
Drilling and Production Regulations

**THE OIL AND GAS ACT
(C.C.S.M. c. 034)**

**Regulation 111/94
Registered June 6, 1994**

**The Drilling and Production Regulations 111/94 as amended by
M.R. 51/95
M.R. 145/98
M.R. 116/2001**

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PART 1 - DEFINITIONS

Definitions

1 In this regulation,

"**Act**" means The Oil and Gas Act; (<Loi>)

"**approved**" means approved by the director, unless otherwise indicated;

"**area of common ownership**" means two or more adjoining spacing units in which the interest of each owner is the same in each of the spacing units

"**battery**" includes a facility used to store, process, or dispose of oilfield waste;

"**blow-out preventer**" means a special casing head used in rotary drilling, well completion, and servicing to prevent an escape of fluid from a well;

"**blow-out prevention system**" means an arrangement of blow-out preventers, accumulator system, kill system, and bleed-off lines installed at a well to prevent the escape of fluid from the well;

"**development well**" means a well that is not an exploratory well;

"**district office**" means:

(a) for an operation conducted in Townships 1 to 6, the Waskada District Office of the branch; and

(b) for an operation conducted north of Township 6, the Virden District Office of the branch;

"**drainage unit**" means a drainage unit as defined in the Crown Royalty and Incentives Regulation;

"**exploratory well**" means a well that, on the day the well licence is issued:

(a) is located more than 0.8 km, measured from the centre of the respective spacing units, from the nearest well that has been cased for the production of oil and gas and that has not since been abandoned as a dry hole; or

(b) is located less than 0.8 km, measured from the centre of the respective spacing units, from the nearest well that has been cased for the production of oil and gas and has not since been abandoned as a dry hole and has a licensed depth that is in a formation that is deeper than the depth of the cased well;

"**finished drilling date**" means the date on which the licensed total depth is reached after the well has been spudded and continuously drilled;

"flame type equipment" means electrical or fired heating equipment that is not explosion-proof, and includes a space heater, torch, heated process vessel, boiler, electric arc welder, open flame welder, and an exposed element electric heater or appliance;

"gas-oil ratio" or **"GOR"** means the ratio of the number of cubic metres of gas produced from a source in a given period of time to the number of cubic metres of oil produced from the source in the same period of time;

"horizontal well" means:

- (a) a well that is drilled so as to achieve an angle of not less than 80° from the vertical for not less than 100 m; or
- (b) a well in which the angle or distance requirements in clause (a) are not achieved owing, in the director's opinion, to mechanical difficulties;

"licensee" means, other than in Part 8 of this regulation, the holder of a well licence issued under Part 8 of the Act;

"multi-pool well" means a well in which there is production from or injection into more than one pool;

"off-lease odours" means odours resulting from the emission of hydrogen sulphide or another compound from a well or battery that is detectable beyond the battery or wellsite;

"oilfield waste" means:

- (a) a fluid used in the drilling, completion, servicing, or abandonment of a well;
- (b) waste oil, water, or sludge from a well or oil and gas facility;
- (c) soil, snow, or debris contaminated with production; or
- (d) any other waste material from a well or oil and gas facility;

"permittee" means the holder of a battery operating permit issued under Part 9 of the Act;

"process vessel" means a vessel used in the processing or treatment of production;

"production" means any fluid produced from a well and includes oil, water, and gas;

"road allowance" means a right of way surveyed for the purpose of a road by either the federal or provincial government survey and includes a right of way provided by a statute for the purpose of a road, a right of way dedicated to the public use as a highway, and a road allowance under the jurisdiction of a municipality;

"salt water truck" means a truck used to haul salt water or any mixture of salt water and other production;

"servicing" means activities carried on in a well after the well is completed and before the well is abandoned;

"surface improvement" means a structure of any kind and includes a well, railway, pipeline, flow line, roadway, power line and a runway and taxiway for an aircraft;

"unique well identifier" means a series of numbers and letters assigned by the branch to a well for the purpose of identifying the well;

"water covered area" means an area normally covered by flowing or standing water;

"water-oil ratio" or **"WOR"** means the ratio of the number of cubic metres of water produced from a source in a given period of time to the number of cubic metres of oil produced from the same source in the same period of time;

"wellhead" means equipment, other than blow-out prevention equipment, used to maintain control of a well at the surface, and includes the surface casing head;

"wellsite" means land surface to which a right of entry has been granted by the owner of the land surface or under The Surface Rights Act for the purpose of drilling and operating a well;

PART 2

Well and Battery Names

Well Name Register

2 Section 2 is repealed.

Well and battery names

3(1) In naming a well or battery, the director may include such identifying information as he or she considers necessary or advisable.

3(2) The well or battery name set out by the director in a well licence or battery operating permit is the name by which the well or battery is to be known and referred to for all purposes under the Act.

Change of well name

4(1) Where the director changes the name of a well under subsection 99(1) of the Act, the director shall give the licensee written notice of the new name.

4(2) An application under subsection 99(1) of the Act by a licensee to change the name of the well may be made to the director and must include:

- (a) the application fee set out in Schedule A;
- (b) the new name proposed by the licensee; and
- (c) if the proposed name change is the result of a reorganization of a corporation or partnership, a copy of the certificate of amalgamation, certificate of amendment or other documentation confirming the change in name of the corporation or partnership.

Well and battery signs

5(1) Within six weeks after the finished drilling date or after a date on which the well licence is transferred under section 8, the licensee shall post at the wellsite a sign that:

- (a) sets out the location of the well and the name of the licensee in letters and numbers not less than 3 cm in height;
- (b) is visible from the entrance to the wellsite from the access road; and
- (c) if the well is a horizontal well, includes the surface location of the well and the location of the end of each lateral drilled in the well.

5(2) Notwithstanding subsection (1), an inspector may require an additional well sign to be posted in a conspicuous place at the entrance of the access road to the wellsite.

5(3) A permittee shall post in a prominent place at the entrance of the access road to the battery site, a sign that sets out in letters and numbers not less than 5 cm in height:

- (a) the location of the battery;
- (b) the name of the permittee; and

(c) the telephone number of the permittee or the operator of the battery.

5(4) A licensee or permittee who is required under this section to post a sign shall maintain the sign in good condition until the well or battery is abandoned.

PART 3

Well Licence

Application for well licence

6(1) An application under section 90 of the Act for a well licence must be submitted to the director on the form provided by the branch and must include the following:

- (a) the application fee and levy set out in Schedule A;
- (b) an original copy of a survey plan, acceptable to the director, of the area surrounding the proposed well;
- (c) a copy of documentation to support the applicant's right to the oil and gas in the spacing unit, including:
 - (i) where the oil and gas rights are not owned by the Crown, an executed lease of the oil and gas rights; or
 - (ii) where the applicant owns the oil and gas rights, a copy of the certificate of title;
- (d) a copy of an executed surface lease or an order under The Surface Rights Act that provides the applicant with access to the wellsite;
- (e) two copies of the proposed drilling program, including:
 - (i) a prognosis of formation tops;
 - (ii) details of the logging program;
 - (iii) anticipated core and drill stem test intervals; and
 - (iv) details of casing and cementing operations.
- (f) the performance deposit required under section 10; and
- (g) any other information the director may require.

6(2) Where, in the opinion of the director, the location of the proposed well or any related oil and gas facility is in an environmentally sensitive area, the director may require the applicant to submit a plan to prevent or minimize any impact of the well or facility on the area.

6(3) An applicant proposing to drill a horizontal well shall provide the director with the following:

- (a) an indication, on the plan required under clause (1)(b), of the bottom hole location of the well and the boundaries of all spacing units that are in the proposed drainage unit for the well;
- (b) a diagram that shows the proposed profile of the well;
- (c) a copy of any agreement that allocates the production of any oil and gas from the horizontal well among all owners in the proposed drainage unit.

6(4) An application for a well licence for a test hole or for the re-entry of a well that is abandoned must be made in accordance with subsection (1), unless the director specifies otherwise.

Change in ownership of well

7 A licensee shall give the registrar written notice of a change in ownership of the well within 15 days after the day of the change in ownership.

Transfer of well licence

8 An application under subsection 100(1) of the Act for approval to transfer a well licence must be made to the registrar and must include the following:

- (a) an agreement in the form set out in Schedule B;
- (b) the application fee and levy set out in Schedule A;
- (c) documentation to support the transferee's right to the oil and gas in the spacing unit;
- (d) documentation to support the transferee's right to enter the wellsite;
- (e) the performance deposit required under section 10;
- (f) a list of batteries and flow lines that the transferee would acquire as a result of the transfer of the well licence;
- (g) any other information that the registrar or director may require.

Restrictions on locating a well

9(1) Subject to this section, no person shall drill a well at a distance from a surface improvement or feature that is less than is set out in Schedule C unless the director, on application by the licensee,

- (a) is satisfied that special circumstances exist that justify drilling the well at a lesser distance; and
- (b) provides the licensee with written approval to drill at a specified lesser distance.

9(2) The director may approve an application made under subsection (1) subject to any term or condition that he or she considers necessary or advisable.

9(3) Where an application to the director under subsection (1) relates to the distance from a road allowance, the director:

- (a) shall not give an approval under this section without prior written approval of the Department of Highways and Transportation or the municipality; and
- (b) shall make any approval subject to any term or condition that is set out in the written approval from the Department or municipality.

9(3.1) No person shall drill a well within 50 m of the boundary of a spacing unit unless:

- (a) the spacing unit and the adjacent spacing unit are owned by the same person; or
- (b) the owner of the adjacent spacing unit consents to the drilling of the well.

9. (4) The director may approve an application to drill a well within one km of a subsurface mine subject to such terms and conditions as the director, after consulting with the Director of Mines under *The Mines and Minerals Act*, considers necessary or advisable.

9(5) The director may establish special requirements for drilling, completion or abandonment of a well that is drilled below the top of the Prairie Formation in an area where the Prairie Formation may contain salt.

Performance deposits

10(1) A performance deposit required under this regulation is payable to the Minister of Finance (Manitoba), and may be in the form of:

- (a) cash; or
- (b) a term deposit that is acceptable to the director and is:
 - (i) issued by a bank, trust company, or credit union; and
 - (ii) assigned as to principal to the Minister of Finance (Manitoba) with confirmation in writing of assignment from the bank, trust company, or credit union.

10(2) Subject to subsections (3) and (4), the amount of a performance deposit required from the holder of or an applicant for a well licence or battery operating permit is \$7,500 for each well and battery to a maximum of:

- (a) \$15,000;
- (b) \$30,000 where, in the opinion of the director, the net revenue from the wells or batteries to which the performance deposit is applied is, over the six months preceding the day on which the performance deposit is determined, less than the cost of abandoning the wells or batteries; or

(c) \$60,000 where, in the opinion of the director, the net revenue from the wells or batteries to which the performance deposit is applied is, over the 12 months preceding the day on which the performance deposit is determined, less than the cost of abandoning the wells or batteries.

10(3) The director may at any time redetermine the amount of a performance deposit required under subsection (2) where the director is satisfied that the circumstances have changed since the amount of the performance deposit was determined.

10(4) Where a performance deposit is required under clause (2)(b) or (c) but the director is satisfied that special circumstances exist, the director may at any time reduce the performance deposit to a minimum of \$15,000 and may make the reduction subject to any term or condition that he or she considers necessary or advisable.

10(5) Notwithstanding subsection (1), where a performance deposit is required under clause 2(b) or (c), the licensee or permittee, with the prior approval of the director, may submit the portion of the performance deposit in excess of \$15,000 in the form of a letter of credit that is acceptable to the director.

PART 4

Spacing Units, Target Areas and Off-Target Penalties

Standard size of spacing unit and target area 11 Subject to section 12:

- (a) for the purpose of this regulation, a spacing unit of an oil well is a legal subdivision;
and
- (b) the target area in the spacing unit is a square with sides 100 m from and parallel to the sides of the spacing unit.

Application to vary size of spacing unit or target area

12 An application under section 102 of the Act to vary the size and shape of a spacing unit and its target area must be submitted to the director in quadruplicate and must include the following:

- (a) a map showing the area of application and boundaries of each proposed spacing unit;
- (b) the names and addresses of owners within 0.5 km of the area of application;
- (c) a statement of the size and shape of each proposed spacing unit and target area and the formations to which the application applies;
- (d) a geological and engineering report that provides justification for the application and includes:
 - (i) a geological description of the formation;
 - (ii) a list of rock and fluid properties determined for the reservoir;
 - (iii) a comparison of the estimated rates of production of oil and ultimate recovery of oil with and without the proposed spacing units; and
 - (iv) the economics of developing the area with and without the proposed spacing units;
- (e) a discussion of the anticipated effect of the proposal on the correlative rights of the owners listed under clause (b);
- (f) where the application is to reduce the size of a spacing unit:
 - (i) the name and address of each owner and occupant of the land surface in the area of the application;
 - (ii) a statement outlining the current land use in the area of application; and
 - (iii) a discussion of the impact of the proposed reduced spacing on land use and the environment in the area of application;
- (g) any other information that the director or minister may require.

Horizontal well penetrating more than one spacing unit

13(1) An operator is not required to make an application under section 102 of the Act for the purpose of allowing a horizontal well to penetrate or drain more than one spacing unit.

13(2) A horizontal well is deemed to be off-target if the completed interval of the well is within 100 m of a spacing unit to which no production from the well is allocated.

13(3) Where two spacing units are separated by a road allowance, the road allowance is deemed to have zero width, and the boundary of the two spacing units is deemed to be the centre line of the road allowance for the purpose of determining:

- (a) the spacing units within the drainage unit; and
- (b) whether the well is off-target.

Well completed outside target area

14(1) Subject to subsections (2) and (3), where a well is completed outside its target area, the maximum production rate for the well determined under section 62 shall be reduced by an off-target penalty factor determined under Schedule F.

14(2) A well is not off-target and the off-target penalty set out in Schedule F does not apply:

- (a) where the adjacent spacing unit and the spacing unit in which the well is drilled are owned by the same person; or
- (b) for an exploratory well, where the well is within 100 m of the boundary of a spacing unit in which the Crown holds all of the oil and gas rights, and:
 - (i) no disposition of the oil and gas rights in the spacing unit has been made under the Act; or
 - (ii) the holder of any disposition of the oil and gas rights in the spacing unit is the licensee, or consents to the drilling of the well by the licensee.

14(3) Where the minister varies the size or shape of a spacing unit and its target area under section 102 of the Act, the minister may set an off-target penalty factor to be applied to reduce the maximum production rate if the well is not completed within the target area.

Delegation

15 The minister may delegate his or her authority to make an order under section 102 of the Act to the director.

Application for waiver of off-target penalty

16 An application under subsection 103(2) of the Act for waiver of an off-target penalty must be made to the director and must include the following:

- (a) the well name;
- (b) a diagram showing the location of the well within the spacing unit;

- (c) the name and address of the owner of the spacing unit in which the well is located and of the owner of any other spacing unit located within 100 m of the well;
- (d) a description of the geological, topographic, land use, economic, or other reasons for locating the well outside the target area;
- (e) the written consent of each owner referred to in clause (c) to waive the off-target penalty or a discussion of the anticipated effect of the off-target penalty on the correlative rights of those owners;
- (f) any other information the director may require.

PART 5

Equipment Registration

Drilling rig, service rig, and truck registration

17(1) Before conducting operations in Manitoba, the operator of a drilling rig, service rig, or salt water truck shall register the rig or truck with the branch on a form provided by the district office.

17(2) The operator of a drilling rig or service rig under subsection (1) shall give the district office written notice of any modification to the hoisting equipment on the rig requiring certification under The Workplace Safety and Health Act within seven days after the modification is completed.

17(3) The operator of a drilling rig, service rig, or salt water truck registered under subsection (1) shall ensure that the rig or truck is labelled with the name of the company and the unit number.

PART 6

Drilling, Completing, Servicing, and Abandoning

Licensee to give notice to district office

18 The licensee shall give notice to the district office as follows:

- (a) not less than 24 hours before commencement of wellsite construction;
- (a.1) not less than 24 hours before spudding a well;
- (b) not less than two hours before pulling pipe during a drill stem test;
- (c) not less than two hours before cementing casing;
- (d) not less than one hour before completing or servicing a well;
- (e) not less than 24 hours before conducting a pressure test under subsection 50(1);
- (f) not less than 24 hours before commencing a segregation test under subsection 52(3);
- (g) not less than two hours before commencing the abandonment of a well in which only surface casing has been run;
- (h) not less than 24 hours before commencing the abandonment of a well in which production casing has been run;
- (i) not less than two hours before backfilling an abandoned well.

Variation in well operation approved under Act

19(1) Subject to subsection (2), no person shall vary an approved well operation for which a well licence has been issued under Part 8 of the Act without the approval of the director or an inspector.

19(2) In the case of an emergency that requires an immediate variation in an approved operation, the licensee shall advise an inspector as soon as is practicable and, when requested by the inspector, shall provide the inspector with confirmation of the variation in writing.

Posting of licence and signs

20(1) A licensee shall ensure that a copy of the well licence, including any amendment, is posted in a conspicuous place at the well at all times during the drilling operation.

20(2) Where gas containing hydrogen sulfide might reasonably be expected to be encountered during drilling, completion, or servicing, the licensee shall post signs in conspicuous places on or near the rig and at the entrance to the wellsite warning of the presence or potential presence of the gas.

20(3) Where explosives are to be detonated at a wellsite by electrical frequencies, the licensee shall post a sign in a conspicuous place at the entrance of the access road to the wellsite stating that equipment transmitting electrical frequencies must be switched off before entering the wellsite.

Drilling BOP requirements

21(1) The licensee of a well that is being drilled shall, before drilling out of the surface casing shoe plug commences, install and maintain a blow-out prevention system in accordance with this Part.

21(2) The blow-out prevention system required on a well is determined in accordance with Schedule E and the following classifications:

(a) Class 2 is a development well in which the total depth authorized by the well licence is above the base of the Devonian Three Forks Formation;

(b) Class 3 is a development well in which the total depth authorized by the well licence is below the base of the Devonian Three Forks Formation or an exploratory well.

Drilling accumulator system

22(1) The licensee shall ensure that a blow-out prevention system required under this regulation is hydraulically operated and is connected to an accumulator system illustrated in Schedule E that is:

(a) capable of providing, without recharge, fluid of sufficient volume and pressure to open the hydraulic valve, to fully close the annular blow-out preventer, and to maintain a pressure of 8,400 kPa on the accumulator system;

(b) installed and operated in accordance with the manufacturer's specifications;

(c) connected to the blow-out preventer and the hydraulic valve with lines of working pressure equal to the working pressure of the accumulator, with any line located under

the substructure of the rig made of steel or sheathed with approved fire resistant sleeving;

(d) recharged by an automatic pressure controlled pump that is capable of recovering in not more than five minutes any drop in the pressure of the accumulator resulting from the operation of the hydraulic valve and full closure of the annular blow-out preventer; and

(e) capable of closing any ram type blow-out preventer in not more than 30 seconds or any annular type blow-out preventer in not more than 90 seconds, using only the accumulator.

22(2) The licensee shall ensure that the nitrogen supply connected to the accumulator system:

(a) is capable of opening the hydraulic valve and closing the annular blow-out preventer and one ram type blow-out preventer; and

(b) is under a pressure of not less than 12,500 kPa.

Drilling BOP system controls

23(1) The licensee shall ensure that the blow-out prevention system includes accessible operating controls for each blow-out preventer and hydraulic valve, and that a set of controls is located:

(a) within 5 m of the driller's station; and

(b) at least 15 m from the well and shielded to protect the operator from any flow of the well.

23(2) The licensee shall ensure that a ram type blow-out preventer that is not equipped with an automatic locking device has hand wheels that are installed or easily accessible for installation.

Drilling kill system requirements

24(1) The licensee shall ensure that the blow-out prevention system includes a kill system that:

(a) is capable of pumping fluid into the well;

(b) consists of an arrangement of valves and steel lines as illustrated in Schedule E; and

(c) has a working pressure equal to that of the blow-out prevention system.

24(2) A flexible hose may be used as a kill line if the hose:

(a) has a pressure rating equal to that of the blow-out prevention system;

(b) has the same internal diameter as the steel line;

(c) has factory installed connections;

(d) is installed and operated in accordance with the manufacturer's specifications;

- (e) is marked so that its manufacturer can be readily identified;
- (f) is secured to prevent stresses on connecting valves and piping; and
- (g) is protected from damage.

Drilling bleed-off and manifold system requirements

25(1) The licensee shall ensure that the blow-out prevention system includes a bleed-off system that:

- (a) consists of an arrangement of valves, chokes, and steel lines as illustrated in Schedule E;
- (b) has a working pressure equal to that of the blow-out prevention system, except for the portion of the bleed-off line that is located downstream from the last valve on the manifold;
- (c) is securely tied down; and
- (d) includes a manifold that:
 - (i) is located outside the substructure of the rig; and
 - (ii) is easily accessible and adequately lighted.

25(2) A flexible hose that conforms to subsection 24(2) may be used to connect the drilling spool to the manifold.

25(3) The licensee shall ensure that a line from the manifold to the mud system directs the flow to a mud tank through a mud gas separator except where the pump suction is taking fluid from earthen pits.

25(4) The licensee shall ensure that the section of the bleed-off line that is located downstream from the last valve on the manifold to the flare pit terminates in a slightly downward direction into an earthen pit that:

- (a) is excavated to a depth of not less than one metre below ground level; and
- (b) has side and back walls rising not less than one metre above ground level.

Mud gas separator

26 Where a mud gas separator is used, the licensee shall ensure that it is connected to a separate line that terminates in the flare pit and has a diameter that is at least 25 mm larger than the inlet line.

Mud tank warning device

27 Where a mud tank is used, an inspector may require the licensee to install and maintain a device to provide warning at the driller's station of a change in the level of fluid in the mud tank.

Drilling mud system

28(1) An inspector may require that the drilling mud system be equipped with a device to permit the measurement of the volume of drilling fluid required to fill the hole when pulling pipe out of the hole.

28(2) When pulling pipe out of a well, the licensee shall fill the hole with drilling fluid so that the fluid level in the well does not fall below a depth of 30 m.

Drilling operations conducted in cold weather

29 The licensee shall ensure that when an operation is conducted in temperatures below 0°C:

- (a) the blow-out prevention system is provided with sufficient heat to maintain its effectiveness; and
- (b) the lines in the bleed-off system are empty, filled with non-freezing fluid, or heated.

Equipment to be maintained on drilling rig

30(1) The licensee shall maintain in an easily accessible location on the drilling rig:

- (a) a device capable of stopping back flow; and
- (b) a full opening drill string safety valve in the open position.

30(2) The equipment referred to in subsection (1) must be designed so that it can be stripped into the well when installed in the drill string.

Air drilling

31 Where a well is being drilled with air, the licensee shall install and maintain:

- (a) a rotating head that diverts the flow;
- (b) a diverter line run to the flare pit;
- (c) a reserve volume of drilling fluid equal to at least 1.5 times the capacity of the hole;
- (d) a continuous hydrogen sulfide monitor on the diverter line; and
- (e) a continuous ignition device at the end of the diverter line.

Drilling BOP pressure tests

32(1) The licensee shall conduct a 10 minute pressure test before drilling the cement out of any casing on:

- (a) each ram type blow-out preventer to 1,400 kPa; and
- (b) the blow-out prevention system, including each blow-out preventer, to 7,000 kPa.

32(2) The licensee shall ensure that the blow-out prevention system is operated at least once a day and that any defective equipment is repaired before operations resume.

32(3) The licensee shall ensure that:

- (a) a report of every test of the blow-out prevention system is contained in the rig tour report; and
- (b) in the case of a pressure test, the report indicates the blow-out preventer that was tested, the duration of the test, and the pressures observed at the beginning and end of the test.

Drilling BOP equipment training

33 The licensee shall ensure that:

- (a) any driller, toolpush, or wellsite supervisor employed on the rig during the drilling of the well have a valid "First Line Supervisor Certificate" issued by the Petroleum Industry Training Service or other accreditation acceptable to an inspector in blow-out prevention procedures, and that the certificate numbers and expiry dates are recorded in the rig tour report for the well;
- (b) a blow-out prevention drill is performed before drilling out any casing shoe plug, and details of the drill are recorded in the rig tour report; and
- (c) the procedures, calculations, formulas, and current data needed to control a kick at the well are posted at the rig in a form acceptable to an inspector.

Service rig BOP system

34(1) The licensee of a well that:

- (a) is being completed or recompleted; or
- (b) is located in an area where, in the opinion of the director, there is a reasonable expectation of encountering positive wellhead pressure, and that is being serviced in a manner involving the movement of tubing;

shall ensure that a blow-out prevention system that is of a pressure rating and configuration adequate to shut off any flow from the well, and that conforms to the requirements of this section, is installed and maintained.

34(2) The blow-out prevention system referred to in subsection (1) shall include:

- (a) a single gate blind ram blow-out preventer, and a single gate pipe ram blow-out preventer;
- (b) a double gate ram type blow-out preventer that utilizes a pipe ram and a blind ram; or
- (c) a single gate blind ram blow-out preventer and an annular blow-out preventer.

34(3) The licensee shall ensure that a servicing blow-out prevention system:

- (a) is hydraulically operated;
- (b) is equipped with a pressure source capable of providing fluid of sufficient volume and pressure to close the blow-out preventers in not more than 30 seconds;

- (c) has one set of clearly-marked operating controls at the operator's station;
- (d) for a ram type blow-out preventer that is not equipped with a ram locking device, has hand wheels that are installed or easily accessible for installation; and
- (e) is maintained so that its operation is not impaired by low temperatures.

34(4) The licensee shall ensure that every servicing blow-out prevention system is equipped with a back-up system capable of closing one blow-out preventer in not more than 60 seconds.

34(5) The licensee shall ensure that manual wheels used as a back-up system are positioned a minimum of 2 m from the wellhead when fully operational.

34(6) The licensee shall maintain on the service rig in an easily accessible location a full opening safety valve that is in the open position and that can be attached to the tubing or other pipe in the well.

34(7) The licensee shall ensure that appropriate measures are taken to prevent the escape of fluid from a well while installing or removing a blow-out preventer.

34(8) The licensee of a well shall ensure that the blow-out prevention equipment is operated daily and that any defective equipment is repaired before operations resume.

34(9) The operator of a service rig shall pressure test each ram type blow-out preventer for 10 minutes to 1,400 kPa and 7,000 kPa or the maximum expected wellhead pressure, whichever is the greater, before commencing completion operations at a well, or on the request of an inspector.

34(10) The operator of a service rig shall ensure that all tests are recorded in the rig tour report including, in the case of a pressure test, the blow-out preventer tested, the duration of the test, and the pressures recorded.

BOP shop servicing

35 Where a drilling or servicing blow-out preventer is serviced and pressure tested in a shop, the operator of the rig shall maintain a record of the test data and maintenance performed and shall, on the request of an inspector, submit a copy of the record to the district office.

Director may vary BOP requirements

36 The director may, upon application by the licensee or on the director's own motion, vary the blow-out prevention requirements of this Part for any well.

Internal combustion engines

37(1) The licensee shall ensure that no internal combustion engine air intake or exhaust is located less than 5 m from a well open to the atmosphere or any other source of ignitable vapour.

37(2) The licensee shall ensure that any internal combustion engine located within 10 m of a well that is open to the atmosphere or any other source of ignitable vapour has:

- (a) air intake shut-off valves, equipped with a remote control easily accessible from the operator's station;
- (b) a system for injecting an inert gas into the engine's cylinders equipped with a remote control easily accessible from the operator's station;
- (c) a duct that provides air for the engine from a distance of at least 10 m from the well or any source of ignitable vapour; or
- (d) any other device approved for the purpose of this section.

37(3) The licensee shall ensure that the exhaust pipe of any internal combustion engine located within 10 m of a well that is open to the atmosphere or any other source of ignitable vapour is:

- (a) directed away from the well or source of ignitable vapour; and
- (b) constructed to prevent the emergence of flame along its length or at its end.

37(4) Where an installation is made in accordance with clause (2)(a) or (b), the licensee shall ensure that the internal combustion engine is tested for stopping by remote control:

- (a) during the drilling of a well, before drilling out the surface casing shoe plug and at least once every seven days thereafter;
- (b) during the completion or servicing of a well, before commencing operations, and at least once every seven days thereafter; and
- (c) when requested by an inspector.

37(5) The licensee shall ensure that the results of a test under subsection (4) are recorded with full particulars in the rig tour report.

37(6) If an internal combustion engine fails to stop during a test under subsection (4), the licensee shall ensure that the operation is discontinued until the shut down system is repaired.

Construction and use of drill pit

38(1) The licensee shall ensure that in the construction of a drilling fluid pit:

- (a) the topsoil in the pit area is removed and preserved;
- (b) the pit is constructed of clay or other suitable impermeable material;
- (c) the bottom of the pit is above the ground water level; and
- (d) the pit is located and constructed so that it does not collect natural run-off water and, in the event of an overflow, the fluid does not travel off the wellsite.

38(2) Where a pit of sufficient capacity for the drilling operation cannot be constructed on the wellsite in accordance with subsection (1) because of subsurface soil, surface topography, or other conditions, the licensee shall insure that

- (a) all drilling fluid and drill cuttings are contained in tanks and disposed of in a manner approved by an inspector; or
- (b) if a pit is to be constructed off the wellsite, the location of the pit is approved by an inspector.

38(3) If a pit is used during the drilling or completion of a well, the licensee shall ensure that only drilling fluid is directed into the pit.

Clean-up of wellsite

39(1) Upon completion of the drilling and casing or abandonment of a well, the licensee shall as soon as weather and ground conditions allow:

- (a) dispose of all drilling fluids and liquid waste in accordance with this section;
- (b) fill any pit made in connection with the well;
- (c) clear the wellsite of debris; and
- (d) spread the topsoil referred to in clause 38(1) on the wellsite;

and advise the district office when the operation is completed.

39(2) Before any drilling fluid is spread on the wellsite, the licensee shall submit a one litre sample of the drilling fluid to the district office.

39(3) The licensee shall ensure that no drilling fluid is spread over the wellsite if the sample submitted under subsection (2) has a pH of less than five or more than 10, or a chlorides content of more than 2,000 parts per million.

39(4) Where the sample referred to in subsection (2) does not conform to the standards specified in subsection (3) or contains hydrocarbons or other contaminants, the licensee shall dispose of drilling fluids in a manner approved by the director or an inspector.

39(5) The licensee shall ensure that no drilling fluids are spread over ground off the wellsite without the written consent of the surface owner and the approval of an inspector.

Removal of drilling rig

40 Unless authorized by the director, the licensee shall not in the course of drilling a well remove the drilling rig unless the well has been completed in accordance with the licence or abandoned in accordance with this regulation.

Surface casing

41(1) The licensee shall ensure that every well has surface casing that:

- (a) is installed to a depth of:
 - (i) 25 m below the top of the bedrock;
 - (ii) 10% of the true vertical depth of the well;

(iii) 100 m; or

(iv) a depth required by the director;

whichever is the greater;

(b) includes a float collar or float shoe; and

(c) is cemented by the pump and plug method with sufficient cement to circulate to the top of the hole.

41(2) If no bleed back occurs, the licensee may release pressure at the surface immediately upon completion of the cement job.

41(3) The licensee shall ensure that before the plug is drilled out:

(a) the cement is allowed to cure for not less than eight hours; and

(b) the surface casing is pressure tested to 7,000 kPa.

41(4) Where, when cementing surface casing, no cement returns occur at the top of the hole, the licensee shall immediately advise the district office and, with the approval of an inspector, conduct a remedial cement job.

41(5) The licensee shall ensure that no surface casing is removed from a well.
Surface casing vent

42 The licensee shall ensure that the annulus between the second casing string and the surface casing is vented by a line that:

(a) has a minimum diameter of 25 mm;

(b) has a working pressure rating of at least 3,500 kPa;

(c) extends at least 30 cm above ground level;

(d) is equipped with a threaded fitting; and

(e) terminates so that any flow is directed either downward or parallel to the ground.

Drill stem testing

43 Where a drill stem test is conducted, the licensee shall ensure that:

(a) a device is installed above the down hole test equipment to allow circulation of fluids from the drill string;

(b) during darkness:

(i) no pipe is pulled from the well unless the rig is lighted with flood lights that meet the requirements of the Manitoba Electrical Code; and

(ii) when oil or gas is recovered in the drill pipe, the recovery is reverse circulated or the discharge is controlled in a manner acceptable to an inspector;

(c) any gas released into the atmosphere during a drill stem test is flared; and

(d) any liquid recovered from a well during a drill stem test is directed into a tank isolated from the drilling mud system.

Production casing

44(1) The licensee shall ensure that intermediate or production casing installed in a well:

(a) includes a float collar or float shoe; and

(b) is cemented by the pump and plug method with sufficient cement to ensure that the cement top is at least 150 m above the top of the Swan River Formation.

44(2) The licensee shall ensure that before the plug is drilled out or the well is completed:

(a) the cement is allowed to cure:

(i) 24 hours for production casing; and

(ii) 12 hours for intermediate casing; and

(b) the production casing or intermediate casing is pressure tested to 7,000 kPa.

44(3) If no bleed back occurs, the licensee may release pressure at the surface immediately upon completion of the cement job.

44(4) Where the director has reasonable grounds to believe that cementing is not effective, the director may require the licensee to conduct a survey to determine the top of the cement and the quality of the cement bond or to take remedial action.

Adequate equipment and methods

45(1) The licensee shall ensure that equipment, tools, material, or casing used in a well is in good condition and conforms with:

(a) the specifications set out in the well licence;

(b) where applicable, specifications established by the manufacturer or the American Petroleum Institute; and

(c) any other specifications established by the director.

45(2) The director or an inspector may specify or approve methods to be used in drilling, completing, or servicing a well.

45(3) Unless otherwise authorized by an inspector, the licensee shall ensure that all wellhead equipment has a minimum working pressure rating of 7,000 kPa or the maximum expected wellhead pressure, whichever is the greater.

45(4) The licensee shall ensure that the wellhead equipment includes valve connections necessary to sample oil, gas, or water.

45(5) The licensee of a producing well shall install a high pressure control device between the wellhead and the flow line.

45(6) Where an inspector considers that wellhead equipment, casing, or down hole equipment used in drilling, completing, servicing, operating, or abandoning a well is inadequate, defective, or hazardous, the inspector may require the licensee to repair or replace the equipment or casing.

45(7) The licensee shall ensure that, during operations on a well, service rig guy lines are installed:

- (a) in accordance with specifications provided by the manufacturer of the rig;
- (b) in a manner certified by a qualified professional engineer; or
- (c) in accordance with the American Petroleum Institute Recommended Practice for Maintenance and Use of Drilling and Well Servicing Structures, API RP 4G, dated January, 1992, as amended from time to time.

Use of condensate

46 Where more than 1.5 m³ of condensate or other low flash point hydrocarbon is used in completing or servicing a well, the licensee shall ensure that:

- (a) open tanks are not used for storage or gauging;
- (b) a minimum distance of 25 m is maintained between the wellhead and storage tanks;
- (c) shut off valves are installed between the tank and any pump and between any pump and the wellhead;
- (d) a check valve is installed at the wellhead; and
- (e) all lines downstream from the pump are pressure tested to 7,000 kPa or twice the anticipated pumping pressure, whichever is the greater.

Approval of well operations

47(1) The licensee of a well that has been completed shall not commence operations to:

- (a) suspend the well;
- (b) recomplete the well;
- (c) deepen the well;
- (d) remove casing from the well;
- (e) abandon the well;

(f) convert the well for another purpose;

(g) repair casing in the well; or

(h) isolate a casing leak and continue operating the well;

without the approval of the director obtained on application.

47(2) An application under subsection (1) must be made on a form provided by the branch and must include:

(a) a detailed program of the proposed operations;

(a.1) for an application made under clause 47(1)(h), a plan for continued operation of the well that minimizes the possibility of a packer becoming stuck in the wellbore or other downhole problems affecting the licensee's ability to abandon the well in accordance with the requirements of section 56; and

(b) any additional information the director may require.

47(3) The director may approve an application made under subsection (1), subject to the regulations and any term or condition the director considers necessary or advisable.

Production and injection through tubing

48 The licensee shall ensure that, unless otherwise authorized by the inspector, all production from or injection into a well is through tubing landed within 15 m of the completed interval.

Packer for injection or disposal

49 The licensee shall ensure that before any fluid is injected through a subsurface formation through a well:

(a) unless otherwise authorized by an inspector, a packer is set within 15 m of the completed interval;

(b) the annular space between the tubing and the casing is filled with a non-corrosive inhibited fluid; and

(c) the annulus is pressure tested in accordance with subsection 50(1).

Isolation of tubing and casing

50(1) The licensee of an injection or disposal well shall, not later than September 1 of each year, pressure test the annulus between the tubing and the production casing to 3,500 kPa or such other pressure as the director may require.

50(2) Where a pressure test fails, the licensee shall advise the district office within seven days after the pressure test of the licensee's plan to repair the well in a manner approved by an inspector.

Casing leak

51(1) If a licensee determines that a well has or may have a casing leak, the licensee shall notify the district office within 24 hours, and if a leak is confirmed, the licensee shall apply within 30 days of confirmation for approval in accordance with the provisions of section 47 to

- (a) repair the leak;
- (b) isolate the leak and continue operating the well; or
- (c) abandon the well.

51(2) If an inspector suspects that a well has or may have a casing leak, the licensee shall determine if there is a leak in accordance with the instructions of the inspector and, if a leak is confirmed, the licensee shall comply with the application requirements of subsection (1).

Application to complete multi-pool well

52(1) An application for approval to complete a well as a multi-pool well must be made to the director on a form provided by the branch and must include:

- (a) a diagram of the well showing the present and proposed completion details;
- (b) a graph showing the production or injection history of the well;
- (c) where it is planned to segregate production or injection in the wellbore proposed segregation measures, including:
 - (i) a detailed description of the equipment installed to achieve segregation; and
 - (ii) the proposed method of demonstrating that segregation exists between the pools;
- (d) where it is proposed to commingle production or injection in the wellbore:
 - (i) maps showing the interpreted structure, effective reservoir thickness, areal extent and fluid interfaces of the pools; and
 - (ii) a discussion of:
 - (A) the ultimate reserves associated with each pool recoverable through the well;
 - (B) the proposed method of allocating production or injection to each pool, including testing frequency;
 - (C) reasons justifying the proposed commingling, including specific economic data; and
 - (D) the impact of commingling production or injection on ultimate recovery from each pool and on the correlative rights of owners; and
- (e) any other information the director may require.

52(2) Unless the director approves commingling of injection or production in a multi-pool well, the licensee shall segregate in the wellbore and separately measure production from or injection into each pool.

52(3) The licensee of a multi-pool well in which segregation of production or injection is required shall conduct a test to demonstrate that segregation exists between the pools:

- (a) within 30 days after the well has been completed as a multi-pool well;
- (b) once every three years thereafter; and
- (c) at such other time as the director may require.

52(4) The licensee of a multi-pool well shall submit to the branch the results of any segregation test conducted under subsection (3).

52(5) Where a licensee fails to comply with subsection (3), the director may establish terms and conditions under which the licensee may continue to operate the well.

52(6) The licensee of a multi-pool well in which production or injection is commingled in the wellbore shall submit, not later than April 30 of each year, a report providing for the previous year:

- (a) the result of any test conducted to determine the allocation of production or injection to each pool;
- (b) a graph showing the production or injection history for each pool in the well;
- (c) a summary of all operations carried out at the well; and
- (d) any other information the director may require.

Suspended wells

53(1) The licensee of a well at which normal operations are suspended for six consecutive months shall apply under subsection 47(1) for approval to suspend or abandon the well.

53(2) The director may approve suspension of a well under subsection 47(3) for a term of not more than three years from the date of approval.

53(3) The licensee of a suspended well shall, at least 30 days before the expiry of the approval of the suspension:

- (a) advise the branch in writing of his or her proposed plan to reactivate the well; or
- (b) submit an application under subsection 47(1) to abandon the well or to suspend the well.

Non-refundable levy for inactive well or battery

54(1) Subject to subsection (2), a well or battery that has been operated 15 days or less in a calendar year may be designated by the director as an inactive well or battery for the purpose of clause 172(1)(b) of the Act.

54(2) A well drilled or battery constructed in a calendar year is exempt from the provisions of this section for that calendar year.

54(3) For the purposes of this section, a well or battery designated under subsection (1) as inactive shall be classified as follows by the director:

- (a) Class 1 - a well that has not been operated for five years or less;
- (b) Class 2 - a well that has not been operated for more than five consecutive years but fewer than 10 consecutive years;
- (c) Class 3 - a well that has not been operated for 10 consecutive years or more;
- (d) Class 4 - an inactive battery.

54(4) Before April 30 of every year, the director shall mail a notice containing the following information to each operator who has one or more inactive wells or batteries;

- (a) a list of the operator's wells and batteries that are designated under subsection (1) as inactive;
- (b) the class of each inactive well and battery; and
- (c) the amount of the non-refundable levy owing for each inactive well and battery as determined under Schedule A.

54(5) The operator shall pay the non-refundable levy for each well and battery set out in the notice provided under subsection (4) by July 31 of that year, unless a well or battery has been abandoned before July 31 of that year in accordance with section 56 or section 79, as the case may be.

54(6) If the operator fails to pay the non-refundable levy by July 31, a penalty as determined in Item 3.1 of Schedule A is assessed against the operator in addition to the requirement to pay the non-refundable levy.

Account reviewed annually

54.1 The director shall conduct an annual review of the Abandonment Fund Reserve Account and shall make a recommendation as to whether the amount of the non-refundable levy should be changed having regard to the account balance and anticipated deposits to and expenditures from the account.

Dry hole abandonment

55 Subject to section 57, where a well in which only surface casing has been set it is abandoned, the licensee shall ensure that:

- (a) each porous interval is isolated with a cement plug not less than 30 m long or by a cement plug extending at least 15 m above and below the porous zone;
- (b) a cement plug with a minimum length of 30 m is placed across the surface casing shoe;
- (c) the interval between the cement plugs is filled with drilling mud;
- (d) all cement plugs are placed in the hole by circulating them through drill pipe, or by any other method approved by an inspector;
- (e) unless otherwise authorized by an inspector, a cement plug is able to withstand a force of 18 kN when probed with drill pipe after allowing the cement to cure for six hours;
- (f) when a cement plug is probed with an approved wireline tool, a strip log showing the calculated and measured cement top is submitted to the district office on completion of the probing;
- (g) a cement plug is reset if it fails to withstand the required force or is found to be displaced a distance that renders it inadequate for the purpose for which it was set;
- (h) the surface casing is cut off at least 1.5 m below ground level; and
- (i) a steel plate is welded on the end of the surface casing in order to completely close it off.

Cased hole abandonment

56(1) Subject to section 57, when abandoning a well completed in a Jurassic or Mississippian formation, the licensee shall:

- (a) set an approved mechanical plug above the base of the upper (Evaporite) member of the Amaranth Formation and place an 8 m cement plug on top of the mechanical plug; or
- (b) set a cement plug by circulating to extend from below the perforations or, in the case of an open hole completion from the bottom of the well, to at least 15 m above the base of the upper (Evaporite) member of the Amaranth Formation, and probe the plug with a force of 18 kN or such other force as may be approved by an inspector after the cement cures for at least six hours;

and, after the plug is set:

- (c) pressure test the casing above the plug to 3,500 kPa;
- (d) if pressure testing indicates a leak, test the plug for proper shut off;
- (e) if the production casing is cemented above the surface casing shoe, pressure test the annulus between the surface and production casing to 3,500 kPa;
- (f) if the pressure test required under clause (e) is successful:

(i) set an approved mechanical plug in the production casing 5 m below the surface casing shoe and place an 8 m cement plug on top of the mechanical plug; or

(ii) set a cement plug inside the production casing to extend at least 15 m above and below the surface casing shoe;

(g) if the production casing is not cemented above the surface casing shoe, or if the pressure test under clause (e) fails:

(i) squeeze cement through perforations made in the casing to ensure the presence of a cement sheath outside the production casing and a plug inside the production casing for at least 15 m above and below the surface casing shoe;

(ii) retest the annulus in accordance with clause (e); and

(iii) probe the plug with tubing.

(h) if there is a hole in the casing above the plug set under clause (a) or (b), pressure test the casing above the plug set in accordance with clause (f) or (g) to 3,500 kPa and, if a cement plug is used, probe the plug with tubing;

(i) fill the production casing and the annulus between the surface and production casing with a non-corrosive inhibited fluid;

(j) cut off the surface and production casing a minimum of 1.5 m below ground level; and

(k) weld a steel plate to completely close off the end of the surface and production casing.

56(2) A licensee shall ensure that the well is abandoned in a manner approved by the director where:

(a) the well has been completed as a multi-pool well;

(b) the well is completed in a formation other than a Jurassic or Mississippian formation;
or

(c) the production casing is to be removed from the well.

Director may vary abandonment requirements

57 The director may on application by the licensee vary any requirement under section 55 or 56.

Flow line to be abandoned

57.1 Unless otherwise approved by an inspector, when a well is abandoned a flow line tied into the well shall be abandoned in accordance with section 99.

Site clean-up and contouring

58 Upon completion of the abandonment of a well or battery, and as soon as weather and ground conditions allow, the operator shall:

- (a) remove from the site and properly dispose of all equipment, materials, oilfield waste, and debris;
- (b) drain and fill all excavations; and
- (c) contour the surface and return the site and access road to a condition as nearly as possible to their condition when operations commenced.

Rehabilitation

59(1) For the purpose of section 125 of the Act (operator must rehabilitate site), a site is rehabilitated when:

- (a) the provisions of section 58 are complied with; and
- (b) subject to subsection (2), an inspector is satisfied that plant growth on the site is comparable to plant growth on the land surrounding the site.

59(2) An inspector may accept analysis of soil samples from the site indicating soil conditions are comparable to the surrounding land in lieu of the requirement in clause (1)(b).

Certificate of Abandonment

60(1) An application under subsection 171(1) of the Act for a Certificate of Abandonment for the site of a well or battery must be made to an inspector on a form provided by the branch and must include:

- (a) a copy of:
 - (i) a release signed by the surface owner indicating the owner is satisfied with the clean-up and rehabilitation of the site; or
 - (ii) an abandonment order of The Surface Rights Board that has been fully complied with; and
- (b) evidence that the surface owner is satisfied with any alteration to the site that does not conform to the requirements of clause 58(c).

60(2) An inspector may issue a Certificate of Abandonment for the site of a well or battery if:

- (a) the well or battery has been abandoned in accordance with this regulation;
- (b) the site has been rehabilitated in accordance with section 59; and
- (c) no debts are due to the Crown in respect of the well or battery.

60(3) Where a well that is not abandoned is located on the site of a well or battery that is abandoned, an inspector may issue a Certificate of Abandonment for the abandoned well or battery if clauses (2)(a) and (c) are satisfied in respect of the abandoned well or battery.

60(4) The operator of an abandoned well or battery for which a Certificate of Abandonment has not been issued shall include the abandoned well or battery site in the operator's report required under section 103.

PART 7

Production Operations

Definition

61 In this Part, "pre-Mississippian pool" means a pool of Devonian, Silurian, Ordovician, or Cambrian age.

Maximum production rate

62(1) Subject to subsection (3), the maximum production rate of clean oil for a well that is off-target is as follows:

- (a) 750 m3 per month for a well producing from a pre-Mississippian pool or a horizontal well; and
- (b) 300 m3 per month for any other well.

62(2) Maximum production rates are effective in the month of the on-production date determined under section 66.

62(3) A maximum production rate does not apply to a well that is drilled within the target area in a spacing unit or to a horizontal well that is deemed under subsection **13(2)** to be on target.

62(4) Production of oil in excess of the maximum production rate determined under this section is accumulated and deducted from the succeeding month's maximum production rate.

62(5) Unless the director in writing authorizes continued production, where the amount of the accumulated overproduction for a well exceeds the amount determined as the maximum production rate for the well under subsection 62(1), the licensee shall shut in the well until the amount of overproduction is reduced to zero.

Multiple wells in spacing unit

63(1) Subject to subsection (3), an application under section 107 of the Act for approval to produce oil and gas from a well in a spacing unit in which a well is producing or capable of producing oil and gas must be made to the director and must include a discussion of the effect of the proposed well on:

- (a) recovery from the spacing unit; and
- (b) correlative rights.

63(2) Subsection (1) does not apply to a horizontal well.
Application to vary or remove MPR

64 Section 64 is repealed

Delegation

65 The minister may delegate his or her authority to make an order under section 105 of the Act to the director.

On-production date

66 The on-production date of a well is the date on which the well produces oil in excess of the volume of any oil used to complete the well.

Initial production test

67(1) The licensee shall conduct an initial production test and shall within 14 days after conducting the test report the results to the district office on the form provided by the branch.

67(2) The licensee shall ensure that the initial production test commences on the first day of normal production after the on-production date and continues for the next four producing days.

On-injection report

67.1 A licensee shall, within 14 days of commencing injection operations at a well, report the date on which injection was commenced to the district office on a form provided by the branch.

Well recompleted

68 Sections 66, 67 and 67.1 apply to a well recompleted in another pool.

Well testing

69(1) Subject to subsection (3), the licensee shall ensure that every well producing to a battery is tested every three months for not less than 24 hours at normal operating conditions to determine the rate of oil, gas, and water production.

69(2) The licensee shall use the results of the tests under subsection (1) to pro-rate the monthly production from the battery to the wells that are producing to the battery.

69(3) The licensee may apply to the director to reduce the frequency of well testing required under subsection (1), and the application must include:

- (a) the proposed frequency and method of testing;
- (b) a discussion of the accuracy of present well testing;
- (c) justification for reducing the test frequency, including:
 - (i) the effect on recovery and correlative rights; and
 - (ii) if the proposal is based on economic considerations, specific economic data;
and
- (d) any other information the director may require.

Application for salt water disposal permit

70 An application under section 109 of the Act for a salt water disposal permit must be made to the director on a form provided by the branch and must include:

- (a) a written consent to the application by the royalty owner of the spacing unit of the well;
- (b) a copy of a notice of the licensee's plans provided to the surface owner;

- (c) the names and addresses of owners within 0.5 km of the proposed disposal well;
- (d) a diagram that includes a detailed description of the proposed injection, treatment, and measurement facilities and the configuration and rated working pressure of piping and equipment;
- (e) a diagram of the wellbore that shows the existing and proposed completion details;
- (f) the proposed method of controlling corrosion in the wellbore, flow line, and surface facilities;
- (g) a geological and engineering report that includes:
 - (i) a cross section of the disposal formation in the vicinity of the proposed disposal well, including the top and base of the formation and fluid interfaces;
 - (ii) a map that shows the structure of the top of the disposal formation within 1 km of the proposed disposal well;
 - (iii) a list of rock and fluid properties, including the estimated fracture pressure of the formation;
 - (iv) a graph showing the production history of the proposed disposal well and offsetting wells;
 - (v) the source of the salt water, the estimated total daily volume to be injected, and the anticipated maximum wellhead injection pressure; and
 - (vi) a discussion of the anticipated effect of disposal on the ultimate recovery from the pool;
- (h) a discussion of the anticipated effect of disposal on the correlative rights of the owners referred to in clause (c); and
- (i) any other information that the director or minister may require.

Application for approval of enhanced oil recovery

71 An application under section 116 of the Act for approval of a project of enhanced recovery must be made to the director and must include:

- (a) a map showing the area in which the proposed project would be undertaken and the pool limits;
- (b) the names and addresses of owners in the project area and within 0.5 km of the project area;
- (c) a diagram showing the wellbore and the method of completion of any injection well;
- (d) if the project involves the injection of fresh water, proof of compliance with any licensing requirements under The Water Rights Act;

- (e) a copy of a notice, and proof of service of the notice, to the surface owners in the project area advising of the proposed project of enhanced recovery;
- (f) a diagram that includes a detailed description of the water injection, treatment, and measurement facilities and shows the configuration and rated working pressure of piping and equipment;
- (g) details of the proposed method of controlling corrosion in the wellbores, flow lines, and surface facilities;
- (h) a geological and engineering report that includes:
 - (i) a cross section of the pool showing the top and base of the reservoir and fluid interfaces;
 - (ii) a map of the structure of the top of the reservoir;
 - (iii) maps showing the pore volume and permeability capacity of the reservoir;
 - (iv) a list of rock and fluid properties, including the estimated fracture pressure of the formation;
 - (v) the original oil in place in the project area;
 - (vi) forecasts of production and ultimate recovery under existing and proposed depletion mechanisms;
 - (vii) the source of the injection fluid and evidence of its compatibility with the reservoir rock and fluids;
 - (viii) a list of the wells to be converted to injection and the estimated injection rates and wellhead injection pressures for each well;
 - (ix) predictions respecting recovery, including the displacement and volumetric sweep efficiencies, economic limits, and the result of any simulation model;
 - (x) any methods considered to maximize recovery, including preventing injection out of the pool and channeling; and
 - (xi) the measured or estimated reservoir pressure in the project area, and the reservoir pressure at which the project will be conducted;
- (i) the proposed schedule for drilling and conversion of the wells, and for the construction of facilities; and
- (j) any other information that the director or minister may require.

Delegation

72 The minister may delegate his or her authority to make an order under section 116 of the Act to the director.

EOR report

73(1) The operator of a project of enhanced recovery approved under section 116 of the Act shall file a report with the director within 60 days after the end of each calendar year that includes the following information for that year:

- (a) the oil production rate, injection rate, GOR, and WOR during each month for each injection pattern and for the whole project;
- (b) the cumulative volume of oil, gas, and water produced and fluid injected for each injection pattern and for the whole project at the end of the year;
- (c) the monthly wellhead injection pressure for each injection well;
- (d) a summary of the result of any survey of reservoir pressure conducted during the year;
- (e) the date and type of any well servicing;
- (f) calculations of the voidage replacement ratio on a monthly and cumulative basis for each injection pattern and for the project area;
- (g) an outline of the method used for quality control and treatment of the injected fluid;
- (h) a report of any unusual performance problems and remedial measures taken or being considered;
- (i) any other information that the operator or director considers necessary to evaluate the performance of the project.

73(2) The data referred to in clauses (1)(a) to (c) must be submitted in tabular and graphical form.

Operator to give notice to district office

74 The operator of a battery shall give notice to the district office as follows:

- (a) not less than 24 hours before commencing the construction of a battery;
- (b) after completing the construction of a battery, but before the battery goes into operation;
- (c) as soon as practicable after completing a minor modification to a battery under subsection 76(2);
- (d) not less than seven days before suspending a battery under section 78.
- (e) not more than 24 hours after receiving a complaint from a member of the public who has detected odours or emissions from a battery. This notice shall include the actions taken or proposed to be taken by the operator to remedy any problem and prevent future occurrences.

Application for battery operating permit

75(1) An application under section 111 of the Act for a battery operating permit must be submitted to an inspector at least 30 days before the date on which it is planned to commence construction and must include:

(a) the application fee and levy set out in Schedule A;

(b) the performance deposit required under section 10;

(c) two copies of a survey plan of the battery location in a form acceptable to an inspector;

(c.1) the names and addresses of all landowners and occupants within 1.5 km of the proposed site of the battery and a description of the applicant's consultations with those landowners and occupants, including a summary of any concerns raised during the consultation process and all actions taken or proposed to be taken by the applicant to address the concerns of the landowners and occupants;

(d) a list of the wells to be tied in to the battery;

(e) an estimate of the production rates of oil, water and gas for the battery, including the estimated volume of gas.

(i) used for fuel,

(ii) flared, or

(iii) vented;

(e.1) copy of a representative gas analysis for the battery in a form acceptable to an inspector;

(f) the specifications of any process vessel to be used, including the name of the manufacturer, dimensions, Canadian Registration Number (CRN), minimum and maximum flow capacity and design and estimated operating pressure and temperature;

(g) details of well testing facilities associated with the battery, including the method, frequency, and duration of well testing;

(g.1) details of the flare and vapour recovery systems for the battery;

(g.2) where the applicant proposes to vent gas containing hydrogen sulphide,

(i) reasons why the gas cannot be flared,

(ii) specific actions to be taken to minimize the volume of gas vented, and

(iii) the method of controlling off-lease odours;

(g.3) where gas production will contain hydrogen sulphide, a copy of air dispersion modelling results in a form acceptable to the director demonstrating that the battery will comply with the requirements of subsection 85.2(1);

(h) two copies of a plot drawing on a scale of not less than 1:125 and showing the location of:

- (i) each process vessel, tank, and salt water disposal facility;
- (ii) any pit, dyke, flare line, or pop tank and its size; and
- (iii) any other equipment;

(i) two copies of a schematic process flow diagram showing:

- (i) process vessels, meters, tanks, and salt water disposal equipment;
- (ii) valves, pumps, and piping;
- (iii) pressure relief valves and settings, emergency shut down systems, and any other equipment intended to prevent a spill or to mitigate the amount of a spill;

(j) repealed

(k) if there are no facilities for the disposal of water, plans for the disposal of produced water; and

(l) any other information that an inspector or the director may require.

75(2) The operator of a single well producing directly to a tank on the wellsite is exempt from section 111 of the Act.

75(3) The permittee shall ensure that a copy of the battery operating permit is posted in a conspicuous place at the battery site at all times.

75(4) No person shall locate equipment at a battery at a distance that is less than is set out in Schedule C unless an inspector, on application by the person:

- (a) is satisfied that special circumstances exist that justify locating the equipment at a lesser distance; and
- (b) provides the permittee with written approval to locate the equipment at a specified lesser distance.

Application for battery modification

76(1) An application under subsection 111(5) of the Act for approval to modify a battery by installing, replacing, or removing any process vessel, tank, meter, or equipment designed for environmental protection must be made to an inspector and must include:

- (a) a description of the proposed modification and its effect on the operation of the battery;
- (b) where the modification requires changes to the battery plot, a revised plot drawing;
- (c) a revised schematic process flow diagram;

(c.1) any information required under subsection 75(1) that is relevant to the proposed modification; and

(d) any other information an inspector may require.

76(2) Notwithstanding subsection (1), the permittee may, after giving notice to the district office, proceed with a minor modification to a battery that does not significantly affect a process, measurement, or environmental protection at the battery and, where the modification requires a change to the battery plot or schematic process flow diagram, shall within 30 days after completing the modification submit a revised plot drawing or schematic process flow diagram to the district office.

Flaring or venting at existing batteries

76.1(1) A permittee who holds a battery operating permit that was issued before June 30, 2000 shall apply, by April 30, 2002, for approval to continue flaring or venting at the battery.

76.1(2) If a permittee who holds a battery operating permit that was issued before June 30, 2000 does not apply by April 30, 2002 to continue flaring or venting at the battery, the battery operating permit is cancelled effective April 30, 2002.

76.1(3) An application under subsection (1) must be made to the director and include

(a) comments on current battery operations from all landowners and occupants within 500 m of the battery and other nearby landowners or occupants who have previously expressed concerns to the permittee or the branch with respect to operation of the battery;

(b) an estimate of the production rates of oil, water and gas for the battery, including the estimated volume of gas

(i) used for fuel,

(ii) flared, or

(iii) vented;

(c) a copy of a representative gas analysis for the battery in a form acceptable to an inspector;

(d) details of the flare or venting system including, where gas production at the battery contains hydrogen sulphide, a copy of air dispersion modelling results for the battery in a form acceptable to the director;

(e) a description of any proposed modification to the battery required to ensure compliance with subsection 85.2(1) and its effect on battery emission, including

(i) specific actions to be taken to reduce or eliminate venting, control off-lease odours and improve flare system operations, and

(ii) a copy of revised air dispersion modelling results that incorporate the proposed battery modifications; and

(f) any other information the director may require.

76.1(4) Any modifications to a battery proposed by an operator under clause 76.1(3)(e) or required by the director as a condition of approval to continue flaring and venting shall be completed by October 31, 2002.

76.1(5) If a permittee has not completed the modifications to a battery set out in subsection (4) by October 31, 2002, the battery operating permit of the permittee is cancelled effective October 31, 2002.

76.1(6) Where an operator has completed modifications to a battery set out in subsection (4) or has demonstrated under clause 76.1(3)(d) that the battery complies with the requirements of subsection 85.2(1), the director shall issue a new battery operating permit authorizing continued operation of the battery.

Operator to maintain site of well and battery

77 The operator shall maintain the wellsite or battery site in good condition, free of debris, and shall maintain a fire-free area of 5 m around the well and all equipment.

Suspension of battery

78 Unless otherwise approved by an inspector, if a battery has not been used for six months, the operator shall suspend the battery by:

- (a) draining all process vessels and tanks;
- (b) isolating and locking out the battery from all pressure sources;
- (c) securing the site against tampering; and
- (d) taking any other measure to protect against spills as may be required by an inspector.

78.1 Upon completion of the suspension of a battery, the operator shall submit a summary of suspension operations to the district office on a form provided by the branch.

Application to abandon battery

79 An application under subsection 122(1) of the Act to abandon a battery must be made to an inspector on a form provided by the branch and must include plans for clean-up, contouring, and rehabilitation of the site in accordance with section 59 of this regulation.

Tanks

80(1) The permittee shall ensure that tanks with a storage capacity sufficient to contain a volume of 24 hours of salt water production are installed at the battery unless the battery has:

- (a) an alarm or emergency shut down system; or
- (b) an emergency storage pit.

80(2) The permittee shall ensure that each tank or group of tanks at a well or battery is surrounded by a dyke with a minimum net capacity of 110% of the volume of the largest tank within the dyke or such greater capacity as an inspector may require.

80(3) The operator shall keep the dyke in good condition and maintain a 5 m fire-free area around the dyke.

80(4) Unless otherwise required by an inspector, subsection (2) does not apply where a tank is temporarily installed at a well for the purpose of testing the well.

Pop tank

81(1) Where a pressure relief device is installed on a process vessel, the permittee shall connect the pressure relief device by piping to a suitable tank.

81(2) Notwithstanding subsection (1), an inspector may, on application, approve the use of an alternate system or method of preventing spills where the inspector is satisfied that the degree of environmental protection provided by the system or method exceeds that provided under subsection (1).

81(3) Unless otherwise authorized by an inspector, the tank referred to in subsection (1) must be adequate to contain the maximum possible flow from the facility to which it is connected but, in the case of a well testing satellite, must be of a volume equal to the daily production of oil and water of the most productive well.

Construction or use of emergency storage pits

82(1) The permittee shall not construct or use a pit for the emergency storage of oil or salt water unless the construction and use of a pit is authorized under a battery operating permit.

82(2) An emergency storage pit must be:

- (a) equipped with an impervious liner;
- (b) equipped with suitable fencing;
- (c) located and constructed so that it will not collect natural run-off water;
- (d) equipped with any device required to monitor the integrity of the liner; and
- (e) roped and flagged at 3 m intervals to prevent waterfowl from entering the pit.

82(3) The permittee shall immediately advise the district office of any use of the emergency storage pit, including the nature of the emergency and the steps taken to return to normal operation.

82(4) Where an emergency pit is used, the permittee shall remove and properly dispose of the fluid from the pit within three days.

Process vessels

83 Every process vessel must be manufactured, tested, maintained, and operated in accordance with the Standard B51-M-1991 Boiler, Pressure Vessel and Pressure Piping Code, as amended from time to time, of the Canadian Standards Association.

Flare design and operation

84(1) All flare systems installed at a battery shall

- (a) provide stable and efficient combustion of any gas directed to it;
- (b) achieve sufficient atmospheric dispersion of emissions that comply with subsection 85.2(1);
- (c) remove any liquid hydrocarbons or other liquids from the gas prior to flaring; and
- (d) limit the visible emission of smoke.

84(2) Unless otherwise approved by an inspector, a flare system installed at a battery shall be equipped with a wind guard and an auto-ignition system capable of igniting or re-igniting the flare in all weather conditions.

Fire protection

85(1) No person shall locate a flare pit, end of flare line, or flame-type equipment at a distance from a surface improvement or feature that is less than is set out in Schedule C unless an inspector, on application by the person:

- (a) is satisfied that special circumstances exist that justify locating the equipment at a lesser distance; and
- (b) provides the person with written approval to locate the equipment at a specified lesser distance.

85(2) The permittee shall construct and safeguard all flare pits and flare lines so that no fire hazard exists.

85(3) The permittee shall ensure that no flame-type equipment is located in the same building as a process vessel or other source of ignitable vapour, unless:

- (a) the air intakes and flues of all burners are located outside of the building;
- (b) relief valves, safety heads, and other sources of ignitable vapour are vented outside the building and discharged above the level of the roof of the building; and
- (c) the building is cross ventilated.

85(4) The permittee shall ensure that any process vessel or equipment from which ignitable vapour could issue is designed and operated in a manner that allows for the safe release of such vapours.

85(5) The permittee shall ensure that a vapour recovery system and all lines from tanks that are directed to a flare system have flame arrestors or other safety devices that are acceptable to an inspector.

Hydrogen sulphide gas safety requirements

85.1 The operator of a battery where gas containing hydrogen sulphide might reasonably be encountered shall ensure that

(a) any worker at the battery

(i) is certified in the Petroleum Industry Training Service (PITS) "H₂S Alive" course or an equivalent certification acceptable to an inspector, and

(ii) is equipped with a personal monitor to alert the worker to the presence of hydrogen sulphide gas;

(b) a sign warning of the presence or potential presence of hydrogen sulphide gas is posted at a conspicuous place at the entrance to the battery; and

(c) unless otherwise approved by an inspector, the battery is equipped with a monitor to alert workers of the presence of hydrogen sulphide gas in a building or other area on the battery site.

Well and battery emissions

85.2(1) For the purpose of subsection 114(1) of the Act (operator to limit discharge of pollutants), gas containing hydrogen sulphide that is vented or burned at a well or battery shall be vented or burned in a manner that ensures the concentration of hydrogen sulphide and sulphur dioxide beyond the well or battery site does not exceed the levels set out in Schedule G.

85.2(2) The operator shall determine the concentration of hydrogen sulphide and sulphur dioxide resulting from emissions from a well or battery using an air dispersion model and methodology acceptable to the director.

85.2(3) In calculating the concentrations of hydrogen sulphide and sulphur dioxide, all measurements shall be corrected to a reference temperature of 25° C and a reference pressure of 101.3 kiloPascals.

Off-lease odours

85.3 Where the director considers that venting gas to the atmosphere at a well or battery results or may result in off-lease odours, the director may, in accordance with subsection 114(2) of the Act (operator to limit discharge of pollutants), require the operator to treat or flare the gas or take such other steps as are required to eliminate or reduce the off-lease odours.

Electrical installations at well or battery

86 All electrical installations at a well or battery must conform to the Manitoba Electrical Code.

Machine guarding

87 The licensee of a well or the operator of an oil and gas facility shall ensure that any moving part of machinery located at a well or oil and gas facility is guarded during its operation in order to prevent injury.

Fencing requirements

88(1) Unless otherwise authorized by the director, the licensee of a well located within 200 m, or the permittee of a battery located within 500 m, of a recreation area or dwelling shall enclose the wellsite or battery site with a fence that is:

- (a) at least 2 m high;
- (b) constructed of a small industrial mesh or other material approved by an inspector;
and
- (c) equipped with a locking gate.

88(2) Notwithstanding subsection (1), where the director considers that the location of any well or battery is or could be a safety hazard, the director may require the wellsite or battery site to be fenced in accordance with clauses (1)(a) to (c).

Oilfield waste

89(1) The operator of a well or a battery shall ensure that oilfield waste:

- (a) is stored, processed, and disposed of in a manner that minimizes any adverse impact on the environment; and
- (b) does not create or constitute a hazard to safety or health.

89(2) Where a battery is to include facilities for the storage, processing, or disposal of oilfield waste, an application for a battery operating permit or for approval of modifications to a battery must include:

- (a) the source, type, and volume of oilfield waste to be stored, processed, or disposed of at the battery;
- (b) the proposed procedure for storing, processing, or disposing of oilfield waste at the battery;
- (c) an assessment of the battery site, including:
 - (i) a representative soil profile and analysis; and
 - (ii) a survey and analysis of ground water;
- (d) the measures proposed to prevent the contamination of air, water, and soil;
- (e) plans for monitoring the integrity of the site, including the location and design of any piezometers; and
- (f) any other information an inspector or the director may require.

89(3) The permittee of a battery at which oilfield waste is stored, processed, or disposed of shall keep a record of:

- (a) the name of each person who supplies oilfield waste and the source of the oilfield waste;
- (b) the type and volume of oilfield waste;
- (c) the disposition of all fluids recovered from the oilfield waste; and
- (d) any other information an inspector may require.

89(4) The permittee shall file a copy of the records kept under subsection (3) with the district office not later than February 28 of each year for the previous calendar year or upon the request of an inspector.

89(5) Before disposing of any solid oilfield waste, the permittee shall obtain approval from an inspector for the proposed method of disposal.

Royalty rate on seizure

89.1 A royalty required under section 182(3) of the Act shall be equal to 15% of the fair market value of the oil and gas produced as determined by the director in accordance with section 7 of the Crown Royalty and Incentives Regulation.

PART 8 - Flow Line

Definition

90 In this Part, "licensee" means the holder of a flow line licence issued under Part 12 of the Act.

Licensee to give notice to district office

91 The licensee shall give notice to the district office as follows:

- (a) not less than 24 hours before commencing construction, pressure testing, suspension, reactivation, or abandonment of a flow line;
- (b) not less than one hour before commencing the repair of a flow line.

Flow line requirements

92(1) Except as otherwise provided in this regulation, the minimum standards for the design, construction, testing, operation, maintenance, repair, and identification of a flow line are those contained in the latest published edition of the Standard CAN/CSA Z662-99 Oil and Gas Pipeline Systems, as amended from time to time, of the Canadian Standards Association.

92(2) A licensee shall ensure that the flow line:

- (a) is buried at least 1.5 m below ground level;
- (b) has a check valve to prevent back flow; and
- (c) is equipped with any other device that an inspector may require to prevent overpressuring or a spill, or to minimize the volume of a spill.

Application

93(1) An application under section 146 of the Act for a flow line licence must be made to an inspector on a form provided by the district office and must include:

- (a) a plan on a scale of 1:5,000 prepared from a survey that is made under the supervision of a surveyor authorized to practice under The Land Surveyors Act, and that shows the flow line right of way;
- (b) a scaled plan view and cross section showing how it is proposed to cross any highway, railway, buried cable, flow line, or pipeline;
- (c) a detailed drawing of the battery and well tie-in and any header facility on the flow line;
- (d) a description of the corrosion mitigation features of the flow line;
- (e) details of any device to be installed on the flow line to minimize the volume of a leak;

(f) a statement indicating that the necessary surface rights have been obtained, including any written consent required under section 155 of the Act to cross or be within a prescribed distance of a road or highway; and

(g) any other information that the inspector may require.

93(2) Where an application for a flow line licence has been approved, the licensee shall file a caveat in the appropriate land titles office advising of the flow line and referring to the plan of survey under clause (1)(a).

Corrosion protection

94 Unless otherwise authorized by an inspector, the licensee shall ensure that every steel flow line includes an external protective coating and is cathodically protected within one year following completion of construction of the flow line.

Temporary flow lines

95 An inspector may approve the temporary installation of a flow line above ground subject to any terms or conditions the inspector considers necessary or advisable.

Pressure testing

96 Where a flow line has been installed, altered, or repaired, or has not been used for six months, or where required by the director, the licensee shall pressure test the flow line:

(a) to a pressure of 125% of the maximum operating pressure, but not less than 1,000 kPa;

(b) unless otherwise approved by an inspector, using fresh water as the test medium; and

(c) unless otherwise approved by an inspector, for a duration of not less than 24 hours.

Flow line replacement

97 Where two or more leaks have occurred on a flow line, the director may require the licensee to replace the flow line or part of it.

Suspension of flow line

98 Unless otherwise approved by an inspector, if a flow line has not been used for 6 months, the licensee shall suspend the flow line by:

(a) filling the flow line with air, fresh water, or nitrogen;

(b) isolating the flow line from all pressure sources; and

(d) taking any additional measure required by an inspector to leave the flow line in a safe condition.

Abandonment of flow line

99 A licensee who abandons a flow line shall do so by cutting and capping both ends of the flow line at least 1.5 m below ground level and complying with clauses 98(a) and (c).

Report of suspension or abandonment

100 Where a licensee suspends or abandons the flow line, the licensee shall submit a written report of the operation to the district office within 30 days after completing the suspension or abandonment.

PART 9 - SPILLS ENVIRONMENTAL PROTECTION

Spill report

101(1) Where a spill occurs from a well or oil and gas facility and:

- (a) the spill occurs on or spreads to land off the wellsite or the site of the oil and gas facility; or
- (b) the volume of fluid spilled is more than 0.5 m³;

the operator of the well or oil and gas facility shall, as soon as practicable, notify the owner of the land and shall, not later than 12 hours after the spill is discovered by or reported to the operator, notify the district office of the size and location of the spill, plans for disposal of any oilfield waste, and any other information that the inspector may request.

101(2) The operator shall, within seven days after the day the spill was discovered, submit a spill report to the district office on a form provided by the branch.

Operator to recover fluid during clean-up

102 On cleaning up a spill, the operator shall make every effort to recover as much of the spilled fluid as is practicable.

Reclamation of a spill or abandon site

103 The operator of a well or battery which is abandoned and for which a Certificate of Abandonment has not been issued or a well or oil and gas facility at which a spill site is not rehabilitated in accordance with section 59 shall, before April 1 of each year, submit to the district office:

- (a) a report on the rehabilitation procedures carried out at the site in the previous year; and
- (b) the rehabilitation procedures to be carried out in the current year.

Environmental protection plan

104(1) Where an environmental protection plan is required by the director under section 120 of the Act, the operator shall file a plan that is acceptable to the director and that includes the following:

- (a) a description of the emergency response, including notification procedures;
- (b) maps showing water-covered areas, spill control points designated by the operator, access roads, municipal or industrial water supply intakes, pipelines, wells, and any other oil and gas facility;
- (c) a description of any spill control points, including information respecting the volume, depth, flow, and current of water;
- (d) the equipment available for containing spills and recovering the fluid, and the location of the equipment;

- (e) procedure respecting any spill that could occur on the site, including the containment, recovery, and clean-up of the spill;
- (f) policies respecting the safety of workers at the site of a spill;
- (g) the duties of personnel in an emergency response or a training exercise.

104(2) The director may require an oil spill co-operative or the operator of a well or oil and gas facility that is required by the director to file an environmental protection plan under section 120 of the Act to conduct training exercises respecting the deployment of equipment at a control point, and to provide the director with a report on the training exercises.

PART 10 - MEASUREMENT

Measurement of oil

105(1) A record or report of any measurement of oil shall be made in units of cubic metres to one decimal place corrected to a temperature of 15° C.

105(2) An operator shall measure oil by manual gauging or an oil meter.

105(3) Where oil is measured with an oil meter, the operator shall prove the meter within 90 days after the day the meter is installed.

105(4) After the first proof, the operator shall prove an oil meter at any time the director may request, and at least once every two years.

105(5) The operator shall keep a record of the results of the most recent proof of any oil meter.

105(6) The operator shall attach to each meter and maintain a tag or label on which the operator shall record the date of the last proof, the serial number of the meter, and the meter factor.

Measurement of gas

106(1) A report or record of any measurement of gas must be made in units of 1,000 m³ to one decimal place and must be corrected to the volume that the gas would occupy at a pressure of 101.325 kPa absolute and a temperature of 15° C.

106(2) Where required by the director, the operator shall measure produced gas with a gas meter and shall keep a record of the data required to accurately calculate the volume of gas produced.

Measurement of water

107(1) Subject to subsection (2), section 105 applies to the measurement of water.

107(2) A record or report of any measurement of water must be made in cubic metres to one decimal place at a temperature between 0° C and 15° C.

Measurement of injection fluids

108(1) Where gas, water, or other fluid is injected into a well, the volume injected in the well must be measured using a meter installed in a manner acceptable to the director.

108(2) The licensee shall prove any injection meter in accordance with section 105.

Measurement of production

109 The licensee shall measure any production in a manner that is satisfactory to the director and, where a meter is used, the licensee shall:

- (a) install the meter in accordance with the manufacturer's specifications;
- (b) maintain the meter in good operating condition; and
- (c) protect the meter from weather and tampering.

PART 11 - WELL DATA

Deviation and directional surveys

110(1) While drilling a well, the licensee shall conduct deviation surveys at depth intervals not exceeding 150 m.

110(2) Unless the director otherwise authorizes the licensee in writing, the licensee shall conduct a directional survey of the well, if:

- (a) the surface location of the well is nearer to the boundary of its target area than 2% of the depth of the well; or
- (b) the well is drilled directionally or horizontally;

and before placing the well on production shall submit a copy of the results of the survey to the branch.

Drill cutting samples

111(1) The licensee shall take a sample of drill cuttings at 5 m intervals over such depth as the director may specify.

111(2) The licensee shall ensure that:

- (a) one set of samples is washed, dried, and preserved in vials that are labelled with the name of the well and the depth at which each sample was taken;
- (b) the vials are stored in trays that are labelled with the well name and the depth at which the samples were taken;
- (c) the samples are delivered prepaid to the director within 30 days after the final drilling date of the well.

Core and core analysis

112(1) The licensee shall store any core obtained from a well:

- (a) in the same sequence as the core is removed from the core barrel; and
- (b) in boxes labelled with the name of the well and the depth intervals.

112(2) The licensee shall protect core from loss or damage and shall, unless otherwise authorized by the director, deliver the core prepaid to the director within 60 days after the finished drilling date of the well.

112(3) No person shall destroy or damage a core, except as is reasonably necessary for the purpose of analysis, without the written approval of the director.

112(4) The licensee shall submit two copies of results of a core analysis to the branch.

Open hole logs

113(1) Unless otherwise authorized by the director, the licensee shall run open hole logs to determine the resistivity, spontaneous potential, porosity, and gamma ray activity of the strata from the total depth of the well to the surface casing shoe, and shall record the results.

113(2) The licensee shall, within 48 hours after an open hole log is run, deliver two copies of the field prints to the district office.

113(3) The licensee shall submit one copy of a final print of any open hole log run to the district office.

Drill stem test results

114 The licensee shall submit to the branch two copies of any report of the result of a drill stem test, including pressure charts.

Licensee of exploratory well to obtain samples

115(1) The licensee of an exploratory well that has been completed in a new pool shall obtain a representative sample of any oil, gas, or water produced from the well within 30 days of the on-production date.

115(2) The licensee shall ensure that any sample obtained under subsection (1) or from an exploratory well under section 114 is analysed and that two copies of the analysis report are submitted to the branch.

Reservoir pressure measurement

116(1) Unless otherwise authorized by the director, the licensee of an exploratory well that is completed in a new pool shall take a subsurface pressure measurement before any production is obtained other than by test.

116(2) Where the director considers that enhanced recovery might be necessary in a pool to prevent waste, the director may require a licensee of wells in the pool to conduct a survey to determine the level and distribution of reservoir pressure in the pool.

PART 12 - RECORDS AND REPORTS

Submission of sample or report under Part 11

117 Subject to Part 11, the licensee shall ensure that any sample or report that is required under Part 11 to be submitted to the branch is submitted within 30 days after the sample or report is obtained.

Digital submission of report under Parts 11 & 12

117.1 The director may require that any report required under Part 11 or 12 to be submitted to the branch be submitted in a digital format acceptable to the director.

Tour reports

118(1) The licensee of a well being drilled shall keep at the rig and submit to the district office within 48 hours after the day of rig release a rig tour report on a form that is approved by the Canadian Association of Oil Well Drilling Contractors or acceptable to an inspector, and the report shall include:

- (a) any cementing operation conducted, including the name of the cementing company, the method of cementing, the type and amount of cement and additives used, the weight and volume of slurry, the volume of cement return to surface, and plug down time;
- (b) any kick or flow encountered;
- (c) any log, drill stem test, cored interval, or other test or survey run;
- (d) any abandonment plug used, including length, setting depth, the amount and type of cement and additives, the weight and volume of slurry, and depth felt;
- (e) the elevation of the drilling rig's kelly bushing, and the date and time of the rig release; and
- (f) any other information an inspector may require.

118(2) The licensee of a well that has been completed, serviced, or abandoned shall submit to the branch within 30 days after the day the operation is completed a report acceptable to the director on the operation, including the following:

- (a) the purpose and results of the operation;
- (b) any wireline work, including the type of tools run and the depth;
- (c) any well stimulation, including the fluid and tools used and treatment pressures and volumes;
- (d) any chemical, hot oil, or hot water treatment in the wellbore;
- (e) any cement job, including the type and amount of cement, the weight and volume of slurry, and pumping and squeezing pressures;

- (f) any equipment integrity test;
- (g) the size and depth of tubing, rods, bottom hole pump, and other downhole equipment;
- (h) any other information an inspector may require.

Weekly status report

119 The licensee of any well being drilled or any well at which an operation results in a change of the status of the well shall report the operation to the district office before 9:00 a.m. on the first day of each week on which the district office is open.

Production and injection report

120 The licensee of a well that:

- (a) produces oil, gas, or water; or
- (b) is used for injection or disposal of water or any other substance;

at any time during a month shall file a report with the registrar, on a form obtained from the branch or acceptable to the registrar, not later than the last day of the following month.

Statement by purchaser of oil or gas

121 A person who purchases oil or gas from a licensee or transports oil or gas that was produced in Manitoba shall submit to the branch not later than the last day of the month following the day of the purchase or transport, a statement on an approved form for the preceding month showing:

- (a) the quantity of oil and gas received from each licensee, by field, pool, or battery;
- (b) the person's inventory of oil and gas at the beginning and end of the month;
- (c) the quantity of oil and gas delivered from the person's inventory, and the destination of the deliveries; and
- (d) any amendment required to be made to a previous statement.

Operator to report fire, blow-out, or accident

122 The operator shall report a blow-out, fire, or accident to an inspector as soon as is practicable, and in all cases not more than 12 hours after it occurs, and shall submit to the district office within seven days after the day of the incident a written report that includes the following:

- (a) the location of the incident, including a sketch of the area;
- (b) the approximate volume of any oil, gas, or water spilled;
- (c) steps taken to control the loss of oil and gas and to prevent damage to the environment or equipment;
- (d) the cause of the incident;
- (e) steps taken to prevent a recurrence of the incident;

(f) steps to be taken to repair or rehabilitate damage to property resulting from the incident;

(g) any other result of the incident, including the name of any person injured and the nature of the injury.

Part 13

Release of Information

Definition

123 In this Part,
"associated well" means the nearest well from a well that:

(a) has been cased for production; and

(b) has not been abandoned as a dry hole;

"deeper pool wildcat" means a well that is located less than 0.8 km from an associated well and that has a projected total depth that is in a deeper formation than that of the associated well.

Release of information

124 The director may release information that was obtained from a well and submitted to the branch in compliance with the Act or this regulation, as follows:

(a) in the case of a development well:

(i) where information respecting the associated well is not confidential under the Act, 30 days after the finished drilling date of the development well; and

(ii) where, on the day a well licence is issued in respect of a development well, information respecting the associated well is confidential under the Act, on the later of:

(A) 30 days after the finished drilling date of the development well; or

(B) the day that information from the associated well is released;

(b) in the case of a deeper pool wildcat:

(i) with respect to information to the base of the producing formation in the associated well, on the later of:

(A) 30 days after the finished drilling date; and

(B) the day that information respecting the associated well is released; and

(ii) with respect to other information, one year after the finished drilling date;

(c) for an exploratory well that is not referred to in clause (b), one year after the finished drilling date of the well.

Part 13.1 - Review

Review and recommendation

124.1 Not later than January 1, 2000, the minister shall:

- (a) review the effectiveness of the operation of this regulation after consulting such persons affected by the regulation as the minister considers appropriate; and
- (b) if the minister considers it advisable, recommend to the Lieutenant Governor in Council that the regulation be amended or repealed.

Part 14 - Repeal and Coming into Force

Repeal

125 The Petroleum Drilling and Production Regulation, Manitoba Regulation 430/87R, is repealed.

Coming into force

126 This regulation comes into force on the day The Oil and Gas and Consequential Amendments Act, S.M. 1993, chapter 4, comes into force.

SCHEDULE A
(Clauses 4(2)(a), 6(1)(a), 8(b), and 75(1)(a), and subsection 54(4))
Schedule of Fees and Levies

1. The fee for an application to change the name of one or more wells is \$250.

1.1 The fee and levy to be submitted along with an application to transfer a well licence is \$100 for each well licence, to a maximum of \$2,000., comprised of the following:

(a) fee: \$50. per well licence;

(b) levy for the Abandonment Fund Reserve Account:
\$50. per well licence.

2. The fee and levy to be submitted with an application for a well licence is \$500., comprised of the following:

(a) fee: \$250.,

(b) levy for the Abandonment Fund Reserve Account: \$250.

3. The annual non-refundable levy for the Abandonment Fund Reserve Account for the following classes of wells and batteries is as follows:

(a) Class 1\$150. per well;

(b) Class 2\$500 per well;

(c) Class 3\$1000 per well;

(d) Class 4\$500 per battery.

3.1 the penalty for failure to pay the non-refundable levy by the date set out in subsection 54(5) is 25% of the levy set out in Item 3. if the levy is paid before October 31 of that year, and 50% of the levy if payment is received after October 31 of that year.

4. The fee and levy to be submitted with an application for a Battery Operating Permit is \$500, comprised of the following:

(a) fee: \$250.,

(b) levy for the Abandonment Fund Reserve Account: \$250.

**Schedule B
(Clause 8(a))
Form of Transfer of Well Licence**

This agreement is made in duplicate this _____ day of _____, 20____.

Between:

_____ (name) _____,

referred to in this agreement as "the transferor";

and

_____ (name) _____,

referred to in this agreement as "the transferee".

1. The transferor is the holder of the following Well Licence(s):

(List the number of each well licence being transferred under this agreement, and the name and location of each well.)

| | | |
|---------------------|-----------|----------|
| Well Licence Number | Well Name | Location |
|---------------------|-----------|----------|

2. In consideration of the sum of \$_____ and other valuable consideration, the transferor hereby transfers to the transferee the well licence(s) referred to in section 1, and all of the transferor's right, title, and interest in, to, and under the Well Licence(s).

3. This agreement is effective on the day it is approved in writing by the Director of the Petroleum Branch and registered in the Petroleum Branch of the Department of Industry, Trade and Mines.

Signed, Sealed and Delivered

(signature of witness)

(signature of transferor)

(signature of witness)

(signature of transferee)

Schedule C
(Subsections 9(1), 75(4), and 85(1))
Table of Minimum Distance Requirements

Note: The distances in the table are expressed in metres.

| To: | Well | Flame Type Equipment | Internal Combustion Engine | | Flare Pit and Flare Stack | Oil Storage Tank | Surface Improvement Except Well, Flow Line, or Road Allowance | Water Covered Area | Road Allowance - Provincial or Municipal |
|----------------------------|------|----------------------|----------------------------|-----------------|---------------------------|------------------|---|--------------------|--|
| | | | Air Shut Off | No Air Shut Off | | | | | |
| From: | | | | | | | | | |
| Well | 5 | 25 | 5 | 10 | 25 | 25 | 75 | 100 | 45 |
| BOP Manifold | 3 | -- | -- | -- | 15 | -- | -- | -- | 45 |
| BOP Remote Control | 15 | -- | -- | -- | 15 | -- | -- | -- | 45 |
| Flame-Type Equipment | 25 | -- | -- | -- | 25 | 25 | -- | -- | 45 |
| Drilling Fluid Pit or Tank | 5 | 25 | -- | -- | 10 | -- | 75 | 100 | 45 |
| Flare Pit and Flare Stack | 25 | 25 | 5 | 10 | -- | -- | 100 | 100 | 45 |
| Emergency Storage Pit | 25 | 25 | -- | -- | 25 | -- | 75 | 100 | 45 |
| Service or Test Tank | 25 | 25 | 5 | 10 | 25 | -- | 75 | 100 | 45 |
| Oil Storage Tank | 25 | 25 | 5 | 10 | 25 | -- | 75 | 100 | 45 |
| Vented Salt Water tank | 10 | 5 | 5 | 5 | 25 | -- | 75 | 100 | 45 |
| Process Vessel | 25 | -- | -- | -- | 25 | 25 | 75 | 100 | 45 |

Schedule D

Schedule D is repealed

Schedule E

**(Subsections 21(2) and 22(1), and clauses 24(1)(b) and 25(1)(a))
Requirements for a Drilling Blow-out Prevention System**

Note:

1. In the diagrams,

"A" means an annular type blow-out preventer;

"R" means a single ram type blow-out preventer with one set of rams, either blank or for pipe;

"S" means a drilling spool with flanged side outlet connections for bleed-off and kill lines.

2. The line sizes indicated in the diagrams are the minimum nominal diameter required.

3. The portion of the bleed-off system from the drilling spool to the choke manifold must be constructed with flanged pipe connections. Threaded fittings may be used for the remainder of the bleed-off system.

4. The manifold system must be constructed to provide flow paths equivalent to those indicated in the diagram.

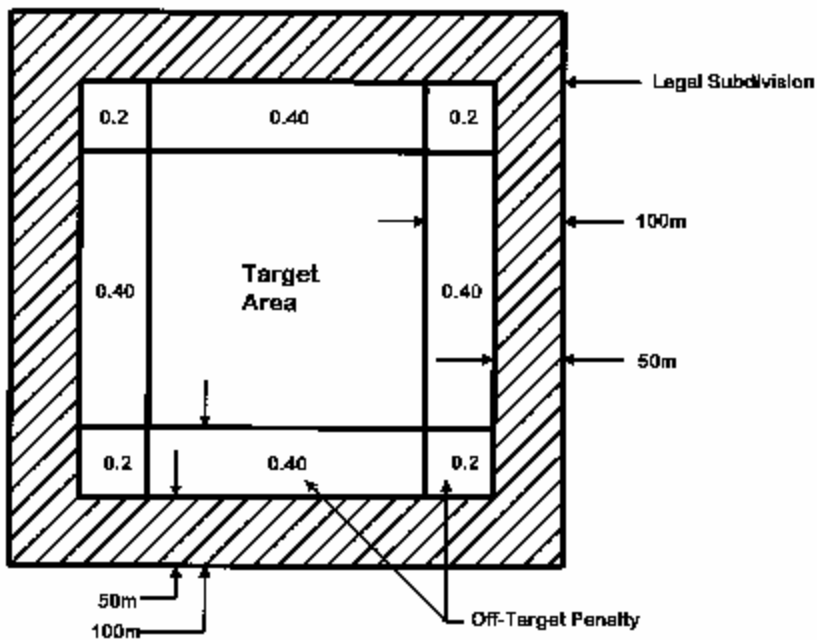
5. The bleed-off system must contain only the straight pipe, or 90° bends constructed of tees and crosses that are blocked on fluid turns.

SCHEDULE F
(Section 14)
Off-Target Penalty Factors

1. Where the minister has not varied the size and shape of a spacing unit under section 102 of the Act, the off-target penalty is determined:

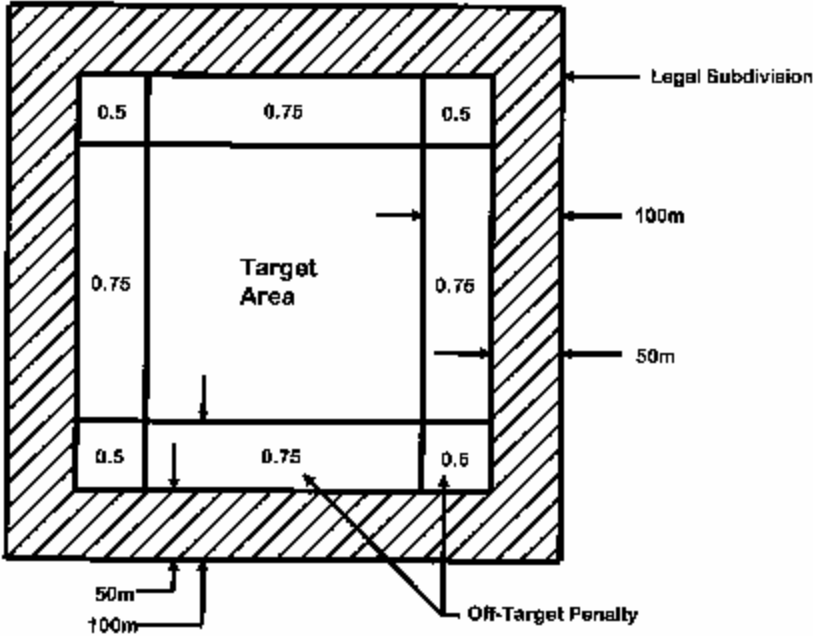
- (a) for a well producing from a pre-Mississippian pool or a horizontal well, by reference to Diagram A;
- (b) in the case of any other well, by reference to Diagram B.

DIAGRAM A



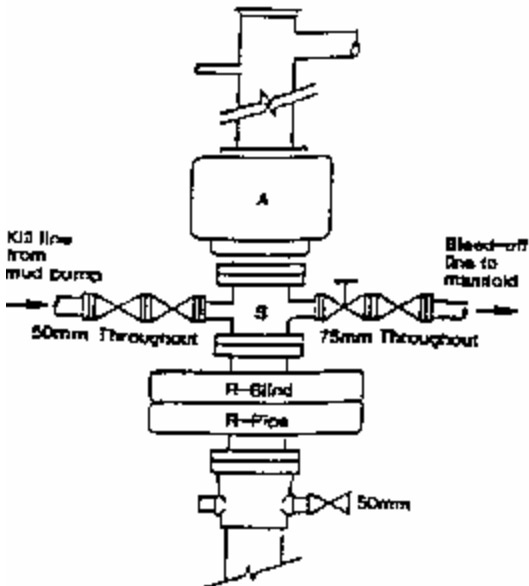
Drilling Restrictions. See Subsection 9(1)

DIAGRAM B



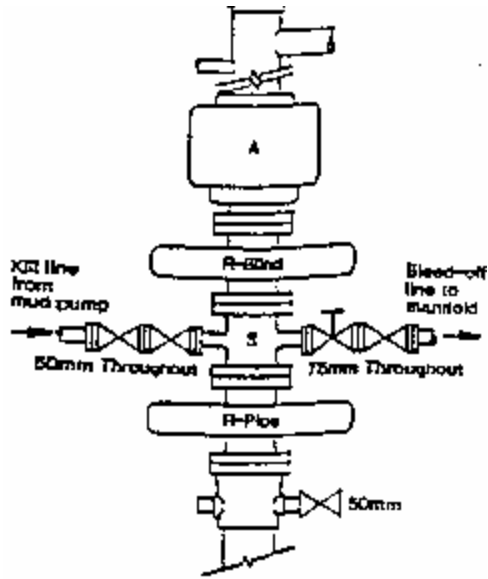
▨ Drilling Restrictions. See Subsection 9(1)

Class 2

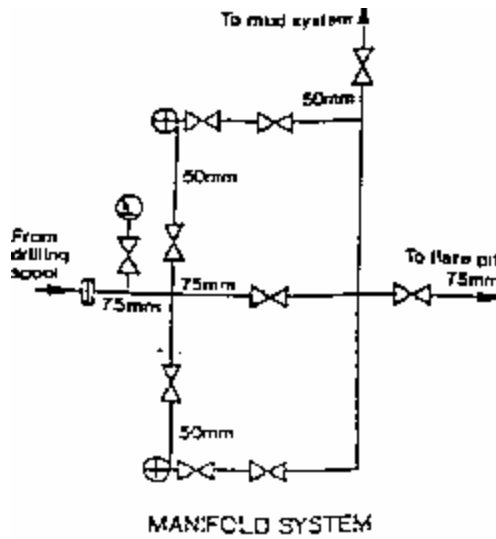


BLOW-OUT PREVENTION STACK

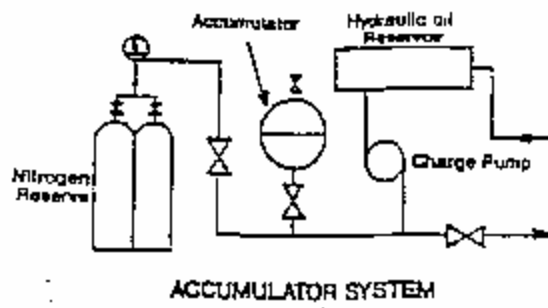
Class 3



BLOW-OUT PREVENTION STACK

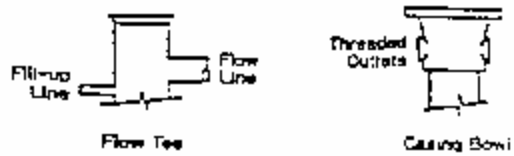


MANIFOLD SYSTEM



ACCUMULATOR SYSTEM

EQUIPMENT SYMBOLS





SCHEDULE G
(Subsection 85.2(1))

Concentrations of Hydrogen Sulphide and Sulphur Dioxide

1. The concentration of hydrogen sulphide beyond a well or battery site shall not exceed either of the following levels:

- (a) one hour average - 15 micrograms per cubic metre/11 parts per billion;
- (b) 24 hour average - 5 micrograms per cubic metre/4 parts per billion.

2. The concentration of sulphur dioxide beyond a well or battery site shall not exceed either of the following levels:

- (a) one hour average - 900 micrograms per cubic metre/0.34 parts per million;
- (b) 24 hour average - 300 micrograms per cubic metre/0.11 parts per million.