.3	0.8
Mont-Albert	0.3	0.8
Mont-Saint-Pierre	0.3	0.8
Rivière-à-Claude	0.3	0.8
Sainte-Anne-des-Monts	0.3	0.8
Sainte-Madeleine-de-la-Rivière-Madeleine	0.3	0.8
Saint-Maxime-du-Mont-Louis	0.3	0.8
Municipalité régionale de comté de La Haute-Yamaska ($vl = \$10.21/m^2$)		
Granby	2	2
Roxton Pond	1	1
Saint-Alphonse-de-Granby	1.6	1.6
Sainte-Cécile-de-Milton	1.2	1.4
Saint-Joachim-de-Shefford	0.3	0.8
Shefford	1.6	1.6
Warden	1.6	1.6
Waterloo	2	2
Municipalité régionale de comté de La Jacques-Cartier ($vl = \$2.74/m^2$)		
Fossambault-sur-le-Lac	1.6	1.6
Lac-Beauport	1	1
Lac-Croche	0.3	0.8
Lac-Delage	2	2
Lac-Saint-Joseph	1	1
Sainte-Brigitte-de-Laval	1	1
Sainte-Catherine-de-la-Jacques-Cartier	1	1
Saint-Gabriel-de-Valcartier	1	1
Shannon	1.6	1.6
Stoneham-et-Tewkesbury	1	1
Municipalité régionale de comté de La Matanie ($vl = \$1.44/m^2$)		
Baie-des-Sables	1	1
Grosses-Roches	0.3	0.8
Les Méchins	0.3	0.8
Matane	1	1
Rivière-Bonjour	0.3	0.8
Saint-Adelme	0.3	0.8
Sainte-Félicité	0.3	0.8
Sainte-Paule	0.3	0.8
Saint-Jean-de-Cherbourg	0.3	0.8
Saint-Léandre	0.3	0.8
Saint-René-de-Matane	0.3	0.8
Saint-Ulric	1	1
Municipalité régionale de comté de La Matapédia ($vl = \$1.40/m^2$)		
Albertville	0.3	0.8
Amqui	1	1
Causapscal	0.3	0.8
Lac-Alfred	0.3	0.8
Lac-au-Saumon	1	1
Lac-Casault	0.3	0.8
Lac-Matapédia	0.3	0.8
Rivière-Patapédia-Est	0.3	0.8
Rivière-Vaseuse	0.3	0.8
Routhierville	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Ruisseau-des-Mineurs	0.3	0.8
Saint-Alexandre-des-Lacs	0.3	0.8
Saint-Cléophas	0.3	0.8
Saint-Damase	0.3	0.8
Sainte-Florence	0.3	0.8
Sainte-Irène	0.3	0.8
Sainte-Marguerite-Marie	0.3	0.8
Saint-Léon-le-Grand	1	1
Saint-Moïse	0.3	0.8
Saint-Noël	1	1
Saint-Tharcisius	0.3	0.8
Saint-Vianney	0.3	0.8
Saint-Zénon-du-Lac-Humqui	0.3	0.8
Sayabec	0.3	0.8
Val-Brillant	1	1
Municipalité régionale de comté de La Mitis (vl = $0.35/m^2)		
Grand-Métis	1.2	1.4
La Rédemption	0.3	0.8
Lac-à-la-Croix	0.3	0.8
Lac-des-Eaux-Mortes	0.3	0.8
Les Hauteurs	1	1
Métis-sur-Mer	1.6	1.6
Mont-Joli	2	2
Padoue	1	1
Price	2	2
Saint-Charles-Garnier	0.3	0.8
Saint-Donat	1	1
Sainte-Angèle-de-Mérici	1	1
Sainte-Flavie	1.2	1.4
Sainte-Jeanne-d'Arc	0.3	0.8
Sainte-Luce	1.2	1.4
Saint-Gabriel-de-Rimouski	1	1
Saint-Joseph-de-Lepage	1.2	1.4
Saint-Octave-de-Métis	1	1
Municipalité régionale de comté de La Nouvelle-Beauce (vl = $2.80/m^2)		
Frampton	0.3	0.8
Saint-Bernard	1.2	1.4
Sainte-Hénédine	1.2	1.4
Saint-Elzéar	1	1
Sainte-Marguerite	1	1
Sainte-Marie	1.6	1.6
Saint-Isidore	1.2	1.4
Saint-Lambert-de-Lauzon	1	1
Saints-Anges	1	1
Scott	1.6	1.6
Vallée-Jonction	1.6	1.6
Municipalité régionale de comté de La Rivière-du-Nord (vl = $2.67/m^2)		
Prévost	2	2
Saint-Colomban	1.6	1.6
Sainte-Sophie	1.6	1.6
Saint-Hippolyte	0.3	0.8
Saint-Jérôme	2	2
Urban agglomeration of La Tuque (vl = $0.05/m^2)		
Coucoucache (Indian reserve)	0.3	0.8
La Bostonnais	0.3	0.8
La Tuque	0.3	0.8
Lac-Édouard	0.3	0.8
Obedjiwan (Indian reserve)	0.3	0.8
Wemotaci (Indian reserve)	0.3	0.8
Municipalité régionale de comté de La Vallée-de-la-Gatineau (vl = $0.15/m^2)		

Activity site	Factor R Wetlands	Factor R Bodies of water
Aumond	0.3	0.8
Blue Sea	0.3	0.8
Bois-Franc	0.3	0.8
Bouchette	0.3	0.8
Cascades-Malignes	0.3	0.8
Cayamant	0.3	0.8
Déléage	0.3	0.8
Denholm	0.3	0.8
Dépôt-Échouani	0.3	0.8
Egan-Sud	0.3	0.8
Gracefield	0.3	0.8
Grand-Remous	0.3	0.8
Kazabazua	0.3	0.8
Kitigan Zibi (Indian reserve)	0.3	0.8
Lac-Lenôtre	0.3	0.8
Lac-Moselle	0.3	0.8
Lac-Pythonga	0.3	0.8
Lac-Rapide (Indian reserve)	0.3	0.8
Lac-Sainte-Marie	0.3	0.8
Low	0.3	0.8
Maniwaki	1	1
Messines	0.3	0.8
Montcerf-Lytton	0.3	0.8
Sainte-Thérèse-de-la-Gatineau	0.3	0.8
Municipalité régionale de comté de La Vallée-de-l'Or (vl = $0.01/m^2)		
Belcourt	0.3	0.8
Kitcisakik (Indian reserve)	0.3	0.8
Lac-Granet	0.3	0.8
Lac-Metei	0.3	0.8
Lac-Simon (Indian reserve)	0.3	0.8
Malartic	1.2	1.4
Matchi-Manitou	0.3	0.8
Réservoir-Dozois	0.3	0.8
Rivière-Héva	0.3	0.8
Senneterre (town)	0.3	0.8
Senneterre (parish)	0.3	0.8
Val-d'Or	0.3	0.8
Municipalité régionale de comté de La Vallée-du-Richelieu (vl = $12.64/m^2)		
Beloeil	2	2
Carignan	1.6	1.6
Chambly	2	2
McMasterville	2	2
Mont-Saint-Hilaire	2	2
Otterburn Park	2	2
Saint-Antoine-sur-Richelieu	1.2	1.4
Saint-Basile-le-Grand	2	2
Saint-Charles-sur-Richelieu	1.2	1.4
Saint-Denis-sur-Richelieu	1.2	1.4
Saint-Jean-Baptiste	1.2	1.4
Saint-Marc-sur-Richelieu	1.2	1.4
Saint-Mathieu-de-Beloeil	1.6	1.6
Municipalité régionale de comté Lac-Saint-Jean-Est (vl = $0.49/m^2)		
Alma	1.6	1.6
Belle-Rivière	0.3	0.8
Desbiens	1	1
Hébertville	0.3	0.8
Hébertville-Station	1.2	1.4
Labrecque	0.3	0.8
Lac-Achouakan	0.3	0.8
Lac-Moncouche	0.3	0.8
Lamarche	0.3	0.8
L'Ascension-de-Notre-Seigneur	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Métabetchouan - Lac-à-la-Croix	1	1
Mont-Apica	0.3	0.8
Saint-Bruno	1.2	1.4
Sainte-Monique	0.3	0.8
Saint-Gédéon	1.2	1.4
Saint-Henri-de-Taillon	1	1
Saint-Ludger-de-Milot	0.3	0.8
Saint-Nazaire	0.3	0.8
Municipalité régionale de comté de L'Assomption (vl = $7.21/m^2))		
Charlemagne	2	2
L'Assomption	1.6	1.6
L'Épiphanie (town)	1.6	1.6
L'Épiphanie (parish)	1.6	1.6
Repentigny	2	2
Saint-Sulpice	1.2	1.4
Ville de Laval (vl = $33.12/m^2)		
Laval	2	2
Municipalité régionale de comté du Domaine-du-Roy (vl = $2.29/m^2)		
Chambord	0.3	0.8
La Doré	0.3	0.8
Lac-Bouchette	0.3	0.8
Mashteuiatsh (Indian reserve)	1	1
Roberval	0.3	0.8
Saint-André-du-Lac-Saint-Jean	0.3	0.8
Sainte-Hedwidge	0.3	0.8
Saint-Félicien	1	1
Saint-François-de-Sales	0.3	0.8
Saint-Prime	1	1
Municipalité régionale de comté du Fjord-du-Saguenay (vl = $1.02/m^2)		
Bégin	0.3	0.8
Ferland-et-Boilleau	0.3	0.8
Lac-Ministuk	0.3	0.8
Lalemant	0.3	0.8
L'Anse-Saint-Jean	0.3	0.8
Larouche	0.3	0.8
Petit-Saguenay	0.3	0.8
Rivière-Éternité	0.3	0.8
Saint-Ambroise	0.3	0.8
Saint-Charles-de-Bourget	0.3	0.8
Saint-David-de-Falardeau	0.3	0.8
Sainte-Rose-du-Nord	0.3	0.8
Saint-Félix-d'Otis	0.3	0.8
Saint-Fulgence	0.3	0.8
Saint-Honoré	0.3	0.8
Municipalité régionale de comté du Golfe-du-Saint-Laurent (vl = $0.002/m^2)		
Blanc-Sablon	0.3	0.8
Bonne-Espérance	0.3	0.8
Côte-Nord-du-Golfe-du-Saint-Laurent	0.3	0.8
Gros-Mécatina	0.3	0.8
La Romaine (Indian reserve)	0.3	0.8
Pakuashipi (Indian reserve)	0.3	0.8
Saint-Augustin	0.3	0.8
Municipalité régionale de comté du Granit (vl = $3.97/m^2)		
Audet	0.3	0.8
Courcelles	0.3	0.8
Frontenac	0.3	0.8
Lac-Drolet	0.3	0.8
Lac-Mégantic	2	2
Lambton	0.3	0.8
Marston	0.3	0.8
Milan	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Nantes	0.3	0.8
Notre-Dame-des-Bois	0.3	0.8
Piopolis	0.3	0.8
Saint-Augustin-de-Woburn	0.3	0.8
Sainte-Cécile-de-Whitton	0.3	0.8
Saint-Ludger	1	1
Saint-Robert-Bellarmin	0.3	0.8
Saint-Romain	0.3	0.8
Saint-Sébastien	0.3	0.8
Stornoway	0.3	0.8
Stratford	0.3	0.8
Val-Racine	0.3	0.8
Municipalité régionale de comté du Haut-Richelieu (vl = $15.80/m^2)		
Henryville	1.2	1.4
Lacolle	1.2	1.4
Mont-Saint-Grégoire	1.2	1.4
Noyan	1.2	1.4
Saint-Alexandre	1.2	1.4
Saint-Blaise-sur-Richelieu	1.2	1.4
Sainte-Anne-de-Sabrevois	1.2	1.4
Sainte-Brigide-d'Iberville	1.2	1.4
Saint-Georges-de-Clarenceville	1	1
Saint-Jean-sur-Richelieu	2	2
Saint-Paul-de-l'Île-aux-Noix	1.2	1.4
Saint-Sébastien	1.2	1.4
Saint-Valentin	1.2	1.4
Venise-en-Québec	1.6	1.6
Municipalité régionale de comté du Haut-Saint-François (vl = $2.48/m^2)		
Ascot Corner	0.3	0.8
Bury	0.3	0.8
Chartierville	0.3	0.8
Cookshire-Eaton	1	1
Dudswell	0.3	0.8
East Angus	1	1
Hampden	0.3	0.8
La Patrie	0.3	0.8
Lingwick	0.3	0.8
Newport	0.3	0.8
Saint-Isidore-de-Clifton	0.3	0.8
Scotstown	0.3	0.8
Weedon	0.3	0.8
Westbury	0.3	0.8
Municipalité régionale de comté du Haut-Saint-Laurent (vl = $5.21/m^2)		
Akwesasne (Indian reserve)	1	1
Dundee	1	1
Elgin	1	1
Franklin	1	1
Godmanchester	1.2	1.4
Havelock	0.3	0.8
Hinchinbrooke	1	1
Howick	1.2	1.4
Huntingdon	1.2	1.4
Ormstown	1.2	1.4
Saint-Anicet	1	1
Saint-Chrysostome	1.2	1.4
Sainte-Barbe	1	1
Très-Saint-Sacrement	1.2	1.4
Municipalité régionale de comté du Rocher-Percé (vl = $0.19/m^2)		
Chandler	0.3	0.8
Grande-Rivière	0.3	0.8
Mont-Alexandre	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Percé	0.3	0.8
Port-Daniel - Gascons	0.3	0.8
Sainte-Thérèse-de-Gaspé	0.3	0.8
Municipalité régionale de comté Val-Saint-François (vl = $1.40/m^2)		
Bonsecours	0.3	0.8
Cleveland	0.3	0.8
Kingsbury	0.3	0.8
Lawrenceville	1	1
Maricourt	1	1
Melbourne	0.3	0.8
Racine	0.3	0.8
Richmond	1	1
Saint-Claude	1	1
Saint-Denis-de-Brompton	0.3	0.8
Sainte-Anne-de-la-Rochelle	0.3	0.8
Saint-François-Xavier-de-Brompton	1	1
Stoke	0.3	0.8
Ulverton	1	1
Valcourt (town)	1	1
Valcourt (township)	1	1
Val-Joli	1	1
Windsor	2	2
Municipalité régionale de comté de L'Érable (vl = $1.64/m^2)		
Inverness	1	1
Laurierville	1	1
Lyster	1	1
Notre-Dame-de-Lourdes	1	1
Plessisville (town)	1	1
Plessisville (parish)	1	1
Princeville	1	1
Sainte-Sophie-d'Halifax	1	1
Saint-Ferdinand	1	1
Saint-Pierre-Baptiste	1	1
Villeroy	0.3	0.8
Municipalité régionale de comté des Appalaches (vl = $2.35/m^2)		
Adstock	0.3	0.8
Beaulac-Garthby	0.3	0.8
Disraeli (town)	0.3	0.8
Disraeli (parish)	0.3	0.8
East Broughton	1	1
Irlande	0.3	0.8
Kinnear's Mills	0.3	0.8
Sacré-Coeur-de-Jésus	1	1
Saint-Adrien-d'Irlande	1	1
Sainte-Clotilde-de-Beauce	1	1
Sainte-Praxède	0.3	0.8
Saint-Fortunat	0.3	0.8
Saint-Jacques-de-Leeds	1	1
Saint-Jacques-le-Majeur-de-Wolfestown	0.3	0.8
Saint-Jean-de-Brébeuf	0.3	0.8
Saint-Joseph-de-Coleraine	1.6	1.6
Saint-Julien	0.3	0.8
Saint-Pierre-de-Broughton	0.3	0.8
Thetford Mines	1.6	1.6
Municipalité régionale de comté Les Basques (vl = $0.55/m^2)		
Lac-Boisbouscache	0.3	0.8
Notre-Dame-des-Neiges	1.2	1.4
Saint-Clément	1	1
Sainte-Françoise	0.3	0.8
Saint-Éloi	1	1
Sainte-Rita	0.3	0.8
Saint-Guy	0.3	0.8
Saint-Jean-de-Dieu	1	1

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Mathieu-de-Rioux	0.3	0.8
Saint-Médard	0.3	0.8
Saint-Simon	0.3	0.8
Trois-Pistoles	1.2	1.4
Municipalité régionale de comté des Chenaux (vl = $3.39/m^2)		
Batiscan	1	1
Champlain	1	1
Notre-Dame-du-Mont-Carmel	0.3	0.8
Sainte-Anne-de-la-Pérade	1	1
Sainte-Geneviève-de-Batiscan	1	1
Saint-Luc-de-Vincennes	1	1
Saint-Maurice	1.2	1.4
Saint-Narcisse	1	1
Saint-Prosper-de-Champlain	1	1
Saint-Stanislas	1	1
Municipalité régionale de comté des Collines-de-l'Outaouais (vl = $0.78/m^2)		
Cantley	1.6	1.6
Chelsea	1.6	1.6
La Pêche	0.3	0.8
L'Ange-Gardien	0.3	0.8
Notre-Dame-de-la-Salette	0.3	0.8
Pontiac	0.3	0.8
Val-des-Monts	0.3	0.8
Municipalité régionale de comté des Etchemins (vl = $3.66/m^2)		
Lac-Etchemin	0.3	0.8
Saint-Benjamin	0.3	0.8
Saint-Camille-de-Lellis	0.3	0.8
Saint-Cyprien	0.3	0.8
Sainte-Aurélie	0.3	0.8
Sainte-Justine	0.3	0.8
Sainte-Rose-de-Watford	0.3	0.8
Sainte-Sabine	0.3	0.8
Saint-Louis-de-Gonzague	0.3	0.8
Saint-Luc-de-Bellechasse	0.3	0.8
Saint-Magloire	0.3	0.8
Saint-Prosper	0.3	0.8
Saint-Zacharie	0.3	0.8
Municipalité régionale de comté des Jardins-de-Napierville (vl = $4.14/m^2)		
Hemmingford (village)	1	1
Hemmingford (township)	1	1
Napierville	1.2	1.4
Saint-Bernard-de-Lacolle	1.2	1.4
Saint-Cyprien-de-Napierville	1.2	1.4
Sainte-Clotilde	1.2	1.4
Saint-Édouard	1.2	1.4
Saint-Jacques-le-Mineur	1.2	1.4
Saint-Michel	1.2	1.4
Saint-Patrice-de-Sherrington	1.2	1.4
Saint-Rémi	1.2	1.4
Municipalité régionale de comté des Laurentides (vl = $0.78/m^2)		
Amherst	0.3	0.8
Arundel	0.3	0.8
Barkmere	0.3	0.8
Brébeuf	0.3	0.8
Doncaster (Indian reserve)	0.3	0.8
Huberdeau	0.3	0.8
Ivry-sur-le-Lac	0.3	0.8
La Conception	0.3	0.8
La Minerve	0.3	0.8
Labelle	0.3	0.8
Lac-Supérieur	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Lac-Tremblant-Nord	0.3	0.8
Lantier	0.3	0.8
Montcalm	0.3	0.8
Mont-Tremblant	1.6	1.6
Sainte-Agathe-des-Monts	1.6	1.6
Sainte-Lucie-des-Laurentides	0.3	0.8
Saint-Faustin - Lac-Carré	0.3	0.8
Val-David	1.6	1.6
Val-des-Lacs	0.3	0.8
Val-Morin	1.6	1.6
Municipalité régionale de comté des Maskoutains (vl = $14.81/m^2)		
La Présentation	1.2	1.4
Saint-Barnabé-Sud	1.2	1.4
Saint-Bernard-de-Michaudville	1.2	1.4
Saint-Damase	1.2	1.4
Saint-Dominique	1.2	1.4
Sainte-Hélène-de-Bagot	1.2	1.4
Sainte-Madeleine	1.2	1.4
Sainte-Marie-Madeleine	1.2	1.4
Saint-Hugues	1.2	1.4
Saint-Hyacinthe	1.6	1.6
Saint-Jude	1.2	1.4
Saint-Liboire	1.2	1.4
Saint-Louis	1.2	1.4
Saint-Marcel-de-Richelieu	1.2	1.4
Saint-Pie	1.2	1.4
Saint-Simon	1.2	1.4
Saint-Valérien-de-Milton	1.2	1.4
Municipalité régionale de comté des Moulins (vl = $10.99/m^2)		
Mascouche	2	2
Terrebonne	2	2
Municipalité régionale de comté des Pays-d'en-Haut (vl = $1.94/m^2)		
Estérel	0.3	0.8
Lac-des-Seize-Îles	0.3	0.8
Morin-Heights	1.6	1.6
Piedmont	2	2
Saint-Adolphe-d'Howard	0.3	0.8
Sainte-Adèle	1.6	1.6
Sainte-Anne-des-Lacs	0.3	0.8
Sainte-Marguerite-du-Lac-Masson	0.3	0.8
Saint-Sauveur	2	2
Wentworth-Nord	0.3	0.8
Municipalité régionale de comté des Sources (vl = $0.71/m^2)		
Asbestos	2	2
Danville	1	1
Ham-Sud	0.3	0.8
Saint-Adrien	0.3	0.8
Saint-Camille	1	1
Saint-Georges-de-Windsor	1	1
Wotton	1	1
Ville de Lévis (vl = $16.83/m^2)		
Lévis	2	2
Municipalité régionale de comté de L'Île-d'Orléans (vl = $5.72/m^2)		
Sainte-Famille-de-l'Île-d'Orléans	1.2	1.4
Sainte-Pétronille	2	2
Saint-François-de-l'Île-d'Orléans	1.2	1.4
Saint-Jean-de-l'Île-d'Orléans	1.2	1.4
Saint-Laurent-de-l'Île-d'Orléans	1.2	1.4
Saint-Pierre-de-l'Île-d'Orléans	1	1
Municipalité régionale de comté de L'Islet (vl = $1.33/m^2)		
L'Islet	1	1
Saint-Adalbert	0.3	0.8
Saint-Aubert	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Cyrille-de-Lessard	0.3	0.8
Saint-Damase-de-L'Islet	0.3	0.8
Sainte-Félicité	0.3	0.8
Sainte-Louise	0.3	0.8
Sainte-Perpétue	0.3	0.8
Saint-Jean-Port-Joli	1.2	1.4
Saint-Marcel	0.3	0.8
Saint-Omer	0.3	0.8
Saint-Pamphile	0.3	0.8
Saint-Roch-des-Aulnaies	1.2	1.4
Tourville	0.3	0.8
Urban agglomeration of Longueuil (vl = $23.89/m^2)		
Boucherville	2	2
Brossard	2	2
Longueuil	2	2
Saint-Bruno-de-Montarville	2	2
Saint-Lambert	2	2
Municipalité régionale de comté de Lotbinière (vl = $9.28/m^2)		
Dosquet	0.3	0.8
Laurier-Station	1.2	1.4
Leclercville	1	1
Lotbinière	1.2	1.4
Notre-Dame-du-Sacré-Coeur-d'Issoudun	1.2	1.4
Saint-Agapit	1.2	1.4
Saint-Antoine-de-Tilly	1.2	1.4
Saint-Apollinaire	0.3	0.8
Sainte-Agathe-de-Lotbinière	1	1
Sainte-Croix	1.2	1.4
Saint-Édouard-de-Lotbinière	1.2	1.4
Saint-Flavien	1.2	1.4
Saint-Gilles	1	1
Saint-Janvier-de-Joly	0.3	0.8
Saint-Narcisse-de-Beaurivage	1.2	1.4
Saint-Patrice-de-Beaurivage	1.2	1.4
Saint-Sylvestre	1	1
Val-Alain	0.3	0.8
Municipalité régionale de comté de Manicouagan (vl = $0.03/m^2)		
Baie-Comeau	0.3	0.8
Baie-Trinité	0.3	0.8
Chute-aux-Outardes	1.6	1.6
Franquelin	0.3	0.8
Godbout	0.3	0.8
Pessamit (Indian reserve)	0.3	0.8
Pointe-aux-Outardes	0.3	0.8
Pointe-Lebel	1.6	1.6
Ragueneau	0.3	0.8
Municipalité régionale de comté de Marguerite-D'Youville (vl = $8.31/m^2)		
Calixa-Lavallée	1.2	1.4
Contrecoeur	2	2
Saint-Amable	2	2
Sainte-Julie	2	2
Varennes	1.6	1.6
Verchères	1.2	1.4
Municipalité régionale de comté de Maria-Chapdelaine (vl = $1.79/m^2)		
Albanel	1	1
Dolbeau-Mistassini	0.3	0.8
Girardville	0.3	0.8
Normandin	1.2	1.4
Notre-Dame-de-Lorette	0.3	0.8
Péribonka	1	1
Saint-Augustin	1	1

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Edmond-les-Plaines	1	1
Sainte-Jeanne-d'Arc	0.3	0.8
Saint-Eugène-d'Argentenay	1	1
Saint-Stanislas	0.3	0.8
Saint-Thomas-Didyme	0.3	0.8
Municipalité régionale de comté de Maskinongé (vl = $0.43/m^2)		
Charette	1	1
Louiseville	1.6	1.6
Maskinongé	1.2	1.4
Saint-Alexis-des-Monts	0.3	0.8
Saint-Barnabé	1.2	1.4
Saint-Boniface	0.3	0.8
Sainte-Angèle-de-Prémont	1.6	1.6
Saint-Édouard-de-Maskinongé	0.3	0.8
Saint-Élie-de-Caxton	0.3	0.8
Saint-Étienne-des-Grès	0.3	0.8
Sainte-Ursule	1.2	1.4
Saint-Justin	1	1
Saint-Léon-le-Grand	1.2	1.4
Saint-Mathieu-du-Parc	0.3	0.8
Saint-Paulin	0.3	0.8
Saint-Sévère	1.2	1.4
Yamachiche	1.2	1.4
Municipalité régionale de comté de Matawinie (vl = $0.16/m^2)		
Baie-Atibenne	0.3	0.8
Baie-de-la-Bouteille	0.3	0.8
Baie-Obaoca	0.3	0.8
Chertsey	0.3	0.8
Entrelacs	0.3	0.8
Lac-Cabasta	0.3	0.8
Lac-des-Dix-Milles	0.3	0.8
Lac-Devenyns	0.3	0.8
Lac-du-Taureau	0.3	0.8
Lac-Legendre	0.3	0.8
Lac-Matawin	0.3	0.8
Lac-Minaki	0.3	0.8
Lac-Santé	0.3	0.8
Manawan (Indian reserve)	0.3	0.8
Notre-Dame-de-la-Merci	0.3	0.8
Rawdon	0.3	0.8
Saint-Alphonse-Rodriguez	0.3	0.8
Saint-Côme	0.3	0.8
Saint-Damien	0.3	0.8
Saint-Donat	0.3	0.8
Sainte-Béatrix	0.3	0.8
Sainte-Émélie-de-l'Énergie	0.3	0.8
Sainte-Marcelline-de-Kildare	0.3	0.8
Saint-Félix-de-Valois	1.6	1.6
Saint-Guillaume-Nord	0.3	0.8
Saint-Jean-de-Matha	0.3	0.8
Saint-Michel-des-Saints	0.3	0.8
Saint-Zénon	0.3	0.8
Municipalité régionale de comté de Mékinac (vl = $2.89/m^2)		
Grandes-Piles	0.3	0.8
Hérouxville	1	1
Lac-aux-Sables	0.3	0.8
Lac-Boulé	0.3	0.8
Lac-Masketsi	0.3	0.8
Lac-Normand	0.3	0.8
Notre-Dame-de-Montauban	0.3	0.8
Rivière-de-la-Savane	0.3	0.8
Saint-Adelphe	0.3	0.8
Sainte-Thècle	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Roch-de-Mékinac	0.3	0.8
Saint-Séverin	1.2	1.4
Saint-Tite	1	1
Trois-Rives	0.3	0.8
Municipalité régionale de comté de Memphrémagog (vl = $1.86/m^2)		
Austin	0.3	0.8
Ayer's Cliff	1	1
Bolton-Est	0.3	0.8
Eastman	0.3	0.8
Hatley (municipality)	1	1
Hatley (township)	0.3	0.8
Magog	1.6	1.6
North Hatley	1	1
Ogden	0.3	0.8
Orford	0.3	0.8
Potton	0.3	0.8
Saint-Benoît-du-Lac	1	1
Sainte-Catherine-de-Hatley	0.3	0.8
Saint-Étienne-de-Bolton	0.3	0.8
Stanstead (town)	2	2
Stanstead (township)	0.3	0.8
Stukely-Sud	0.3	0.8
Municipalité régionale de comté de Minganie (vl = $0.02/m^2)		
Aguanish	0.3	0.8
Baie-Johan-Beetz	0.3	0.8
Havre-Saint-Pierre	0.3	0.8
L'Île-d'Anticosti	0.3	0.8
Longue-Pointe-de-Mingan	0.3	0.8
Mingan (Indian reserve)	0.3	0.8
Natashquan	0.3	0.8
Nutashkuan	0.3	0.8
Rivière-au-Tonnerre	0.3	0.8
Rivière-Saint-Jean	0.3	0.8
Ville de Mirabel (vl = $14.47/m^2)		
Mirabel	1.6	1.6
Municipalité régionale de comté de Montcalm (vl = $4.25/m^2)		
Saint-Alexis	1.2	1.4
Saint-Calixte	0.3	0.8
Sainte-Julienne	1.6	1.6
Sainte-Marie-Salomé	1.2	1.4
Saint-Esprit	1.2	1.4
Saint-Jacques	1.2	1.4
Saint-Liguori	1.2	1.4
Saint-Lin - Laurentides	1.6	1.6
Saint-Roch-de-l'Achigan	1.2	1.4
Saint-Roch-Ouest	1.2	1.4
Municipalité régionale de comté de Montmagny (vl = $1.91/m^2)		
Berthier-sur-Mer	1.6	1.6
Cap-Saint-Ignace	0.3	0.8
Lac-Frontière	0.3	0.8
Montmagny	1.6	1.6
Notre-Dame-du-Rosaire	0.3	0.8
Saint-Antoine-de-l'Isle-aux-Grues	1	1
Sainte-Apolline-de-Patton	0.3	0.8
Sainte-Euphémie-sur-Rivière-du-Sud	0.3	0.8
Sainte-Lucie-de-Beauregard	0.3	0.8
Saint-Fabien-de-Panet	0.3	0.8
Saint-François-de-la-Rivière-du-Sud	1	1
Saint-Just-de-Bretenières	0.3	0.8
Saint-Paul-de-Montminy	0.3	0.8
Saint-Pierre-de-la-Rivière-du-Sud	1	1
Urban agglomeration of Montréal (vl = $136.64/m^2)		
Baie-D'Urfé	2	2

Activity site	Factor R Wetlands	Factor R Bodies of water
Beaconsfield	2	2
Côte-Saint-Luc	2	2
Dollard-Des Ormeaux	2	2
Dorval	2	2
Hampstead	2	2
Kirkland	2	2
L'Île-Dorval	2	2
Montréal	2	2
Montréal-Est	2	2
Montréal-Ouest	2	2
Mont-Royal	2	2
Pointe-Claire	2	2
Sainte-Anne-de-Bellevue	2	2
Senneville	2	2
Westmount	2	2
Municipalité régionale de comté de Nicolet-Yamaska (vl = $5.46/m^2)		
Aston-Jonction	1.2	1.4
Baie-du-Febvre	1.2	1.4
Grand-Saint-Esprit	1.2	1.4
La Visitation-de-Yamaska	1.2	1.4
Nicolet	1.2	1.4
Odanak (Indian reserve)	1.2	1.4
Pierreville	1.2	1.4
Saint-Célestin (village)	1.2	1.4
Saint-Célestin (municipality)	1.2	1.4
Sainte-Eulalie	1	1
Saint-Elphège	1.2	1.4
Sainte-Monique	1.2	1.4
Sainte-Perpétue	1.2	1.4
Saint-François-du-Lac	1.2	1.4
Saint-Léonard-d'Aston	1.2	1.4
Saint-Wenceslas	1.2	1.4
Saint-Zéphirin-de-Courval	1.2	1.4
Municipalité régionale de comté de Papineau (vl = $0.56/m^2)		
Boileau	0.3	0.8
Bowman	0.3	0.8
Chénéville	0.3	0.8
Duhamel	0.3	0.8
Fassett	0.3	0.8
Lac-des-Plages	0.3	0.8
Lac-Simon	0.3	0.8
Lochaber	1	1
Lochaber-Partie-Ouest	1	1
Mayo	0.3	0.8
Montebello	0.3	0.8
Montpellier	0.3	0.8
Mulgrave-et-Derry	0.3	0.8
Namur	0.3	0.8
Notre-Dame-de-Bonsecours	0.3	0.8
Notre-Dame-de-la-Paix	0.3	0.8
Papineauville	0.3	0.8
Plaisance	1	1
Ripon	0.3	0.8
Saint-André-Avellin	1	1
Saint-Émile-de-Suffolk	0.3	0.8
Saint-Sixte	0.3	0.8
Thurso	1	1
Val-des-Bois	0.3	0.8
Municipalité régionale de comté de Pierre-De Saurel (vl = $5.89/m^2)		
Massueville	1.2	1.4
Saint-Aimé	1.2	1.4
Saint-David	1.2	1.4
Sainte-Anne-de-Sorel	1	1

Activity site	Factor R Wetlands	Factor R Bodies of water
Sainte-Victoire-de-Sorel	1.2	1.4
Saint-Gérard-Majella	1.2	1.4
Saint-Joseph-de-Sorel	2	2
Saint-Ours	1.2	1.4
Saint-Robert	1.2	1.4
Saint-Roch-de-Richelieu	1.6	1.6
Sorel-Tracy	2	2
Yamaska	1.2	1.4
Municipalité régionale de comté de Pontiac (vl = $0.25/m^2)		
Alleyn-et-Cawood	0.3	0.8
Bristol	1	1
Bryson	1	1
Campbell's Bay	1	1
Chichester	0.3	0.8
Clarendon	1	1
Fort-Coulonge	1	1
Lac-Nilgaut	0.3	0.8
L'Île-du-Grand-Calumet	0.3	0.8
L'Isle-aux-Allumettes	0.3	0.8
Litchfield	0.3	0.8
Mansfield-et-Pontefract	0.3	0.8
Otter Lake	0.3	0.8
Portage-du-Fort	1	1
Rapides-des-Joachims	0.3	0.8
Shawville	1	1
Sheenboro	0.3	0.8
Thorne	0.3	0.8
Waltham	0.3	0.8
Municipalité régionale de comté de Portneuf (vl = $3.16/m^2)		
Cap-Santé	1.6	1.6
Deschambault-Grondines	1	1
Donnacona	1.6	1.6
Lac-Blanc	0.3	0.8
Lac-Lapeyrère	0.3	0.8
Lac-Sergent	1	1
Linton	0.3	0.8
Neuville	1.6	1.6
Pont-Rouge	1	1
Portneuf	0.3	0.8
Rivière-à-Pierre	0.3	0.8
Saint-Alban	0.3	0.8
Saint-Basile	1	1
Saint-Casimir	1.2	1.4
Sainte-Christine-d'Auvergne	0.3	0.8
Saint-Gilbert	1	1
Saint-Léonard-de-Portneuf	0.3	0.8
Saint-Marc-des-Carrières	1.2	1.4
Saint-Raymond	0.3	0.8
Saint-Thuribe	1	1
Saint-Ubalde	0.3	0.8
Urban agglomeration of Québec (vl = $20.74/m^2)		
L'Ancienne-Lorette	2	2
Notre-Dame-des-Anges	2	2
Québec	2	2
Saint-Augustin-de-Desmaures	1.6	1.6
Wendake (Indian reserve)	2	2
Municipalité régionale de comté de Rimouski-Neigette (vl = $2.77/m^2)		
Esprit-Saint	0.3	0.8
La Trinité-des-Monts	0.3	0.8
Lac-Huron	0.3	0.8
Rimouski	1.6	1.6
Saint-Anaclet-de-Lessard	1	1
Saint-Eugène-de-Ladrière	0.3	0.8

Activity site	Factor R Wetlands	Factor R Bodies of water
Saint-Fabien	1	1
Saint-Marcellin	0.3	0.8
Saint-Narcisse-de-Rimouski	0.3	0.8
Saint-Valérien	0.3	0.8
Municipalité régionale de comté de Rivière-du-Loup (vl = $2.34/m^2)		
Cacouna (municipality)	1.6	1.6
Cacouna (Indian reserve)	1.6	1.6
L'Isle-Verte	1.2	1.4
Notre-Dame-des-Sept-Douleurs	0.3	0.8
Notre-Dame-du-Portage	1.6	1.6
Rivière-du-Loup	2	2
Saint-Antonin	0.3	0.8
Saint-Arsène	1.2	1.4
Saint-Cyprien	0.3	0.8
Saint-Épiphane	1	1
Saint-François-Xavier-de-Viger	0.3	0.8
Saint-Hubert-de-Rivière-du-Loup	0.3	0.8
Saint-Modeste	0.3	0.8
Saint-Paul-de-la-Croix	0.3	0.8
Whitworth (Indian reserve)	0.3	0.8
Municipalité régionale de comté de Robert-Cliche (vl = $3.25/m^2)		
Beauceville	0.3	0.8
Saint-Alfred	0.3	0.8
Saint-Frédéric	1	1
Saint-Joseph-de-Beauce	0.3	0.8
Saint-Joseph-des-Érables	1	1
Saint-Jules	1	1
Saint-Odilon-de-Cranbourne	1	1
Saint-Séverin	0.3	0.8
Saint-Victor	1	1
Tring-Jonction	1.6	1.6
Municipalité régionale de comté de Roussillon (vl = $14.81/m^2)		
Candiac	2	2
Châteauguay	2	2
Delson	2	2
Kahnawake (Indian reserve)	2	2
La Prairie	2	2
Léry	2	2
Mercier	1.6	1.6
Saint-Constant	2	2
Sainte-Catherine	2	2
Saint-Isidore	1.2	1.4
Saint-Mathieu	1.2	1.4
Saint-Philippe	1.2	1.4
Municipalité régionale de comté de Rouville (vl = $4.86/m^2)		
Ange-Gardien	1.2	1.4
Marieville	1.6	1.6
Richelieu	1.6	1.6
Rougemont	1.2	1.4
Saint-Césaire	1.2	1.4
Sainte-Angèle-de-Monnoir	1.2	1.4
Saint-Mathias-sur-Richelieu	1.2	1.4
Saint-Paul-d'Abbotsford	1.2	1.4
Ville de Rouyn-Noranda (vl = $3.74/m^2)		
Rouyn-Noranda	0.3	0.8
Ville de Saguenay (vl = $5.63/m^2)		
Saguenay	1.6	1.6
Municipalité régionale de comté de Sept-Rivières (vl = $0.04/m^2)		
Maliotenam (Indian reserve)	0.3	0.8
Port-Cartier	0.3	0.8
Sept-Îles	0.3	0.8
Uashat (Indian reserve)	0.3	0.8
Ville de Shawinigan (vl = $1.62/m^2)		

Activity site	Factor R Wetlands	Factor R Bodies of water
Shawinigan	0.3	0.8
Ville de Sherbrooke (vl = $5.61/m^2)		
Sherbrooke	2	2
Municipalité régionale de comté de Témiscamingue (vl = $0.08/m^2)		
Béarn	0.3	0.8
Belleterre	0.3	0.8
Duhamel-Ouest	1	1
Fugèreville	0.3	0.8
Guérin	0.3	0.8
Hunter's Point	0.3	0.8
Kebaowek (Indian reserve)	0.3	0.8
Kipawa	0.3	0.8
Laforce	0.3	0.8
Laniel	0.3	0.8
Latulipe-et-Gaboury	0.3	0.8
Laverlochère-Angliers	0.3	0.8
Les Lacs-du-Témiscamingue	0.3	0.8
Lorrainville	1.2	1.4
Moffet	0.3	0.8
Nédélec	0.3	0.8
Notre-Dame-du-Nord	1	1
Rémigny	0.3	0.8
Saint-Bruno-de-Guigues	1.2	1.4
Saint-Édouard-de-Fabre	0.3	0.8
Saint-Eugène-de-Guigues	1	1
Témiscaming	0.3	0.8
Timiskaming (Indian reserve)	0.3	0.8
Ville-Marie	1.2	1.4
Winneway	0.3	0.8
Municipalité régionale de comté de Témiscouata (vl = $0.43/m^2)		
Auclair	0.3	0.8
Biencourt	0.3	0.8
Dégelis	0.3	0.8
Lac-des-Aigles	0.3	0.8
Lejeune	0.3	0.8
Packington	0.3	0.8
Pohénégamook	0.3	0.8
Rivière-Bleue	0.3	0.8
Saint-Athanase	0.3	0.8
Saint-Elzéar-de-Témiscouata	0.3	0.8
Saint-Eusèbe	0.3	0.8
Saint-Honoré-de-Témiscouata	0.3	0.8
Saint-Jean-de-la-Lande	0.3	0.8
Saint-Juste-du-Lac	0.3	0.8
Saint-Louis-du-Ha! Ha!	0.3	0.8
Saint-Marc-du-Lac-Long	0.3	0.8
Saint-Michel-du-Squatec	0.3	0.8
Saint-Pierre-de-Lamy	0.3	0.8
Témiscouata-sur-le-Lac	0.3	0.8
Municipalité régionale de comté de Thérèse-De Blainville (vl = $17.12/m^2)		
Blainville	2	2
Boisbriand	2	2
Bois-des-Filion	2	2
Lorraine	2	2
Rosemère	2	2
Sainte-Anne-des-Plaines	1.2	1.4
Sainte-Thérèse	2	2
Ville de Trois-Rivières (vl = $8.51/m^2)		
Trois-Rivières	2	2
Municipalité régionale de comté de Vaudreuil-Soulanges (vl = $7.38/m^2)		
Coteau-du-Lac	1.6	1.6

Activity site	Factor R Wetlands	Factor R Bodies of water
Hudson	2	2
Les Cèdres	1.6	1.6
Les Coteaux	1.6	1.6
L'Île-Cadieux	2	2
L'Île-Perrot	2	2
Notre-Dame-de-l'Île-Perrot	2	2
Pincourt	2	2
Pointe-des-Cascades	2	2
Pointe-Fortune	1	1
Rigaud	1	1
Rivière-Beaudette	1.6	1.6
Saint-Clet	1.2	1.4
Sainte-Justine-de-Newton	1.2	1.4
Sainte-Marthe	1.2	1.4
Saint-Lazare	1.6	1.6
Saint-Polycarpe	1.2	1.4
Saint-Télesphore	1.2	1.4
Saint-Zotique	1.6	1.6
Terrasse-Vaudreuil	2	2
Très-Saint-Rédempteur	1.2	1.4
Vaudreuil-Dorion	2	2
Vaudreuil-sur-le-Lac	2	2

For the purpose of this Schedule, the term "Indian reserve" refers to a reserve within the meaning of the Indian Act (R.S.C. 1985, c. I-5), an Indian establishment and the Kanesatake Mohawk interim land base within the meaning of the Kanesatake Interim Land Base Governance Act (S.C. 2001, c. 8).

103689

Gouvernement du Québec

O.C. 1251-2018, 17 August 2018

Petroleum Resources Act
(chapter H-4.2)

Petroleum exploration, production and storage in a body of water

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

WHEREAS, under sections 10 and 68, the second paragraph of section 69, section 70 and the second paragraph of section 71 of the Petroleum Resources Act (chapter H-4.2), the Government may set forth, by regulation, the terms and conditions for awarding an authorization to produce brine, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 73 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a geophysical surveying or geochemical surveying authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 76 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a stratigraphic survey authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 78, section 80, the second paragraph of section 100, section102 and the second paragraph of section 103 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a drilling authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the second paragraph of section 84, section 85 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a completion authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under section 88 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a fracturing authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the second paragraph of section 90, section 91 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a reconditioning authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the third paragraph of section 92, sections 93, 95 and 96 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a temporary or permanent closure authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first paragraph of section 131 of the Act, the Government may determine, by regulation, the protective and safety measures that must be implemented by a licence holder or any other person in charge of a well;

WHEREAS, under section 191 of the Act, the Government may, by regulation, specify that a failure to comply with the regulation may give rise to a monetary administrative penalty and set forth the amounts and the methods for determining them;

WHEREAS, under paragraph 1 of section 207 of the Act, the Government may, by regulation, determine the form and manner in which all the documents required for the purposes of the Act and the regulations are to be sent;

WHEREAS, under paragraphs 2 to 4 of section 207 of the Act, the Government may, by regulation, determine the fee payable for the assessment of a permanent well or reservoir closure and site restoration plan with a view to its approval or revision, the fee payable for the assessment and inspections conducted for the purpose of issuing a certificate of release under section 112 of the Act, and the fee payable by a person to whom an inspector has given a written notice of non-compliance with the Act or the regulations;

WHEREAS, under paragraph 5 of section 207 of the Act, the Government may, by regulation, determine the provisions of a regulation whose violation constitutes an offence;

WHEREAS, under paragraph 6 of section 207 of the Act, the Government may, by regulation, prescribe, in relation to a petroleum right in a body of water, additional conditions or obligations or conditions or obligations that are different from those prescribed by the Act and the regulations;

WHEREAS, under section 287 of the Act, the Government may, by a regulation made before the date that is 18 months after the date of coming into force of the Act, enact any other transitional measure required for the carrying out of the Act;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft Regulation respecting petroleum exploration, production and storage in a body of water was published in Part 2 of the *Gazette officielle du Québec* of 20 June 2017 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, on the recommendation of the Minister of Energy and Natural Resources:

THAT the Regulation respecting petroleum exploration, production and storage in a body of water, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

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

Petroleum Resources Act
(chapter H-4.2. ss. 10, 26, 68, 69, 2nd par., 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., 131, 1st par., 191, 207 and 287)

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.

Despite the second paragraph and for the purposes of sections 70 and 123, this Regulation applies to the Baie de Gaspé, to the Baie des Chaleurs and to the Baie La Malbaie situated in the Municipalité régionale de comté Le Rocher-Percé.

2. In this Regulation,

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

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

"bank" means sloping land, of a height equal to or greater than 4 m, having at least 1 segment with a slope whose gradient is greater than 14° (25%) over a height of 4 m; the top and base of the bank are determined by a segment with a slope whose gradient is less than 8° (14%) over a horizontal distance greater than 15 m; (*talus*)

"blowout preventer" means all the valves and devices located at the top of a well used to control formation fluids and block and monitor the well during the various activities; (*bloc obturateur de puits*)

"blowout prevention system" means all the control equipment of a well including in particular a blowout preventer, an accumulator and a pipe network allowing the safe flow of fluids during activities in a well; (*système anti-éruption*)

"casing head" means the top part of a wellbore that forms the interface between its buried part and the surface of the bottom of the water; (*collet*)

"casing shoe" means an annular part, generally filled with concrete installed at the bottom of a casing string that allows to guide the casing string; (*sabot de tubage*)

"casing string" means the entire casing of a wellbore 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*)

"conductor casing" means the first casing installed at the time of the construction of a wellbore to prevent the collapse of unconsolidated formations near the surface; (*tubage conducteur*)

"directional well" means a well whose orientation and slope are controlled using dedicated equipment and techniques; (*puits directionnel*)

"diverter" means a device that ensures a safe flow of fluids resulting from a shallow blowout or kick and that may be used where the conductor casing is installed; (*déflecteur*)

"drilling fluid" means the mud circulating in the drill rod and coming up in the annular space during drilling to discharge cuttings, cool and lubricate the bit and maintain the desired pressure in the wellbore; (*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 using drill stems as flow pipe in the wellbore and dedicated equipment; (*essai aux tiges*)

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

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

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

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

"horizontal well" means a well whose wellbore angle, from vertical, exceeds 80°, including a section extended from the wellbore in the reservoir; (*puits horizontal*)

"injection well" means a well used to inject fluids into an underground formation; (puits d'injection)

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

"integrity" means, in the case of a wellbore, the condition that ensures containment and prevention of a blowout or migration of fluids in the underground or surface formations with the use of technical and operational solutions; (*intégrité*)

"intermediate casing" means a casing string generally installed after the surface casing and before the production casing, that offers protection against cavities and abnormal pressures of the formations traversed and that allows the use of drilling fluids of various densities necessary to control previous formations; (*tubage intermédiaire*)

"marine riser" means a large diameter tube that connects the casing head of a submerged wellbore to a floating platform to return the fluids to the surface; (*tube prolongateur*)

"measured depth" means the length of travel of the wellbore; (*profondeur mesurée*)

"observation well" means a well that is not in production and that is 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 (chapter Q-2, r. 35.2); (*puits d'observation*)

"packer" means an expendable device used to close a wellbore or isolate an annular space that allows a controlled production, injection or treatment; (*garniture d'étanchéité*)

"petroleum enhanced recovery" means any petroleum recovery using methods of holding the pressure on the pool, in particular by injecting fluids; (*récupération assistée d'hydrocarbures*)

"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)

"protective barrier" means a mechanism installed in 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*);

"reconditioning" means major maintenance work or corrective activities on a well to modify it that require the use of a reconditioning device or other service rig; (*reconditionnement*)

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

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

"shale" means a non-metamorphic geological unit consisting of sedimentary rocks with a grain size less than 0.0625 mm and consisting of at least 20% of clay minerals and less than 65% of carbonates, such as Utica Shale; (*schiste*)

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

"surface casing" means a casing in a competent formation after the installation of the conductor casing to provide structural support for placing a diverter or a blowout prevention system and for the subsequent casing strings, 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*)

"true vertical depth" means the vertical distance from a point in the wellbore to a reference point on the surface, generally the drive bushing; (*profondeur verticale réelle*)

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

"well log" means measurement or recording based on the depth carried out in a wellbore for the inspection or characterization of a geological formation; (*diagraphie*)

"wellbore" means a well or a stratigraphic survey, including the open part; (*trou de forage*)

"wellhead" means the surface end of a well including elements to hang casings during the construction phase and a means to install production tubing and place valves and surface flow and pressure control installations in preparation for the well production phase; (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 aquifer is set at 200 m below the surface, unless a hydrogeological study or an analysis of an adjacent wellbore 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.

The electronic version of the following documents must also be sent:

(1) well log raw data, in an ASCII file or an equivalent version;

(2) data produced by a geographical information system (GIS) software, in a shapefile.

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

CHAPTER II
SAFETY AND PROTECTIVE MEASURES AND INCIDENT NOTICE

DIVISION I
SAFETY AND PROTECTIVE MEASURES

6. The Minister may grant an authorization or approve activities in a body of water only if the licence holder demonstrates to the Minister that the activities planned do not compromise the integrity and conservation of the body of water.

At the request of the Minister, the holder supports this demonstration by submitting to the Minister a technical environmental study signed by an engineer from a consulting engineering firm independent from all the enterprises of the holder.

7. A licence holder must ensure that the work teams are composed of 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.

8. 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.

The licence holder must also ensure that the drilling rigs are certified according to the applicable recommended practices published by the Canadian Association of Oilwell Drilling Contractors, where applicable.

The wellhead or the blowout prevention system must be chosen and designed in accordance with the Industry Recommended Practices, IRP: #3, In Situ Heavy Oil Operations, and IRP: #5, Minimum Wellhead Requirements, published by the Drilling and Completions Committee.

The Minister may, in the case of the second and third paragraphs, accept the application of other standards if the holder demonstrates the equivalence.

9. 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.

10. 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 wellbore.

11. In the case of a loss of control of a wellbore, a licence holder must close the valves of all other wellbores of the activity site until the wellbore is again controlled.

12. 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 3 of the second paragraph of section 31 is familiar with the system.

13. 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;

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

(4) a helideck of an installation is easily accessible from the work stations and any accommodation for the personnel in the installation.

14. 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.

15. 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.

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 must also ensure that the activities are carried out so as to reduce to a minimum the production of residual materials.

17. A licence holder must ensure to carry out activities in order to eliminate or reduce to a minimum the volume of gas released into the atmosphere.

To that end, the licence holder must in particular

(1) contribute to the combustion of gases using a pilot ignition at the flare or other device, or their recovery, where possible;

(2) implement a leak inspection plan;

(3) select and install equipment according to the best practices; and

(4) prepare equipment operating procedures according to the best practices.

18. A licence holder using water for the activities following the cementing of the surface casing must ensure to prevent any corrosion in particular by microorganisms and must keep on the activity site the analysis certificate for the water used.

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

20. No person may access the activity site or a site where there is a temporarily closed well without the authorization of the holder of a licence, except persons authorized by law.

21. 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.

22. A licence holder must secure the wellbore 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.

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

A well is considered as posing such a risk if any of the following situations is detected:

(1) there is an emanation at the surface casing vent flow 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 packer or casing;

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

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

24. 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.

25. The holder of an exploration or production licence may not, in the territory of any urbanization perimeter delimited in a land use and development plan made under the Act respecting land use planning and development (chapter A-19.1) and at less than 1,000 m from the latter, conduct geophysical surveying, drill a stratigraphic survey and drill, re-enter and complete a well in water.

The holder of a storage licence may not, in such a territory and less than 1,000 m from the latter, conduct geophysical surveying and conduct stratigraphic drilling and drill a well in water.

DIVISON II
INCIDENT NOTICE

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

(1) damage to the integrity of a wellbore;

(2) a casing corrosion problem;

(3) an unexpected loss of pressure in a wellbore;

(4) an unexpected detection of hydrogen sulfide (H_2S);

(5) a blowout;

(6) the detection of any of the situations provided for in the second paragraph of section 23;

(7) a fire or an explosion;

(8) vandalism;

(9) the triggering of the emergency response plan provided for in subparagraph 3 of the second paragraph of section 31;

(10) damage to private property;

(11) ground movement;

(12) 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 schedules.

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 wellbore.

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

In the case of ground movement, the Minister may require geotechnical expertise.

27. After having received an incident notice under section 26, 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

28. 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.

29. 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.

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

31. The application for authorization or approval of an activity, except the authorization for geochemical surveying and the approval of the petroleum enhanced 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 casing head and the bottom of the wellbore 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 take into account the harmonization of land use 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 deemed necessary by the Minister.

For the application for a geophysical surveying authorization, the safety and community involvement program must also include a schedule of navigation 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.

The Minister may exempt the holder from providing a safety and community involvement program if the holder demonstrates that the duration and scope of the activity do not justify such a program.

CHAPTER IV
MEASUREMENT

32. 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.

Where the measurements of the volume or flow of a fluid to be measured by the holder cannot be taken, the holder may estimate them. If so, the holder must, when they are sent to the Minister, indicate the circumstances preventing the holder from taking accurate measurements.

33. 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.

34. 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 30 days following the calibration.

35. 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.

36. 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.

The Minister may exempt the holder from the allocation where the holder demonstrates that it is technically impossible to carry out such an allocation.

CHAPTER V
GEOPHYSICAL SURVEYING OR GEOCHEMICAL SURVEYING AUTHORIZATION

DIVISION I
GEOPHYSICAL SURVEYING AUTHORIZATION

§1. Conditions for obtaining an authorization

37. A licence holder who wishes to obtain a geophysical surveying authorization must apply to the Minister, in writing.

Division I of Chapter V of the Regulation respecting petroleum exploration, production and storage on land, made by Order in Council 1252-2018 dated 17 August 2018, applies to a licence holder who wishes to conduct an airborne geophysical surveying both in a body of water and on land. In that case, only one application for authorization must be made.

38. 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.

39. The application must be accompanied by

(1) the demonstration that the distances provided for in section 25 are complied with;

(2) the demonstration that the separation distances provided for in section 45 are complied with;

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

(a) the perimeter of the licence;

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

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

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

(4) the geophysical surveying technical program provided for in section 40, signed and sealed by a geologist, an engineer or a geophysicist;

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

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

If required and based on the area of the surveying, the licence holder may, for the purposes of subparagraph 3 of the first paragraph, submit a number of maps at different scales.

40. The geophysical surveying technical program must include

(1) the name and contact information of the geologist, the engineer or the geophysicist responsible for the technical 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 sources used;

(7) the acquisition parameters and the objectives of the surveying including, in particular, the structures and 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) a chronological and detailed description of the work to be carried out;

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

(13) a summary description of the equipment to be used;

(14) 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;

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

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

(17) the meteorological and hydrographic conditions anticipated for the work period;

(18) if applicable, the list of licences, certificates and other authorizations to be obtained;

(19) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

§2. Time periods and notice of the start of the work

41. The authorization holder must, within 12 months after the granting of the authorization by the Minister, 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 if the holder demonstrates the need therefor.

42. 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 start 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.

43. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date. If the geophysical surveying work is temporarily interrupted, the holder must also, as soon as possible, notify the Minister of the work resumption date.

§3. Conditions of exercise

44. 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, an engineer or a geophysicist 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 40;

(2) the cancellation of the drilling or loading of a shotpoint.

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

45. The authorization holder who uses an explosive energy source must not position the shotpoints

(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 casing head of an existing wellbore or, if the charge exceeds 2 kg, less than a distance corresponding to the following formula:

$A + B \times 4 = C$

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.

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

46. 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.

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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.

§4. Daily report and end of activities report

53. 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 conducted and the energy sources 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.

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

55. The authorization holder must send to the Minister, within the period provided for in section 100 of the Petroleum Resources Act (chapter H-4.2), an end of activities report signed by a geologist, an engineer or a geophysicist 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, engineer or geophysicist 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 name of the region in which the surveying was carried out;

(8) the type of surveying conducted and the energy sources used;

(9) the acquisition parameters and the objectives of the surveying including in particular structures, geological formations targeted, the type of exploration target sought and the investigation depth;

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

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

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

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

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

(15) 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

(16) 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) if applicable, the setting of the recording filters;

(17) a description of the data processing parameters;

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

(19) the following interpretation maps:

(a) in the case of seismic reflection surveying, the time structure map and the isochrone map of the main target and, if applicable, the secondary target and the interpreted profiles; if the stratigraphy of an adjacent wellbore is known, the holder must carry out the matching 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;

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

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

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

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

(24) photographs of the bottom of the water;

(25) bathymetric maps prepared from the surveyed data; 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.

DIVISION II
GEOCHEMICAL SURVEYING AUTHORIZATION

56. Division II of Chapter V of the Regulation respecting petroleum exploration, production and storage on land, made by Order in Council 1252-2018 dated 17 August 2018, applies to the licence holder who wishes to conduct an airborne geochemical surveying.

CHAPTER VI
STRATIGRAPHIC SURVEY AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

57. A licence holder who wishes to obtain a stratigraphic survey authorization must apply to the Minister, in writing.

58. 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.

59. The application must be accompanied by

(1) the demonstration that the distances provided for in section 25 are complied with;

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

(a) the surface projection of the stratigraphic survey profile to the location of the bottom of the stratigraphic survey;

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

(c) the demonstration that the distances provided for in sections 69 and 72 are met;

(3) the stratigraphic survey technical program provided for in section 60, signed and sealed by an engineer;

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

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

60. The stratigraphic survey 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 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 presence of adjacent wellbores has been taken into consideration for the safety of persons and property, environmental protection and the integrity of the stratigraphic survey;

(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 enterprises 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 lateral 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 used, 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) if applicable, the list of the proposed coring intervals;

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

(18) the list of the well logs 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 spacer 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 Completions Committee;

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

(d) the diameters of the stratigraphic survey according to the measured depth and the true vertical depth on a lateral section, to the bottom of the planned stratigraphic survey;

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

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

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

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

(i) 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 Completions 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 Completions Committee and including, in particular,

(a) the diameters of the casing strings according to the measured depth and the true 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) if applicable, 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 wellbore for cementing and to improve fluid displacement, in particular, casing movement; and

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

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

(29) 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 Completions 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 surface casings, there is 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;

(30) if applicable, the list of licences, certificates and other authorizations to be obtained;

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

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

61. 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the test results to the Minister.

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

62. The authorization holder must, within 12 months after the granting of the authorization by the Minister, 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 if the holder demonstrates the need therefor.

63. 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 start 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.

64. 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 as soon as possible of the resumption of the work.

65. 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

66. 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% in the final depth of the stratigraphic survey resulting in a slightly different geological projection;

(2) a change in the position of the casing head 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 log, 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.

67. 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 Completions 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 stratigraphic survey in a constant and safe manner.

68. 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;

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

(6) the indication that access to the activity site is prohibited without the holder's authorization.

69. The authorization holder may not position the casing head of a stratigraphic survey

(1) 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;

(2) less than 100 m from a cemetery;

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

(4) less than 200 m from a surface improvement work for sporting or recreational purposes;

(5) less than 275 m from a site classified as a heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act (chapter P-9.002);

(6) less than 300 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(7) less than 550 m from a health and social services institution, an educational institution, a building in which childcare services are offered or any building having 3 floors or more or a floor area greater than 10,000 m^2;

(8) less than 1,000 m from an airport or an aerodrome; or

(9) less than 1,600 m from any underground reservoir used for petroleum storage purposes and for which the holder has no right.

The distances must be measured horizontally, in a straight line, from the casing head 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 infrastructures belonging to the authorization holder or used for the holder's work.

70. The authorization holder may not position the casing head of a stratigraphic survey

(1) in lac Témiscamingue, including the mouths of other communicating watercourses;

(2) in lac des Deux Montagnes, situated in the Municipalité régionale de comté Deux-Montagnes;

(3) in lac Memphrémagog;

(4) in lac Saint-Jean, situated mainly in the regional county municipalities of Lac-Saint-Jean-Est and Domaine-du-Roy;

(5) in rivière des Outaouais, from lac Témiscamingue to the St. Lawrence River;

(6) in the Beauharnois canal;

(7) in the Lachine canal;

(8) in rivière des Milles Îles;

(9) in rivière des Prairies, situated mainly in the Municipalité régionale de comté Les Moulins;

(10) in rivière Richelieu, situated mainly in Municipalité régionale de comté Pierre-De Saurel;

(11) in rivière Saint-Maurice, from the Shawinigan dam to the St. Lawrence River;

(12) in rivière Saguenay, from lac Saint-Jean to the St. Lawrence River;

(13) in the St. Lawrence River;

(14) in the Baie de Gaspé;

(15) in the Baie des Chaleurs;

and

(16) in the Baie La Malbaie, situated in the Municipalité régionale de comté Le Rocher-Percé.

71. 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.

72. The authorization holder may not position the activity site less than 100 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).

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

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

(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 are utilized to minimize the risk of loss of stratigraphic survey control in the event of lost circulation, fluid kicks or blowout.

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

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

76. Where the authorization holder drills a stratigraphic survey in a region where the geology is unknown, in a region where shallow gas kicks have been documented or if it is foreseeable that a petroleum zone will be intersected, the holder must use a diverter to drill to the surface casing installation depth.

77. 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.

78. 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.

79. 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.

80. 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 Completions Committee.

81. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely displace the drilling fluids and the mud cakes from the walls of the stratigraphic survey in accordance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

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

83. 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.

84. 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 Completions Committee.

85. The authorization holder must demonstrate the uniform coverage of the cement behind each casing by carrying out a cement assessment sonic or ultrasonic logging or by any other method.

86. 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.

87. 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 or the leak pressure of the geological formation.

The test must be conducted at a pressure that ensures the safety of the drilling work to the installation depth of 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.

88. The maximum pressure applicable to casings must be calculated so as to ensure the control of the stratigraphic survey. It must be posted on the activity site.

89. 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.

90. 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, where necessary to differentiate a number of formations, characterize the carbon isotope ratios.

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.

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

91. The authorization holder who collects a sample of the drilling core must 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, unless the holder demonstrates that an adjacent wellbore has already been sampled and the spatial variability makes the sampling of the stratigraphic survey unnecessary.

Cutting samples must be taken 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.

92. 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.

93. 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.

94. The authorization holder submits to the Minister the samples whose analysis is completed not later than 180 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.

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

96. 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 drilling fluids indicates that the cement height required for cementing has not been reached;

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

97. 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

98. 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.

99. 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.

100. 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.

101. The authorization holder must cut the casings at a minimum of 2 m below the surface of the bottom of the water. 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 if adequate protective measures are implemented.

102. The authorization holder must weld a ventilated steel cover at the top of the casings.

103. 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.

104. If applicable, before the demobilization of the installations, the authorization holder must ensure that the structure is free from plants and animals.

105. 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.

106. 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 END OF ACTIVITIES REPORT

107. 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 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 of the enterprises that carried out the work;

(6) the measured depth reached during the day;

(7) the composition of the drilling fluid and spacer 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 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 logs 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;

(22) the composition, concentration and detailed assessment of all the products identified in the technical program that are stored or used on the activity site;

(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.

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

109. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 name and contact information of the enterprises that carried out the work;

(4) the type and name of the drilling installation, its registration number and the name of its owner;

(5) the type of navigation equipment used;

(6) the coordinates of the stratigraphic survey casing head on a plan provided by a land surveyor according to the NAD83 map reference system;

(7) 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;

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

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

(10) a summary of the abnormal meteorological conditions that caused the work 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 spacer fluid and the separating fluid used;

(f) the circulation pressures;

(g) the maximum pressure reached during cementing;

(h) an indication that the casing check valve is functional or, if not, the propping pressure applied and the duration; and

(i) 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 well logs, in particular those interpreted, scaled in true 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 Completions Committee;

(15) the measured temperature and pressure to the final depth of the stratigraphic survey;

(16) the data, recordings, results of the drill-stem tests, pressure and leak tests, leakoff tests and their interpretation;

(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 of them;

(20) the type of play encountered and a comparison with a similar play;

(21) a lateral section of the stratigraphic survey after the sealing, according to the measured depth and the true 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 stratigraphic survey and the diameters of each of the casings;

(d) the location of each of the casings;

(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 sheets;

(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 under the surface;

(28) a photograph of the ventilated steel cover welded at the top of the casings before the backfilling;

(29) a plan showing the layout of the activity site after the restoration work; and

(30) photographs of the entire restored activity site and the device installed in accordance with section 106.

CHAPTER VII
DRILLING AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

110. A licence holder who wishes to obtain a drilling authorization must apply to the Minister, in writing.

111. 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.

112. The application must be accompanied by

(1) the demonstration that the distances provided for in section 25 are complied with;

(2) 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 wellbores within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 122 and 125 are met;

(3) the drilling technical program provided for in section 113, signed and sealed by an engineer;

(4) the permanent well or reservoir closure and site restoration plan or, if applicable, its update, and the guarantee provided for in sections 289 and 291;

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

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

113. The drilling 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 or revised the program;

(3) the demonstration that, during the positioning of the well, the regional and local geology and the presence of adjacent wellbores have been taken into consideration;

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

(5) if applicable, the list of the data that could be consulted with respect to the adjacent wellbores;

(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 enterprises 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 lateral 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 used, 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) if applicable, the list of the planned coring intervals;

(18) the list of pressure and leak tests, drill-stem tests, leakoff tests and all other tests planned;

(19) the list of the well logs 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 spacer 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 Completions Committee;

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

(d) the diameters of the well according to the measured depth and the true vertical depth on a lateral section, to the bottom of the planned well;

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

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

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

(h) 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;

(i) 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 Completions Committee, indicating, in particular, the type of centralizers, their dimension, frequency of installation and installation; and

(j) 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, except a storage well the evaluation and calculation of which 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 Completions Committee and including, in particular,

(a) the diameters of the casing strings compared with the measured depth and the true 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) if applicable, 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) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained;

(30) if applicable, the list of licences, certificates and other authorizations to be obtained;

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

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

Where work is planned in a temporarily closed well, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

114. 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the results of the test to the Minister.

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

115. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the drilling work.

116. 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 start 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.

117. 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, as soon as possible, of the resumption of the work.

118. 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

119. 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% in the final depth of the well resulting from a slightly different geological projection;

(2) a change in the position of the casing head 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 log if, in the latter case, it is not required under section 129 or 130.

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

120. 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 Completions 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 wellbore in a constant and safe manner.

121. If the water level allows, 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 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;

(4) a telephone number in case of emergency;

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

(6) the indication that access to the activity site is prohibited without the holder's authorization.

122. The authorization holder may not position the casing head of a well

(1) 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;

(2) less than 100 m from a cemetery;

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

(4) less than 200 m from a surface improvement work for sporting or recreational purposes;

(5) less than 275 m from a site classified as a heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act;

(6) less than 300 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(7) less than 550 m from a health and social services institution, an educational institution, a building in which childcare services are offered, or any building having 3 floors or more or a floor area greater than 10,000 m^2;

(8) less than 1,000 m from an airport or an aerodrome; or

(9) less than 1,600 m from any underground reservoir used for petroleum storage purposes and for which the holder has no right.

The distances must be measured horizontally, in a straight line, from the casing head 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 infrastructures belonging to the authorization holder or used for the holder's work.

123. The authorization holder may not position the casing head of a well

(1) in lac Témiscamingue, including the mouths of other communicating watercourses;

(2) in lac des Deux Montagnes, situated in the Municipalité régionale de comté Deux-Montagnes;

(3) in lac Memphrémagog;

(4) in lac Saint-Jean, situated mainly in regional county municipalities of Lac-Saint-Jean-Est and Domaine-du-Roy;

(5) in rivière des Outaouais, from lac Témiscamingue to the St. Lawrence River;

(6) in the Beauharnois canal;

(7) in the Lachine canal;

(8) in rivière des Milles Îles;

(9) in rivière des Prairies, situated mainly in Municipalité régionale de comté Les Moulins;

(10) in rivière Richelieu, situated mainly in Municipalité régionale de comté Pierre-De Saurel;

(11) in rivière Saint-Maurice, from the Shawinigan dam to the St. Lawrence River;

(12) in rivière Saguenay, from lac Saint-Jean to the St. Lawrence River;

(13) in the St. Lawrence River;

(14) in the Baie de Gaspé;

(15) in the Baie des Chaleurs;

and

(16) in the Baie La Malbaie, situated in the Municipalité régionale de comté Le Rocher-Percé.

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

125. The authorization holder may not position the activity site less than 100 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.

126. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

127. 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 wellbore, 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 are utilized to minimize the risk of loss of well control in the event of lost circulation, fluid kicks or blowout.

128. The authorization holder must ensure that the measurements of the well path deviation are taken at intervals that allow the position of the wellbore to be determined accurately and that do not exceed 150 m, unless there is a wellbore stability problem.

129. The authorization holder must carry out the well logs 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 casing head and in depth, under the surface casing.

The holder must, in particular, carry out

(1) a gamma ray logging from the well casing head to the final depth of the wellbore;

(2) a neutron logging from 25 m under the well casing head 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 wellbore.

In the case of an electrical resistivity or porosity logging, it must be carried out at least until a 70° angle has been reached in relation to the vertical.

The Minister may exempt the holder from the requirement to carry out certain well logs 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.

130. The authorization holder must demonstrate the uniform coverage of the cement behind each casing by carrying out a cement assessment sonic or ultrasonic logging or by any other method.

In the case of a log in a horizontal well, it must be carried out at least until a 70° angle has been reached in relation to the vertical.

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

132. Where the authorization holder drills a well in a region where the geology is unknown, in a region where shallow gas kicks have been documented or it is foreseeable that a petroleum zone will be intersected, the holder must use a diverter to drill to the surface casing installation depth.

133. 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.

134. 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.

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 a true 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 wellbore 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 Completions Committee.

140. Where surface casings and, if applicable, intermediate casings are subject to wear caused by the movement and rotation of the drill-stems, they must be inspected to determine their integrity, using a pressure test or a well log.

141. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely displace the drilling fluids and remove the mud cakes from the walls of the well in accordance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

142. During cementing, the authorization holder must ensure that surface fluids and cement 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 Completions 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 conduct an integrity test or a leak pressure test on the geological formation.

The test must be conducted at a pressure that ensures the safety of the drilling work to the installation depth of 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 maximum pressure applicable to the casings must be calculated to ensure control of the well. It must be posted on the activity site.

148. 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.

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

In the case of gas, the analyses must, in particular, identify its composition and, where necessary to differentiate a number of formations, characterize the carbon isotope ratios.

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.

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

150. The authorization holder who collects a sample of the drilling core must 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, unless the holder demonstrates that an adjacent wellbore has already been sampled and the spatial variability makes the sampling of the stratigraphic survey unnecessary.

Cutting samples must be collected at the following intervals:

(1) every 25 m, from the top of the rock to a true vertical depth of 50 m above the shallowest anticipated petroleum objective;

(2) in the case of vertical and directional wells, every 5 m from a true 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 a true 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.

151. 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.

152. 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.

153. 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.

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

155. 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 drilling fluid indicates that the cement height required for cementing is not reached;

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

156. 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.

157. An authorization holder must, in the case of an observation well, use a wellhead.

158. 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 a geologist or an engineer containing a summary of the data collected and the frequency of the collection and the annual inspection worksheet provided for in Schedule 2.

A storage licence holder may send a synthesis report on all the observation wells drilled in the territory subject to the licence. Despite the foregoing, the holder must send an annual inspection worksheet for each well.

DIVISION IV
DAILY REPORT AND END OF ACTIVITIES REPORT

159. 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 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 spacer 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 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 logs 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;

(22) the composition, concentration and detailed assessment of all the products identified in the technical program that are stored or used on the activity 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.

160. The authorization holder must send to the Minister, every Tuesday, the daily reports of the preceding week until the end of the drilling or re-entry work. If the Tuesday is a holiday, the report is sent on the first working day that follows.

161. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, starting from the rig release, an end of activities 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 casing head 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) the 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 spacer fluid and the separating fluid used;

(f) the circulation pressures;

(g) the maximum pressure reached during cementing;

(h) an indication that the casing check valve is functional or, if not, the propping pressure applied and the duration; and

(i) 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 well logs, in particular those interpreted, scaled in true 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 Completions 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) 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 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 Completions Committee;

(20) the list of the drill bits used, their type and the number of metres drilled by each of them;

(21) a technical description of the condition of the well after the drilling;

(22) the classification of the well determined according to Schedule 1;

(23) a lateral section of the well, according to the measured depth and the true 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 well and the diameters of each of the casings;

(d) the location of each of the casings;

(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;

(24) the daily tour sheets;

(25) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(26) the technical reports prepared by the enterprises that carried out the work;

(27) the type of play encountered and a comparison with a similar play; and

(28) photographs of the entire site after the drilling work.

CHAPTER VIII
COMPLETION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

162. A licence holder who wishes to obtain a completion authorization must apply to the Minister, in writing.

163. 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.

164. The application must be accompanied by

(1) the demonstration that the distances provided for in section 25 are complied with;

(2) the completion technical program provided for in section 165, signed and sealed by an engineer;

(3) payment of the fee of $2,555; and

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

165. 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 or 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 lateral section of the well indicating the technical elements;

(7) the type of service rig, 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 wellbores 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 true 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) if applicable, the type of packers installed and the installation depths;

(26) if applicable, a casing perforation program indicating, in particular, the number and the type of perforations;

(27) if applicable, the list of the planned well logs;

(28) if applicable, the list of expected pressure and leak tests;

(29) if applicable, 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;

(37) if applicable, the list of licences, certificates and other authorizations to be obtained;

(38) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well and the depth of the wellhead under the water makes it accessible, 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

166. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the completion work.

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

167. The authorization holder must, at least 7 days before, notify the Minister of the expected date for the start of the completion work.

Where the holder cannot comply with the start 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.

168. 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

169. 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.

170. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

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 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.

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 packer 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 rig 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 Completions Committee.

175. 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.

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, until the end of the work, keep the necessary protective barrier 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 or the casing shoe, 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 END OF ACTIVITIES 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 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 logs 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) if applicable, the technical details of the completion by chemical stimulation, 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 composition, concentration and detailed assessment of all the products identified in the technical program that are stored or used on the activity 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;

(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 Tuesday, the daily reports of the preceding week until the end of the completion work. If the Tuesday 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, an end of activities 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) a summary of the abnormal meteorological conditions that caused the operation delay and the corrective measures taken;

(7) a description of the condition of the well including a lateral section indicating the mechanical conditions of the well after the completion;

(8) the classification of the well determined according to Schedule 1;

(9) if applicable, a description of the type of completion carried out and its degree of recovery;

(10) the results of the pressure and leak tests;

(11) 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;

(12) the results of the injectivity tests;

(13) the results of the other tests carried out;

(14) the interpreted well logs and the results of the related analyses and studies;

(15) if applicable, the analyses of recovered petroleum or water;

(16) the number, interval, type and pressure of each series of perforations;

(17) the volume of flow-back water;

(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 technical reports prepared by the enterprises that carried out the work; and

(20) if applicable, the other data collected during the completion work.

CHAPTER IX
FRACTURING

185. Fracturing, in a well whose casing head is in a body of water, is prohibited.

186. Fracturing is prohibited in shale.

It is also prohibited at a true vertical depth of less than 1,000 m from the surface of the bottom of the water.

CHAPTER X
RECONDITIONING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

187. A licence holder who wishes to obtain a reconditioning authorization must apply to the Minister, in writing.

188. The application must contain

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

(2) the name, number and type of well; and

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

189. The application must be accompanied by

(1) the reconditioning technical program provided for in section 190, signed and sealed by an engineer;

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

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

190. 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 or 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 wellbores have been taken into consideration;

(12) the reasons justifying the reconditioning;

(13) the purpose of the reconditioning;

(14) a lateral 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 logs planned;

(17) the type of service rig 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;

(e) if applicable, the maximum pressure for injecting the cement; and

(f) if applicable, the changes to the cement required 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;

(31) if applicable, the list of licences, certificates and other authorizations to be obtained;

(32) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well and the depth of the wellhead under the water makes it accessible, 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

191. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the reconditioning.

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

192. 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 start 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.

193. 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

194. 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.

195. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

196. 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.

197. The authorization holder must, until the end of the work, keep the necessary protective barrier to withstand the pressures provided for in the technical program.

198. 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.

199. 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 a well.

200. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service rig to alert onsite personnel.

201. 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.

202. 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 END OF ACTIVITIES REPORT

203. 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 elevation of the reference level and its identification;

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

(6) the name of the enterprises carrying out the reconditioning;

(7) a summary of the meteorological conditions;

(8) the result of the pressure and leak tests, including their 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 logs carried out;

(12) the type of packers 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;

(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.

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

205. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 lateral 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 logs and the results of the related analyses and studies;

(13) the technical reports prepared by the enterprises that carried out the work; and

(14) if applicable, the other data collected during the reconditioning activities.

CHAPTER XI
PETROLEUM EXTRACTION TESTS AND TRIAL TESTS FOR THE USE OF AN UNDERGROUND RESERVOIR FOR STORAGE PURPOSES

DIVISION I
PETROLEUM EXTRACTION TEST PROGRAM

206. An exploration licence holder who wishes to carry out petroleum extraction tests must submit a petroleum extraction test technical program for the Minister's approval.

207. 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 enterprises 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 used, the interpreted profile indicating the location of the zones subject to the tests;

(14) the methods planned to dispose of the substances extracted;

(15) the list of licences, certificates and other authorizations to be obtained, if applicable;

(16) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

DIVISION II
TRIAL TEST PROGRAM FOR THE USE OF AN UNDERGROUND RESERVOIR FOR STORAGE PURPOSES

208. An exploration licence holder who wishes to carry out trial tests for the use of an underground reservoir for storage purposes must submit trial test technical program for the use of an underground reservoir for storage purposes for the Minister's approval.

209. 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 enterprises 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; the Minister may exempt the holder if the holder demonstrates to the Minister the impossibility of carrying out the profiles considering the shallow depth of the reservoir;

(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;

(19) the list of licences, certificates and other authorizations to be obtained, if applicable;

(20) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

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

210. An exploration licence holder who carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes 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 start 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 TRIAL TESTS FOR THE USE OF AN UNDERGROUND RESERVOIR FOR STORAGE PURPOSES

211. The maximum duration of a test period is 240 consecutive days for the petroleum extraction tests and 365 consecutive days for the trial tests for the use of an underground reservoir for storage purposes.

The test period begins on the first day on which an exploration licence holder carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes and ends on the day on which the holder completely ceases to carry out the tests.

212. 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.

213. An exploration licence holder who carries out tests must use

(1) a bottom safety valve that closes the well above the packer; 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.

214. 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.

215. 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).

216. 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

217. An exploration licence holder who carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes 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.

218. An exploration licence holder who carries out tests must send to the Minister, every Tuesday, the daily reports of the preceding week until the end of the test period. If the Tuesday is a holiday, the report is sent on the first working day that follows.

219. 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) the 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 of the well; and

(e) in the case of trial tests for the use of an underground reservoir for storage purposes, the deliverability decline curve and the pressure rise curve;

(5) the realization cost of the tests carried out;

(6) the methods used to dispose of the substances extracted;

(7) the classification of the well determined according to Schedule 1; and

(8) the technical reports prepared by the enterprises that carried out the work.

The holder must also send to the minister in the same manner, as soon as the elements are available,

(1) in the case of petroleum extraction tests,

(a) the pressure rise curve; and

(b) for a gas well, the absolute potential flow; and

(2) the results of the analyses carried out including, in particular, the composition of the fluids extracted, injected, withdrawn and disposed of.

CHAPTER XII
SPECIFIC REQUIREMENTS RELATING TO THE PRODUCTION

DIVISION I
PETROLEUM PRODUCTION TESTS

220. A production licence holder must carry out production tests for all the wells drilled for production 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.

221. A production licence holder must measure the shut-in pressure of the pool before and after the production test.

222. 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 battery to determine the petroleum and water production rate.

The holder uses the results of those tests to allocate the monthly production of the battery 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 deemed necessary by the Minister.

The term "battery" 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.

223. During the tests, a production licence holder must measure the pressure interference from one well to the other.

224. 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.

225. 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.

226. 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).

227. 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.

228. 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
PETROLEUM ENHANCED RECOVERY

229. A production licence holder who wishes to carry out a petroleum enhanced recovery project must submit an enhanced recovery technical program for the Minister's approval.

230. The enhanced recovery technical program must be signed and sealed by an engineer and 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 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 lateral 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;

(10) if applicable, the list of licences, certificates and other authorizations to be obtained;

(11) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

231. 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.

232. The holder may start petroleum enhanced recovery if no deformity has been identified on the casings and production tubes, and if the well is clean.

CHAPTER XIII
AUTHORIZATION TO PRODUCE BRINE

233. The production of brine in a well whose casing head is in a body of water, is prohibited.

CHAPTER XIV
WELL CLOSURE

DIVISION I
TEMPORARY OR PERMANENT CLOSURE AUTHORIZATION

§1. *Temporary closure authorization*

§§1. *Conditions for obtaining an authorization*

234. 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.

235. On request and after analysis of the annual report provided for in section 158, 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.

236. A licence holder who must obtain a temporary well closure authorization must apply to the Minister, in writing.

237. 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.

238. The application must be accompanied by

(1) the temporary closure technical program provided for in section 239, signed and sealed by an engineer;

(2) payment of the fee of $2,058; and

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

239. The temporary closure 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 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 3;

(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 enterprises charged with carrying out the work;

(13) a lateral 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 rig and equipment to be used and their specifications, in particular, the configuration of the wellhead and the surface casing vent flow;

(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 23 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) if applicable, the list of the planned well logs;

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

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

(22) if applicable, the list of licences, certificates and other authorizations to be obtained;

(23) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

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

240. 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.

241. 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

242. 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.

243. The authorization holder must, within 6 months after the granting of the authorization by the Minister, complete the temporary closure work.

244. 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.

245. 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.

246. 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;

(5) that the valve on the surface casing vent flow 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 vent flow;

(7) if applicable, to disconnect the wellhead flow pipe; and

(8) to chain and lock the valves or remove the handles.

247. 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.

248. The blowout prevention system and the wellhead must be designed to withstand the maximum pressures provided for in the technical program.

249. 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.

250. 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.

251. 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.

252. The authorization holder who observes the presence of an emanation at the surface casing vent flow using a bubble point test must also measure the emanation flow over a 24-hour period.

253. The authorization holder must, except for a well whose risk potential has been classified as low under Schedule 3, draw out the polished drill-stem from the well if it is connected to a pumpjack.

254. In the case of a well whose risk potential has been classified as moderate under Schedule 3, 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 of the bottom of the water.

255. In the case of a well whose risk potential has been classified high under Schedule 3, the authorization holder must close the well in accordance with the generally recognized best practices.

256. 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.

257. If applicable, before the demobilization of the installations, the authorization holder must ensure that the installations are free from plants and animals.

258. 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 end of activities report

259. 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 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 logs 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 identified in the technical program that are stored or used on the activity site;

(12) the volume and composition of the gas used, released, incinerated or burned 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 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.

260. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 well logs, in particular those interpreted, scaled in true vertical depth and the corrections made;

(11) a lateral 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

261. 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 23; and

(3) ensure the preventive maintenance of the well and the wellhead so as to prevent any incident or accident that would undermine the safety of persons and property, and environmental protection.

§2. Permanent closure authorization

§§1. Conditions for obtaining an authorization

262. A well whose risk potential has been classified as low under Schedule 3 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 3 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.

263. A licence holder who wishes to obtain a permanent well closure authorization must apply to the Minister, in writing.

264. 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 deemed necessary by the Minister.

The application must be accompanied by payment of the fee of $2,677.

265. 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the results of the test to the Minister.

§§2. Time periods and notice of the start of the work

266. 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 start 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.

267. 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

268. The authorization holder must comply with the permanent well or reservoir closure and site restoration plan.

269. 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 fluid emanation into the atmosphere;

(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.

270. The authorization holder must, before the permanent closure of the well, conduct a flow test at the surface casing vent flow to determine if fluid is escaping from it.

A bubble test must be conducted using a pipe submerged at 2.5 cm under the water for at least 10 minutes. If, during that period, bubbles are present, the well is considered to have flow at the surface casing vent flow.

In such a case, the holder must

(1) conduct a flow test of that flow until a stabilized flow is obtained; and

(2) close the surface casing vent flow until a stabilized pressure is obtained.

The pressure is considered to be stabilized if, over a 6-hour period, the change in pressure is less than 2 kPa/h.

271. While performing the work for permanent closure, the holder must use a wellhead, a blowout prevention system or 2 protective barriers to withstand the pressures provided according to the needs of the activity performed.

272. 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.

273. 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.

274. 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.

275. 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.

276. 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 Completions Committee.

277. 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.

278. 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 Completions Committee.

279. The authorization holder must verify the position of the top of each of the cement plugs.

280. The authorization holder must cut the casings at 2 m below the surface of the bottom of the water. 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 if adequate protective measures are implemented.

281. The authorization holder must weld a ventilated steel cover at the top of the casings.

282. 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.

283. 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.

284. If applicable, before the demobilization of the installations, the holder must ensure that the installations are free from plants and animals.

285. 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 end of activities report

286. 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 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 logs 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 identified in the technical program that are stored or used on the activity 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.

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

288. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 start and end dates of the work;

(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 vent flow 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 below the surface;

(16) a photograph of the ventilated steel plate welded at the top of the casings before the backfilling;

(17) a lateral section of the well after the permanent closure, according to the measured depth and the true 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 produce petroleum;

vi. the layers of abnormal pressure; and

vii. the areas of circulation loss;

(b) the location of each of the casings;

(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

289. 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 to be 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 rig and equipment to be used and their specifications;

(18) a lateral 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 Completions 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) if applicable, 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 at the surface, there was no gas emanation;

(23) a plan showing the extent of the activity site;

(24) the list of equipment and facilities to be removed from the work site; and

(25) 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.

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.

290. 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

291. 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 contract 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).

292. In the case of a guarantee furnished according to subparagraph 3 or 6 of the first paragraph of section 291, 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 declaration of satisfaction or the certificate of release 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 declaration of satisfaction or 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.

293. 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.

294. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 4 of the first paragraph of section 291, and of the security and guarantee contract 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 declaration of satisfaction or 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 and 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.

295. The guarantee furnished may be replaced at any time by another guarantee that complies with the requirements of this Regulation.

§3. Fees payable

296. 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.

297. 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
FEES, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEES

298. 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.

299. The amounts of the duties and fees payable are adjusted on 1 April of each year according to the same rate resulting from the application of section 83.3 of the Financial Administration Act (chapter A-6.001). Despite the foregoing, the amounts are not adjusted where, in the preceding year, they were fixed or increased otherwise than under that provision.

Adjusted amounts are reduced to the nearest dollar where they contain a fraction of a dollar less than $0.50. They are increased to the nearest dollar where they contain a fraction of a dollar equal to or greater than $0.50. The application of the rounding rule may not operate to decrease the amounts to below their pre-adjustment level.

If an adjusted amount cannot be rounded to the nearest dollar, the annual adjustments are deferred and accumulated until the amounts payable include a decimal of 0.5 or more.

The Minister publishes the result of the adjustment in Part 1 of the *Gazette officielle du Québec*.

300. The amounts of the duties, fees and royalties payable bear interest, at the rate fixed under the first paragraph of section 28 of the Tax Administration Act (chapter A-6.002), as of the thirtieth day following the date on which they are owed. Interest is capitalized monthly.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

301. 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, 30, 34, 35, the first paragraph of section 41, sections 42, 43, 53, 54, the first paragraph of section 62, sections 63 to 65, 68, 90, 91, the first paragraph of section 92, section 93, the first and second paragraphs of section 94, sections 95, 107, 108, 115 to 118, 121, 149, 150, the first paragraph of section 151, section 152, the first and second paragraphs of section 153, sections 154, 158 to 160, the first paragraph of section 166, sections 167, 168, 182, 183, the first paragraph of section 191, sections 192, 193, 203, 204, 210, 217 to 219, 224, 228, 231, the first paragraph of section 240, sections 241 and 259, the first and second paragraphs of section 266, and sections 267, 286, 287 and 290.

302. 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 14, sections 24, 28, 32, the first paragraph of section 33, sections 36, 44, the first paragraph of section 45, paragraphs 1 and 3 of section 46, sections 47 to 52 and 66, the first paragraph of section 69, sections 70 to 72, paragraphs 1 and 3 of section 73, sections 74 to 85, the first paragraph of section 86, the first and second paragraphs of section 87, section 88, paragraph 2 of section 89, sections 96, 97, the first paragraph of section 98, section 99, the first paragraph of section 100, sections 101, 102, 105, 106, 119, the first paragraph of section 122, sections 123 to 126, paragraphs 1 and 3 of section 127, section 128, the second paragraph of section 129, sections 130 to 134, subparagraphs 1 and 3 of the first paragraph of section 136, sections 137 to 140, 141, 142, the first paragraph of section 143, sections 144 to 148, 155 to 157, 169, 170, the first paragraph of section 171, section 172, paragraphs 3 and 4 of section 173, sections 174 to 180, 194, 195, 197 to 202, 206, 208, the first paragraph of section 211, section 212, paragraph 2 of section 213, sections 214, 215, 216, 220, 221, the first and second paragraphs of section 222, sections 223, 225 to 227, 229, 232 to 234, 242 and 243, paragraphs 4 to 8 of section 246, and sections 247 to 258 and 261.

303. 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 8, 9, 11 to 13, 18 to 20, 22, the first paragraph of section 23, and sections 25 to 27, 185 and 186.

DIVISION III
OFFENCE

304. 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

305. A permanent well closure authorization issued under the Mining Act (chapter M-13.1), 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 that date, 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 that date, 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*).

306. 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 permanent well closure and site restoration plan and the guarantee provided for in Chapter IV of the Act.

DIVISION II
FINAL

307. 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, if applicable,

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, non-combustible gas or other
Type of well	Exploration, production or storage, 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, and the pipeline construction or use authorization, made by Order in Council 1253-2018 dated 17 August 2018
Service – disposal	Well used as permanent location to store discharges in a reservoir
Service - relief	Well used to intercept another well that is blowing out
Observation	Well used to monitor the conditions of a geological formation or other wells of a reservoir or to determine the decline characteristics 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
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 for which authorized work is underway
Production	Well from which fluids are extracted
Injection	Well in which fluids are pumped
Temporary interruption (*shut-in*)	Well in which work is interrupted for a short period, between 2 activities or 2 operations
Temporary closure	Well that has been temporarily closed
Permanent closure	Well that has been permanently closed in accordance with the well or reservoir closure and site restoration plan
Restoration	Well that has been permanently closed and whose work site has been restored to the satisfaction of the Minister in accordance with section 114 of the Act
Cancellation	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 elements covered.	

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.		A test of gas migration in the soil has been carried out.	

WELLHEAD – If applicable, check the integrity.			
A wellhead is present.		A surface casing vent flow is present.	
All valves are chained and locked or the handles have been removed.		The surface casing vent flow valve is open.	
The wellhead is free of corrosion or erosion.		The surface casing vent flow is blocked.	
The wellhead is designed to withstand the measured pressure.		Insert the flow measured at the surface casing vent flow (with the unit).	
The flow pipe is disconnected from the wellhead.		Insert the concentration of gas at the vent 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 vent flow.		The emanation is only composed of gas.	
A leak is observed in the guide tube.		Indicate the composition of the fluid at the vent.	
		There is a leak on the vent joints and welds.	

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:		Pressure of the surface casing:	
Pressure of the production tubing:		Are the pressures constant with respect to the last measurements?			

REGULAR PREVENTIVE MAINTENANCE			
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 instruments used for the inspection (flow meter, gas detector, etc.).			

APPENDICES – If applicable, attach at least one photograph of the protected perimeter of the well and one 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

CLASSIFICATION OF A WELL'S RISK POTENTIAL

During the classification of a well's risk potential, if a well meets the criteria of the various levels of risks, the highest risk must take precedence.

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	Well containing gas with a content in H_2S ≥ 5% Sour gas well	Not applicable	Not applicable

103690

Gouvernement du Québec

O.C. 1252-2018, 17 August 2018

Petroleum Resources Act
(chapter H-4.2)

Petroleum exploration, production and storage on land

Regulation respecting petroleum exploration, production and storage on land

WHEREAS, under sections 10 and 68, the second paragraph of section 69, section 70 and the second paragraph of section 71 of the Petroleum Resources Act (chapter H-4.2), the Government may set forth, by regulation, the terms and conditions for awarding an authorization to produce brine, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 73 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a geophysical surveying or geochemical surveying authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 76 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a stratigraphic survey authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and second paragraphs of section 78, section 80, the second paragraph of section 100, section 102 and the second paragraph of section 103 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a drilling authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the second paragraph of section 84, section 85 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a completion authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under section 88 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a fracturing authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the second paragraph of section 90, section 91 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a reconditioning authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the third paragraph of section 92, sections 93, 95 and 96 and the second paragraph of section 100 of the Act, the Government may set forth, by regulation, the terms and conditions for awarding a temporary or permanent closure authorization, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first paragraph of section 131 of the Act, the Government may determine, by regulation, the protective and safety measures that must be implemented by a licence holder or any other person in charge of a well;

WHEREAS, under section 191 of the Act, the Government may, by regulation, specify that a failure to comply with the regulation may give rise to a monetary administrative penalty and set forth the amounts and the methods for determining them;

WHEREAS, under paragraph 1 of section 207 of the Act, the Government may, by regulation, determine the form and manner in which all the documents required for the purposes of the Act and the regulations are to be sent;

WHEREAS, under paragraphs 2 to 4 of section 207 of the Act, the Government may, by regulation, determine the fee payable for the assessment of a permanent well or reservoir closure and site restoration plan with a view to its approval or revision, the fee payable for the assessment and inspections conducted for the purpose of issuing a certificate of release under section 112 of the Act, and the fee payable by a person to whom an inspector has given a written notice of non-compliance with the Act or the regulations;

WHEREAS, under paragraph 5 of section 207 of the Act, the Government may, by regulation, determine the provisions of a regulation whose violation constitutes an offence;

WHEREAS, under section 287 of the Act, the Government may, by a regulation made before the date that is 18 months after the date of coming into force of the Act, enact any other transitional measure required for the carrying out of the Act;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft Regulation respecting petroleum exploration, production and storage on land was published in Part 2 of the *Gazette officielle du Québec* of 20 June 2017 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, on the recommendation of the Minister of Energy and Natural Resources:

THAT the Regulation respecting petroleum exploration, production and storage on land, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

Regulation respecting petroleum exploration, production and storage on land

Petroleum Resources Act
(chapter H-4.2, ss. 10, 26, 68, 69, 2nd par., 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., 131, 1st par., 191, 207, pars. 1 to 5, and 287)

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 wellbores and the land laid out in the immediate vicinity to receive the equipment and infrastructures necessary for the operations carried out in the wellbores or, in the case of a survey, the zone corresponding to the perimeter of the area of the survey; (*site des activités*)

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

"bank" means sloping land, of a height equal to or greater than 4 m, having at least 1 segment with a slope whose gradient is greater than 14° (25%) over a height of 4 m; the top and base of the bank are determined by a segment with a slope whose gradient is less than 8° (14%) over a horizontal distance greater than 15 m; (*talus*)

"blowout preventer" means all the valves and devices located at the top of a well used to control formation fluid and block and monitor the well during the various activities; (*bloc obturateur de puits*)

"blowout prevention system" means all the control equipment of a well including in particular a blowout preventer, an accumulator and a pipe network allowing the safe flow of fluids during activities in a well; (*système anti-éruption*)

"casing head" means the top part of a wellbore that forms the interface between its buried part and the ground surface; (*collet*)

"casing shoe" means an annular part, generally filled with cement, attached to the bottom of a casing string that allows to guide the casing string; (*sabot de tubage*)

"casing string" means the entire casing of a wellbore 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*)

"conductor casing" means the first casing installed at the time of the construction of a wellbore to prevent the collapse of unconsolidated formations near the surface; (*tubage conducteur*)

"directional well" means a well whose orientation and slope are controlled using dedicated equipment and techniques; (*puits directionnel*)

"diverter" means a device that ensures a safe flow of fluids resulting from a shallow blowout or kick and that may be used where the conductor casing is installed; (*déflecteur*)

"drilling fluid" means the mud circulating in the drill rod and coming up in the annular space during drilling to discharge cuttings, cool and lubricate the bit and maintain the desired pressure in the wellbore; (*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 using drill stems as flow pipe in the wellbore and dedicated equipment; (*essai aux tiges*)

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

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

"fracturing test" means a procedure carried out before fracturing, which involves the injection of a fluid and allows to anticipate in particular the length of fractures, the reaction of geological units to fracturing and the confinement potential of the fracturing fluids by the geological feature and the fracturing pressure of rocks associated to a reservoir; (*essai de fracturation*)

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

"horizontal well" means a well whose wellbore angle, from vertical, exceeds 80°, including a section extended in the reservoir; (*puits horizontal*)

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

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

"integrity" means, in the case of a wellbore, the condition that ensures containment and prevention of a blowout or migration of fluids in the underground or surface formations with the use of technical and operational solutions; (*intégrité*)

"intermediate casing" means a casing string generally installed after the surface casing and before the production casing, that offers protection against cavities and abnormal pressures of the formations traversed and that allows the use of drilling fluids of various densities necessary to control previous formations; (*tubage intermédiaire*)

"measured depth" means the length of travel of the wellbore; (*profondeur mesurée*)

"miss-fire" means any portion or remainder of a shotpoint containing explosives that have not completely detonated following blasting operations; (*raté*)

"observation well" means a well that is not in production and that is 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 (chapter Q-2, r. 35.2); (*puits d'observation*)

"packer" means an expendable device used to close a wellbore or isolate an annular space that allows a controlled production, injection or treatment; (*garniture d'étanchéité*)

"petroleum enhanced recovery" means any petroleum recovery using methods for holding the pressure of the pool, in particular by injecting fluids; (*récupération assistée d'hydrocarbures*)

"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*)

"protective barrier" means a mechanism installed in 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*);

"reconditioning" means major maintenance work or corrective activities on a well to modify it that require the use of a reconditioning device or other service rig; (*reconditionnement*)

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

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

"shale" means a non-metamorphic geological unit consisting of sedimentary rocks with a grain size less than 0.0625 mm and consisting of at least 20% of clay minerals and less than 65% of carbonates, such as Utica Shale; (*schiste*)

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

"surface casing" means a casing in a competent formation after the installation of the conductor casing to provide structural support for placing a diverter or a blowout prevention system and for the subsequent casing strings, prevent the walls from collapsing and protect against underground water contamination; (*tubage de surface*)

"surface casing vent flow" 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*)

"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*)

"true vertical depth" means the vertical distance from a point in the wellbore to a reference point on the surface, generally the drive bushing; (*profondeur verticale réelle*)

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

"well log" means measurement or recording based on the depth of a characteristic of a geological formation carried out from a wellbore; (*diagraphie*)

"wellbore" means a well or a stratigraphic survey, including the open part; (*trou de forage*)

"wellhead" means the surface end of a well including elements to hang casings during the construction phase and a means to install production tubing and place valves and surface flow and pressure control installations in preparation for the well production phase; (*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 aquifer is set at 200 m below the surface, unless a hydrogeological study or an analysis of an adjacent wellbore 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.

The electronic version of the following documents must also be sent:

(1) well log raw data, in an ASCII file or an equivalent version;

(2) data produced by a geographical information system (GIS) software, in a shapefile.

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

CHAPTER II
SAFETY AND PROTECTIVE MEASURES AND INCIDENT NOTICE

DIVISION I
SAFETY AND PROTECTIVE MEASURES

6. A licence holder must ensure that the work teams are composed of 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.

The licence holder must also ensure that the drilling rigs are certified according to the applicable recommended practices published by the Canadian Association of Oilwell Drilling Contractors, where applicable.

The wellhead or the blowout prevention system must be chosen and designed in accordance with the Industry Recommended Practices, IRP: #3, In Situ Heavy Oil Operations, and IRP: #5, Minimum Wellhead Requirements, published by the Drilling and Completions Committee.

The Minister may, in the case of the second and third paragraphs, accept the application of other standards if the holder demonstrates the equivalence.

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 wellbore.

10. In the case of a loss of control of a wellbore, a licence holder must close the valves of all other wellbores of the activity site until the wellbore is again controlled.

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 on 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 3 of the second paragraph of section 29 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 must also ensure that the activities are carried out so as to reduce to a minimum the production of residual materials.

14. A licence holder must ensure that the activities are carried out so as to eliminate or reduce to a minimum the volume of gas released into the atmosphere.

To that end, the licence holder must in particular

(1) contribute to the combustion of gases using a pilot ignition at the flare or other device, or their recovery, where possible;

(2) implement a leak inspection plan;

(3) select and install equipment according to the best practices; and

(4) prepare equipment operating procedures according to the best practices.

15. A licence holder using water for the activities following the cementing of the surface casing must ensure to prevent any corrosion in particular by microorganisms and must keep on the activity site the analysis certificate for the water used.

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

17. No person may access the activity site or a site where there is a temporarily closed well without the authorization of the holder of a licence, except persons authorized by law.

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 wellbore 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.

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 such a risk if any of the following situations is detected:

(1) there is an surface casing vent flow 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 packer or casing;

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

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

22. The holder of an exploration or production licence or an authorization to produce brine may not, in the territory of any urbanization perimeter delimited in a land use and development plan made under the Act respecting land use planning and development (chapter A-19.1) and at less than 1,000 m from the latter, conduct geophysical surveying or geochemical surveying, drill a stratigraphic survey and drill, re-enter and complete a well in the ground.

The holder of a storage licence may not, in such a territory and at less than 1,000 m from the territory, conduct geophysical surveying or geochemical surveying, drill a stratigraphic survey and a well, and fracture a well in the ground.

23. The licence holder may not conduct the activities referred to in section 22 at less than 1,000 m from a body of water.

Despite the foregoing, the Minister may reduce that distance if the holder demonstrates to the Minister that the activities planned do not compromise the integrity and conservation of the body of water. At the request of the Minister, the holder supports this demonstration by submitting to the Minister a technical environmental study signed by an engineer from a consulting engineering firm independent from all the enterprises of the holder.

DIVISON II
INCIDENT NOTICE

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

(1) damage to the integrity of a wellbore;

(2) a casing corrosion problem;

(3) an unexpected loss of pressure in a wellbore;

(4) an unexpected detection of hydrogen sulfide (H_2S);

(5) a blowout;

(6) the detection of any of the situations provided for in the second paragraph of section 20;

(7) a fire or an explosion;

(8) vandalism;

(9) the triggering of the emergency response plan provided for in subparagraph 3 of the second paragraph of section 29;

(10) damage to private property;

(11) ground movement;

(12) 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 schedules.

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 wellbore.

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

In the case of ground movement, the Minister may require geotechnical expertise.

25. After having received an incident notice under section 24, 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

26. 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.

27. 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.

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

29. The application for authorization or approval of an activity, except the authorization for geochemical surveying and the approval of the petroleum enhanced 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 casing head and the bottom of the wellbore 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 deemed necessary 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.

The Minister may exempt the holder from providing a safety and community involvement program if the holder demonstrates that the duration and scope of the activity do not justify such a program.

CHAPTER IV
MEASUREMENT

30. 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.

Where the measurements of the volume or flow of a fluid to be measured by the holder cannot be taken, the holder may estimate them. If so, the holder must, when they are sent to the Minister, indicate the circumstances preventing the holder from taking accurate measurements.

31. 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.

32. 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 30 days following the calibration.

33. 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.

34. 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.

The Minister may exempt the holder from the allocation where the holder demonstrates that it is technically impossible to carry out such an allocation.

CHAPTER V
GEOPHYSICAL OR GEOCHEMICAL SURVEYING AUTHORIZATION

DIVISION I
AUTHORIZATION FOR GEOPHYSICAL SURVEYING

§1. Conditions for obtaining an authorization

35. A licence holder who wishes to obtain a geophysical surveying authorization must apply to the Minister in writing.

36. 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.

37. The application must be accompanied by

(1) the demonstration that the separation distances provided for in section 44 are complied with;

(2) the demonstration that the distances provided for in section 22 are complied with;

(3) a topographic map at a sufficient scale showing, in particular,

(a) the perimeter of the licence;

(b) the territory 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 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 airborne survey, the flight plan;

(4) the geophysical surveying technical program provided for in section 38, signed and sealed by a geologist, an engineer or a geophysicist;

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

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

If required and based on the area of the surveying, the licence holder may, for the purposes of subparagraph 3 of the first paragraph, submit a number of maps at different scales.

38. The geophysical surveying technical program must include

(1) the name and contact information of the geologist, engineer or geophysicist responsible for the technical 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 sources used;

(7) the acquisition parameters and the objectives of the surveying including, in particular, 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) a chronological and detailed description of the work to be carried out;

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

(13) a summary description of the equipment to be used;

(14) 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 shotpoints and fire them;

(b) the type of explosive substance; and

(c) the charge, in kilograms, to be detonated and, if it is greater than 20 kg, a technical demonstration that justifies exceeding that limit;

(15) in the case of a surveying involving the drilling of a shotpoint,

(a) the depth of the shotpoint and, if it is greater than 12 m, a technical demonstration that justifies exceeding that limit; and

(b) the method for sealing the shotpoint;

(16) if applicable, the list of licences, certificates and other authorizations to be obtained;

(17) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

§2. Time periods and notice of the start of the work

39. 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 period if the holder demonstrates the need therefor.

40. 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 start 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.

41. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date. If the geophysical surveying work is temporarily interrupted, the holder must also, as soon as possible, notify the Minister of the work resumption date.

§3. Conditions of exercise

42. 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, an engineer or a geophysicist 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 38;

(2) the cancellation of the drilling or loading of a shotpoint.

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

43. The authorization holder must, during the work, install a sign on each motorized equipment, except aircraft, indicating

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

(2) the number of the geophysical surveying authorization; and

(3) the type of surveying conducted.

44. The authorization holder who uses an explosive energy source must not position the shotpoints in the right of way of a public highway within the meaning of the Highway Safety Code (chapter C-24.2), a multipurpose 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 (chapter H-4.2). 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 casing head of an existing wellbore or, if the charge exceeds 2 kg, less than a distance corresponding to the following formula:

$A + B \times 4 = C$ 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 casing head of an existing wellbore, a septic 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.

45. Where a surveying requires drilling, the authorization holder must protect usable groundwater and use non-toxic substances when drilling and sealing shotpoints.

46. 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.

47. The authorization holder must ensure that a hole loaded with explosives is monitored until

(1) the mouth is packed with drill cuttings or a material that ensures an impervious and durable sealing;

(2) an indicator marking its 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 indicator; and

(4) the remaining drill cuttings are levelled uniformly around the shotpoint.

48. 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.

49. 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 mouth is done by the person who loaded and fired the shotpoint, 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 shotpoint and inserted in it is made of non-ferrous materials.

If dynamite has been used as explosive charge, it is prohibited to untamp a shotpoint unless a tamping plug is placed between the explosive charge and tamping at the time the shotpoint 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 material used. During untamping of a shotpoint, 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.

50. Where, during drilling or the blasting of a shotpoint, groundwater flows to the surface or where the presence of gas is detected, the authorization holder must

(1) interrupt the shotpoint drilling work in progress;

(2) make sure that no explosive charge is placed in adjacent shotpoints during the drilling; and

(3) stop the water or gas flow by sealing the shotpoint so that the fluid is confined in its initial zone, with a material that ensures an impervious and durable sealing.

Where the drilling of a shotpoint is completed and the explosive charge is already inserted when groundwater flows to the surface or the presence of gas is detected, the holder must blast according to the procedure provided for in the technical program before stopping the water or gas flow by sealing the shotpoint in accordance with subparagraph 3 of the first paragraph.

To continue drilling work, the holder must move or reduce the depth of the drilling of adjacent shotpoints to prevent new groundwater flows to the surface or another gas kick.

51. 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 shotpoint;

(2) seal the shotpoint 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 shotpoint.

If the ground around the shotpoint collapsed, the holder must put the site back to its initial level. The backfill material must be of the same type as the soil.

52. 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 end of activities report

53. 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 conducted and the energy sources 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.

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

55. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities report signed by a geologist, an engineer or a geophysicist 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, engineer or geophysicist 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 name of the region in which the surveying was carried out;

(6) the type of surveying conducted and the energy sources used;

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

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

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

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

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

(12) 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;

(13) 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) if applicable, the setting of the recording filters;

(14) a description of the data processing parameters;

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

(16) the following interpretation maps:

(a) in the case of seismic reflection surveying, the time structure map and the isochrone map of the main target and, if applicable, the secondary target and the interpreted profiles; if the stratigraphy of an adjacent wellbore is known, the holder must carry out the matching 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, potential faults, the depth of zones and their thickness;

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

(18) if applicable, the technical reports drawn up by the enterprises that carried out the data processing or interpretation;

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

(20) a description and photographs of the equipment used and their specifications;

(21) 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;

(22) in the case of a surveying involving the drilling of a shotpoint, the coordinates of the holes in which there is a groundwater spill on the surface or a gas kick according to the NAD83 map reference system and a description of the corrective measures taken; and

(23) 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 12 of the first paragraph, submit a number of maps at different scales.

§5. Notice to the Minister

56. The authorization holder must, within 24 hours, notify the Minister where a firing has misfired and in the cases referred to in section 50.

The notice must indicate the corrective measures taken by the holder or those planned with their schedules.

57. After having received a notice under section 56, 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

58. A licence holder who wishes to obtain a geochemical surveying authorization must apply to the Minister in writing.

59. 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.

60. The application must be accompanied by

(1) the demonstration that the distances provided for in section 22 are complied with;

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

(a) the perimeter of the licence;

(b) the activity site;

(c) the sampling points;

(d) public and private land; and

(e) in the case of an airborne survey, the flight plan;

(3) the geochemical surveying technical program provided for in section 61, signed and sealed by a geologist or an engineer;

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

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

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

61. The geochemical surveying technical program must contain

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

(14) if applicable, the list of licences, certificates and other authorizations to be obtained;

(15) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

§2. Time periods and notice of the start of the work

62. 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 period if the holder demonstrates the need therefor.

63. 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 start 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.

64. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date. If the geochemical surveying work is temporarily interrupted, the holder must also, as soon as possible, notify the Minister of the work resumption date.

§3. Conditions of exercise

65. 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.

66. The authorization holder must, during the work, install a sign on each motorized equipment, except aircraft, 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 conducted.

67. 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.

68. 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 end of activities report

69. 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 conducted;

(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.

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

71. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 name of the region in which the surveying was carried out;

(6) the type of surveying conducted;

(7) the objectives of the surveying including, in particular, the acquisition parameters and the type of analyses;

(8) the number of samples collected and the percentage of actual loss;

(9) the depth of the sample collection;

(10) the area covered by the surveying;

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

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

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

(14) 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;

(15) the list of the numbered sampling points and their GPS coordinates;

(16) a description of the data processing parameters;

(17) an interpretation map for gas sampling showing the spatial variation of the distribution of the gas concentrations showing anomalies;

(18) an analysis of the interpretation map specifying the correlations between the geology and the geochemical 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) if applicable, the interpretation of the results obtained in connection with the other geological and geophysical data available;

(22) if applicable, the type of petroleum anticipated in the targets identified by the surveying;

(23) if applicable, the discovery of a natural seepage;

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

(25) 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 14 of the first paragraph, submit a number of maps at different scales.

CHAPTER VI
STRATIGRAPHIC SURVEY AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

72. A licence holder who wishes to obtain a stratigraphic survey authorization must apply to the Minister in writing.

73. 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.

74. The application must be accompanied by

(1) the demonstration that the distances provided for in section 22 are complied with;

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

(a) the surface projection of the stratigraphic survey profile to the location of the bottom of the stratigraphic survey;

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

(c) the demonstration that the distances provided for in sections 84 and 86 are met;

(3) the stratigraphic survey technical program provided for in section 75, signed and sealed by an engineer;

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

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

75. The stratigraphic survey 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 or revised the technical 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 presence of adjacent wellbores has been taken into consideration for the safety of persons and property, environmental protection and the integrity of the stratigraphic survey;

(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 enterprises charged with carrying out the work;

(8) a lateral 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 used, 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) if applicable, the list of the proposed coring intervals;

(11) the list of pressure and leak tests, drill-stem tests, leakoff test and all other tests planned;

(12) the list of the well logs 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 spacer 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 Completions Committee;

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

(d) the diameters of the stratigraphic survey according to the measured depth and the true vertical depth on a lateral section, to the bottom of the planned stratigraphic survey;

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

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

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

(h) 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

(i) 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 Completions 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 Completions Committee and including, in particular,

(a) the diameters of the casing strings according to the measured depth and the true 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) if applicable, 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 wellbore 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 Completions 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;

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

(f) 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,

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;

(17) if applicable, the list of licences, certificates and other authorizations to be obtained;

(18) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

76. The holder may not position the activity site in a zone potentially exposed to ground movement particularly identified in accordance with government mapping available. If such mapping is not available, the holder may not position the activity site at less than a horizontal distance that corresponds to twice the height of a bank, measured in relation to the top and base of the bank.

Despite the foregoing, a licence holder may position an activity site in an area potentially exposed to ground movement if the holder provides the Minister, with the application, geotechnical expertise that

(1) assesses the stability of the activity site and confirms that the wellbore 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.

77. 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the test results to the Minister.

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

78. 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 period if the holder demonstrates the need therefor.

79. 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 start 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.

80. 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 as soon as possible of the resumption of the work.

DIVISION III
CONDITIONS OF EXERCISE

81. 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% in the final depth of the stratigraphic survey resulting from a slightly different geological projection;

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

(3) the addition or cancellation of a coring section, a drill-stem test, a well log, 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.

82. 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 Completions 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 stratigraphic survey in a constant and safe manner.

83. The authorization holder must, as soon as the work starts and until the site restoration work is undertaken, 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;

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

(6) the indication that access to the activity site is prohibited without the holder's authorization.

84. The authorization holder may not position the casing head 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, a pipeline or any other installation or infrastructure of the same type;

(3) less than 100 m from a cemetery;

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

(5) less than 200 m from a surface improvement work for sporting or recreational purposes;

(6) less than 275 m from a site classified as a heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act (chapter P-9.002);

(7) less than 300 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(8) less than 550 m from a health and social services institution, an educational institution, a building in which childcare services are offered or any building having 3 floors or more or a floor area greater than 10,000 m^2;

(9) less than 1,000 m from an airport or an aerodrome; or

(10) less than 1,600 m from any underground reservoir used for petroleum storage purposes and for which the holder has no right.

The distances must be measured horizontally, in a straight line, from the casing head 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 infrastructures belonging to the authorization holder or used for the holder's work.

85. 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.

86. The authorization holder may not position the activity site less than 100 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).

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

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

(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 are utilized to minimize the risk of loss of stratigraphic survey control in the event of lost circulation, fluid kicks or blowout.

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

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

90. Where the authorization holder drills a stratigraphic survey in a region where the geology is unknown, in a region where shallow gas kicks have been documented or if it is foreseeable that a petroleum zone will be intersected, the holder must use a diverter to drill to the surface casing installation depth.

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. 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 Completions Committee.

94. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely displace the drilling fluids and remove the mud cakes from the walls of the stratigraphic survey in accordance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

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

96. 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.

97. 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 Completions Committee.

98. The authorization holder must demonstrate the uniform coverage of the cement behind each casing by carrying out a cement assessment sonic or ultrasonic logging or by any other method.

99. 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.

100. 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 or the leak pressure of the geological formation.

The test must be conducted at a pressure that ensures the safety of the drilling work to the installation depth of 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.

101. The maximum pressure applicable to casings must be calculated so as to ensure the control of the stratigraphic survey. It must be posted on the activity site.

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, where necessary to differentiate a number of formations, characterize the carbon isotope ratios.

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.

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

104. The authorization holder who collects a sample of the drilling core must 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, unless the holder demonstrates that an adjacent wellbore has already been sampled and the spatial variability makes the sampling of the stratigraphic survey unnecessary.

Cutting samples must be taken 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 180 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 SURVEYSEALING 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 cut the casings at 1 m below the surface.

Where it is justified by agricultural activities, the holder may, with the Minister's authorization, cut the casings at 1.6 m below the surface.

114. The authorization holder must weld a ventilated steel cover at the top of the casings.

115. 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.

116. 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 the use of the territory, the holder may, with the Minister's authorization, position the plate as close as possible to the stratigraphic survey and indicate the distance at which the stratigraphic survey is located and its azimuth.

DIVISION V
DAILY REPORT AND END OF ACTIVITIES REPORT

117. The holder of the 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 of the enterprises that carried out the work;

(4) the measured depth reached during the day;

(5) the composition of the drilling fluid and spacer 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 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 logs 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 identified in the technical program that are stored or used on the activity 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 progress of the work; and

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

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

119. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 name and contact information of the enterprises that carried out the work;

(4) the coordinates of the stratigraphic survey casing head on a plan provided by a land surveyor according to the NAD83 map reference system;

(5) 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;

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

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

(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 spacer fluid and the separating fluid used;

(f) the circulation pressures;

(g) the maximum pressure reached during cementing;

(h) an indication that the casing check valve is functional or, if not, the propping pressure applied and the duration;

(i) a description of the cement return, the quantity and the retreat, and 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 well logs, in particular those interpreted, scaled in true 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 Completions Committee;

(12) the measured temperature and pressure to the final depth of the stratigraphic survey;

(13) the data, recordings, results of the drill-stem tests, pressure and leak tests, leakoff test 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 list of drill bits used, their type and the number of metres drilled by each of them;

(17) the type of play encountered and a comparison with a similar play;

(18) a lateral section of the stratigraphic survey after the sealing, according to the measured depth and the true 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 stratigraphic survey and the diameters of each casing;

(d) the location of each of the casings;

(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;

(19) the daily tour sheets;

(20) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(21) the technical reports prepared by the enterprises that carried out the work;

(22) a technical description of the condition of the stratigraphic survey before the sealing;

(23) 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;

(24) the cutting depth of the casings under the surface;

(25) a photograph of the ventilated steel plated welded at the top of the casings before the backfilling;

(26) a plan showing the layout of the activity site after the restoration work; and

(27) photographs of the entire restored activity site and of the plate installed in accordance with section 116.

CHAPTER VII
DRILLING AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

120. A licence holder who wishes to obtain a drilling authorization must apply to the Minister in writing.

121. 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.

122. The application must be accompanied by

(1) the demonstration that the distances provided for in section 22 are complied with;

(2) 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 wellbores within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 132 to 134 are met;

(3) the drilling technical program provided for in section 123, signed and sealed by an engineer;

(4) the permanent well or reservoir closure and site restoration plan or, if applicable, its update, and the guarantee provided for in sections 315 and 317;

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

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

123. The drilling 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 or revised the program;

(3) the demonstration that, during the positioning of the well, the regional and local geology, and the presence of adjacent wellbores 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 wellbores;

(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 enterprises charged with carrying out the work;

(9) a lateral 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 used, 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) if applicable, the list of the planned coring intervals;

(12) the list of pressure and leak tests, drill-stem tests, leakoff test and all other tests planned;

(13) the list of the well logs 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 spacer 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 Completions Committee;

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

(d) the diameters of the well according to the measured depth and the true vertical depth on a lateral section, to the bottom of the planned well;

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

(f) a calculation 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 Completions 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, performed in accordance with CSA Standard Z625, Well design for petroleum and natural gas industry systems, except a storage well, the evaluation and calculation of which 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 Completions Committee and including, in particular,

(a) the diameters of the casing strings compared with the measured depth and the true 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) if applicable, 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;

(17) if applicable, the list of licences, certificates and other authorizations to be obtained;

(18) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

124. The holder may not position the activity site in a zone potentially exposed to ground movement particularly identified in accordance with government mapping available. If such mapping is not available, the holder may not position the activity site at less than a horizontal distance that corresponds to twice the height of a bank, measured in relation to the top and base of the bank.

Despite the foregoing, a licence holder may position an activity site in an area potentially exposed to ground movement if the holder provides the Minister, with the application, the geotechnical expertise provided for in section 76, with the necessary modifications.

125. Before ruling on a drilling application, the 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the results of the test to the Minister.

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

126. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the drilling work.

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

(1) if applicable, 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 start 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.

128. 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 as soon as possible within the same period of the resumption of the work.

SECTION III
CONDITIONS OF EXERCISE

129. 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% in the final depth of the well resulting from a slightly different geological projection;

(2) a change in the position of the casing head 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 log 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.

130. 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 Completions 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 wellbore in a constant and safe manner.

131. 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;

(4) a telephone number in case of emergency;

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

(6) the indication that access to the activity site is prohibited without the holder's authorization.

132. The authorization holder may not position the casing head of a well or, in the case of a re-entry, drill in a well whose casing head 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;

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

(5) less than 200 m from a surface improvement work for sporting or recreational purposes;

(6) less than 275 m from a site classified as a heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act;

(7) less than 300 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(8) less than 550 m from a health and social services institution, an educational institution, a building in which childcare services are offered, or any building having 3 floors or more or a floor area greater than 10,000 m^2;

(9) less than 1,000 m from an airport or an aerodrome; or

(10) less than 1,600 m from any underground reservoir used for petroleum storage purposes and for which the holder has no right.

The distances must be measured horizontally, in a straight line, from the casing head 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 infrastructures belonging to the authorization holder or used for the holder's work.

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

134. The authorization holder may not position the activity site less than 100 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.

135. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

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 wellbore, 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 are 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 wellbore to be determined accurately and that do not exceed 150 m, unless there is a wellbore stability problem.

138. The authorization holder must carry out the well logs 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 casing head and in depth, under the surface casing.

The holder must, in particular, carry out

(1) a gamma ray logging from the well casing head to the final depth of the wellbore;

(2) a neutron logging from 25 m under the well casing head 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 wellbore.

In the case of an electrical resistivity or porosity logging, it must be carried out at least until a 70° angle has been reached in relation to the vertical.

The Minister may exempt the holder from the requirement to carry out certain well logs 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 demonstrate the uniform coverage of the cement behind each casing by carrying out a cement assessment sonic or ultrasonic logging or by any other method.

In the case of a log in a horizontal well, it must be carried out at least until a 70° 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, in a region where shallow gas kicks have been documented or it is foreseeable that a petroleum zone will be intersected, the holder must use a diverter to drill to the surface casing installation depth.

142. 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.

143. 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.

144. 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.

145. The authorization holder must install a conductor casing if

(1) the surface casing is laid at a true 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 wellbore or a shotpoint 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.

146. 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.

147. 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 Completions Committee.

148. Where surface casings and, if applicable, intermediate casings are subject to wear caused by the movement and rotation of the drill-stems, they must be inspected to determine their integrity, using a pressure test or a well log.

149. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely displace the drilling fluids and remove the mud cakes from the walls of the well according to the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

150. During cementing, the authorization holder must ensure that surface fluid and cement returns are observed.

151. 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.

152. 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 Completions Committee.

153. 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.

154. 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 conduct an integrity test or a leak pressure test on the geological formation.

The test must be conducted at a pressure that allows the safety of the drilling work to the installation depth of 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.

155. The maximum pressure applicable to the casings must be calculated to ensure control of the well. It must be posted on the activity site.

156. 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.

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

In the case of gas, the analyses must, in particular, identify its composition and, where necessary to differentiate a number of formations, characterize the carbon isotope ratios.

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.

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

158. The authorization holder who collects a sample of the drilling core must 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, unless the holder demonstrates that an adjacent wellbore has already been sampled and the spatial variability makes the sampling of the stratigraphic survey unnecessary.

Cutting samples must be collected at the following intervals:

(1) every 25 m, from the top of the rock to a true vertical depth of 50 m above the shallowest anticipated petroleum objective;

(2) in the case of vertical and directional wells, every 5 m from a true 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 a true 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.

159. 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.

160. 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.

161. 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.

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

163. 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 drilling fluid indicates that the cement height required for cementing is not reached;

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

164. An authorization holder must, in the case of an observation well, use a wellhead.

165. 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 a geologist or an engineer containing a summary of the data collected and the frequency of the collection as well as the annual inspection worksheet provided for in Schedule 2.

A storage licence holder may send a synthesis report on all the observation wells drilled in the territory subject to the licence. Despite the foregoing, the holder must send an annual inspection worksheet for each well.

DIVISION IV
DAILY REPORT AND END OF ACTIVITIES REPORT

166. 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 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 spacer 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 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 logs 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 identified in the technical program that are stored or used on the activity 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 well;

(23) the indication of any event that disrupted the progress of the work; and

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

167. The authorization holder must send to the Minister, every Tuesday, the daily reports of the preceding week until the end of the drilling or re-entry work. If the Tuesday is a holiday, the report is sent on the first working day that follows.

168. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, starting from the rig release, an end of activities 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 casing head 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 spacer fluid and the separating fluid used;

(f) the circulation pressures;

(g) the maximum pressure reached during cementing;

(h) an indication that the casing check valve is functional or, if not, the propping pressure applied and the duration; and

(i) 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 well logs, in particular those interpreted, scaled in true 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 Completions 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 Completions Committee;

(17) the list of the drill bits used, their type and the number of metres drilled by each of them;

(18) a technical description of the condition of the well after the drilling;

(19) the well classification determined according to Schedule 1;

(20) a lateral section of the well, according to the measured depth and the true 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 well and the diameters of each of the casings;

(d) the location of each of the casings;

(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 sheets;

(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 play; and

(25) photographs of the entire site after the drilling work.

CHAPTER VIII
COMPLETION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

169. A licence holder who wishes to obtain a completion authorization must apply to the Minister in writing.

170. 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.

171. The application must be accompanied by

(1) the demonstration that the distances provided for in section 22 are complied with;

(2) the completion technical program provided for in section 172, signed and sealed by an engineer;

(3) payment of the fee of $2,555; and

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

172. 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 or 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 lateral section of the well indicating the technical elements;

(7) the type of service rig, 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 wellbores 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 true 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) if applicable, the type of packers installed and the installation depths;

(18) if applicable, a casing perforation program indicating, in particular, the number and the type of perforations;

(19) if applicable, the list of the planned well logs;

(20) if applicable, the list of expected pressure and leak tests;

(21) if applicable, 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;

(24) if applicable, the list of licences, certificates and other authorizations to be obtained;

(25) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well, 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

173. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the completion work.

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

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

Where the holder cannot comply with the start 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

175. 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.

176. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

177. 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.

178. The authorization holder must ensure that the pressure applied during the completion work does not exceed the test pressure.

179. 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 packer 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 rig to alert onsite personnel.

180. 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 Completions Committee.

181. 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.

182. The authorization holder must, until the end of the work, keep the necessary protective barrier to withstand the pressures provided for in the technical program.

183. 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.

184. 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.

185. Before drilling the well casing or the casing shoe, 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 END OF ACTIVITIES REPORT

186. 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 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 logs carried out;

(8) the type of packers installed and the installation depths;

(9) the technical details of the perforations, in particular, the number, type and intervals;

(10) if applicable, 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 composition, concentration and detailed assessment of all the products identified in the technical program that are stored or used on the activity 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 or document deemed necessary by the Minister.

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

188. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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) a description of the condition of the well including a lateral section indicating the mechanical conditions of the well after the completion;

(5) the classification of the well determined according to Schedule 1;

(6) if applicable, a description of the type of completion carried out and its degree of recovery;

(7) the results of the pressure and leak tests;

(8) the intervals, the type of chemical completion, concentrations and volumes of acids and additives injected, the volume of flow-back water and injection rates and pressures;

(9) the results of the injectivity tests;

(10) the results of the other tests carried out;

(11) the interpreted well logs and the results of the related analyses and studies;

(12) if applicable, the analyses of recovered petroleum or water;

(13) the number, interval, type and pressure of each series of perforations;

(14) the volume of flow-back water;

(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 technical reports prepared by the enterprises that carried out the work; and

(17) if applicable, the other data collected during the completion work.

CHAPTER IX
FRACTURING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

189. A licence holder who wishes to obtain a fracturing authorization must apply to the Minister in writing.

190. 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.

191. The application must be accompanied by

(1) the demonstration that the distances provided for in section 22 are complied with;

(2) the fracturing technical program provided for in section 192, signed and sealed by an engineer;

(3) payment of the fee of $2,555; and

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

192. 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 or 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 lateral 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 logs 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 rig, 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 Completions 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 true vertical depth and measured depth;

(14) the number of planned stages;

(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 vent 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 on the environment; 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 Completions 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 fracturing intervals planned and the base of the usable groundwater aquifer;

(b) a simulation of the fracture pattern and the location of the faults; and

(c) an analysis distance covering double the half length of the fracture planned on the entire depth of the wellbore;

(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 earthquake of a 2.0 magnitude or more occurs;

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

(27) a summary of the results of any fracturing simulation or modelling carried out;

(28) if applicable, the list of licences, certificates and other authorizations to be obtained;

(29) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where the holder observes a probability of an induced seismicity of a 2.0 magnitude or more, 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 allowing the detection of an earthquake of a 2.0 magnitude or more 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 207.

Where work is planned in a temporarily closed well, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

The term "fracturing half-length" means the radial distance separating the well and the outer tip of a fracture propagated by fracturing.

193. 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

194. 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.

195. 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 start 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

196. 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.

197. Fracturing is prohibited in shale.

It is also prohibited at a true vertical depth of less than 1,000 m from the soil surface.

198. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

199. 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 around it are not protective barriers and must not be exposed to pressures created by the fracturing work.

200. 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 begin the fracturing operations if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

201. 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.

202. 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.

203. 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.

204. 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.

205. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service rig to alert onsite personnel.

206. 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.

207. 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 along with a microseismic characterization of the fracturing.

208. Following an interruption provided for in the second paragraph of section 207, 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 END OF ACTIVITIES 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 elevation of the reference level and its identification;

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

(4) the name 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 logs carried out;

(9) the type of packers installed and the installation depths;

(10) the composition, concentration and a detailed assessment of all the products identified in the technical program that are stored or used on the activity 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 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 interruption of the fracturing work and the procedure followed to secure the well; and

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

210. The authorization holder must send to the Minister, every Tuesday, the daily reports of the preceding week until the end of the fracturing work. If the Tuesday 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, an end of activities 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 lateral 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 extension and orientation measurements of the induced fractures:

(f) the formation temperature;

(g) the indication of the presence of flow-back water or a fracture that closed up by natural leakage;

(h) the indication of any problem encountered and its potential impact on the test results;

(i) 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

(j) 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, specifying if the date was measured or calculated; and

iv. the list of horizons likely to stop the propagation of fractures;

(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) if applicable, the interpreted well logs and the results of the related analyses and studies;

(16) if applicable, the analyses of the petroleum or water recovered;

(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 212 and 213; and

(22) 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 aquifer.

213. When the authorization holder observes an involuntary entry of any formation fluid inside an adjacent wellbore, the authorization holder must immediately notify the person responsible for the wellbore 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.

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

(3) 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 or document deemed necessary 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 or 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 wellbores have been taken into consideration;

(7) the reasons justifying the reconditioning;

(8) the purpose of the reconditioning;

(9) a lateral 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 logs planned;

(12) the type of service rig 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;

(e) if applicable, the maximum pressure for injecting the cement; and

(f) if applicable, 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;

(21) if applicable, the list of licences, certificates and other authorizations to be obtained;

(22) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well, 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 by the Minister, 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 start 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

220. 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.

221. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

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

(5) ensure that the petroleum zones and the aquifer layers are isolated from one another.

223. The authorization holder must, until the end of the work, keep the necessary protective barrier 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 and maintains a register of those inspections 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 rig to alert onsite personnel.

DIVISION IV
DAILY REPORT AND END OF ACTIVITIES REPORT

227. 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 elevation of the reference level and its identification;

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

(4) the name 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 logs carried out;

(10) the type of packers 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.

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

229. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 lateral 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 logs 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 FOR STORAGE PURPOSES

DIVISION I
PETROLEUM EXTRACTION TEST PROGRAM

230. An exploration licence holder who wishes to carry out petroleum extraction tests must submit a petroleum extraction test technical program for the Minister's approval.

231. 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 enterprises 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 used, the interpreted profile indicating the location of the zones subject to the tests;

(12) the methods planned to dispose of the substances extracted;

(13) the list of licences, certificates and other authorizations to be obtained, if applicable;

(14) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

DIVISION II
TRIAL TEST PROGRAM FOR THE USE OF AN UNDERGROUND RESERVOIR FOR STORAGE PURPOSES

232. An exploration licence holder who wishes to carry out trial tests for the use of an underground reservoir for storage purposes must submit a trial test technical program for the use of an underground reservoir for storage purposes for the Minister's approval.

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 enterprises 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; the Minister may exempt the holder if the holder demonstrates to the Minister the impossibility of carrying out the profiles considering the shallow depth of the reservoir;

(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;

(17) the list of licences, certificates and other authorizations to be obtained, if applicable;

(18) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

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

234. An exploration licence holder who carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes 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 start 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 TRIAL TESTS FOR THE USE OF AN UNDERGROUND RESERVOIR FOR STORAGE PURPOSES

235. The maximum duration of a test period is 240 consecutive days for the petroleum extraction tests and 365 consecutive days for the trial tests for the use of an underground reservoir for storage purposes.

The test period begins on the first day on which an exploration licence holder carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes and ends on the day on which the holder completely ceases to carry out the tests.

236. 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.

237. 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

238. An exploration licence holder who carries out petroleum extraction tests or trial tests for the use of an underground reservoir for storage purposes 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.

239. An exploration licence holder who carries out tests must send to the Minister, every Tuesday, the daily reports of the preceding week until the end of the test period. If the Tuesday is a holiday, the report is sent on the first working day that follows.

240. 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 end of activities 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 of the well; and

(e) in the case of trial tests for the use of an underground reservoir for storage purposes, the deliverability decline curve and the pressure rise curve;

(5) the realization cost of the tests carried out;

(6) the methods used to dispose of the substances extracted;

(7) the classification of the well determined according to Schedule 1; and

(8) the technical reports prepared by the enterprises that carried out the work.

The holder must also send to the Minister in the same manner,

(1) in the case of petroleum extraction tests,

(a) the pressure rise curve;

(b) for a gas well, the absolute potential flow;

(2) the results of the analyses carried out including, in particular, the composition of the fluids extracted, injected, withdrawn and disposed of.

CHAPTER XII
SPECIFIC REQUIREMENTS RELATING TO THE PRODUCTION

DIVISION I
PETROLEUM PRODUCTION TESTS

241. A production licence holder must carry out production tests for all the wells drilled for production 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.

242. A production licence holder must measure the shut-in pressure of the pool before and after the production test.

243. 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 battery to determine the petroleum and water production rate.

The holder uses the results of those tests to allocate the monthly production of the battery 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 deemed necessary by the Minister.

The term "battery" 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.

244. During the tests, a production licence holder must measure the pressure interference from one well to the other.

245. 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.

246. 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
PETROLEUM ENHANCED RECOVERY

247. A production licence holder who wishes to carry out a petroleum enhanced recovery project must submit an enhanced recovery technical program for the Minister's approval.

248. The enhanced recovery technical program must be signed and sealed by an engineer and 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) if applicable, a diagram showing the wells and the well injection completion methods;

(6) a diagram showing the 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 lateral 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) if applicable, the recovery forecasts and simulation models; 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;

(10) the list of licences, certificates and other authorizations to be obtained, if applicable;

(11) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

249. 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.

250. The holder may start petroleum enhanced recovery if no deformity has been identified on the casings and production tubes, and if the well is clean.

CHAPTER XIII
AUTHORIZATION TO PRODUCE BRINE

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

251. A licence holder who wishes to obtain an authorization to produce brine must apply to the Minister in writing.

252. 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.

253. The application must be accompanied by

(1) the brine production program provided for in section 254, signed and sealed by an engineer;

(2) payment of the fee of $2,500;

(3) payment of the annual fee payable under section 261 for the first year; and

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

254. The brine production 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 or revised the program;

(3) the name and contact information of the enterprises charged with carrying out the work;

(4) a lateral 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) if applicable, a description of the manner in which the brine will be treated, delivered and transported; and

(c) 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;

(9) if applicable, the list of licences, certificates and other authorizations to be obtained;

(10) the list of references used during the preparation of the operation program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

Where work is planned in a temporarily closed well, 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

255. The authorization holder must, within 24 months after the granting of the authorization by the Minister, start the production of brine.

256. 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 start 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

257. 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.

258. If work is planned in a temporarily closed well, the authorization holder must, before carrying out the work, inspect the premises and the wellhead, maintain the wellhead and conduct a pressure and tightness test on the wellhead and the casings.

259. The authorization holder must, as soon as the work starts, add on the sign installed in accordance with section 131, an indication that it is a well containing brine.

260. 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.

261. The annual fee payable by an authorization holder is $722.

262. The Minister renews an authorization for a 5-year period, provided that the holder

(1) pays the annual fee payable under section 261 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.

263. An authorization to produce brine is transferable only in the case of transfer of the licence of the authorization holder.

264. 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.

If applicable, the application must be accompanied by a supplementary agreement to the brine production program.

DIVISION IV
MONTHLY REPORTS AND ROYALTIES

265. 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;

(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 267;

(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 .

266. 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.

267. 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.

268. The royalties must be paid in cash, or by cheque or postal money order payable to the order of the Minister of Finance.

CHAPTER XIV
WELL CLOSURE

DIVISION I
TEMPORARY OR PERMANENT CLOSURE AUTHORIZATION

§1. *Temporary closure authorization*

§§1. *Conditions for obtaining an authorization*

269. 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.

270. On request and after analysis of the annual report provided for in section 165, 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.

271. A licence holder who must obtain a temporary well closure authorization must apply to the Minister in writing.

272. 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.

273. The application must be accompanied by

(1) the temporary closure technical program provided for in section 274, signed and sealed by an engineer;

(2) payment of the fee of $2,058; and

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

274. The temporary closure 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 or revised the program;

(3) the classification of the risk potential of the well determined according to Schedule 3;

(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 enterprises charged with carrying out the work;

(9) a lateral 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 rig and equipment to be used and their specifications, in particular, the configuration of the wellhead and the surface casing vent flow;

(11) the demonstration that, before carrying out the work for the temporary closure, the well did not present any risk within the meaning of the second paragraph of section 20 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) if applicable, the list of the planned well logs;

(16) if applicable, the list of licences, certificates and other authorizations to be obtained;

(17) the list of references used during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

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

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*

275. 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

276. 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.

277. The authorization holder must, within 6 months after the granting of the authorization by the Minister, complete the temporary closure work.

278. 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.

279. 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.

280. 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;

(5) that the valve on the surface casing vent flow pipe is open and the vent 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 vent flow;

(7) if applicable, to disconnect the wellhead flow pipe; and

(8) to chain and lock the valves or remove the handles.

281. 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.

282. The blowout prevention system and the wellhead must be designed to withstand the maximum pressures provided for in the technical program.

283. 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.

284. 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.

285. The authorization holder who observes the presence of an surface casing vent flow using a bubble point test must also measure the emanation flow over a 24-hour period.

286. The authorization holder must, except for a well whose risk potential has been classified as low under Schedule 3, draw out the polished drill-stem from the well if it is connected to a pumpjack.

287. In the case of a well whose risk potential has been classified as moderate under Schedule 3, 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.

288. In the case of a well whose risk potential has been classified high under Schedule 3, the authorization holder must close the well in accordance with the generally recognized best practices.

289. 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 end of activities report

290. 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 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 logs 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 identified in the technical program that are stored or used on the activity 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 progress of the work; and

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

291. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 well logs, in particular those interpreted, scaled in true vertical depth and the corrections made;

(8) a lateral 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

292. 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 any risk within the meaning of the second paragraph of section 20; and

(3) ensure the preventive maintenance of the well and the wellhead so as to prevent any incident or accident that would undermine the safety of persons and property, and environmental protection.

§2. Permanent closure authorization

§§1. Conditions for obtaining an authorization

293. A well whose risk potential has been classified as low under Schedule 3 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 3 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.

294. A licence holder who wishes to obtain a permanent well closure authorization must apply to the Minister in writing.

295. 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 deemed necessary by the Minister.

The application must be accompanied by payment of the fee of $2,677.

296. 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 in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completions Committee.

The holder sends the results of the test to the Minister.

§§2. Time periods and notice of the start of the work

297. 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 start 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

298. The authorization holder must comply with the permanent well or reservoir closure and site restoration plan.

299. 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 fluid emanation into the atmosphere;

(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.

300. The authorization holder must, before the permanent closure of the well, conduct a flow test at the surface casing vent flow to determine if fluid is escaping from it.

A bubble test must be conducted using a pipe submerged at 2.5 cm under the water for at least 10 minutes. If, during that period, bubbles are present, the well is considered to have flow at the surface casing vent flow.

In such a case, the holder must

(1) conduct a flow test of that flow until a stabilized flow is obtained; and

(2) close the surface casing vent flow until a stabilized flow is obtained.

The pressure is considered to be stabilized if, over a 6-hour period, the change in pressure is less than 2 kPa/h.

301. While performing the work for permanent closure, the holder must use a wellhead, a blowout prevention system or 2 protective barriers to withstand the pressures according to the needs of the activity performed.

302. 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.

303. 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

304. 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.

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 Completions 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 Completions 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 at 1 m below the surface.

Where it is justified by agricultural activities, the holder must, with the Minister's authorization, cut the casings at 1.6 m below the surface.

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 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 the use of the territory, the holder may, with the Minister's authorization, position the plate as close as possible to the well and indicate the distance at which the well is located and its azimuth.

§§4. Daily report and end of activities report

312. 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 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 logs 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 identified in the technical program that are stored or used on the activity 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 progress of the work; and

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

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

314. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, an end of activities 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 surface casing vent flow 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 below the surface;

(14) a photograph of the ventilated steel plate welded at the top of the casings before the backfilling;

(15) a lateral section of the well after the permanent closure, according to the measured depth and the true 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 produce petroleum;

vi. the layers of abnormal pressure; and

vii. the areas of circulation loss;

(b) the location of each of the casings;

(c) the depth interval of an 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;

(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*

315. 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 to be 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 rig and equipment to be used and their specifications;

(14) a lateral 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 Completions 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) if applicable, 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 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 holes for storing drill-stems and other equipment;

(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; and

(21) the surface drainage after the 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.

316. 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

317. 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 contract 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).

318. In the case of a guarantee furnished according to subparagraph 3 or 6 of the first paragraph of section 317, 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 declaration of satisfaction or the certificate of release 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 declaration of satisfaction or the certificate of release provided for in 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.

319. 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.

320. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 4 of the first paragraph of section 317, and of the security or guarantee contract 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 or 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 declaration of satisfaction or 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) if 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 and underground reservoir closure or 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.

321. The guarantee furnished may be replaced at any time by another guarantee that complies with the requirements of this Regulation.

§3. Fees payable

322. 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.

323. 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
FEES, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEES

324. The fee payable by a person to whom an inspector submitted a written notice of non-compliance with the provisions of the Act or this Regulation is $500.

325. The amounts of the duties and fees payable are adjusted on 1 April of each year according to the same rate resulting from the application of section 83.3 of the Financial Administration Act (chapter A-6.001). Despite the foregoing, the amounts are not adjusted where, in the preceding year, they were fixed or increased otherwise than under that provision.

Adjusted amounts are reduced to the nearest dollar where they contain a fraction of a dollar less than $0.50. They are increased to the nearest dollar where they contain a fraction of a dollar equal to or greater than $0.50. The application of the rounding rule may not operate to decrease the amounts to below their pre-adjustment level.

If an adjusted amount cannot be rounded to the nearest dollar, the annual adjustments are deferred and accumulated until the amounts payable include a decimal of 0.5 or more.

The Minister publishes the result of the adjustment in Part 1 of the *Gazette officielle du Québec*.

326. The amounts of duties, fees and royalties payable bear interest, at the rate fixed under the first paragraph of section 28 of the Tax Administration Act (chapter A-6.002), as of the thirtieth day following the date on which they are owed. Interest is capitalized monthly.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

327. 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, 28, 32, 33, the first paragraph of section 39, sections 40, 41, 43, 46, 52 to 54, the first paragraph of section 62, sections 63, 64, 66 to 70, the first paragraph of section 78, sections 79, 80, 83, 103, 104, the first paragraph of section 105, section 106, the first and second paragraphs of section 107, sections 108, 116 to 118, 126 to 128, 131, 157, 158, the first paragraph of section 159, section 160, the first and second paragraphs of section 161, sections 162, 165 to 167, the first paragraph of section 173, sections 174, 186, 187, the first paragraph of section 194, sections 195, 209, 210, the first paragraph of section 218, sections 219, 227, 228, 234, 238 to 240, 245, 246, 249, 255, 256, 259, the second paragraph of section 262, section 265, the first paragraph of section 275, section 290, the first and second paragraphs of section 297, and sections 312, 313 and 316.

328. 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 21, 26, 30, the first paragraph of section 31, sections 34, 42, the first and second paragraphs of section 44, sections 45, 50, 51, 65, 81, the first paragraph of section 84, sections 85, 86, paragraphs 1 and 3 of section 87, sections 88 to 98, the first paragraph of section 99, the first paragraph of section 100, 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 115, 129, the first paragraph of section 132, sections 133 to 135, paragraphs 1 and 3 of section 136, section 137, the second paragraph of section 138, sections 139 to 143, subparagraphs 1, 3 and 4 of the first paragraph of section 145, sections 146 to 152, the first paragraph of section 153, the first and second paragraphs of section 154, section 155, paragraph 2 of section 156, sections 163, 164, 168, 175, 176, the first paragraph of section 177, section 178, paragraphs 3 and 4 of section 179, sections 180 to 184, 196, 198, the first paragraph of section 200, the first paragraph of section 201, sections 202 to 206, 220, 221, 223 to 226, 230, 232, the first paragraph of section 235, section 236, paragraph 2 of section 237, sections 241, 242, the first and second paragraphs of section 243, sections 244, 247, 257, 258, 260, 269, 276, 277, the first, second and fourth paragraphs of section 278, paragraphs 4 to 8 of section 280, and sections 281 to 289.

329. 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, 15 to 17, 19, the first paragraph of section 20, and sections 22 to 25, 47 to 49, 56, 57, 197, 207, 208, 212 and 213.

DIVISION III
OFFENCE

330. 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

331. 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*).

332. A permanent well closure authorization issued under the Mining Act (chapter M-13.1), 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 that date, 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 that date, 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 permanent closure and site 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, if applicable

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, non-combustible gas or other
Type of well	Exploration, production or storage, 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, and the pipeline construction or use authorization, made by Order in Council 1253-2018 dated 17 August 2018
Service – disposal	Well used as permanent location to store discharges in the reservoir
Service - relief	Well used to intersect another well that is blowing out
Observation	Well used to monitor the conditions of a geological formation or other wells of a reservoir or to determine the decline characteristics 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
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 for which authorized work is underway
Production	Well from which fluids are extracted
Injection	Well into which fluids are pumped
Temporary interruption (*shut-in*)	Well in which work is interrupted for a short period, between 2 activities or 2 operations
Temporary closure	Well that has been temporarily closed
Permanent closure	Well that has been permanently closed, in accordance with the well or reservoir closure and site restoration plan
Restoration	Well that has been permanently closed and whose work site has been restored to the satisfaction of the Minister in accordance with section 114 of the Act
Cancellation	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 elements covered.	
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.	

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.	

WELLHEAD – Integrity			
A wellhead is present.		A surface casing vent flow is present.	
All valves are chained and locked or the handles have been removed.		The surface casing vent flow valve is open.	
The wellhead is free of corrosion or erosion.		The surface casing vent flow is blocked.	
The wellhead is designed to withstand the measured pressure.		Insert the flow measured at the surface casing vent flow (with the unit).	
The flow pipe is disconnected from the wellhead.		Insert the concentration of gas at the vent 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 vent flow.		The emanation is only composed of gas.	
A leak is observed in the guide tube.		Indicate the composition of the fluid at the vent.	
		There is a leak on the vent joints and welds.	

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:		Pressure of the surface casing:	
Pressure of the production tubing:		Are the pressures constant with respect to the last measurements?			

REGULAR PREVENTIVE MAINTENANCE			
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 instruments used for the inspection (flow meter, gas detector, etc.).			

APPENDICES – Attach at least one photograph of the protected perimeter of the well and one 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

CLASSIFICATION OF A WELL'S RISK POTENTIAL

During the classification of a well's risk potential, if a well meets the criteria of the various levels of risks, the highest risk must take precedence.

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	Well containing gas with a content in H_2S ≥ 5 % Sour gas well	Not applicable	Not applicable

103691

Gouvernement du Québec

O.C. 1253-2018, 17 August 2018

Petroleum Resources Act
(chapter H-4.2)

Petroleum exploration, production and storage licences, and the pipeline construction or use authorization

Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization

WHEREAS, under the second paragraph of section 11, section 44, the first paragraph of section 48, the second and fifth paragraphs of section 51, the second paragraph of section 54, section 57, the first paragraph of section 61, the second paragraph of section 62, section 63, the first paragraph of section 64, the first paragraph of section 65, sections 66 and 67 of the Petroleum Resources Act (chapter H-4.2), the Government may determine, by regulation, the manner in which a production or storage licence is to be awarded, in addition to determining the conditions for exercising the licence;

WHEREAS, under section 17, the second paragraph of section 20, the fourth paragraph of section 25, the second paragraph of section 27, the fourth and fifth paragraphs of section 28, section 29, the first and third paragraphs of section 31, sections 36 to 38, the first paragraph of section 39 and the first paragraph of section 40 of the Act, the Government may determine, by regulation, the manner in which an exploration licence is to be awarded, in addition to determining the conditions for exercising the licence;

WHEREAS, under section 117, the second paragraph of section 118, the first paragraph of section 119, the first paragraph of section 121, the fourth paragraph of section 122, sections 123 and 124 and the second paragraph of section 126 of the Act, the Government may determine, by regulation, the manner in which a pipeline construction or use authorization is to be awarded, in addition to determining the conditions for exercising the authorization;

WHEREAS, under the first and third paragraphs of section 128 of the Act, the Government may determine, by regulation, a solvency amount that an exploration, production or storage licence holder or a pipeline construction or use authorization holder must furnish in the form and manner determined by the Government;

WHEREAS, under the first and third paragraphs of section 131 of the Act, the Government may determine, by regulation, the protective and safety measures that must be implemented by a pipeline construction or use authorization holder or any other person in charge of a pipeline;

WHEREAS, under the second paragraph of section 150 and section 152 of the Act, the Government may determine, by regulation, the acts or documents that may be registered in the public register of real and immovable petroleum rights and determine related fees;

WHEREAS, under section 191 of the Act, the Government may, by regulation, specify that a failure to comply with the regulation may give rise to a monetary administrative penalty and set forth the amounts and the methods for determining them;

WHEREAS, under paragraph 1 of section 207 of the Act, the Government may, by regulation, determine the form and manner in which all the documents required for the purposes of the Act and the regulations are to be sent;

WHEREAS, under paragraph 4 of section 207 of the Act, the Government may, by regulation, determine the fee payable by a person to whom an inspector has given a written notice of non-compliance with the Act or the regulations;

WHEREAS, under paragraph 5 of section 207 of the Act, the Government may, by regulation, determine the provisions of a regulation whose violation constitutes an offence;

WHEREAS, under paragraph 6 of section 207 of the Act, the Government may, by regulation, prescribe, in relation to a petroleum right in a body of water, additional conditions or obligations or conditions or obligations that are different from those prescribed by the Act and the regulations;

WHEREAS, under section 287 of the Act, the Government may, by regulation made before the date that is 18 months after the date of coming into force of the Act, enact any other transitional measure required for the carrying out of the Act;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization was published in Part 2 of the *Gazette officielle du Québec* of 20 June 2018 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, on the recommendation of the Minister of Energy and Natural Resources:

THAT the Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization

Petroleum Resources Act
(chapter H-4.2, ss. 11, 2nd par., 17, 20, 2nd par., 25, 4th par., 27, 2nd par., 28, 4th and 5th pars., 29, 31, 1st and 3rd pars., 36 to 38, 39, 1 par., 40, 1st par., 44, 48, 1st par., 51, 2nd and 5th pars., 54, 2nd par., 57, 61, 1st par., 62, 2nd par., 63, 64, 1st par., 65, 2nd par., 66, 67, 117, 118, 2nd par., 119, 1st par., 121, 1st par., 122, 4th par., 123, 124, 126, 2nd par., 128, 1st and 3rd pars., 131, 1st par., 150, 2nd par., 152, 191, 207, pars. 1 and 4 to 6, and 287)

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 using drill stems as flow pipe in the wellbore and dedicated equipment; (*essai aux tiges*)

"isobath" 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 any tax 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.

The electronic version of the following documents must also be sent:

(1) well log raw data, in an ASCII file or an equivalent version;

(2) data produced by a geographical information system (GIS) software, in a shapefile.

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

CHAPTER II
SPECIFIC PROVISIONS APPLICABLE TO PETROLEUM EXPLORATION, PRODUCTION AND STORAGE LICENCE HOLDERS

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 (chapter H-4.2) 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 of the land subject to the licence. 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.

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 in particular to its renewal, transfer, surrender, suspension, revocation or expiry;

(2) 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;

(3) in the case of a production or storage licence, the petroleum production or storage plan;

(4) 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;

(5) a summary of the safety and community involvement programs provided for in the Regulation respecting petroleum exploration, production and storage on land, made by Order in Council 1252-2018 dated 17 August 2018, or the Regulation respecting petroleum exploration, production and storage in a body of water, made by Order in Council 1251-2018 dated 17 August 2018, as the case may be;

(6) the notices sent under sections 29 and 57 of the Act;

(7) the notices sent under sections 63, 67, 89, 93 and, if applicable, those sent under sections 119 and 123;

(8) the authorizations, permits and certificates obtained by the holder and issued by an authority other than the Minister; and

(9) a summary of the incident notices sent to the Minister under section 24 of the Regulation respecting petroleum exploration, production and storage on land and section 26 of the Regulation respecting petroleum exploration, production and storage in a body of water and, where applicable, corrective measures planned.

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 15 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 corresponding to the holder's fiscal year on the website and send it to the Minister before 30 June of each year.

The committee must draw up the portion of the report concerning its activities and send it to the holder at least 15 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 I
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 160; 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 for 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 for 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 165 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 165;

(3) the process for appointing members of the monitoring committee or, if the bidder is not required to establish a new committee under the first paragraph of 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; and

(5) the payment of the annual fee payable under section 42 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 49, $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 survey;

(3) well drilling or reentry;

(4) completion of a well;

(5) fracturing of a well;

(6) reconditioning of a well;

(7) petroleum extraction tests or using an underground reservoir;

(8) temporary closure of a well;

(9) permanent closure 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 held 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 (COGEH) 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 discovery 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 lateral 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 discovered petroleum resources established in accordance with the Canadian Oil and Gas Evaluation Handbook (COGEH) 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 lateral 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 an estimate of the contingent resources and, where applicable, the petroleum reserves established in accordance with the Canadian Oil and Gas Evaluation Handbook (COGEH) by an independent qualified reserves evaluator and the data and analyses that allowed the establishment of the estimate. The notice of commercial discovery must explain the nature of the contingencies that do not allow to qualify contingent reserve resources and steps that must be carried out to lift the contingencies. Should there be a calculation of the reserves, the notice of commercial discovery will have to give 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 a qualified independent reserves evaluator.

48. Where an exploration licence holder sends to the Minister 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 and a summary of the notice containing the information referred to in paragraphs 1, 2, 4 and 9 of section 45 or paragraphs 1, 2 and 9 of section 46.

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 payable under section 42;

(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 payable under section 42 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 or storage 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 165;

(2) a copy of the authorizations obtained in accordance with section 48 of the Act;

(3) the payment of the annual fee payable under section 68 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 165;

(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 under section 68 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;

(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 urbanization perimeters established in a land use and development plan made under the Act respecting land use planning and development (chapter A-19.1) in the territory that will be covered by the licence and the delimitation of a 1,000-m strip around them;

iv. the roads included in the territory that will be subject to the licence;

v. the public and private lands; and

vi. 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 project; 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 logs, 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 contingent resources and, where applicable, the petroleum reserves established in accordance with the Canadian Oil and Gas Evaluation Handbook (COGEH) 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 closure 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 closure, dismantling and site restoration costs, and indirect costs;

(d) an estimate of the operating 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) in the case of petroleum reserves, 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 Régie de l'énergie, the person who wishes to obtain a production licence sends a notice to the Minister containing

(1) the person's name and contact information and, if the person holds an exploration licence, the licence number; and

(2) the date of filing the application with the Régie de l'énergie and the file number.

64. During the examination of the project, the Régie de l'énergie must take into account, in particular,

(1) job creation;

(2) the estimate of the revenues for the State;

(3) the positive and negative economic impact of the project; and

(4) the project completion probability.

65. Where the Régie de l'énergie renders its decision, it must in particular rule on the 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 Régie de l'énergie.

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 Régie de l'énergie, the holder notifies the Minister.

The notice must be accompanied by the presentation of the amendments to the production project and it 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 71.

The royalties are,

(1) on petroleum extracted from the territory subject to 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 m^3; and

ii. 12.5% of the wellhead value on the excess; and

(2) on the gas extracted from the territory subject to 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.

DIVISION IV
REPORTS

§1. Monthly report

71. 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 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

72. 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 in the territory covered by the licence;

(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 logs carried out;

(5) a description of the transactional meters for measuring for invoicing purposes and their specifications and a map locating them;

(6) the date of the last calibration of the transactional meters for measuring for invoicing purposes;

(7) the results of the shut-in pressure measurements, which must be carried out at least once a year for each well in production during the year;

(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) historical production data for each producing well, in the form of a curve indicating the monthly flow and the declining pressure;

(11) the annual production revenues for each type of petroleum, including the sale price, the volume sold and the person involved in the transaction;

(12) the total monthly amount of the royalties for the petroleum produced during the year concerned;

(13) 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 (COGEH) by an independent qualified reserves evaluator; and

(14) 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.

73. 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

74. The Minister renews a production licence for a 10-year period, not more than 5 times, provided that the holder

(1) pays the fee payable under section 68 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 relevance of the pool for the extension period.

The renewal application must be sent at least 120 days before the end of the previous term.

75. 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 72.

CHAPTER V
STORAGE LICENCE

DIVISION I
PROTECTIVE PERIMETER

76. 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

77. 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 165;

(2) a copy of the authorizations obtained in accordance with section 48 of the Act;

(3) the payment of the annual fee payable under section 97 for the first year of the licence; and

(4) the payment of the licence awarding fee of $10,000.

78. The holder of an exploration or production licence sends the elements referred to in section 77 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

79. Where a storage licence is awarded by auction, sections 17 to 32 apply, with the necessary modifications.

80. 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.

81. 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 80.

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.

82. 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.

83. 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 165;

(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 under section 97 for the first year of the licence.

84. The Minister awards a storage licence where the Minister receives the elements referred to in section 83 and approves the process for appointing the members of the monitoring committee, where applicable.

85. 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.

86. Within 30 days after awarding a licence, the Minister returns the guarantee to the person who did not obtain the licence.

87. 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

88. 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 urbanization perimeters established in a land use and development plan made under the Act respecting land use planning and development (chapter A-19.1) in the territory that will be covered by the licence and the delimitation of a 1,000-m strip around them;

iv. the roads included in the territory that will be subject to the licence;

v. the public and private lands; and

vi. 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 project; 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 logs, 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, established in accordance with the Canadian Oil and Gas Evaluation Handbook (COGEH) 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 project for installations that will be used during the 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 closure, dismantling and site restoration costs, and indirect costs;

(d) an estimate of the operating and maintenance costs, in particular, administrative and technical support and 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.

89. As soon as the application has been submitted to the Régie de l'énergie, the person who wishes to obtain a storage licence must send a notice to the Minister containing

(1) the person's name and 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.

90. When examining the project, the Régie de l'énergie must in particular take into account

(1) job creation;

(2) the estimate of the revenues for the State;

(3) the positive and negative economic impact of the project; and

(4) the project completion probability.

91. Where the Régie de l'énergie renders its decision, it must in particular rule on the overall economic relevance of the project.

§2. Amendments to the storage project

92. A licence holder who wishes to amend the storage project must first submit the amendment to the Régie de l'énergie.

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.

93. As soon as the holder has submitted an amendment to the Régie de l'énergie, 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

94. A storage licence gives the holder the right to use an underground reservoir to store in it and withdraw natural gas.

95. A licence holder may not withdraw from the underground reservoir a quantity of substance greater than the quantity injected except during the permanent closure of an underground reservoir and its wells.

96. A storage licence holder must immediately notify the Minister of any change to the characteristics of the underground reservoir.

DIVISION V
ANNUAL FEE AND DUTIES ON THE SUBSTANCES WITHDRAWN

97. A storage licence holder pays an annual fee of $361 per km^2.

98. 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 100.

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.

99. 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.

DIVISION VI
REPORTS

§1. Monthly report

100. 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 monthly per well and the 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 30 days following the last day of each month.

101. 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

102. 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 description of the transactional meters used for measuring for invoicing purposes and their specifications and a map locating them;

(4) the date of the last calibration of the transactional meters used for measuring for invoicing purposes;

(5) the nature and volume of the substances injected and withdrawn daily per well and the monthly and yearly accumulation;

(6) 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

(7) 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.

103. 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

104. 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 payable under section 97 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 relevance 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.

105. 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 102.

CHAPTER VI
SURRENDER, REVOCATION AND TRANSFER OF A PETROLEUM EXPLORATION, PRODUCTION OR STORAGE LICENCE

DIVISION I
SURRENDER

106. 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.

107. In the case of an application for the partial surrender of an exploration right, the holder must send to the Minister an update of the summary of the exploration work filed under paragraph 4 of section 33.

108. 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

109. 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.

In the case of an underground reservoir having a storage licence and its wells, the period is 24 months.

The Minister may grant an additional period if the holder demonstrates the need therefor.

Sections 298 to 315 of the Regulation respecting petroleum exploration, production and storage on land, made by Order in Council 1252-2018 dated 17 August 2018, and sections 268 to 289 of the Regulation respecting petroleum exploration, production and storage in a body of water, made by Order in Council 1251-2018 dated 17 August 2018, as the case may be, apply to the closure and restoration work, with the necessary modifications.

DIVISION III
TRANSFER

§1. General

110. 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.

111. 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

112. A licence transferee must apply for the transfer to the Minister, in writing.

The application must be accompanied by an update of the proof of solvency provided for in section 165 and an update of the summary of the exploration work filed under paragraph 4 of section 33, if the licence transferred is an exploration licence.

113. 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 or the Regulation respecting petroleum exploration, production and storage in a body of water, as the case may be.

114. 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.

115. 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 or storage right*

116. A transferee of a share of the exploration, production or storage right 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 165, if the transferee acquires the majority of shares in the exploration, production or storage right; and

(3) the designation of a representative with the Minister.

117. A designated representative works for the Minister as mandatary for all the holders of shares. The representative's name and contact information are registered in the public register of real and immovable petroleum rights. Each holder of a share is bound by the acts and omissions of the designated representative in the carrying out of the representative's mandate.

CHAPTER VII
PIPELINE CONSTRUCTION OR USE AUTHORIZATION

DIVISION I
EXAMINATION OF THE PROJECT BY THE RÉGIE DE L'ÉNERGIE

§1. *Application*

118. 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, including all its elements, the real or proposed route of the pipeline, and compliance with the distances provided for in section 131;

(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 132 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.

119. As soon as the application has been submitted to the Régie de l'énergie, 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.

120. During the examination of the project, the Régie de l'énergie must take into account, in particular,

(1) the project completion probability;

(2) the positive and negative economic 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.

121. Where the Régie de l'énergie renders its decision, it must, in particular, rule on the overall economic relevance of the project, and its compliance with the generally recognized best practices.

§2. Amendments to a project

122. The authorization holder who wishes to amend a project must first submit the amendment to the Régie de l'énergie.

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.

123. As soon as the holder has submitted an amendment to the Régie de l'énergie, 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 II
AWARDING OF AND AMENDMENT TO AN AUTHORIZATION

124. Not later than 120 days after having obtained the last authorization necessary or the favourable decision from the Régie de l'énergie, a person who wishes to obtain a pipeline construction or use authorization must apply to the Minister in writing.

125. The application must contain

(1) the name and contact information of the applicant;

(2) the proof of solvency provided for in section 165;

(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 132 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 deemed necessary by the Minister.

It must be accompanied by the documents submitted to the Régie de l'énergie for the examination of the project under section 118 and payment of the fee of $1 per linear metre of pipeline anticipated.

Subparagraphs *a*, *b*, *c*, *d* and *e* of subparagraph 3 of the first paragraph do not apply to a construction or use application for

(1) a pipeline of less than 2 km;

(2) a pipeline in an existing right of way used for the same purpose; and

(3) a pipeline for gathering or transporting natural gas of less than 30 cm in diameter for a pressure less than 4,000 kPa.

126. In the case of a modification to the project, as soon as the authorization holder receives a favourable decision from the Régie de l'énergie on the modification to the project submitted under section 122, 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 the fees for the additional pipeline anticipated.

DIVISION III
NOTICE TO OWNERS OR LESSEES, LOCAL MUNICIPALITIES AND REGIONAL COUNTY MUNICIPALITIES

127. 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 of the land crossed by the pipeline. The holder also sends the notice to the local municipalities and regional county municipalities according to the terms and conditions provided for in section 5, with the necessary modifications.

128. The notices must be accompanied by topographic or bathymetric maps at a scale sufficient to show the route of the pipeline, the limits of the territory of the local municipalities and those of the regional county municipalities crossed by the pipeline.

DIVISION IV
CONDITIONS OF EXERCISE

§1. *Time periods and notice of the start of the work*

129. 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 Régie de l'énergie. The authorization holder who plans on using a pipeline already built must start use it within 6 months.

The Minister may grant an additional period if the holder demonstrates the need therefor.

130. 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

131. The authorization holder who designs and constructs a pipeline may not place it at less than 100 m from a national park or a protected area registered in the register of protected areas provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01)

132. 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.

In addition, 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.

133. 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.

134. 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.

135. Pressure tests must be supervised by an engineer who is not employed by the enterprise that carried out the construction work.

136. 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 schedules.

137. The authorization holder ensures that the pumping or compression stations are

(1) designed so that their access ensures the safety of persons and property, and environmental protection;

(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.

138. 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 schedules.

139. The authorization holder must, within 24 hours, notify the Minister of any incident related to the pipeline that triggers the emergency preparedness plan. 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 schedules.

140. 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 125.

141. After having received an incident notice under section 139 or 140, 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.

142. 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.

143. 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

144. 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 demonstrates the need therefor. 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.

145. The authorization holder sends 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 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

146. The authorization holder must permanently shutdown the pipeline before the end of the period of validity of the authorization provided for in sections 153 and 154.

147. The authorization holder must ensure that, 12 months after the permanent shutdown of the 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 demonstrates the need therefor. 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.

148. The authorization holder must send to the Minister within 60 days following 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 that has carried out the shutdown.

DIVISION V
DAILY REPORT, COMPLETION REPORT AND ANNUAL REPORT

149. The authorization holder must prepare a daily report of the construction work 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.

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

151. 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 132 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 7 of the first paragraph, submit a number of types of maps including a topographic map and a bathymetric map.

152. 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 gathered 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 VI
PERIOD OF VALIDITY AND RENEWAL

153. The period of validity of a pipeline construction or use authorization is 20 years.

154. The Minister renews a pipeline construction or use authorization for 5-year periods provided that the holder

(1) pays renewal fees of $0.50 per linear metre of pipeline constructed;

(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.

DIVISION VII
REVOCATION AND TRANSFER OF A PIPELINE CONSTRUCTION OR USE AUTHORIZATION

§1. Revocation

155. 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 Minister may grant an additional period if the holder demonstrates the need therefor.

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

156. 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.

157. 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.

158. The transferee must apply to the Minister, in writing, for the transfer.

The application must be accompanied, with the necessary modifications, by an update of the documents and information provided for in the first paragraph of section 125.

159. 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 127, 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

160. 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

161. 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,

(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 or in a marine environment.

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 to gather or transport natural gas is determined according to the coefficient equivalent to multiplication of the squared outside diameter of the pipeline, measured in cm, by the maximum operating pressure, measured in MPa and by the length of the pipeline in km.

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 or in a marine environment, the amount is 1 billion dollars.

163. 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 sections 161 and 162, calculated in proportion of the ratio of each with the total length of the pipeline.

164. The authorization holder who modifies the pipeline project so as to cause a revision of the amount payable under sections 161 to 163 must first notify the Minister so 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 provided for in section 165.

DIVISION II
PROOF OF SOLVENCY

165. For the purpose of demonstrating solvency to the amount provided for in sections 160 to 163, 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 160 to 163. 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).

166. The declaration setting forth the net assets or financing agreements that the holder has entered into, provided for in the first paragraph of section 165, 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.

167. In the case of a proof of solvency provided under subparagraph 3 or 7 of the second paragraph of section 165, 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 or authorization expires.

The licence or authorization holder must submit to the Minister a certified copy of the original contract.

168. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 8 of the second paragraph of section 165 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 or authorization 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.

169. The purpose of the security and guarantee contract provided for in subparagraph 9 of the second paragraph of section 165 must 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 or authorization 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 165 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.

170. Proof of solvency must remain in force for the term of the licence or the pipeline construction or use authorization under which it is required.

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.

171. On the anniversary date of the licence or the authorization, the holder provides to the Minister an update of the proof of solvency.

CHAPTER IX
PUBLICATION OF RIGHTS

172. 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, transfer, suspension, revocation or expiry of a pipeline construction or use authorization;

(2) the name and contact information of the person designated under subparagraph 3 of the second paragraph of section 116 to represent holders of a share of the exploration, production and storage right.

173. 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, except the revocation or suspension by the Minster of a right or 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
FEES, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEES

174. 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.

175. The amounts of the duties and fees payable and the minimum work required under section 38 are adjusted on 1 April of each year according to the same rate resulting from the application of section 83.3 of the Financial Administration Act (chapter A-6.001). Despite the foregoing, the amounts are not adjusted where, in the preceding year, they were fixed or increased otherwise than under that provision.

Adjusted amounts are reduced to the nearest dollar where they contain a fraction of a dollar less than $0.50. They are increased to the nearest dollar where they contain a fraction of a dollar equal to or greater than $0.50. The application of the rounding rule may not operate to decrease the amounts to below their pre-adjustment level.

If an adjusted amount cannot be rounded to the nearest dollar, the annual adjustments are deferred and accumulated until the amounts payable include a decimal of 0.5 or more.

The Minister publishes the result of the adjustment in Part 1 of the *Gazette officielle du Québec*.

176. The amounts of duties, fees and royalties payable bear interest, at the rate fixed under the first paragraph of section 28 of the Tax Administration Act (chapter A-6.002), as of the thirtieth day following the date on which they are owed. Interest is capitalized monthly.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

177. 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 paragraph of section 16, the second paragraph of section 41, sections 63, 67, the third paragraph of section 74, sections 75, 89, 93, 96, the third paragraph of section 104, sections 105, 107, 114, 115, 119, 123, 127, 128, the first paragraph of section 129, sections 130, 134, 143, 145, 148 to 150, the first paragraph of section 151, section 152, the second paragraph of section 154 and section 159.

178. 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 94, 95, 126, 131, 132, 135, 136, paragraphs 2 and 3 of section 137, and sections 138, 141, 142, 144, 164, 170 and 171.

179. 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 109, 139, 140, 146, 147 and 155.

DIVISION III
OFFENCE

180. 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

181. 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.

182. 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 165.

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.

183. 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.

184. Every person who, on (*insert the date of coming into force of this section*), uses a pipeline must provide the Minister, with the necessary modifications, with the documents and information provided for in the first paragraph of section 125 and any other similar document and information under which the pipeline has been constructed.

The person must also pay the fee of $1 per linear metre of pipeline constructed, not later than 180 days following (*insert the date of coming into force of this section*).

The Minister then grants the person a pipeline use authorization.

185. 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 that date.

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.

186. 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

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

103692

Gouvernement du Québec

O.C. 1254-2018, 17 August 2018

Mining Act
(chapter M-13.1)

Petroleum, natural gas and underground reservoirs —Revocation

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

WHEREAS, under sections 306, 310 and 313 of the Mining Act (chapter M-13.1), the Government may, by regulation, determine the manner in which a licence or a lease is to be awarded, in addition to determining the conditions of exercise;

WHEREAS the Government made the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1) by Order in Council 1539 88 dated 12 October 1988;

WHEREAS the Petroleum Resources Act (chapter H-4.2), enacted by the Act to implement the 2030 Energy Policy and to amend various legislative provisions (2016, chapter 35, section 23), was assented to on 10 December 2016;

WHEREAS it is expedient to revoke the Regulation;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft Regulation to revoke the Regulation respecting petroleum, natural gas and underground reservoirs was published in Part 2 of the *Gazette officielle du Québec* of 20 June 2018 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation without amendment;

IT IS ORDERED, therefore, on the recommendation of the Minister of Energy and Natural Resources:

THAT the Regulation to revoke the Regulation respecting petroleum, natural gas and underground reservoirs, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

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*.

103693

Gouvernement du Québec

O.C. 1265-2018, 22 August 2018

Health Insurance Act
(chapter A-29)

Hearing devices and insured services —Amendment

CONCERNING the Regulation to amend the Regulation respecting hearing devices and insured services

WHEREAS, under subparagraph *(h.2)* of the first paragraph of section 69 of the Health Insurance Act (chapter A-29), the Government may, after consultation with the Régie de l'assurance maladie du Québec or upon its recommendation, make regulations to determine the hearing deficiencies, the services and the sets or subsets of hearing aids that must be considered to be insured services for the purposes of the seventh paragraph of section 3 of that Act, fix the age of the insured persons referred to therein and determine the classes of insured persons, determine the cost that the Board may assume on behalf of an insured person with a hearing deficiency, determine the cases and conditions in and on which the Board assumes the cost of such insured services and in and on which the services are furnished, and prescribe the cases and conditions in and on which such hearing aids may or must be recovered;

WHEREAS the Government has made the Regulation respecting hearing devices and insured services (chapter A-29, r. 2);

WHEREAS, 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 hearing devices and insured services was published in Part 2 of the *Gazette officielle du Québec* of 25 April 2018, with notice that it could be made by the Government upon expiry of the 45-day period following this publication;

WHEREAS the Régie de l'assurance maladie du Québec has been consulted;

WHEREAS it is expedient to amend that regulation without any amendment;

IT IS ORDERED therefore, upon the recommendation of 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 hearing devices and insured services, attached to this Order in Council, be made.

ANDRÉ FORTIER,
Clerk of the Conseil exécutif

Regulation to amend the Regulation respecting hearing devices and insured services

Health Insurance Act
(chapter A-29, s. 69, first para. subpara. *h*.2)

1. The Regulation respecting hearing devices and insured services (chapter A-29, r. 2) is amended at section 1:

(1) by replacing the definition of "assistive listening device" with the following:

" "assistive listening device": means the aids and devices in the text transmission category, of the following types: TTYs (TDDs), TTYs with large display or Braille display, portable VCO (voice carry over) TTYs, and TTY modems; the aids and devices in the sound transmission category, of the following types: telephone amplifiers, wireless sound transmission personal communication system, personal amplifiers or wireless sound transmission and amplification systems for television; the aids and devices in the environmental control systems category, of the following types: visual and tactile aids, adapted alarm clocks (visual), adapted alarm clocks (tactile), and adapted alarm clocks (for deaf-blind persons. In the latter category, the visual and tactile aids and devices include telephone monitors, door monitors, fire alarm monitors, smoke detector monitors, sound monitors, baby cry monitors and signal receivers; ";

(2) by replacing the definition of "hearing aid" with the following:

""hearing aid": the aids and devices in the digital category and in-the-ear hearing aids and behind-the-ear hearing aids; ";

(3) by deleting the definitions of "BI-FROS", "CRIS-CROS", "focal-CROS", "FROS", "high-CROS", "IROS", "mini-CROS", "multi-CROS", "open-BI-CROS" and "Unis-CROS".

2. Section 2 of this regulation is amended:

(1) by deleting, in subparagraph (*a*) of paragraph (1) of the first pragraph, the words "and its variations (FROS, high-CROS, mini-CROS, focal-CROS and power-CROS)";

(2) by deleting, in subparagraph (*b*) of paragraph (1) of the first pragraph, the words "and its variations (BI-FROS, open BI-CROS and multi-CROS)";

(3) by deleting paragraph (*c*) of the second paragraph.

3. Section 30 of this regulation is amended:

(1) by deleting, in paragraph (5) of the first paragraph, the words "the magnetic loop or";

(2) by deleting paragraph (1) of the second paragraph;

(3) by replacing paragraph (6) of the second paragraph with the following:

"(6) a wireless sound transmission personal communication system;";

(4) by deleting paragraph (8) of the second paragraph;

(5) by replacing paragraph (9) of the second paragraph with the following:

"(9) a wireless transmission and sound amplification system for television;";

(6) by deleting paragraph (10) of the second paragraph;

(7) by inserting, after the word "fire" in paragraph (13) of the second paragraph, the words "or smoke".

4. Section 32 of this regulation is deleted.

5. Section 37 of this regulation is amended by replacing the words "frequency modulation system" with the words "wireless sound transmission personal communication system".

6. Section 39 of this regulation is revoked.

7. Section 40 of this regulation is amended:

(1) by replacing, in the first paragraph, the words "wireless frequency modulation amplification system or wireless infrared amplification system" with the words "wireless transmission and sound amplification system";

(2) by replacing, in the second paragraph, the words "wireless amplification" with the words "wireless transmission and sound amplification".

8. Section 40.1 of this regulation is revoked.

9. Section 42 of this regulation is amended by replacing, in the fourth paragraph, the word "fire" with the words "fire or smoke alarm".

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

103696

Draft Regulations

Draft Regulation

Hydro-Québec Act
(chapter H-5)

Rates for using the public fast-charging service for electric vehicles

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting the rates for using the public fast-charging service for electric vehicles, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The draft Regulation sets at $11.50 per hour the rates for using the public fast-charging service for electric vehicles operated by Hydro-Québec. Those rates will be adjusted annually. They reflect the cost of using 50 kW fast-charging stations and may be reviewed by regulation as the power of the public fast-charging service stations changes.

Further information on the draft Regulation may be obtained by contacting Louis Germain, Direction générale de l'électricité, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-402, Québec (Québec) G1H 6R1; telephone: 418 627-6386, extension 8199; fax: 418 644-1445; email: louis.germain@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 MOREAU,
Minister of Energy and Natural Resources,

Regulation respecting the rates for using the public fast-charging service for electric vehicles

Hydro-Québec Act
(chapter H-5, s. 22.0.2; 2018, c. 25)

1. The rates for using the public fast-charging service for electric vehicles are set at $11.50 per hour for the use of a 50 kW fast-charging station.

2. The rates are adjusted by operation of law on 1 January of each year by a rate corresponding to the annual variation in the overall average Québec consumer price index without alcoholic beverages and tobacco products for the 12-month period ending on 30 September of the year preceding the year for which the rates are to be adjusted.

The results of the adjustment are rounded up to the nearest multiple of $0.25. An amount that is equidistant from 2 multiples is rounded off to the higher multiple.

If the results of the adjustment cannot be rounded up to the higher multiple in accordance with the rounding rule in the second paragraph, the annual adjustments are deferred and accumulated until the amount can be rounded up to the higher multiple.

The application of this section may not decrease the rates below their pre-adjustment level.

The Minister publishes the results of the adjustment in the *Gazette officielle du Québec*.

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

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Abbreviations: **A**: Abrogated, **N**: New, **M**: Modified