



Province of Alberta

OIL AND GAS CONSERVATION ACT

OIL AND GAS CONSERVATION RULES

Alberta Regulation 151/1971

With amendments up to and including Alberta Regulation 158/2017

Office Consolidation

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(Consolidated up to 158/2017)

ALBERTA REGULATION 151/71
Oil and Gas Conservation Act
OIL AND GAS CONSERVATION RULES

Part 1
Interpretation and Application

Title

1.010 These Rules may be cited as the “*Oil and Gas Conservation Rules*”.

AR 151/71 s1.010;89/2013

Definitions

1.020(1) The terms defined in section 1 of the *Oil and Gas Conservation Act* have the same meaning in these Rules.

(2) In these Rules,

1. “Act” means the *Oil and Gas Conservation Act*;
2. “base MRL” means the maximum rate of production that would apply where a maximum rate limitation is prescribed if no penalty factor, whether its purpose be for proration, for the avoidance of waste or for protection of the rights of others, were to be applied;
 - 2.1. “Basic Well Rate” or “BWR” means the lowest unpenalized allowable assigned to a producing oil well, related to the average well depth, and as tabulated in Schedule 5 of these Rules;
3. repealed AR 203/2011 s2;
 - 3.1. “coal” means a lithostratigraphic unit having 50% or greater by weight organic matter and being thicker than 0.30 metres;
4. “common ownership” means,
 - (a) when that term is used in connection with a block, holding or project,

- (i) that the ownership of the lessors' interest throughout the block, holding or project is the same and the ownership of the lessees' interests throughout the block, holding or project is the same, or
 - (ii) that the owners of the lessor's interests and the lessee's interests throughout the block, holding or project have agreed to pool their interests,
- or
- (b) when that term is used in connection with a drilling spacing unit,
 - (i) that the owners of the lessee's interest throughout the drilling spacing unit are the same, or
 - (ii) that the owners of tracts within the drilling spacing unit, as defined in section 78 of the Act, have agreed to pool their interests or the Regulator has ordered that all tracts within the drilling spacing unit be operated as a unit under Part 12 of the Act;

4.05. "complaint level" means the reference rate, if less than the BWR, or the BWR plus 70% of the difference between the reference rate and the BWR;

4.1. "compressor station" means an installation of service equipment that receives natural gas from a well, battery or gathering system prior to delivery to market or other disposition and is intended to maintain or increase the flowing pressure of the gas, and includes any equipment for measurement;

5. "control well" means

- (i) a well that is capable of producing oil, is within a block or project and is completed in a drilling spacing unit that is contiguous to a drilling spacing unit that contains a producing well that is outside the block or project, and
- (ii) a well that has been designated by the Regulator pursuant to section 7.025(1) or (2) as a control well for the purposes of obtaining data required by that section;

5.1. “development entity” means an entity, consisting of multiple formations in a specific area described in an order of the Regulator, from which gas may be produced without segregation in the well bore in accordance with section 3.051;

5.11. “Directive 001” means Directive 001: Requirements for Site-Specific Liability Assessments in Support of the ERCB’s Liability Management Programs;

5.12. “Directive 006” means Directive 006: Licensee Liability Rating (LLR) Program and Licence Transfer Process;

5.13. “Directive 007” means Directive 007: Volumetric and Infrastructure Requirements;

5.14. “Directive 011” means Directive 011: Licensee Liability Rating (LLR) Program Updated Industry Parameters and Liability Costs;

5.14001. “Directive 013” means Directive 013: Suspension Requirements for Wells;

5.1401. “Directive 020” means Directive 020: Well Abandonment;

5.141. “Directive 024” means Directive 024: Large Facility Liability Management Program;

5.15. “Directive 036” means Directive 036: Drilling Blowout Prevention Requirements and Procedures;

5.16. “Directive 037” means Directive 037: Service Rig Inspection Manual;

5.161. “Directive 039” means Directive 039: Revised Program to Reduce Benzene Emissions from Glycol Dehydrators;

5.17. “Directive 040” means Directive 040: Pressure and Deliverability Testing Oil and Gas Wells;

5.171. “Directive 047” means Directive 047: Waste Reporting Requirements for Oilfield Waste Management Facilities;

5.18. “Directive 055” means Directive 055: Storage Requirements for the Upstream Petroleum Industry;

- 5.19.** “Directive 056” means Directive 056: Energy Development Applications and Schedules;
- 5.191.** “Directive 058” means Directive 058: Oilfield Waste Management Requirements for the Upstream Petroleum Industry;
- 5.192.** “Directive 060” means Directive 060: Upstream Petroleum Industry Flaring, Incinerating and Venting;
- 5.2.** “Directive 065” means “Directive 065: Resources Applications for Oil and Gas Reservoirs”;
- 5.21.** “Directive 068” means Directive 068: ERCB Security Deposits;
- 5.3.** “Directive 071” means Directive 071: Emergency Preparedness and Response Requirements for the Petroleum Industry;
- 5.4.** “Directive 075” means Directive 075: Oilfield Waste Liability (OWL) Program;
- 5.41.** “Directive 076” means Directive 076: Operator Declaration Regarding Measurement and Reporting Requirements;
- 5.5.** “Directive 079” means Directive 079: Surface Development in Proximity to Abandoned Wellbores;
- 5.51** “Directive 080” means Directive 080: Well Logging;
- 5.6.** “Directive 083” means Directive 083: Hydraulic Fracturing – Subsurface Integrity;
- 5.7.** “Directive 084” means Directive 084: Requirements for Hydrocarbon Emission Controls and Gas Conservation in the Peace River Area;
- 6.** repealed AR 226/93 s2;
- 7.** “finished drilling date” means the date at which the total depth of a well is reached;
- 8.** “gas well” means
- (i) a well that produces primarily gas from
 - (A) a pool or portion of a pool in which the hydrocarbon system is gaseous or exhibits a dew point on reduction of pressure, or

(B) coal by in situ gasification,

and

(ii) any well designated as a gas well by the Regulator;

9. “good production practice” or “GPP” means production of crude oil or raw gas at a rate

(i) not governed by a base allowable, but

(ii) limited to what can be produced without adversely and significantly affecting conservation, the prevention of waste, or the opportunity of each owner in the pool to obtain his share of production;

9.1. “in situ coal scheme evaluation well” means an evaluation well as defined in the *Coal Conservation Act*;

10. “maximum rate limitation” or “MRL” is the maximum rate of oil production prescribed for the avoidance of waste or the protection of the rights of others, after application of any applicable penalty factor;

10.1. “minimum level” means the lesser of the BWR and the reference rate;

11. “multi-zone well” means a well for the segregated production from or injection to more than one pool;

11.1. “oil sands strata” means the geological intervals defined in the Regulator’s Oil Sands Area Orders OSA 1, 2 and 3, as amended from time to time;

12. “oil well” means

(i) a well that produces primarily liquid hydrocarbons from a pool or portion of a pool in which the hydrocarbon system is liquid or exhibits a bubble point on reduction of pressure, and

(ii) any well designated as an oil well by the Regulator;

12.1. “oilfield waste” means an unwanted substance or mixture of substances that results from the construction, operation, abandonment or reclamation of a facility, well site or pipeline, but does not include an unwanted substance or mixture of substances from such a source that is received for storage, treatment, disposal or recycling at a facility that is regulated by the Department of Environment and Sustainable Resource Development;

12.2. “oilfield waste management facility” means a facility, the operation of which is approved by the Regulator, including, without limitation, a waste processing facility, a waste storage facility, a waste transfer station, a surface facility associated with a disposal well, a biodegradation facility, an oilfield landfill, a thermal treatment facility and any other facility for the processing, treatment, storage, disposal or recycling of oilfield waste;

12.3. “operator”, when the term is used in connection with Directive 076, means the person or organization who keeps records and submits production reports to the Regulator or to the electronic information system called Petrinex that is administered by the Department of Energy;

13. “operator of a battery” includes

- (i) a person who has control of the operation of the wells or equipment at a battery,
- (ii) a person permitted to keep records or file reports on a battery or group basis under section 92 of the Act,
- (iii) the holder of an approval issued under section 7.001, and
- (iv) a person who receives from a well or battery a part of the production that requires separate handling, including, without limitation, a tank bottom, so that it may be disposed of;

14. “operator of the scheme” or “operator of the facility”, when the term is used in connection with a scheme approved under section 39 of the Act, includes

- (i) a person who applied, or on whose behalf an application was made, for the approval of the scheme, and
- (ii) any person who undertakes to perform an operation pursuant to the scheme by an agreement with a person referred to in subclause (i);

15. “penalty factor” means the factor determined due to gas-oil ratio or off-target location and applied against the base allowable to determine the allowable;

16., 17., 18. repealed AR 226/93 s2;

18.1. “production entity” means a well, block or project;

19. “productive well” means an oil well that

- (i) has produced either a cumulative volume of 400 cubic metres of oil or its full base allowable for two consecutive months, and
- (ii) is, in the opinion of the Regulator, capable of producing an amount equal to 2.5 cubic metres per day;

20., 21., 22., 23. repealed AR 226/93 s2;

24. “publication of notice” means the service, circulation or advertising by the Regulator, in accordance with its rules or practice, of a notice that, in the absence of objection by a person having a bona fide interest in the matter, it may grant an application or take such other action in a proceeding as the notice may specify;

25. “Qmax” means the maximum daily allowable of a gas well, determined in accordance with section 10.300;

26. repealed AR 226/93 s2;

26.1. “reference rate” means the average oil production rate for the most recent unrestricted 3-month production period, not exceeding the MRL, as reported to and available from the Regulator’s records, or such other rate as the Regulator may specify;

26.2 “regulatory authority” means an entity having lawful authority respecting the regulation of oil and gas exploration, development and operations and the abandonment of wells and facilities in a jurisdiction other than Alberta;

27. “segregate” means to confine each fluid in a well to its proper pool or flow channel so that it is separate from the fluid in, or passing from or to, any other pool;

27.1. “shale” means a lithostratigraphic unit having less than 50% by weight organic matter, with

- (i) less than 10% of the sedimentary clasts having a grain size greater than 62.5 micrometres, and
- (ii) more than 10% of the sedimentary clasts having a grain size less than 4 micrometres;

28. “surface improvement” means a railway, pipeline or other right of way, road allowance, surveyed roadway, dwelling, industrial plant, aircraft runway or taxiway, building used for military purposes, permanent farm buildings, school or church;

28.1. repealed AR 197/2016 s2;

29. “target area” means the part of a drilling spacing unit within which a well for the purpose of producing oil or gas may be completed without reduction of its base allowable because of its location;

30. “unique identifier” means a number assigned by the Regulator to a well licenced by it to provide a unique numerical identity for the well;

31. repealed AR 36/2002 s2.

(2.01) Where these Rules refer to a directive by its directive’s number or title or both, the reference is to be construed as a reference to that directive as published by the Regulator and amended from time to time.

(2.1) For the purposes of section 91 of the Act and these Rules,

- (a) a licensee or approval holder who is an individual is resident in a jurisdiction if the individual makes his or her home in and is ordinarily present in that jurisdiction, and
- (b) a licensee or approval holder that is a corporation is resident in a jurisdiction if a director or officer of the corporation or a person employed or retained to provide services to the corporation makes his or her home in that jurisdiction, is ordinarily present in that jurisdiction and is authorized to
 - (i) make decisions respecting a licence for a well or facility issued by
 - (A) the regulatory authority in that jurisdiction, or
 - (B) in the case of Alberta, the Regulator,
 - (ii) operate the well or facility, and
 - (iii) implement directions from the regulatory authority or in the case of Alberta, the Regulator, relating to the well or facility.

(2.2) Repealed AR 159/2008 s3.

(3) Where, in an order by the Regulator, the words “spacing unit”, “spacing units”, “production spacing unit” or “production spacing units” occur, they shall be read as “drilling spacing unit” or “drilling spacing units”, as the case may be.

AR 151/71 s1.020;2/76;179/76;229/79;399/83;264/84;350/87;217/88;
374/91;226/93;144/96;229/98;47/99;36/2002;185/2005;269/2006;
115/2008;159/2008;203/ 2011;208/2011;209/2011;31/2012;121/2012;
157/2012;170/2012;222/2012;2/2013;41/2013;44/2013;55/2013;
62/2013;89/2013;115/2013;88/2014;140/2014;197/2016;
30/2017

Exemption - agents

1.030(1) In this section, “mutual recognition agreement” means a valid and subsisting agreement made between the Minister and a regulatory authority of another jurisdiction for the purpose of recognizing substantial regulatory equivalency and enabling reciprocity between Alberta and that jurisdiction.

(2) The Regulator, on application, may grant an exemption from the requirement under section 91(2) of the Act to appoint an agent if the licensee or approval holder applying for the exemption

- (a) is resident in a jurisdiction outside Alberta that is a party to a mutual recognition agreement and is subject to the authority of the regulatory authority in that jurisdiction,
- (b) is in compliance with all applicable legislation in Alberta and in the jurisdiction in which the licensee or approval holder is resident and all applicable directives, orders, decisions, directions and other instruments of the regulatory authority referred to in clause (a) and of the Regulator,
- (c) provides evidence satisfactory to the Regulator that the licensee or approval holder meets, and during the time the licence or approval is in effect will continue to meet, the requirements set out in subsection (3), and
- (d) agrees to attorn to the jurisdiction of Alberta with respect to all matters, obligations and liabilities pertaining to licences and approvals issued by the Regulator.

(3) An exemption under subsection (2) is subject to the condition that, in substitution for the requirements of section 91(2)(a), (b) and (c) of the Act, the licensee or approval holder must have

- (a) sufficient numbers of individuals who are trained and competent to
 - (i) carry out operations relating to a well or facility, as the case may be, in compliance with the requirements

of all applicable legislation and all applicable directives, orders, decisions, directions and other instruments of the Regulator, and

(ii) respond sufficiently to incidents and emergencies,

and

(b) representatives at a well site during any drilling, completion, stimulation, servicing and abandonment operations at the well site who are authorized to make decisions respecting all aspects of those operations.

(4) An exemption under subsection (2) ceases to have effect immediately on

(a) the licensee or approval holder ceasing to meet a requirement referred to in subsection (2)(a), (b) or (d), or

(b) the Regulator determining that it is no longer satisfied that the licensee or approval holder meets or will continue to meet the requirements set out in subsection (3).

AR 159/2008 s4;85/2009;222/2012;89/2013

Part 1.1 Security Deposit for Wells and Facilities

1.100(1) In this section “facility” does not include an oilfield waste management facility.

(2) The Regulator may require a licensee to provide a security deposit

(a) before approving a transfer of a licence,

(b) at any time the licensee fails a licensee liability rating assessment conducted by the Regulator,

(b.1) at any time the licensee fails a liability management rating assessment conducted by the Regulator,

(c) at any time where the Regulator considers it appropriate to do so to offset the estimated costs of suspending, abandoning or reclaiming a well, facility, well site or facility site,

- (d) at any time where the Regulator considers it appropriate to do so to offset the estimated costs of providing care and custody for a well, facility, well site or facility site, and
- (e) at any time where the Regulator considers it appropriate to do so to offset the estimated costs of carrying out any other activities necessary to ensure the protection of the public and the environment.

(3) The Regulator may require an applicant for a transfer of a licence who is not a licensee to provide a security deposit for any purpose referred to in subsection (1)(c), (d) or (e).

(4) The Regulator may require a security deposit to be provided, and may administer a security deposit,

- (a) relative to a particular well, facility, well site or facility site, or
- (b) relative to the operations of the licensee generally,

and may convert a security deposit from one such basis to the other.

(5) Where the Regulator determines that a security deposit currently held by the Regulator is inadequate for the purposes provided for in subsection (2), the Regulator may require the licensee to provide any additional amounts that the Regulator considers necessary.

(6) A security deposit must be in one of the following forms, as determined by the Regulator:

- (a) cash;
- (b) an irrevocable letter of credit in a form acceptable to the Regulator.

(7) The Regulator may require that a security deposit be provided all at the same time or in portions in the amounts and at the times specified by the Regulator.

(8) Where a licensee fails to meet an obligation or carry out an activity in respect of which the security deposit was provided, the Regulator may,

- (a) in the case of a cash security deposit, apply all or part of the security deposit held in the name of the licensee and any earned interest towards the costs required to meet the obligation or carry out the activity;

- (b) in the case of a security deposit in the form of a letter of credit, cash the letter of credit and apply any or all of the cash towards the costs required to meet the obligation or carry out the activity.

(9) Where a person other than the licensee does anything for the purposes of meeting the obligation or carrying out the activity in respect of which the security deposit was provided, the Regulator may distribute any or all of the security deposit to that person for that purpose.

(10) On the request of a licensee the Regulator shall return a security deposit, together with earned interest, where the Regulator is satisfied that the licensee

- (a) has fully met all of the obligations and carried out all of the activities in respect of which the security deposit was provided, and
- (b) has met the other eligibility requirements of the Regulator for a full refund of the security deposit.

(11) On the request of a licensee the Regulator may return part of a security deposit where the Regulator is satisfied that the licensee

- (a) has partially met the obligations and carried out the activities in respect of which the security deposit was required, and
- (b) has met the other eligibility requirements of the Regulator for a partial refund of the security deposit.

AR 83/2002 s2;189/2005;89/2013

1.200 A licensee must comply with the requirements set out in Directives 001, 006, 011, 024, 068 and 075 published by the Regulator, as applicable.

AR 121/2012 s3;89/2013

Part 2 Licensing of Wells

Application for Licence

2.010(1) An application for a licence shall

- (a) be made on the form prescribed for that purpose by, and obtainable from, the Regulator, and
- (b) include the documentation required by Directive 056.

(2) A licence shall be subject to such conditions as may be set out therein or attached thereto.

(3) The well name shall be in accordance with section 13.020.

AR 151/71 s2.010;11/98;47/99;269/2006;208/2011;89/2013

2.020(1) This section applies to an application for a licence for a well other than

- (a) repealed AR 103/73 s2,
- (b) repealed AR 144/96 s3,
- (c) a well which is one of a group of experimental wells, oil sands evaluation wells or test holes referred to in section 2.030, and
- (d) any other water supply well of a depth of more than 150 metres.

(2) Repealed AR 179/98 s2.

(3) An application for a licence under this section shall be accompanied by a suitable plan showing

- (a) the location of a well, tied by bearings and distance to a monument, or, in the case of a well located in an unsurveyed territory, determined in accordance with the Alberta Land Surveyors' Association *Manual of Standard Practice*,
- (b) the relation of the well location to the boundaries of the quarter section shown by the co-ordinates from the two boundaries of the quarter section that are also boundaries of the section, assuming a 20 metre wide road allowance, and by calculated distances to the interior boundaries of the quarter section,
- (c) the relation of the well location to the surface topography within 200 metres of the well, including
 - (i) elevations of the corners of the surface lease,
 - (ii) elevations of any significant water bodies,
 - (iii) sufficient information to establish the general character of the topography and any predominant drainage pattern,
- (d) the relation of the well location to

- (i) surface improvements,
- (ii) wells,
- (iii) coal mines, whether working or abandoned,
- (iv) water wells,

within 200 metres of the well,

- (e) where it is proposed to drill the well in a water covered area, the depth of the water.

(3.1) A plan submitted in accordance with subsection (3), shall be

- (a) repealed AR 11/98 s3;
- (b) on a readable scale,
- (c) prepared from a survey made under the direct supervision of an Alberta Land Surveyor,
- (d) certified by the Surveyor.

(4) An applicant under this section shall

- (a) notify any landowners or residents as necessary of the applicant's plans to drill a well, in accordance with Directive 056, and
- (b) provide to the Regulator such further particulars concerning the well or proposed surface location of the well as the Regulator, after examination of the application, may require.

AR 151/71 s2.020;103/73;144/74;264/74;295/78;350/87;
144/96;11/98;179/98;269/2006;208/2011;209/2011;89/2013

2.030(1) This section applies to an application for a licence for one or more oil sands evaluation wells, in situ coal scheme evaluation wells, test holes or experimental wells, but does not apply to holes drilled under permit pursuant to the *Coal Conservation Act*.

(2) Application may be made under this section for a licence for,

- (a) where the setting of surface casing in the wells is not required by the Regulator, not more than 12 wells to be included in a single scheme or program of drilling, or
- (b) where the setting of surface casing is required by the Regulator, one well.

(3) Repealed AR 179/98 s3.

(4) If the licensee of a licence granted under this section for oil sands evaluation wells, in situ coal scheme evaluation wells or test holes wishes to use one or more of such wells otherwise than as oil sands evaluation wells, in situ coal scheme evaluation wells or test holes, the licensee shall

- (a) apply to the Regulator for the removal of the well or wells from the licence and for the issue of a separate licence for each well so removed, and
- (b) forward to the Regulator the deposit and data that would have been set out in or accompany an application under section 2.020.

(5) As soon as possible but not more than 30 days after an oil sands evaluation well, in situ coal scheme evaluation well or test hole is drilled, the licensee shall furnish the Regulator on the form prescribed for that purpose by, and obtainable from, the Regulator, full information as to the location and depth of the well, the strata penetrated by it, the abandonment plugs and such further information as the Regulator may require.

AR 151/71 s2.030;2/76;179/98;55/2013;89/2013

2.040(1) This section applies to an application for a licence for a well

- (a) repealed AR 103/73 s3,
- (b) to obtain gas for use solely on a farm or ranch or for other domestic uses of the applicant, or
- (c) repealed AR 103/73 s3,
- (d) to supply water for any purpose and being of a depth of over 150 metres.

(2) Repealed AR 144/96 s4.

(3) Repealed AR 2/76 s4.

(4) Repealed AR 179/98 s4.

AR 151/71 s2.040;103/73;2/76;295/78;144/96;179/98

Transfer of Licence

2.050(1) An application for a transfer of a licence must be on the form established for that purpose by, and obtainable from, the

Regulator and the transfer is not effective unless this subsection is complied with.

(2) Where the Regulator directs the transfer of a licence pursuant to section 24(6) of the Act, the person to whom the licence is so transferred shall pay to the Regulator the fee prescribed by section 17.010(1)(d.1).

(3) If a licensee of one or more wells changes its name or amalgamates with another company which results in a change of name, the licensee shall submit to the Regulator the appropriate certificates.

AR 151/71 s2.050;350/87;9/93;
144/96;179/98;209/2011;89/2013

2.060 to 2.080 Repealed AR 27/86 s2.

2.081 Repealed AR 83/2002 s3.

Agent

2.082 An application for the approval of an agent or for consent to the discharge of an agent must be made on the form established for that purpose by, and obtainable from, the Regulator.

AR 144/96 s6;179/98;89/2013

Well Near Aerodrome

2.090 A person proposing to drill a well within 5 kilometres of a lighted aerodrome, or within 1.6 kilometres of an unlighted aerodrome shall, before applying for a well licence, advise the Regional Manager, Air Navigation Requirements, Transport Canada, Edmonton, Alberta, of the proposed well site, the height of the derrick to be used and the approximate dates between which drilling operations are expected to take place.

AR 151/71 s2.090;295/78;350/87

Coal Mines

2.100(1) If the applicant for a licence intends to drill through a bed or seam of coal, the applicant shall notify in writing the lessee of the coal lease.

(2) Where an applicant intends to drill through a bed or seam of coal, then, before a licence may be granted, the applicant shall satisfy the Director of Mines that it is practicable to drill through the bed or seam.

(3) The location of a well to be drilled through a bed or seam of coal, and its drilling, completion, operation and abandonment, shall be in accordance with sections 6.140 to 6.190.

AR 151/71 s2.100;11/98

Surface Improvements

2.110(1) No well shall be drilled at any point that is within

- (a) 100 metres of any surface improvement other than a surveyed roadway or road allowance, or
- (b) 40 metres of a surveyed roadway or road allowance

unless there exist special circumstances which in the opinion of the Regulator justify the drilling of a well within a lesser distance.

AR 151/71 s2.110;295/78;89/82'89/2013

Water Pollution Control

2.120(1) No person shall

- (a) drill a well or cause or permit a well to be drilled, or
- (b) construct a pit for containing mud, oil, water and other fluid associated with the well or cause or permit such a pit to be constructed,

closer than 100 metres, or such greater distance as the Regulator may direct, to the normal high water mark of a body of water or permanent stream unless he has obtained written approval from the Regulator of his plans to prevent pollution of the water.

(2) The plans referred to in subsection (1) shall

- (a) indicate the elevations of the normal high water mark and surrounding land, and
- (b) set forth measures to meet the particular circumstances that may be encountered including
 - (i) the construction and maintenance of dikes, reservoirs and other installations, as may be required, and
 - (ii) the final disposal of mud, oil, water and other fluid associated with the well or drilling operation.

AR 151/71 s2.120;2/76;295/78;89/2013

Part 3

Approval of Drilling and Completion Operations

Approval of Certain Operations

3.010(1) The licensee of a well shall apply for and obtain the permission of the Regulator before performing any of the following operations, or causing or permitting them to be performed,

- (a) suspend normal drilling operations;
- (b) - (d) repealed AR 12/98;
- (e) resume drilling operations after a previous completion, suspension or abandonment of the well;
- (f) abandon or plug back the well with a mechanical well bore problem;
- (g) undertake remedial operations for the purposes of eliminating a vent flow, gas migration or leaking open-hole abandonment.

(2) An application under subsection (1)(e) shall be made on a form prescribed for that purpose by, and obtainable from, the Regulator.

(3) The Regulator may, in writing and after consultation with the applicant and in time to be received by the applicant prior to commencement of the approved program, vary a program approved or alter a condition prescribed in an approval granted under this section.

(4) If an operation approved under this section will deepen a well beyond the formation authorized by the well licence, the Regulator shall amend the licence accordingly.

(5) A member or authorized employee of the Regulator may first give orally an approval required under this section.

(6) If the well is an experimental well, the Regulator's approval of the experimental scheme is sufficient approval of any operation referred to in subsection (1) that is part of the performance of the scheme.

(7) Repealed AR 185/2005 s3.

AR 151/71 s3.010;12/98;185/2005;89/2013

3.011 No person shall produce gas from a well completed in the oil sands strata prior to obtaining an approval from the Regulator in

accordance with section 3 of the *Oil Sands Conservation Rules* (AR 76/88), unless the Regulator has exempted the well from the application of this section.

AR 47/99 s3;89/2013

Abandoned Wells

3.012 A licensee shall abandon a well or facility

- (a) on the termination of the mineral lease, surface lease or right of entry,
- (b) where the licensee fails to obtain the necessary approval for the intended purpose of the well, if the licensee does not hold the right to drill for and produce oil or gas from the well,
- (c) if the licensee has contravened an Act, a rule, a regulation or an order or direction of the Regulator and the Regulator has suspended or cancelled the licence,
- (d) if the Regulator notifies the licensee that in the opinion of the Regulator the well or facility may constitute an environmental or a safety hazard,
- (e) if the licensee is not or ceases to be a working interest participant in the well or facility,
- (e.1) if the licensee
 - (i) is not or ceases to be resident in Alberta,
 - (ii) has not appointed an agent in accordance with section 91 of the Act, and
 - (iii) does not hold a subsisting exemption under section 1.030 from the requirement to appoint an agent,
- (f) if the licensee is
 - (i) a corporation registered, incorporated or continued under the *Business Corporations Act* whose status is not active or has been dissolved or if the corporate registry status of the corporation is struck or rendered liable to be struck under any legislation governing corporations, or
 - (ii) an individual who is deceased,

- (g) if the licensee has suspended the well in contravention of the requirements established by the Regulator under section 3.020, or
- (h) where otherwise ordered to do so by the Regulator.

AR 185/2005 s4;159/2008;222/2012;89/2013

Abandonment Operations

3.013(1) Abandonment operations, including well abandonment, casing removal, zone abandonments and plug backs, shall be conducted in accordance with the current edition of Directive 020.

(2) A licensee must comply with all of the requirements of Directive 079, including requirements for locating and testing wells which are considered abandonment operations for the purposes of sections 27, 28, 29, 30, 101 and Part 11 of the Act.

AR 185/2005 s4;208/2011;157/2013

Suspended Wells

3.020(1) A licensee shall suspend a well when required by and in accordance with Directive 013, or as otherwise directed by the Regulator.

(2) - (3) Repealed AR 78/98 s2.

AR 151/71 s3.020;350/87;144/96;78/98;89/2013;197/2016

3.030 Repealed AR 144/96 s8.

Production from more than One Pool

3.040(1) The licensee of a multi-zone well shall within 30 days after the well has been completed in more than one pool, advise the Regulator of the effective date of each completion on the form prescribed for that purpose by, and obtainable from, the Regulator, and submit in duplicate to the Regulator a diagrammatic sketch showing

- (a) the type and make of each component of the subsurface installation,
- (b) the depth below a stated reference in the well of each component of the subsurface installation, the casing, liner and tubing, setting depths and sizes, the upper and lower limits of the porous intervals, and fluid interfaces of each completion pool and the perforated intervals, and
- (c) the flow channels for the fluids.

(2) The licensee of a multi-zone well shall, within 30 days after modification of the subsurface installation or producing interval, submit to the Regulator revisions to the sketch required by subsection (1).

AR 151/71 s3.040;89/2013

3.050(1) The Regulator may, by order, approve two or more pools in a field as pools from which production may be taken or to which injection may be made without segregation in the well bore, and may, where in its opinion exceptional circumstances so require, limit the application of the order to production or injection in wells named in the order.

(2) An application for an order under this section must be made in accordance with Directive 065 and must include any other information that the Regulator requires.

AR 151/71 s3.050;169/90;203/2011;89/2013

3.051(1) In the absence of an approval under section 3.050, a licensee may produce gas from all formations in a development entity without segregation in the well bore where

- (a) there are no completions above or below the stratigraphic interval of the development entity,
- (b) anticipated or actual water production is less than 30.0 cubic metres per well per month if there are completions above the base of the groundwater protection,
- (c) repealed AR 50/2012 s2,
- (d) there is no hydrogen sulphide in the production stream,
- (e) the licensee has resolved any concerns of lessors or lessees of the mineral rights whose rights may be directly and adversely affected by the unsegregated production,
- (f) the reservoir pressure of any interval completed for production does not exceed 90% of the fracture pressure of any other interval completed for production, and
- (g) there is no production of gas associated with an oil accumulation.

(2) In the absence of an approval under section 3.050, a licensee may produce gas from all formations without segregation in the well bore, on a self-declared basis, where

- (a) the criteria set out in subsection (1)(b) to (g) are met,

- (b) the well is not in a designated oil sands area or in a pool that overlaps a designated oil sands area, and
- (c) repealed AR 130/2010 s2.
- (d) the pools or intervals are not subject to any existing or proposed enhanced recovery scheme.

(3) In the absence of an approval under section 3.050, a licensee may produce oil from all formations without segregation in the well bore, on a self-declared basis, where

- (a) the criteria set out in subsection (1)(b) to (f) and subsection (2)(b) and (d) are met,
- (b) there is no production of gas that is not associated with an oil accumulation,
- (c) the oil pools have the same rate administration,
- (d) there are no oil pools that have associated gas caps that have not been approved for concurrent production, and
- (e) the unsegregated flow rate of every well in the pools proposed for commingling is less than 3 cubic metres per day when calculated over 3 consecutive months of production.

(4) A licensee shall initially report production from each well producing in accordance with this section, using the field and pool codes set out by the Regulator

- (a) for production in a development entity, or
- (b) for unsegregated production occurring on a self-declared basis.

AR 269/2006 s5;130/2010;50/2012;89/2013

3.060 A well shall not be completed or operated with casing perforated or left open in more than one pool unless

- (a) such completion or operation occurs in accordance with the requirements of section 3.040 or 3.050, or

- (b) the commingling is in compliance with section 3.051.

AR 151/71 s3.060;269/2006

Wells Completed Above Base of Groundwater Protection

3.061 A licensee of a well that is completed above the base of groundwater protection, other than a water well or a well that is part of a water recycle program, shall operate the well in accordance with Directive 044: Requirements for Surveillance, Sampling, and Analysis of Water Production in Hydrocarbon Wells Completed Above the Base of Groundwater Protection.

AR 208/2011 s5

Hydraulic Fracturing Operations

3.062 A licensee of a well shall comply with Directive 083.

AR 115/2013 s3

3.068 Repealed AR 185/2005 s5.

3.069 Repealed AR 83/2002 s4.

3.070 Repealed AR 12/98 s3.

Determination of Costs

3.071(1) An application under section 30(2) of the Act by a person who conducted the work for a determination of suspension costs, abandonment costs or reclamation costs for a well or facility and for the allocation of those costs to each working interest participant in accordance with its proportionate share in the well or facility must be made in accordance with this section.

(2) The application referred to in subsection (1) must include

- (a) the applicant's full legal name, address, telephone number, fax number and a contact person,
- (b) the legal description and licence number of the well or facility that has been suspended or abandoned or of the site that has been reclaimed,
- (c) a complete list, totalling 100 per cent of the working interest, of the working interest participants in the well or facility at the time the costs were incurred,
- (d) the full legal name, last known address, telephone number, fax number and a contact person for each working interest participant and the proportionate share of

the costs for each participant for which the determination referred to in subsection (1) is being sought,

- (e) a detailed description of the total costs incurred in the work of suspension, abandonment or reclamation, supported by receipts for work performed, less salvage revenue, if any, and
- (f) in the case of a determination of costs for
 - (i) suspension or abandonment, a statement that the suspension or abandonment of the well or facility has been completed, was carried out in accordance with the Regulator's rules and other requirements, and that the Regulator's records have been updated to reflect the work performed, or
 - (ii) reclamation, a statement that a reclamation certificate has been issued for the well or facility site.

AR 185/2005 s6;89/2013

Variation of Program

3.080(1) On application by a licensee, the Regulator may approve a departure from or variation of a program of operations approved or prescribed by the Regulator.

(2) In case of an emergency in which an immediate departure from or variation in the program is necessary, such departure or variation may be made to the extent that it is necessary, and the licensee shall immediately advise the Regulator thereof by the quickest effective means and shall further advise the Regulator thereof in writing signed by him.

AR 151/71 s3.080;12/98;89/2013

Part 4 Drilling Spacing Units and Target Areas

Application

4.005 This Part does not apply in respect of any wells associated with an in situ coal scheme.

AR 55/2013 s4

Drilling Spacing Unit

4.010(1) The drilling spacing unit for a well is the surface area of the drilling spacing unit and

- (a) the subsurface vertically beneath that area, or
- (b) where the drilling spacing unit is prescribed with respect to a specified pool, geological formation, member or zone, the pool, geological formation, member or zone vertically beneath that area.

(2) A drilling spacing unit does not include the area of a road allowance.

(3) Unless the Regulator otherwise prescribes under section 4.040, the surface area of a drilling spacing unit for

- (a) an oil well is one quarter section, or
- (b) a gas well is one section.

AR 151/71 s4.010;374/91;12/98;203/2011;89/2013

4.020 Repealed AR 203/2011 s5.

4.021(1) Unless the Regulator otherwise prescribes under section 4.040, in a drilling spacing unit

- (a) 2 gas wells may be produced from each gas pool with the exception of
 - (i) coalbed methane, including but not limited to those wells with interbedded lithologies sands, and shale gas reservoirs, where there is no prescribed number of wells that may be produced,
 - (ii) the area outlined in the map set out in Schedule 13A that is above the Mannville Group, where there is no prescribed number of wells that may be produced, and
 - (iii) the area outlined in the map set out in Schedule 13B that is in the designated strata and stratigraphic equivalents between the top of the Smoky Group to the base of the Rock Creek Member, where 4 wells may be produced from each gas pool in a drilling spacing unit,

and

- (b) one oil well may be produced from each oil pool in a drilling spacing unit, except in the area outlined in the

map set out in Schedule 13A that is in the Mannville Group, where 2 wells may be produced from each oil pool in a drilling spacing unit.

(2) No well shall be produced unless there is common ownership throughout the drilling spacing unit.

AR 153/2006 s2;12/2007;39/2010;203/2011;89/2013

Target Areas

4.030(1) Unless the Regulator otherwise prescribes under section 4.040, the target area for wells drilled or to be drilled must be within the drilling spacing unit, as follows:

- (a) in a drilling spacing unit for a gas well, the target area must be the central area within the drilling spacing unit having sides of 150 metres from the sides of the drilling spacing unit and parallel to them;
- (b) in a drilling spacing unit for an oil well, the target area must be the central area within the drilling spacing unit having sides of 100 metres from the sides of the drilling spacing unit and parallel to them.

(2) Notwithstanding subsection (1), the target area for those gas wells drilled or to be drilled in the area of the Province outlined in Schedule 13A must be located at least 150 metres from the south and west boundaries of the drilling spacing unit.

AR 151/71 s4.030;264/74;374/91;12/98;153/2006;
39/2010;203/2011;89/2013

4.035 Repealed AR 374/91 s2.

Special Drilling Spacing Units

4.040(1) The Regulator, on application, may prescribe the surface area or target area of a drilling spacing unit or number of wells to be produced in a drilling spacing unit.

(2) An application under subsection (1) must be made in accordance with Directive 065 and must include any other information that the Regulator requires.

(3) The Regulator shall not grant an application for an order pursuant to subsection (1) that would increase the number of wells that may be produced in a drilling spacing unit unless the applicant shows that

- (a) improved recovery will be obtained,

- (b) additional wells are necessary to provide capacity to drain the pool at a reasonable rate that will not adversely affect the recovery of the pool, or
 - (c) the proposed drilling spacing unit would be in a pool in a substantial part of which there are existing drilling spacing units that allow the same number of wells that may be produced.
- (4) The Regulator may prescribe for an approved oil sands scheme or after publication of notice, for an experimental scheme
- (a) special drilling spacing units as to size, shape and target area, or
 - (b) an area not having any specific drilling spacing units as to size, shape or target area within which wells may be drilled.
- (5) The Regulator may, on application or on its own motion,
- (a) vary an order or direction issued under this section, or
 - (b) rescind the order.

AR 151/71 s4.040;374/91;203/2011;89/2013

Fractional Tracts of Land

- 4.050(1)** A fractional tract of land that is equal to or greater than half the size of a drilling spacing unit, as described in section 4.010(3), is deemed to be a drilling spacing unit.
- (2) If a fractional tract of land is less than half the size of a drilling spacing unit, as described in section 4.010(3), it must be joined with an adjacent drilling spacing unit and is deemed to be a drilling spacing unit where
- (a) the lands to be joined are of common ownership,
 - (b) the adjacent drilling spacing unit is the size of a drilling spacing unit, as described in section 4.010(3), and
 - (c) the adjacent drilling spacing unit is located directly to the east or west of the fractional tract of land.
- (3) If a fractional tract of land is deemed to be a drilling spacing unit under subsection (1), the Regulator may apply either a production penalty based on the ratio of the area that the deemed drilling spacing unit bears to a drilling spacing unit, as described in section 4.010(3), or an off-target penalty.

AR 151/71 s4.050;374/91;203/2011;89/2013

Off-target Penalties

4.060(1) Where the Regulator has prescribed a special drilling spacing unit, it may prescribe a factor to be applied in reduction of the base allowable of the well if the well is not completed within its target area.

(2) Notwithstanding any other provision of this section, where a well is off-target, the Regulator may specify that the off-target penalty factor prescribed for the well pursuant to section 4.070 shall not apply, or may be modified or changed, subject to such terms and conditions as the Regulator may prescribe.

(3) If a drilling spacing unit exists that is smaller than one quarter legal subdivision, but is similar in configuration as to shape and target area as to the larger drilling spacing units, and where an off-target well exists in the smaller drilling spacing unit, the Regulator, in order to determine the off-target penalty factor, may use and adapt the figures referred to in Schedule 14 to fit the boundary and area of the smaller drilling spacing unit.

(4) If a well is completed within its target area, its base allowable shall not be reduced because of its location within its drilling spacing unit.

(5) Where a well is spudded on or after 1 April 1994 and is the first well in a new pool, the off-target penalty factor prescribed for the well under section 4.070 shall not apply.

(6) For the purposes of this section,

- (a) “capable”, when the term is used in connection with a first well, means
 - (i) an oil well that is placed on production within 6 months of the spud date, and
 - (ii) a gas well that is completed and a suitable test has demonstrated to the Regulator’s satisfaction that the well has the ability to produce gas at commercial rates on a sustained basis;
- (b) “first well” means the well in a new pool with the earliest spud date that is capable of production.

AR 151/71 s4.060;350/87;374/91;226/93;12/98;89/2013

4.070(1) If a well is completed outside of its target area, its base allowable shall be reduced by a penalty factor determined in accordance with Schedule 14.

(2) The point at which the off-target penalty factor is determined is the minimum horizontal distance, measured in metres, from any portion of the well bore within the oil or gas productive part of the producing pool to the nearest boundary of the drilling spacing unit.

(3) Notwithstanding subsection (1), a well drilled prior to 1 April 1994, with an off-target penalty that is less than the off-target penalty factor determined by Schedule 14, shall retain its current penalty factor.

AR 151/71 s4.070;69/72;2/76;202/76;250/77;295/78;469/78;229/79;
267/82;374/91;12/98

4.080 Repealed AR 12/98 s9.

4.090(1) If the Regulator, by order, rule or regulation, changes the drilling spacing unit so that a well in the drilling spacing unit that was on-target before the issuance of the order, rule or regulation, is off-target, the base allowable shall not be reduced because of its location within the drilling spacing unit unless the Regulator otherwise directs.

(2) Where any well was spudded on or before January 1, 1992, it shall not become off-target nor have its off-target penalty changed due to the change in rules or regulations.

AR 374/91 s3;89/2013

Part 5 Blocks, Projects and Holdings

5.005 Repealed AR 203/2011 s10.

5.010 to 5.090 Repealed AR 226/93 s6.

5.100(1) The Regulator, on application and by order, may establish blocks in oil pools.

(2) An application for an order for the establishment of a block shall contain

- (a) a summary of the current gas-oil ratio, water-oil ratio and productive capability of each well proposed to be included in the block,
- (b) a depletion plan for the block, along with a discussion of the conservation benefits to be achieved by producing in accordance with a block,

- (c) a discussion of the impact on wellbore performance by producing selected wells at higher oil rates, and
- (d) a statement verifying that the lands being included in the block are of common ownership.

AR 151/71 s5.100;264/74;226/93;89/2013

5.110 A block shall contain only

- (a) whole, contiguous drilling spacing units of common ownership, and
- (b) drilling spacing units that contain a well capable of production,

but the Regulator may, where in its opinion circumstances that are not hereby provided for are present, vary these requirements in a particular case.

AR 151/71 s5.110;264/74;15/84;217/88;226/93;89/2013

5.120 Repealed AR 226/93 s8.

5.130 The Regulator may, on application or on its own motion, rescind the order establishing a block or amend the order to vary the area of a block.

AR 151/71 s5.130;264/74;226/93;89/2013

5.140 Repealed AR 226/93 s10.

Establishment of Projects

5.150(1) If, upon the application by an operator of an approved scheme for the enhanced recovery of oil, the Regulator is satisfied that operations are proceeding in accordance with the scheme, it may, in accordance with sections 5.160 and 5.170 establish a project.

(2) An application for an order for the establishment of a project shall contain a statement verifying that the lands being included in the project are of common ownership.

AR 151/71 s5.150;226/93;36/2002;89/2013

5.160 A project shall contain only whole contiguous drilling spacing units of common ownership, but the Regulator may, where in its opinion circumstances not hereby provided for are present, vary these requirements in a particular case.

AR 151/71 s5.160;226/93;89/2013

5.170 The Regulator may, on application or on its own motion, rescind the order establishing a project or amend the order to vary the area of a project.

AR 151/71 s5.170;89/2013

5.180 Repealed AR 226/93 s14.

Establishment of Holdings

5.190(1) The Regulator, on application and by order, may establish holdings.

(2) An application to establish holdings must be made in accordance with Directive 065 and must include any other information that the Regulator requires.

(3) The Regulator shall not grant an application for an order pursuant to subsection (1) unless, in the opinion of the Regulator, the applicant shows that

- (a) improved recovery will be obtained,
- (b) additional wells are necessary to provide capacity to drain the pool at a reasonable rate that will not adversely affect the recovery of the pool, or
- (c) the proposed holding would be in a pool, in a substantial part of which there are existing drilling spacing units or holdings with similar provisions.

AR 217/88 s5;203/2011;89/2013

5.200 A holding shall contain only

- (a) a single drilling spacing unit of common ownership, or
- (b) whole, contiguous drilling spacing units of common ownership.

AR 217/88 s5;226/93;203/2011

5.210 The Regulator may specify in an order establishing a holding any terms and conditions respecting the establishment, continuation and termination of the holding that it considers appropriate in the circumstances.

AR 217/88 s5;89/2013

5.220 The Regulator may, on application or on its own motion, where a holding fails to meet the requirements of section 5.200 or

the terms and conditions specified in an order establishing the holding,

- (a) vary the area of the holding or any term or condition contained in the order establishing the holding by amending the order, or
- (b) rescind the order.

AR 217/88 s5;89/2013

Part 6 Drilling, Completing and Servicing

Posting of Licence and Signs

6.010(1) During drilling operations, the licensee shall post and keep prominently displayed at the well site a duplicate of the licence for the well, together with a duplicate of any amendment thereof.

(2) Repealed AR 321/90 s2.

AR 151/71 s6.010;321/90;9/93

6.020(1) Repealed AR 36/2002 s4.

(2) This section applies to all wells and facilities and to LPG facilities and oil loading and unloading terminals as if they were facilities.

(3) The licensee of a well shall identify a well and the operator of a facility shall identify a facility by the use of a conspicuous sign erected at the primary entrance to the well or facility that indicates

- (a) the name and telephone number of the licensee or operator, and
- (b) the legal description of the surface location of the well or facility.

(4) Subsection (3) does not apply to a licensee of a well during drilling and initial completion operations.

(5) A licensee or operator shall maintain a sign that is erected pursuant to subsection (3) in a manner that is satisfactory to the Regulator.

(6) An operator who operates more than one facility at one location may erect one sign to identify all of the facilities at that location.

(7) A licensee who drills more than one well from one surface location shall identify the bottom hole location of each well on a sign affixed to the wellhead.

(8) The licensee of a well or the operator of a facility shall post one of the following categories of warning symbol:

- (a) Category I: Flammable (gas or liquid); Class 3;
- (b) Category II: Poison Gas; Class 2.

(9) A Category II warning symbol shall be used in the following cases:

- (a) where a facility handles or a well may produce gas containing .01 moles per kilomole of hydrogen sulphide or greater;
- (b) where the Regulator so directs;

and a Category I warning symbol shall be used in all other cases.

(10) Warning symbols must be of the size, design and color shown in Schedule 12.

(11) Warning symbols shall be posted adjacent to all entrances to the developed area of wells and facilities or, for wells and facilities that have no access roads or developed areas, warning symbols shall be posted at the wellhead or facility.

(12) A warning symbol may be posted on a sign that is erected at the primary entrance to a well or facility pursuant to subsection (3).

(13) No licensee or operator may

- (a) post warning symbols if a hazard does not exist, or
- (b) post warning symbols that are not in compliance with this section and Schedule 12.

AR 151/71 s6.020;321/90;67/98;36/2002

Notification of Commencement of Drilling

6.021 On commencement of the drilling of a well, other than a well of the kind referred to in section 2.030 or 2.040(1)(d), the licensee shall, within 12 hours or as otherwise arranged with the Regulator, advise the appropriate field centre of the Regulator.

AR 69/72 s3;19/90;36/2002;89/2013

Deviation and Directional Surveys

6.030(1) Unless the Regulator otherwise directs in writing, the licensee of a well shall make or cause to be made during drilling, tests, at depth intervals not exceeding 150 metres, for the purpose of ascertaining to what extent the well deviates from the vertical.

(2) Repealed AR 36/2002 s6.

(3) The licensee shall, immediately upon the making of a directional survey, send to the Regulator the report of the survey.

(4) The Regulator may order the licensee to make such further deviation or directional surveys as it deems necessary, and may give directions as to the manner in which such tests or surveys shall be made.

AR 151/71 s6.030;295/78;36/2002;89/2013

Removal of Rig

6.040(1) The licensee shall not remove or cause or permit to be removed the rig, derrick or other equipment from a well without first obtaining written approval of the Regulator, unless he has

- (a) completed the well in accordance with the licence, or
- (b) suspended operations or abandoned the well in accordance with the approval of the Regulator pursuant to section 3.010.

(2) The Regulator may first give orally an approval required by this section.

AR 151/71 s6.040;89/2013

Control of Fluids Encountered

6.050 The licensee of a well and the operator of equipment at a well shall, at all times during which the well is being drilled, tested, completed or reconditioned,

- (a) conduct operations, and
- (b) maintain casing and control equipment,

so that any oil, gas or water encountered shall be effectively controlled.

AR 151/71 s6.050

Casing and Equipment at a Well

6.060 The licensee shall comply with the specifications stipulated in the licence for a well and with such further equipment specifications as the Regulator, after consultation with the licensee, may from time to time stipulate.

AR 151/71 s6.060;89/2013

6.070(1) The licensee of a well must case it in a manner prescribed by the Regulator in Directive 010: Minimum Casing Design Requirements.

(2) Notwithstanding subsection (1), the Regulator may, on application by the licensee of a well,

- (a) consider and approve the use of a casing engineered to an alternative standard, or
- (b) if the Regulator is satisfied that in the particular circumstances casing is not required, dispense with the requirement to case the well.

AR 151/71 s6.070;36/2002;209/2011;89/2013

6.080(1) Repealed AR 186/93 s2.

(2) The licensee shall set surface casing and meet requirements as prescribed in Directive 008: Surface Casing Depth Requirements.

(3) Repealed AR 216/2010 s2.

(4) Where the required surface casing setting depth is less than

- (a) 180 metres, or
- (b) the Base of Groundwater Protection (BGWP) depth,

the casing string next to the surface casing shall be cemented full length.

(5) Notwithstanding any other provision hereof, for any specific well or area, the Regulator may prescribe and require the licensee of the well to ensure that surface casing is installed at such greater or lesser depth as it considers appropriate in the circumstances.

(6) The licensee shall ensure that surface casing is cemented full length before drilling more than 10 metres beyond the casing setting depth.

AR 151/71 s6.080;15/77;229/79;205/81;206/82;
19/90;186/93;269/2006;216/2010;208/2011;89/2013

6.081 The licensee of a well shall not drill beyond a depth of 3600 metres without first setting intermediate casing unless the Regulator is satisfied that such casing is not required.

AR 15/77 s3;89/2013

6.090 The licensee shall cement casing as required by Directive 009: Casing Cementing Minimum Requirements, unless the Regulator

- (a) exempts the licensee from the requirements, or
- (b) prescribes another method for cementing the casing

for a particular well or area.

AR 151/71 s6.090;460/82;269/2006;208/2011;89/2013

6.100(1) The licensee of a well completed to produce oil or gas or to inject any fluid shall leave the annulus between the second casing string and the surface casing open to the atmosphere in the manner described in subsection (2).

(2) The licensee shall vent the annulus by a line which, subject to such other specifications as the Regulator may prescribe in a particular case, shall

- (a) have a minimum diameter of 50 millimetres,
- (b) extend at least 60 centimetres above ground level,
- (c) terminate so that any flow is directed either in a downward direction or parallel to the ground, and
- (d) be equipped with a valve where the hydrogen sulphide concentration in a representative sample of gas from the well is found to exceed 50 moles per kilomole.

(3) The working pressure rating in kilopascals of all parts of the surface casing vent shall be at least 25 times the numerical equivalent of the surface casing depth in metres required.

(4) The Regulator may exempt a well from the requirements of this section if the well pressures are such that annulus vents are not necessary, or if special circumstances require the vents to remain closed except when checking for pressure in the surface casing.

AR 151/71 s6.100;295/78;51/81;36/2002;89/2013

6.101(1) All production from or injection to a well, except production of sweet gas or injection of fresh water, shall be through tubing.

(2) The Regulator may, upon application by the licensee, exempt a well from the requirements of subsection (1) where in the opinion of the Regulator, circumstances warrant the exemption.

(3) A licensee applying for an exemption under subsection (2) shall demonstrate that the measures he has taken to reduce the risk of escape of fluids resulting from corroded materials are adequate.

(4) Repealed AR 36/2002 s9.

AR 241/71 s2;69/72;36/2002;89/2013;45/2014

6.110 No casing recovered from a well shall be run as intermediate or production casing unless it has been tested in a manner satisfactory to the Regulator and shown to meet the Regulator's requirements.

AR 151/71 s6.110;89/2013

6.120(1) Before any fluid other than potable water is injected to a subsurface formation through a well, the licensee shall

- (a) set a production packer in the well as closely above the injection interval as is practicable, and
- (b) fill the space between the tubing and outer steel casing with a non-corrosive, corrosion inhibited liquid,

but the Regulator, upon application and in writing, may relieve the licensee from any requirement of this section.

(2) Where a well is equipped with a production packer as required by subsection (1), the licensee of the well shall, not later than September 1, of each year, submit to the appropriate area office of the Regulator,

- (a) evidence to show, to the satisfaction of the Regulator, that the liquid between the tubing and the casing is isolated from the fluid being injected, and
- (b) the data which substantiates isolation.

AR 151/71 s6.120;233/72;103/73;89/2013

6.130(1) The surface and subsurface equipment of a completed oil or gas well shall be of such nature and so arranged as to permit the ready measurement of the tubing pressure, production casing pressure, surface casing pressure and bottom hole pressure, and to permit any reasonable test required by the Regulator except insofar as a completion technique approved by the Regulator precludes such measurement or test.

(2) The surface equipment shall include such valve connections as are necessary to sample the oil, gas or water produced.

(3) The licensee of an oil or gas well, on completion of the well and on any subsequent alteration, shall keep and make readily available to the Regulator an accurate and detailed description of all subsurface equipment in the well and its location therein.

AR 151/71 s6.130;51/81;89/2013

Drilling through Coal

6.140(1) No person shall drill within 3 kilometres of any subsurface mine workings which are not abandoned or within 400 metres of any subsurface mine workings which are abandoned unless he complies with sections 6.150 to 6.170 of these Rules, but the Regulator may, in writing,

- (a) grant relief from any of the provisions of sections 6.150 to 6.170, or
- (b) direct, in a particular case, a change in any of the provisions of sections 6.150 and 6.160.

(2) The Regulator, in a particular case, may require compliance with sections 6.150 to 6.170 by a person drilling at a greater distance than stipulated in subsection (1) from subsurface mine workings, and in such case the said sections shall be deemed to read as applying to such drilling operations.

AR 151/71 s6.140;15/77;295/78;89/2013

6.150 No person shall drill a well closer to subsurface mine workings whether active or abandoned than 15 metres.

AR 151/71 s6.150;295/78

6.160 No person shall drill a well through a coal seam in which subsurface mining has been undertaken unless the well is so located that there can be left surrounding the well bore a pillar of coal of a radius measured from the well bore of 15 metres, but if permission in writing is obtained from the Regulator and subject to whatever direction the Regulator makes for the drilling, completion and abandonment of the well, a well may be drilled through subsurface mine workings which are abandoned without provision for a pillar of coal.

AR 151/71 s6.160;295/78;89/2013

6.170(1) Where a well is drilled through a seam of coal within 3 kilometres of subsurface mine workings which are not abandoned or within 400 metres of abandoned subsurface mine workings, the

diameter of the hole to a depth of at least 50 metres below the base of the lowest workable coal seam shall be at least 90 millimetres larger than the diameter of the first casing string to be set through the coal.

(2) The first casing string in the well to be set through the coal shall be

- (a) new,
- (b) equipped with suitable float equipment and a positive means of insuring that the cement in the casing is not displaced from the bottom 10 metres of the casing string,
- (c) assembled with the lowest two lengths of casing fastened together by a suitable thread bonding material or other equivalent means,
- (d) run and set at a point at least 50 metres below the base of the lowest workable coal seam, and
- (e) equipped with suitably located centralizers and scratchers on the lowest length of casing and both above and below each coal seam;

but, where the distance between coal seams is less than 15 metres, not more than one centralizer and three scratchers are required for each 15 metres of casing.

(3) The licensee shall

- (a) cement the well's first casing string to be set through the coal as required by subsection (2) from bottom to top by the circulation method with cement containing a proportion of accelerator of not more than 0.04 tonne per tonne or other proportion as the Regulator may approve for a particular well or area,
- (b) if cement returns are not received at the surface, have a survey made before the shoe of the casing is drilled out, to determine to the satisfaction of the Regulator the position of the top of the cement, and
- (c) following the survey under clause (b), take such action to recement as the Regulator may require.

(4) The cement at the shoe of the casing string set through the coal shall not be drilled out until 24 hours after the completion of cementing or such greater period as the Regulator may require in a particular case.

- (5) Where the lowest workable coal seam is below prudent surface casing depth, the Regulator may require that the surface casing be set at a shallower depth and that
- (a) an intermediate string be run, to which the provisions of subsections (1) to (4) shall apply, or
 - (b) the provisions of subsections (1) to (3) shall apply to the part of the hole and the production casing extending from the shoe of the first casing string to 50 metres below the base of lowest workable coal seam.
- (6) If a subsequent string of casing is run
- (a) its equipment shall include an approved type of float shoe or collar, and an adequate program of centralizers and scratchers,
 - (b) it shall be cemented in compliance with the conditions prescribed by the Regulator,
 - (c) the upper 150 metres of cement around the casing shall contain not more than 0.03 tonne per tonne additives and the remainder of the cement shall develop not less than the minimum 24-hour strength specified by the Regulator,
 - (d) the licensee shall, before any testing or producing of the well, have a temperature or other approved survey made to determine the fill-up of cement which, if it is a temperature survey, shall be made within 24 hours of the placement of cement,
 - (e) if the cement does not reach the required level, the licensee immediately shall advise the Regulator and take such action to recement as the Regulator may require, and
 - (f) the cement shall not be drilled out until at least 24 hours after the completion of cementing.
- (7) The licensee shall notify the Regulator through its appropriate area office of his intention to cement any casing string or to run plugs at least 12 hours before commencing such operations and shall not proceed with such operations until a representative of the Regulator is present to inspect the casing and witness the cementing.
- (8) The Regulator, where in its opinion special circumstances are present, may alter the requirements of subsections (1) to (6) of this section or specify such other requirements or provisions as it deems necessary.

6.180 For the purpose of sections 6.140 to 6.170, the decision of the Regulator as to

- (a) whether mine workings are or are not abandoned, or
- (b) whether a coal seam is workable,

is final.

AR 151/71 s6.180;15/77;89/2013

6.190(1) The licensee of a well that has been drilled through coal shall not abandon the well unless he has obtained the approval of the Regulator under section 3.010.

(2) The Regulator may approve the abandonment of the well subject to such conditions as it may prescribe.

(3) The licensee before the abandonment shall carry out such works in accordance with the directions and specifications prescribed.

(4) The licensee shall notify the appropriate area office of the Regulator of his intention to do so at least 12 hours before the commencing the abandonment, and shall not proceed with the abandonment until a representative of the Regulator is present to witness the abandonment.

AR 151/71 s6.190;15/77;89/2013

6.191 An in situ coal scheme evaluation well must be drilled through the target coal seam in a manner and location acceptable to the Regulator.

AR 55/2013 s5;45/2014

6.192 Unless otherwise approved by the Regulator, a well associated with an in situ coal scheme, other than an in situ coal scheme evaluation well, must be drilled only to the base or above the base of the target coal seam.

AR 55/2013 s5;45/2014

Drilling in the Oil Sands Strata

6.200 Any well drilled in the oil sands strata must be drilled deep enough to be able to log over the base of the oil sands deposit containing the zone to be produced, unless the licensee has obtained an exemption from the Regulator.

AR 47/99 s4;89/2013

Part 7 Production Operations

Construction of Facilities

7.001 No person shall commence construction of or modification to a battery (other than a battery receiving production from a single well which produces gas containing less than 0.01 moles per kilomole of hydrogen sulphide), an oilfield waste management facility or a compressor station, unless the Regulator has, on application, approved the location and construction of or modification to the battery, oilfield waste management facility or compressor station.

AR 51/74 s2;144/74;399/83;70/88;14/98;36/2002;89/2013

7.002(1) An application for the location and construction of or modification to a battery or compressor station shall be submitted in accordance with section 15.210.

(2) An application for the construction of or modification to an oilfield waste management facility shall be submitted in accordance with section 15.212.

AR 51/74 s2;144/74;399/83;70/88;14/98;36/2002

7.003 An approval or licence for the location, construction or modification of a battery, oilfield waste management facility or compressor station shall be subject to any conditions set out in the approval.

AR 51/74 s2;399/83;70/88;14/98;36/2002

7.004(1) The operator of a battery shall install, at the battery, equipment that will provide for

- (a) the separation and continuous measurement of all produced gas in accordance with section 14.040,
- (b) the accurate determination of oil, condensate and water production in accordance with Part 14, and
- (c) the protection of the environment from spills or uncontrolled releases of well effluents from the battery site.

(2) The Regulator may, on application, exempt from the operation of subsection (1)(a) any single well oil or oil sands battery where, in the opinion of the Regulator, circumstances warrant the exemption.

(3) An application submitted under subsection (2) shall be in accordance with section 15.140.

AR 70/88 s2;89/2013

7.010 Repealed AR 229/79 s10.

Common Flow Lines

7.020 Where production from more than one well is received at a battery, the production from each well or each zone in each well, as the case may be, shall be carried to the battery in a separate flow line unless a test measurement of the oil, gas and water production can be made at any time without separate flow lines.

AR 151/71 s7.020;229/79;36/2002

Control Wells

7.025(1) Subject to subsection (5), a licensee shall not produce gas from coal unless the Regulator has designated

- (a) a control well that is within 3 kilometres of the producing gas well, to measure pressure and production in each coal zone, and
- (b) a control well that is within 5 kilometres of the producing gas well, for desorption testing.

(2) A licensee shall not produce gas from shale unless the Regulator has designated

- (a) a control well that is within 5 kilometres of the producing gas well, to measure pressure and production in each shale zone, and
- (b) a control well that is within 30 kilometres of the producing gas well, for desorption testing.

(2.1) Notwithstanding subsections (1) and (2), the Regulator may, on application by a licensee of a well, grant a deferral or relief from any or all of the requirements set out in this section.

(3) A licensee shall submit an application for the designation of control wells or for the deferral of, or relief from, control well requirements in accordance with Directive 062: Coalbed Methane (CBM) Control Well Requirements and Related Matters.

(4) A licensee shall provide information relating to a designated control well to the Regulator in accordance with section 11.145.

(5) Subsection (1) does not apply in respect of a licensee producing synthetic coal gas from coal in an in situ coal scheme for which the licensee holds an approval under the *Coal Conservation Act*.

AR 269/2006 s9;115/2008;208/2011;209/2011;55/2013;89/2013

Testing of Wells in a Battery

7.030(1) Unless the Regulator stipulates otherwise, where the production of wells is commingled before measurement, the operator of the battery shall test each well in accordance with this section and Schedule 16.

(2) Repealed AR 36/2002 s15.

(3) The well test production shall be determined within the measurement guidelines listed in Schedule 9.

(4) Repealed AR 36/2002 s15.

(5) An application to reduce the test frequency of a well or wells must set out the reasons why a lesser standard should be accepted.

(5.1) to (10) Repealed AR 229/79 s12.

AR 151/71 s7.030;241/71;69/72;93/73;229/79;326/79;
70/88;36/2002;89/2013

Air Emissions Management

7.035 The licensee, in the case of a well or facility, the operator, in the case of a facility that is exempted from the requirement to obtain a licence or approval, and the approval holder, in the case of an oilfield waste management facility, must comply with the requirements of Directive 060, Directive 039 and Directive 084, as applicable.

AR 209/2011 s7;2/2013;75/2013;30/2017

7.040(1) No person shall burn, and no

- (a) licensee, in the case of a well or facility,
- (b) operator, in the case of a facility that is exempted from the requirement to obtain a licence or approval, or
- (c) approval holder, in the case of an oilfield waste management facility,

shall cause or permit to be burned any oil, gas, oily waste or other material produced or used at a well, facility or in the operation of a scheme, except under conditions of controlled combustion where there is no significant or visible emission of smoke.

(1.1) Subsection (1) does not apply where the Regulator or its authorized representative approves the burning.

(2) Notwithstanding subsection (1), burning of effluent from a well or facility is permissible under emergency conditions and due to equipment failure, but such burning shall be immediately reported to the Regulator.

AR 151/71 s7.040;36/2002;209/2011;89/2013

7.050(1) This section applies to a well at which the hydrogen sulphide concentration in a representative sample of gas from the well is found to exceed 50 moles per kilomole, or such higher or lower ratio as the Regulator may, by order, stipulate with respect to any well or group of wells in a battery, pool or area, having regard to pressures, nature of production, remoteness of the area and other circumstances.

(2) Repealed AR 241/71 s4.

(3) Unless the well is produced by artificial lift, the licensee shall equip the well with

- (a) two master valves,
- (b) a production packer set as closely above the producing formation as is practicable, with the annular space between the tubing and production casing filled with a suitable non-corrosive, corrosion inhibited liquid, and
- (c) a well head whose working pressure rating is not less than the bottom hole pressure of the producing formation, but the surface casing vent may be in accordance with section 6.100, subsection (3).

(3.1) Where a well is equipped with a production packer, as required by subsection (3), clause (b), the licensee of the well shall, not later than September 1 of each year, submit to the appropriate area office of the Regulator,

- (a) evidence to show, to the satisfaction of the Regulator, that the liquid between the tubing and the casing is isolated from the fluid being produced or injected, and
- (b) the data which substantiates isolation.

- (4) If a hot oil circulating string is used inside the production casing of a well, the licensee shall install a check valve in the injection line and an automatic shut-off valve on the return line.
- (5) Stimulation treatments employing maximum pressures in excess of 75 per cent of the minimum internal yield pressure of the production casing shall be carried out through the tubing and below a packer seated as near to the production formation as is practicable.
- (6) Repealed AR 2/76 s9.
- (7) Where a well that is not on pump and
- (a) is located within 800 metres of an occupied dwelling or within 8 kilometres of the limits of a city, town or village and has, in the opinion of the Regulator, the potential to produce more than 140 thousand cubic metres of gas per day, or
 - (b) the Regulator so directs,

the licensee shall install in the tubing of the well, at a minimum depth of 30 metres below the surface, or such other depth as the Regulator may prescribe, a valve that may be controlled from the surface and which will close automatically in the event of an uncontrolled flow of oil or gas or a failure in the system which operates the valve.

(7.1) to (7.4) Repealed AR 70/2013 s2.

(8) Repealed AR 79/80 s2.

(9) The Regulator may, upon application, exempt from any provision of this section a well or group of wells in a battery, pool or area where, in the opinion of the Regulator, the pressures, nature of production, remoteness of the area or other circumstances warrant the exemption.

AR 151/71 s7.050;241/71;69/72;93/73;103/73;51/74;144/74;
264/74;2/76;295/78;79/80;36/2002;70/2013;89/2013

7.055(1) Where gas

- (a) from a well producing gas containing more than 50 moles per kilomole of hydrogen sulphide, or any higher or lower ratio stipulated by the Regulator, or
- (b) produced from a well designated as a critical sour well

is flared during any test, during any period of cleaning out the well or during well servicing operations, the licensee shall obtain

approval from the Regulator of the method, stack height and equipment to be used to flare the gas.

(2) An application submitted under subsection (1) must be in accordance with Directive 060.

AR 79/91 s2;36/2002;269/2006;209/2011;89/2013

7.060(1) This section applies to any well which produces gas containing more than 10 moles per kilomole hydrogen sulphide, or such higher or lower ratio as the Regulator may stipulate with respect to any well, pool or area, having regard to pressures, nature of production, remoteness of the area and other circumstances.

(1.5) Where no gas analysis has been taken from the well within the preceding 12-month period, gas from the formation produced at the well shall be tested at the commencement of flaring to determine the hydrogen sulphide content.

(2) Where a flare line is installed at a gas well for burning gas produced during normal depressurizing operations or other routine flaring, the licensee shall provide a flare stack constructed in accordance with the specifications for a flare line set out in subsection (4).

(3) Where a pressure relief valve, rupture disk or burst plate is installed on a separator, dehydrator or other pressure vessel which receives production from a gas well, the valve, rupture disk or burst plate fitting shall be connected to the flare stack required by subsection (2).

(3.1) Where a pressure relief valve, rupture disk or burst plate is installed on a separator, treater or other pressure vessel that receives production from an oil well, the vessel shall be equipped with pressure and liquid level sensors that cause a valve installed on the inlet to close and isolate the vessel from the flow stream.

(3.2) The Regulator may, on application, exempt an operator from the requirements of subsection (3.1) and permit the use of a tank referred to in section 8.031 where, in the opinion of the Regulator, the nature of the production, the remoteness of the area or any other circumstance warrants the exemption.

(4) Where gas is produced from any well to the atmosphere for a period exceeding 10 minutes during a drill stem test, the licensee shall burn the gas through a flare line which shall

- (a) terminate with a vertical riser of at least 12 metres or such greater or lesser height as the Regulator directs in a particular case,

- (b) be provided with a suitable guard to prevent the wind from extinguishing the flame,
- (c) if the gas flow may be intermittent, be provided with a sweet gas pilot or ignition device to ensure continuous ignition of any vented gas, and
- (d) be provided with a suitable vessel to separate and collect any liquids to prevent the liquids from reaching the flame.

(5) and (6) Repealed AR 79/91 s3.

(7) Where liquids are produced from a well during any test, during any period of cleaning out the well or during well servicing operations, the liquids shall be separated and piped to a storage tank and all gas shall be discharged to a flare stack that meets the requirements of subsection (4)(a), (b) and (c).

(8) Unless the licensee of a well equips and operates the well so that the maximum operating flow line gauge pressure cannot exceed 1400 kilopascals, the licensee shall install on the wellhead a mechanism that halts the flow of oil or gas in the event of an uncontrolled drop in pressure or an equipment failure.

(9) The licensee of the well shall, when requested to do so by the Regulator, file with the Regulator an outline of emergency procedures to ensure public safety that will be followed by the licensee in the event of an uncontrolled emission of oil or gas.

(9.5) Repealed AR 209/2011 s11.

(10) The Regulator may by order and upon application exempt a well, pool or field from any provision of this section where, in the opinion of the Regulator, the pressure, nature of production, remoteness of area or other circumstances warrant the exemption.

AR 151/71s7.060;69/72;93/73;144/74;2/76;295/78;79/80;51/81;70/88;
19/90;79/91;36/2002;209/2011;89/2013

7.070(1) This section applies to any facility that receives gas containing more than 10 moles per kilomole of hydrogen sulphide or a higher or lower ratio as the Regulator may by order stipulate having regard to the nature of production, the remoteness of the area and other circumstances.

(2) Repealed AR 321/90 s4.

(3) The licensee of a well or the operator of a facility shall not discharge or permit to be discharged to the atmosphere stock tank vapours or any other gas produced from the well, unless they are burned so that essentially all sulphur compounds are converted to

sulphur dioxide, but the Regulator on written application may approve another method of disposal.

(4) Gas burned or disposed of by a method approved under subsection (3) shall be burned or disposed of so as to ensure that the concentrations of hydrogen sulphide and sulphur dioxide do not exceed

- (a) the maximum permissible concentrations set out in the Alberta Ambient Air Quality Guidelines as established and amended from time to time by the Department of Environment and Sustainable Resource Development,
- (b) standards to which the facility is subject under the *Environmental Protection and Enhancement Act*, and
- (c) standards specified by the Regulator.

(5) Gas that is required under subsection (3) to be burned shall be discharged from a flare line that is in accordance with the specifications outlined in section 7.060(4).

(6) The Regulator may, on application, exempt a facility from any provision of this section where, in the opinion of the Regulator, the nature of production, the remoteness of the area or any other circumstance warrants the exemption.

AR 151/71s7.070;241/71;69/72;71/74;144/74;264/74;229/79;70/88;
321/90;25/98;206/2001;36/2002;31/2012;170/2012;89/2013

7.080 A licensee of a pumping well that has the potential to flow to atmosphere at sustained rates of at least 8 m³ per day of liquids and has a hydrogen sulphide content of 10 moles per kilomole or greater in the gas phase shall ensure that the well is equipped with a full opening master valve, a hydraulic rod blowout preventer and an environmental blowout preventer.

AR 70/2013 s3

Part 8 Emergency Preparedness and Response

8.001 In this Part,

- (a) “cavern” means a cavern used for hydrocarbon storage;
- (b) “corporate ERP” means a general ERP that applies to all wells, pipelines and facilities of a licensee;

- (c) “emergency” means a present or imminent event, outside the scope of normal operations, that requires prompt co-ordination of resources to protect the health, safety or welfare of people or to limit damage to property and the environment;
- (d) “ERP” means a comprehensive emergency response plan to protect the public that includes criteria for assessing an emergency and procedures to mobilize response personnel and agencies and to establish communications and ensure coordination of the emergency response;
- (e) “gathering system” means a network of pipelines, pumps, tanks and other equipment that carries oil and gas to a processing plant or to other separation equipment;
- (f) “sour gas” means natural gas, including solution gas, containing hydrogen sulphide;
- (g) “sour production facility” means a facility that processes sour gas;
- (h) “sour well” means an oil or gas well expected to encounter sour gas-bearing formations during drilling or any oil or gas well capable of producing sour gas.

8.002(1) A licensee of a well or facility shall prepare a corporate ERP in accordance with Directive 071.

(2) A licensee referred to in subsection (1) shall on request file its corporate ERP with the Regulator for review by the Regulator.

AR 151/71 s8.002;269/2006;208/2011;89/2013

8.003(1) A licensee of a sour well shall prepare a specific ERP for each sour well in accordance with Directive 071.

(2) A licensee referred to in subsection (1) shall submit a specific ERP for each sour well to the Regulator for approval as required by Directive 071.

AR 151/71 s8.003;269/2006;208/2011;89/2013

8.004(1) A licensee of a sour production facility and associated gathering system shall prepare a specific ERP for each sour production facility and associated gathering system in accordance with Directive 071.

(2) A licensee referred to in subsection (1) shall submit a specific ERP for each sour production facility to the Regulator for approval as required by Directive 071.

AR 151/71 s8.004;269/2006;208/2011;89/2013

8.005 A licensee of a cavern shall

- (a) prepare a specific ERP for the cavern, and
- (b) submit the ERP to the Regulator for approval

in accordance with Directive 071.

AR 151/71 s8.005;269/2006;208/2011;89/2013

8.006 A licensee referred to in section 8.002, 8.003, 8.004 or 8.005 shall

- (a) update the ERP and undertake training exercises, and
- (b) in the case of an emergency, report the emergency to the Regulator and implement the ERP

in accordance with Directive 071.

AR 190/2003 s3;269/2006;208/2011;89/2013

Storage

8.010 Earthen structures or excavations shall not be used as receptacles for crude bitumen, liquid hydrocarbon, process chemicals, produced water, process water or oilfield wastes (other than drilling wastes) produced from a well or facility, either by design or normal operating practice, without the written approval of the Regulator.

AR 151/71 s8.010;13/98;36/2002;89/2013

8.020 Repealed AR 13/98 s3.

8.030(1) Materials that are used, produced or generated at a well site or facility, other than fresh water and inert solids, shall be stored in accordance with the requirements of Directive 055.

(2) Aboveground tanks, underground tanks, containers, lined earthen excavations and bulk pads shall meet the requirements for integrity verification, secondary containment, leak detection and weather protection that are set out in Directive 055.

(3) The Regulator, on application, may approve storage methods, systems or devices alternative to those set out in Directive 055 if in

the Regulator's opinion the level of environmental protection provided is at least equal to that outlined in the Directive.

(4) Tanks or batteries of tanks containing fluids other than fresh water at a well or facility shall be located so that the distance from the outer perimeter of the dike to any surface improvement other than a public roadway is not less than 60 metres or a lesser distance permitted by the Regulator.

AR 151/71 s8.030;341/74;229/79;36/2002;269/2006;208/2011;89/2013

8.031 Notwithstanding section 7.060(3.1), where a pressure relief valve, rupture disk or burst plate is installed on a separator, treater or other pressure vessel which receives production from an oil well, the licensee shall connect the valve, rupture disk or burst plate fitting by suitable piping to an open tank, but the Regulator, upon application, may allow a licensee to use a system of automatic controls or other method of avoiding oil spills if it is satisfied that the degree of protection provided is equivalent to or better than the venting of relief devices to an open tank.

AR 241/71 s6;70/88;89/2013

Water Disposal

8.040 All water produced at a well or facility shall be disposed of in accordance with a scheme approved by the Regulator pursuant to section 39 of the Act.

AR 151/71 s8.040;241/71;51/74;229/79;350/87;
13/98;36/2002;89/2013

Control of Spills

8.050(1) When oil, water or unrefined product is spilled or released from a break or leak in a wellhead, tank, separator, treater or process vessel, the licensee of the well or operator of the facility from which the spill or release occurred shall immediately take reasonable steps to contain and clean up the spill or release and shall ensure that the spilled or released material is processed in the operator's facilities, if appropriate, or is treated or disposed of, or both, in accordance with Directive 058.

(2) Where a spill or release referred to in subsection (1)

- (a) is not confined to the site of the well or facility from which the spill or release occurred,
- (b) is on-site and is in excess of 2 cubic metres, or

- (c) is on-site and of a size that may cause, is causing or has caused an adverse effect as defined in the *Environmental Protection and Enhancement Act*,

the licensee or operator shall immediately orally report the size and location of the spill to the appropriate field centre of the Regulator.

(3) When so directed by the Regulator, a report made pursuant to subsection (2) shall be confirmed in a written report to the Regulator and be supplemented with at least the following additional information:

- (a) the time the spill or release occurred;
- (b) a description of the circumstances leading to the spill or release;
- (c) a discussion of the spill or release containment and recovery procedures;
- (d) a discussion of steps to be taken to prevent similar future spills or releases;
- (e) any other information that the Regulator may require.

AR 151/71 s8.050;69/72;144/74;2/76;179/76;229/79;
399/83;36/2002;269/2006;208/2011;89/2013

8.051 Where oil, water or unrefined product is spilled while being transported, otherwise than by pipeline, from a well, pipeline or other facility over which the Regulator has jurisdiction to any other like facility, the licensee of a well or pipeline or operator of the facility and the owner of the transportation facility shall immediately

- (a) report the spill to the appropriate field centre of the Regulator and to Alberta Environment and Sustainable Resource Development,
- (b) take reasonable steps to contain and clean up the spill material, and
- (c) ensure that the spill material is treated or disposed of in accordance with Directive 058, unless otherwise approved by the Regulator.

AR 93/73 s5;399/83;25/98;206/2001;36/2002;
269/2006;208/2011;89/2013;45/2014

8.052(1) A licensee of a well or facility shall

- (a) prepare a spill response contingency plan, and

- (b) conduct spill training exercises and complete a training exercise report

in accordance with Directive 071.

(2) Repealed AR 208/2011 s13.

(3) If in the opinion of the Regulator a well or facility is a risk to a water body due to its location near the water body, the Regulator may require the licensee of the well or facility to demonstrate that the licensee has the equipment and the ability to implement a spill response contingency plan.

AR 70/88 s7;25/98;206/2001;36/2002;190/2003;
269/2006;208/2011;89/2013

8.060 Where a well or facility is located closer than 100 metres to the normal high water mark of a body of water or permanent stream or is in a location such that in the opinion of the Regulator a spill or leak may reach the water, the licensee or operator shall

- (a) where a well is not on pump, install on the well head a valve which closes automatically to shut off an uncontrolled flow of effluent from the well in the event of a failure of the well head, surface facilities or gathering line,
- (b) at the direction of the Regulator, install in the well a packer and a subsurface valve to shut off automatically an uncontrolled flow of effluent from the well in the event of a failure of the well head or production casing,
- (c) construct pits, dikes, trenches or other structures or installations to contain effluent or spill material, and
- (d) submit, at the request of the Regulator, a plan to limit the spread of effluent or spill material and to recover effluent or spill material from the surface of the water in the event of a leak or spill, such plan to include details of procedures, materials and equipment proposed to be used.

AR 151/71 s8.060;250/77;295/78;36/2002;89/2013

8.070 Where in the opinion of the Regulator, the location or condition of a well or facility is such that it may become a source of serious water pollution, the Regulator may require that the well or facility be abandoned.

AR 151/71 s8.070;36/2002;89/2013

Burning Vented Gas

8.080(1) The licensee of a well or the operator of a facility or oil sands scheme shall burn any significant volume of gas that is vented to the atmosphere.

(2) Vented gas shall not be flared to an earthen pit at a well or facility that was constructed after July 1, 1996.

(3) The licensee or operator shall

(a) safeguard all flare pits constructed before July 1, 1996, and

(b) construct and safeguard all ends of flare lines

so that no hazard to public property or forest cover will be created and so that they are not located closer than 100 metres to a surface improvement, except a surveyed roadway, but the Regulator, where, in its opinion, special circumstances exist, may prescribe a greater or lesser distance.

(4) The licensee of a well or operator of a facility that was constructed before July 1, 1996 and on which vented gas is flared to an earthen pit shall prevent produced liquids from entering the pit by installing appropriate flow shut-off and emergency containment devices.

(5) No flare pit or open end of a flare line shall be located or remain within 50 metres of a well or oil storage tank, or within 25 metres of any oil or gas processing equipment, but the Regulator, having regard to the volume and nature of the gas and the flash point and other characteristics of the oil being produced, may suspend the application in a field or pool of the requirement of this subsection respecting the distance of a flare pit or open end of a flare line from a well, and in such case, notwithstanding subsection (1), gas vented from the flare line shall not be burned.

AR 151/71 s8.080;295/78;36/2002;89/2013

Fired Equipment and Engine Exhausts

8.090(1) In this section

(a) “fire” means any open or enclosed flame or other sources of ignition except sources of ignition associated with the installation and operation of electrical equipment;

(b) “flame type equipment” means any fired equipment using an open or enclosed flame and includes, without limitation, a space heater, torch, heated process vessel, boiler, open flame welder and thermo electric generator;

- (c) “process vessel” means a heater, dehydrator, separator, treater or any vessel used in the processing or treatment of produced gas or oil.
- (2) No person shall create or cause to be created any fire within 50 metres of a well, oil storage tank or other source of ignitable vapour.
- (3) No oil storage tank shall be placed or remain within 50 metres of any well, but the Regulator may prescribe a distance of less than 50 metres but not less than 15 metres in any field or at any well, having regard to the products of the well.
- (4) No flame type equipment shall be placed or operated within 25 metres of a well, oil storage tank, or other source of ignitable vapour, except
- (a) where the well is
 - (i) a water supply well, or
 - (ii) a water injection well equipped with a suitable packer and with the surface casing annulus vented outside any building,
- or
- (b) that emergency work requiring the use of flame type equipment may be conducted within 25 metres of a well, if the wellhead valves and the blow out preventer, if one is installed, are closed, or
 - (c) where extenuating circumstances exist, the Regulator suspends the application of this subsection in any field or area.
- (5) No flame type equipment shall be placed or operated within 25 metres of any process vessels unless, where such is applicable, the flame type equipment is fitted with an adequate flame arrester.
- (6) No flame type equipment shall be located in the same building as any process vessel or other source of ignitable vapour, unless
- (a) the air intakes and flues of all burners are located outside the building,
 - (b) relief valves, safety heads, and other sources of ignitable vapours are vented outside the building and discharged above roof level, and
 - (c) the building is adequately cross ventilated.

(7) All process vessels and equipment from which any ignitable vapour may issue shall be safely vented to the atmosphere, and all vent lines from oil storage tanks which are vented to flare pits or flare stacks shall be provided with flame arrestors or other equivalent safety devices.

(8) All installations at or near any well, process vessel, oil storage tank or other source of ignitable vapour shall be made in compliance with regulations made under the *Safety Codes Act* or under the *Occupational Health and Safety Act*.

(9) An exhaust pipe from an internal combustion engine, located within 25 metres of any well, process vessel, oil storage tank or other source of ignitable vapour, shall be so constructed that

- (a) any emergence of flame along its length or at its end is prevented, and
- (b) the end is not closer to the vertical centre line of the well projected upward than 6 metres and is directed away from the well.

(10) Each licensee of a well or operator of a facility at which there is located an oil storage tank or other source of ignitable vapour shall enforce the provisions of this section.

AR 151/71 s8.090;93/73;2/76;179/76;295/78;416/83;
36/2002;209/2011;18/2012;89/2013

8.100 Repealed AR 208/2011 s14.

Use of High Vapour Pressure Hydrocarbons

8.110(1) In this section a “high vapour pressure hydrocarbon” means any hydrocarbon and stabilized hydrocarbon mixture with a Reid vapour pressure greater than 14 kilopascals.

(2) Where the licensee or operator of a well uses a high vapour pressure hydrocarbon in an operation at a well other than in the hydraulic fracturing of a formation, he shall observe the following rules:

- (a) no open tanks shall be used for storing or gauging or measuring the pumping rate;
- (b) a minimum distance of 50 metres shall be maintained between the wellhead and storage tank;
- (c) positive shut-off valves shall be installed between the tank and pump and between the pump and wellhead;

- (d) a check valve shall be installed between the pump and the well to prevent backflow from the well;
- (e) all surface lines downstream from the pump shall be pressure tested to 10 000 kilopascals above anticipated maximum pressure to be encountered;
- (f) no significant wastage shall occur.

(3) High vapour pressure hydrocarbons shall not be blended with propping agents for the purpose of hydraulically fracturing a formation, but the Regulator may, on application, approve a given fracturing program if conclusive evidence is submitted to show that there is not another carrying fluid available that will be similarly effective.

AR 151/71 s8.110;69/72;286/82;89/2013

Smoking

8.120(1) No person shall smoke within 25 metres of a well, separator, oil storage tank or other unprotected source of ignitable vapour or on a rig or derrick at a well site.

(2) Each licensee of a well and each contractor who has contracted to manage or perform any operation at a well shall enforce the provisions of subsection (1) at the well.

(3) Where a person contravenes subsection (1), the licensee and the contractor referred to in subsection (2) who is the employer of that person are in contravention of subsection (2) regardless of whether they had knowledge of the smoking or took steps to guard against the smoking.

AR 151/71 s8.120;295/78;36/2002

Blowout Prevention Requirements

8.129(1) The requirements of Directive 036 and Directive 037 apply to any well that is being drilled, tested, abandoned, completed, reconditioned or serviced.

(2) A licensee of a well referred to in subsection (1) shall comply with Directive 036 and Directive 037 and with any other requirements as directed by the Regulator.

(3) Repealed AR 208/2011 s15.

(4) The Regulator may, upon its own motion or upon application, vary or specify the blowout prevention requirements which apply to any well or wells.

- (5) The Regulator may, upon its own motion or upon application, vary a classification set out in Directive 036 or Directive 037 for any well or wells in any pool, field or area.
- (6) The Regulator may, upon its own motion or upon application, vary the design or requirements for any classification set out in Directive 036 or Directive 037.
- (7) Prior to making application for a well licence, the licensee shall
- (a) research offset well records to determine maximum pore pressures and hole problems which may be encountered while drilling the proposed well, and
 - (b) incorporate the information determined under clause (a) into the well design.
- (8) A licensee shall make the information determined under subsection (7)(a) available to the Regulator on request.
- (9), (10) Repealed AR 208/2011 s15.

AR 15/77 s6;51/81;36/2002;208/2011;89/2013

8.130 to 8.148 Repealed AR 208/2011 s16.

Drilling and Servicing Inspections

- 8.149(1)** The Regulator or its authorized representative may make a direction requiring the licensee of the well to
- (a) test the operation and effectiveness of blowout prevention equipment required by Directive 036 and Directive 037,
 - (b) conduct a pressure test of the blowout prevention equipment referred to in clause (a), using where necessary a hanger plug or casing packer, and
 - (c) perform a blowout prevention drill.
- (2) Upon a direction made by the Regulator or its authorized representative and if the licensee believes it is safe to do so, the licensee of a well shall suspend or cause to be suspended any operation or service being performed at a well until any test required to be made, pursuant to subsection (1), has been completed.
- (3) Any direction made by the Regulator or its authorized representative pursuant to subsection (1) may be made to the licensee of the well or to any contractor or other person performing an operation or service, referred to in subsection (2).

AR 51/81 s5;208/2011;89/2013

Waste Management at Well and Facility Site

8.150(1) In this section, “oilfield waste” does not include drilling mud and cuttings.

(2) The licensee of a well or pipeline and the operator of a facility generating oilfield waste shall

- (a) properly characterize and classify oilfield wastes,
- (b) use appropriate oilfield waste storage, treatment and disposal practices,
- (c) understand the capabilities and limitations of the methods selected for the treatment and disposal of oilfield wastes that are generated,
- (d) complete and maintain accurate oilfield waste documentation and records,
- (e) disclose to waste carriers and receivers the characteristics and classification of the oilfield wastes, and
- (f) ensure that waste operational requirements have been satisfied and, if applicable, approvals are in place for on-site oilfield waste handling, treatment, and disposal methods

in accordance with the requirements outlined in Directive 058 and any other requirements as directed by the Regulator.

(3) The operator of a facility receiving oilfield waste shall

- (a) ensure that all required approvals are in place and operational requirements have been satisfied for all oilfield waste storage, handling, treatment and disposal methods,
- (b) understand the capabilities and limitations of the treatment and disposal methods of the facility and communicate those capabilities and limitations to oilfield waste generators,
- (c) accept only those oilfield wastes that the facility is approved to receive,
- (d) maintain accurate and complete oilfield waste documentation and records,
- (e) operate the facility in compliance with required licences and approvals, and

- (f) upgrade equipment and operating practices as necessary to comply with changes in regulatory requirements,

in accordance with the requirements outlined in Directive 058, Directive 047 and any other requirements as directed by the Regulator.

(4) The licensee of a well or pipeline and the operator of a facility shall maintain the well, pipeline or facility in a clean condition and shall ensure that oilfield wastes do not create or constitute a safety hazard or nuisance or adversely affect air, soil, surface water or groundwater.

AR 151/71 s8.150;241/71;69/72;51/81;399/83;36/2002;
269/2006;208/2011;41/2013;89/2013

8.151(1) In this section, “drilling waste” means the mud and cuttings generated from drilling a well.

(2) A licensee of a well shall ensure that an earthen excavation at a well site used to store drilling waste

- (a) is so located and constructed that it will not collect natural run-off water, and
- (b) is so located and constructed that it will not allow contaminants from the drilling waste to migrate beyond the pit walls and bottom.

(3) Where the surface topography or soil conditions are such that a satisfactory storage pit of sufficient design and capacity cannot be constructed, the licensee of the well shall contain drilling waste in tanks and shall dispose of the waste without undue delay.

(4) All drilling waste shall be treated and disposed of in accordance with

- (a) the requirements in Directive 050: Drilling Waste Management,
- (b) the requirements in Directive 058, or
- (c) other requirements approved by the Regulator.

AR 36/2002 s47;269/2006;208/2011;89/2013

8.152 The Regulator may, on application, approve alternative storage, treatment and disposal methods to those prescribed in sections 8.150 and 8.151 if the Regulator is satisfied that those alternative methods will not adversely affect air, soil, surface water or groundwater.

AR 36/2002 s47;89/2013

8.160 Repealed AR 36/2002 s47.

Fencing

8.170(1) At each battery at which the hydrogen sulphide concentration in a representative sample of the gas from any well producing to the battery is found to exceed 10 moles per kilomole, or such higher or lower ratio as the Regulator may by order stipulate in a particular case, the licensee shall construct and maintain an adequate fence around the battery, but the Regulator, on application, may exempt a battery from the provisions of this section where it is of the opinion that the pressures, nature of production, remoteness of area or other circumstances warrant the exemption.

(2) For the purpose of subsection (1) a fence shall be considered adequate if,

- (a) where a battery is within 800 metres of an occupied dwelling, rural school, picnic grounds or the like, it is at least 2 metres high, small mesh industrial type, completely enclosing the battery, and equipped with a gate that is locked when the battery is unattended, or
- (b) where a battery is located elsewhere, it is a cattle type fence with a minimum of four strand barbed wire and either a gate or cattle guard.

AR 151/71 s8.170;229/79;89/2013

8.171 If the Regulator considers that a facility, other than a battery, may, due to its location or nature, constitute a serious hazard to the general public, the Regulator may require that the facility be fenced in accordance with section 8.170(2).

AR 36/2002 s48;89/2013

8.180(1) The licensee of a well that is equipped with a pumping unit and located in or within 800 metres of the boundaries of a city, town, new town, village, summer village, hamlet or other incorporated centre, unrestricted country development, public facility, picnic area or campground shall enclose the well and pumping unit with a fence suitable for preventing access to or tampering with the well and pumping unit.

(2) A fence required by subsection (1) shall be

- (a) of steel mesh, with the mesh not greater than 130 square centimetres,
- (b) not less than 2 metres high,

- (c) placed around the entire pumping unit, well head and cellar, and
- (d) equipped with a gate that is locked when the well is unattended.

(3) If, in the opinion of the Regulator, the location of a well that is equipped with a pumping unit is such that it is or may become a serious hazard to the general public, the Regulator may require that the well be fenced in accordance with subsection (2).

(4) The Regulator may, on application, exempt the licensee from or vary any of the requirements of this section if, in the opinion of the Regulator, circumstances warrant the exemption or variation.

AR 151/71 s8.180;229/79;321/90;89/2013

General

8.190(1) The licensee or operator of a well shall not permit a well to flow uncontrolled.

(2) The licensee shall

- (a) record in the drilling log book, any uncontrolled flow of gas or liquid from the well, and
- (b) record the remedial measures taken to control the flow.

(3) The licensee shall advise the appropriate area office of the Regulator immediately by the quickest, most effective means, of any well flowing uncontrolled.

(4) Within 30 days after a well flowing uncontrolled is controlled, the licensee shall submit to the Regulator a detailed written report of the reasons for the uncontrolled flow and the operations undertaken to control the well.

AR 151/71 s8.190;15/77;89/2013

8.191 The licensee shall, upon request from the Regulator or its representative, determine the formation fracture pressure at the casing shoe.

AR 15/77 s16;89/2013

8.192 The licensee of a well shall ensure that the wellhead is conspicuously marked or fenced in a manner that makes it visible in all seasons.

AR 70/2013 s4

8.193 The licensee and operator of a well shall ensure that no vehicles operate within a 3-metre radius of the wellhead, except vehicles that are specifically required to do so as part of an operation being performed on a well.

AR 70/2013 s4

Part 9 Processing Plants

9.010 In this Part, except where the context otherwise requires, “sulphur” means all sulphur in whatever compound or physical form it may exist.

AR 151/71 s9.010;71/74

9.020(1) An application under section 39(1)(b) of the Act for approval of a new scheme or a major modification to an existing scheme for the processing of gas shall be filed with the Regulator and shall conform with the requirements of section 15.050.

(2) Repealed AR 14/98 s5.

(3) On the filing of a completed application for approval, or a major amendment of approval, of a scheme for the processing of gas and where it appears to the Regulator that its decision on the application

- (a) may directly and adversely affect the rights of any person, the Regulator shall hold a public hearing or publish notice of the application, or
- (b) would not directly and adversely affect the rights of any person, the Regulator may process the application without notice or hearing.

(4) Repealed AR 14/98 s5.

AR 151/71 s9.020;71/74;350/87;14/98;209/2011;89/2013

9.030(1) No person shall commence construction related to a new scheme or a major modification to an existing scheme for the processing of gas until the Regulator has approved the location, conservation levels and pollution control features of the scheme.

(2) No person shall commence processing operations related to a new scheme or a major modification to an existing scheme for the processing of gas until the Regulator has approved the scheme.

AR 151/71 s9.030;71/74;25/98;89/2013

9.040 The operator of a processing plant shall conduct operations so as to ensure that the concentrations of any air contaminant do not exceed

- (a) the maximum permissible concentrations set out in the Alberta Ambient Air Quality Guidelines as established and amended from time to time by the Minister of Environment and Sustainable Resource Development,
- (b) standards to which the plant is subject under the *Environmental Protection and Enhancement Act*, and
- (c) standards specified by the Regulator.

AR 151/71 s9.040;71/74;25/98;206/2001;31/2012;
170/2012;89/2013

9.050(1) Subject to subsection (2), the operator of a processing plant treating gas for removal of hydrogen sulphide shall, by continuous or periodic measurements or tests, obtain records satisfactory to the Regulator, and the Department of Environment and Sustainable Resource Development of:

- (a) where sulphur compounds are emitted to the atmosphere through a stack following incineration, the daily quantity of sulphur dioxide and any other sulphur present in the stack gases and the daily minimum stack gas emission temperature, or
- (b) where sulphur compounds are emitted to the atmosphere through a flare stack without prior incineration, the daily average volume of stack gases and the daily average concentration of hydrogen sulphide and of any other sulphur present in the stack gases.

(2) The operator of a processing plant which emits sulphur compounds to the atmosphere after incineration and is recovering more than 100 tonnes per day of sulphur or emitting to the atmosphere gases containing more than 10 tonnes per day of sulphur, shall obtain the operating data referred to in subsection (1), clause (a) on a continuous basis.

(3) If the total quantity of sulphur being emitted as determined under subsection (1) exceeds the quantity approved by the Regulator or the Department of Environment and Sustainable Resource Development, the operator of the plant shall take immediate measures to reduce the total emission of sulphur to within the approved limits.

(4) If the total quantity of sulphur emitted to the atmosphere in any day exceeds the quantity approved by the Regulator or the Department of Environment and Sustainable Resource

Development by more than 50 per cent, the operator shall immediately report such emission to the Regulator by the quickest effective means.

(5) The operator of a processing plant shall not discharge or permit to be discharged from the plant to the atmosphere any gas containing hydrogen sulphide unless it is burned so that essentially all of the sulphur is converted to sulphur dioxide, but the Regulator on written application may approve another method of disposal.

(6) The operator of a processing plant shall conduct operations in such a manner as to

- (a) control the emission of sulphur dust to the satisfaction of the Regulator and the Department of Environment and Sustainable Resource Development,
- (b) control the emission of unburned hydrocarbon vapours to the satisfaction of the Regulator and the Department of Environment and Sustainable Resource Development,
- (c) control the emission of odourous materials to the satisfaction of the Regulator and the Department of Environment and Sustainable Resource Development,
- (d) control the emission of smoke to the satisfaction of the Regulator and the Department of Environment and Sustainable Resource Development, and
- (e) control noise to the satisfaction of the Regulator and the Department of Environment and Sustainable Resource Development.

(7) The disposal from a processing plant of water produced in association with gas or oil, shall be in accordance with section 8.040.

(8) The disposal of process waste water, sanitary waste or surface run-off water from a processing plant shall,

- (a) if to an underground formation, be in accordance with a scheme approved by the Regulator pursuant to section 39 of the Act and in accordance with a licence of the Department of Environment and Sustainable Resource Development, or
- (b) if to a body of surface water or a disposal pond, be in accordance with a licence of the Department of Environment and Sustainable Resource Development.

AR 151/71 s9.050;241/71;71/74;229/79;350/87;25/98;
206/2001;209/2011;31/2012;170/2012;89/2013

9.060 The operator of a processing plant in which gas containing more than 10 moles per kilomole hydrogen sulphide, or such higher or lower ratio as the Regulator may by order stipulate, is being processed, shall, prior to the initial processing of gas, file with the Regulator and the Department of Environment and Sustainable Resource Development an outline of emergency procedures to ensure public safety, that will be followed in the event of an uncontrolled release of contaminants to the air, water or land from the processing plant.

AR 151/71 s9.060;71/74;229/79;25/98;206/2001;31/2012;
170/2012;89/2013

9.070(1) Where it appears to the Regulator that the operations of a scheme for the processing of gas has contravened or is contravening the Act, these Rules or an order of the Regulator, the Regulator may

- (a) order that operations of the scheme be partially or totally suspended, or
- (b) require that remedial measures be taken.

(2) When any operation of a scheme for the processing of gas is suspended, pursuant to subsection (1), the Regulator shall, within ten days of the suspension, hold an inquiry to investigate the circumstances leading to the suspension.

(3) After an inquiry pursuant to subsection (2), the Regulator may order that the suspension of any operation continue or that the processing scheme be shut down until such time as the Regulator otherwise orders.

AR 151/71 s9.070;71/74;89/2013

Part 9.1 Repealed AR 151/71 s9.190.

Part 10 Production Rates and Accounting

General

10.010 Repealed AR 226/93 s16.

10.011 Unless the Regulator otherwise directs, this Part does not apply in respect of any wells associated with an in situ coal scheme.

AR 55/2013 s7;45/2014

10.020(1) A licensee or operator of a production entity or any person authorized by the licensee or operator may take production from the production entity only at rates in accordance with the subsisting MRL Order of the Regulator where it applies or in accordance with any applicable order or authorization governing rates of production.

(2) Repealed AR 36/2002 s49.

AR 2/76 s13;226/93;36/2002;89/2013

10.030 and 10.040 Repealed AR 36/2002 s50.

10.050 Where in any order of the Regulator governing rates of production reference is made to a base gas-oil ratio (GOR), such reference shall be in accordance with Schedule 6 of these Rules.

AR 2/76 s13;229/79;226/93;89/2013

10.060 The Regulator, upon its own motion or upon application therefor, where it is satisfied that any provision in this Part is not or should not be applicable to the circumstances of a particular case, may vary, alter or exempt from application any provision of this Part and may make such other provision as it considers suitable or necessary to effect the purposes of the Part.

AR 2/76 s13;89/2013

10.070 to 10.090 Repealed AR 36/2002 s51.

Gas Base Allowables

10.095 The gas base allowable of a well shall be its Q_{\max} as shown in the subsisting gas allowable order.

AR 374/91 s4;36/2002

10.100, 10.110, 10.120 and 10.130 Repealed AR 226/93.

Production from a Block or Project

10.140 Sections 10.150 to 10.190 apply to production of oil from a block or project.

AR 2/76 s13;179/76;226/93

10.150 Subject to the provisions of sections 10.160 to 10.290, any part of the oil allowable for a block or for a project may be produced from any well in the block or project.

AR 2/76 s13;226/93

10.160(1) Subject to subsection (3), gas-oil ratio and off-target penalties applicable in a block or project shall be computed as if the production from the block or project were produced from one well.

(2) When the Regulator establishes a block or project, it shall set forth a productive area of the block or project on the appendix to its approval.

(3) The oil control well rate, as defined in section 10.170, of a control well is subject to the gas-oil ratio penalty and off-target penalty that would apply

(a) if the drilling spacing unit of the well were not included in a block or project, or

(b) as specified in the subsisting MRL Order.

AR 2/76 s13;229/79;226/93;89/2013

10.170(1) The Regulator may impose control well status in blocks or projects on consideration of a written request from an affected party when

(a) the well is off-target, or

(b) the operator of the well causing control can show evidence that drainage is occurring.

(2) The production of a control well is subject to a control well rate established as follows:

(a) for a control well in a block, the oil base allowable that the well would receive if it were located outside the block;

(b) for a control well in a project, the greater of 20 cubic metres per day and the product of the control well drilling spacing unit area times the base MRL per hectare for the pool type;

(c) such other rate as the Regulator in a particular case may prescribe.

AR 2/76 s13;226/93;89/2013

10.180 When an approved scheme for enhanced recovery of oil that is not a pilot or experimental scheme has been in operation for not less than 90 days in accordance with the approval of the scheme, the Regulator, on application of the licensee or the operator of the wells in the scheme area shall, at the commencement of the production month following the end of the 90-day period, recognize the enhanced recovery reserves set by it

in the determination of the base allowable of the project, unless the Regulator is satisfied

- (a) that the supply of injection fluid is assured, that the mechanics of injection have been shown to be satisfactory and that the effectiveness of the operations involved in the scheme on a continuing basis has been demonstrated, whereupon it may reduce the 90-day period, or
- (b) that there has not been continued satisfactory performance of the scheme or there has been a contravention of any condition of the approval or the approval has been rescinded, whereupon it may reduce or discontinue recognition of the enhanced recovery reserves.

AR 2/76 s13;226/93;89/2013

10.190 In a block or project, production from or injection to the pool shall be taken from and distributed among the wells in the pool so as to obtain the optimum recovery of oil or gas from the pool.

AR 2/76 s13

Overproduction and Underproduction

10.200 In sections 10.220 to 10.280, “overproduction” means the production of oil or gas in excess of the oil or gas allowable or control well rate determined in accordance with a subsisting order or directive of the Regulator.

AR 2/76 s13;264/84;36/2002;89/2013

10.210 Repealed AR 226/93 s24.

10.220 Where the Regulator establishes a block or project, the cumulative overproduction of each well included in the block or project, as at the end of the month preceding the month in which the block or project became effective, shall be attributed to the block or project at the commencement of the month in which the block or project became effective.

AR 2/76 s13;264/84;89/2013

10.230 Where

- (a) a well is removed from a block or project, or
- (b) a block or project is dissolved,

the Regulator may direct the manner in which the overproduction of the block or project shall be distributed.

AR 2/76 s13;264/84;226/93;89/2013

10.240 Repealed AR 264/84 s7.

10.250 Repealed AR 264/84 s7.

10.260 Repealed AR 264/84 s7.

10.270 Overproduction of oil may be reduced by the amount by which the oil allowable or control well rate exceeds the current month's production, in accordance with Directive 007-1: Allowables Handbook.

AR 2/76 s13;264/84;36/2002;209/2011

10.280(1) Cumulative overproduction of an allowable or control well rate at a production entity for oil shall be dealt with in accordance with Directive 007-1: Allowables Handbook.

(2) Where the cumulative overproduction of an allowable at a production entity for gas at the end of an allowable period is 20% or more of the gas allowable for the allowable period, the Regulator, without further notice, may restrict the gas allowable in the next succeeding period to an amount equivalent to the gas allowable that the production entity would otherwise have less an amount equal to 0.50 times the cumulative overproduction in excess of 10% of the gas allowable for the period ending.

(3) Notwithstanding subsections (1) and (2), where a well is overproduced and, after notice, the well continues to be overproduced, the Regulator may take such measures as may be necessary to remedy the overproduction status, including shutting in the well.

AR 2/76 s13;179/76;15/77;264/84;226/93;
36/2002;209/2011;89/2013

10.290 Repealed AR 36/2002 s57.

Gas Well Production Rates

10.300(1) Where it appears to the Regulator that the ultimate recovery of gas from a pool may be affected by the producing rate, the Regulator may by order prescribe a maximum daily allowable

(Q_{max}) for each gas well in the pool or part of the pool, and in so doing shall have regard to

- (a) the tests made at the well pursuant to Directive 040,
- (b) reservoir modelling or other appropriate reservoir analysis techniques,
- (c) the following equation:

$$Q_{\max} = q \left[\frac{P_i^2 - f^2 P_i^2}{\bar{P}_R^2 - P_{wf}^2} \right]^n \frac{\bar{P}_R}{P_i}$$

where

q = flow rate under stabilized conditions, 10³ m³/d to one decimal place,

p_{wf} = stabilized flowing bottom hole pressure corresponding to q, kilopascals absolute (p_{wf} to be within five per cent of f p_R),

p_R = stabilized shut-in bottom hole pressure, kilopascals absolute,

p_i = initial stabilized shut-in pressure in the reservoir, kilopascals absolute,

n = inverse slope of the simplified deliverability plot (to be taken to the nearest five one-hundredths),

f = fraction, to be set at a value which generally reflects permeability considerations, proximity of underlying water or oil, and other pertinent reservoir data, and

- (d) such other data relating to the well as the Regulator considers pertinent.

(2) The licensee of a gas well in a pool or field for which maximum daily rates are prescribed by the Regulator shall not place the well on regular production until an allowable for the well has been prescribed by the Regulator.

(3) Where a maximum daily allowable is prescribed for a gas well, the licensee of the well shall not produce, cause or permit to be produced, in any day, gas from the well in excess of the amount prescribed.

(4) The Regulator may, upon its own motion or upon application therefor by the licensee of a gas well in a pool or field for which a

maximum daily allowable is prescribed, revise or rescind the maximum daily allowable prescribed for the well.

(5) An application under this section must be made in accordance with Directive 065 and must include any other information that the Regulator requires.

(6) Where a significant increase in water production occurs in a well,

- (a) which had not previously produced water in excess of water of condensation, or
- (b) which is producing water in excess of water of condensation,

the licensee shall immediately advise the Regulator of his estimate, supported by appropriate evidence, of the maximum gas production rate for the well that would not adversely affect ultimate recovery.

AR 2/76 s13;179/76;229/79;36/2002;269/2006;
203/2011;208/2011;89/2013

10.310 Repealed AR 226/93 s28.

10.320 Repealed AR 226/93 s28.

Proration of Battery Production

10.330(1) Where the production of wells producing to a battery is commingled before group measurement, the production shall be prorated among the individual wells in the battery based on the proration factor as calculated in accordance with the Production Accounting Handbook published by the Regulator.

(2) To determine the estimated production for the individual wells and for the battery from which the proration factor is calculated, the test to test method of calculation shall be followed.

AR 2/76 s13;36/2002;89/2013

10.340 Repealed AR 36/2002 s60.

Part 11 Well Data

11.005 Where a licensee conducts or obtains well tests, analyses, surveys, reports or logs, the licensee shall submit all results to the Regulator within the time period specified by the Regulator.

AR 269/2006 s19;209/2011;89/2013

11.006 The Regulator may require the licensee of a well to conduct or run any reasonable or conventional test, analysis, survey or log or perform any instrument calibration, and to submit to the Regulator the information so obtained.

AR 209/2011 s18;89/2013

Drill Cuttings

11.010(1) The licensee of a well shall take samples of drill cuttings in accordance with Directive 056.

(2) The licensee shall

- (a) wash, dry and preserve the samples in bags that fulfil the labelling and packaging requirements of the Regulator, and
- (b) within two weeks of the finished drilling date of the well, deliver the samples at his expense to the Regulator's Core Research Center, 3545 Research Way N.W., Calgary.

(3) Despite subsection (2)(a), on and after April 1, 2003 a licensee must submit vialled drill cuttings that meet the following requirements:

- (a) the samples are washed and dried;
- (b) the samples are in 2 dram (19 mm x 48 mm) plastic vials;
- (c) the vial caps are round and of low density polyethylene;
- (d) the vial labels are 16 mm x 63 mm of latex laser sheet label quality;
- (e) the information on the label includes the unique well identifier and the depth from which the sample was taken;
- (f) the vials are packaged and submitted in lidded sample trays.

AR 151/71 s11.010;51/81;11/98;12/98;32/2003;
269/2006;208/2011;209/2011;89/2013

Oil Sands Data

11.020(1) Any person who, by a pit, well, shaft or other opening penetrates oil sands, shall forward to the Regulator, within one month of the date of the analysis or the completion or abandonment of the well or opening,

- (a) the appropriate factual details including the location and the surface or other reference elevation,
- (b) two copies of any core or fluid analysis, log, drill stem or wire line test report, and
- (c) if required by the Regulator, the core, drill cuttings or geological description pertaining to the well or opening.

(2) Where the well or opening referred to in subsection (1) is not licensed under the Act, any report or information required by subsection (1) shall be accompanied by two copies of a suitable plan or survey description giving the location of the well or opening in relation to the boundaries of the section in which it is located shown by the co-ordinates measured in metres from two joining boundaries of the section, but a plan or description for the purpose of this subsection may show more than one well or opening.

AR 151/71 s11.020;229/79;89/2013

Core and Core Analyses

11.030(1) When directed by the Regulator, the licensee of a well shall core each formation or part thereof to which the direction applies.

(2) Unless otherwise directed by the Regulator, the licensee may remove and retain from any core recovered one longitudinal slab not thicker than the lesser of 25 millimetres or one-half the thickness of the core.

(3) The licensee shall

- (a) place all core or part thereof remaining after the removal of a slab in accordance with subsection (2) in cardboard core boxes that fulfill the labelling and packaging requirements of the Regulator, and
- (b) within three months of the finished drilling date of the well from which the core was recovered, forward the core intact at his own expense to the Regulator's Core Research Center, 3545 Research Way N.W., Calgary.

(4) Notwithstanding the other provisions of this section, where more than one experimental well in a quarter section is cored, the licensee shall submit the core from only one such well which shall be the least altered and most complete and representative core recovered in the quarter section, or, where it would be more representative and complete, a composite core from different wells in the quarter section.

(5) This section does not apply in respect of in situ coal scheme evaluation wells.

AR 151/71 s11.030;229/79;51/81;12/98;55/2013;89/2013

11.040(1) The licensee shall supply to the Regulator, within one month of the completion of the analysis, two copies of reports of analyses made of core, involving routine measurements of porosity, permeability or fluid saturation.

(2) The licensee shall supply to the Regulator, within six months of the date of a core analysis not referred to in subsection (1), two copies of reports of measurements pertaining to the estimation of, or the recovery of, oil or gas reserves, but the Regulator may grant relief from the requirement of this subsection if disclosure of an analysis would prejudice a patent right or if the information is shown to be not pertinent to the evaluation of the pool.

(3) A core analysis to which subsection (2) applies includes an analysis on core or cuttings from coal or shale.

(4) This section does not apply in respect of in situ coal scheme evaluation wells.

AR 151/71 s11.040;269/2006;55/2013;89/2013

11.050 Repealed AR 69/72 s13.

Analyses, Tests, Surveys and Logs

11.060 Repealed AR 209/2011 s20.

11.070(1) Where recoveries on a drill stem or wireline test from a well which when drilled is not within a designated pool permit good sampling, the licensee shall submit to the Regulator analyses of representative samples of the oil, gas and formation water recovered from each formation, on approved forms, and report at least the following information:

OIL

Density in kilograms per cubic metre at 15°C of the water free and sediment free oil

Sulphur content of the water free and sediment free oil, weight per cent
Saybolt Universal Viscosity of the water free and sediment free oil at 21°C, seconds

GAS

Gross Heating Value, moisture and acid gas free, measured or calculated from an analysis
Hydrogen sulphide, moles per mole
Carbon dioxide, moles per mole
Density in kilograms per cubic metre, measured or calculated from an analysis

WATER

Chloride content, grams per cubic metre
Resistivity, ohm metres at 25°C
Total solids content on ignition, grams per cubic metre pH

(2) Following the first production or deliverability test of a well which, when completed, is not within a designated pool or is produced in accordance with section 3.051, the licensee shall submit to the Regulator analyses of representative samples of the produced oil, gas, condensate, formation water and of gas and condensate combined, on approved forms, and report at least the following information:

OIL

Sulphur content of the water free and sediment free oil, weight per cent
Saybolt Universal Viscosity of the water free and sediment free oil at 21°C and 38°C, density in kilograms per cubic metre at 15°C of the water free and sediment free oil

GAS

Composition in moles per mole of methane, ethane, propane, iso-butane, normal butane, iso-pentane, normal pentane, hexanes, heptanes plus, nitrogen, helium, carbon dioxide, and hydrogen sulphide. The composition in moles per mole converted to litres per thousand cubic metres at 101.325 kPa and 15°C, of propane, iso-butane, normal butane, iso-pentane, normal pentane, hexanes, and heptanes plus
Gross Heating Value, moisture and acid gas free at 101.325 kPa and 15°C, measured or calculated from the analysis
Density in kilograms per cubic metre, measured or calculated from the analysis
Pseudocritical pressure and temperature calculated from the analysis

CONDENSATE

Mole fractions and liquid composition in moles per mole of nitrogen, carbon dioxide, hydrogen sulphide, methane, ethane, propane, iso-butane, normal butane, iso-pentane, normal pentane, hexanes, and heptanes plus
Density in grams per cubic centimetre at 15°C, density in kilograms per cubic metre at 15°C, and molecular weight in grams per mole of the heptanes plus fraction
density in kilograms per cubic metre at 15°C of the water free and sediment free condensate

WATER

Solids content in kilograms per cubic metre and the calculated per cent solids of chloride, bromide, iodide, carbonate, bicarbonate, hydroxide, sulphate, calcium, magnesium, sodium, and total solids
Total solids content by evaporation at 110°C, 180°C, and at ignition density in kilograms per cubic metre at 15°C
pH
Hydrogen sulphide, grams per cubic metre
Refractive index at 25°C
Resistivity, ohm metres at 25°C

GAS AND CONDENSATE COMBINED

Mole fractions and gas composition in moles per mole of nitrogen, helium, carbon dioxide, hydrogen sulphide, methane, ethane, propane, iso-butane, normal butane, iso-pentane, normal pentane, hexanes, and heptanes plus
Molecular weight in grams per mole of the heptanes plus fraction density in kilograms per cubic metre, measured or calculated from the recombined analysis
Pseudocritical pressure and temperature calculated from the recombined analysis
Molecular weight and specific gravity of liquid hydrocarbons
Liquid to gas ratio expressed in cubic metres per cubic metre

- (3) The analyses of gas and condensate combined, pursuant to subsection (2), may be obtained from either an analysis of a representative combined wellstream sample or from a calculated recombination of the analyses of separate gas and condensate samples.
- (4) The analyses required pursuant to subsections (1) and (2), shall, within 45 days of the completion of the test, be submitted to the Calgary office of the Regulator, accompanied by the following details of the taking of the samples:
- (a) in the case of a drill stem test,

- (i) well name and unique identifier of the well,
- (ii) point of sampling,
- (iii) pressure and temperature at point of sampling,
- (iv) amount of water cushion,
- (v) mud type (lime, gypsum base, salt or the like),
- (vi) test recovery,
- (vii) interval tested, and
- (viii) formation tested,

or

- (b) in the case of a production or deliverability test,
 - (i) well name and unique identifier of the well,
 - (ii) point of sampling, and
 - (iii) pressure and temperature at point of sampling.

(5) The Regulator, upon application, may grant relief from the provisions of this section where it is satisfied that the formation tested is an extension of a pool previously designated and adequately sampled.

AR 151/71 s11.070;69/72;179/76;229/79;269/2006;89/2013

11.080 The operator of a field processing plant shall submit, on or before January 31 of each year, analyses, satisfactory to the Regulator and representative of the operations of the preceding year, of

- (a) the fluids entering the plant, where practical separately, for each pool delivering gas to the plant, and
- (b) each marketable product leaving the plant,

but the Regulator may, upon application by the operator, grant relief from the requirement of this section with respect to a small processing plant or to a pool for which adequate analyses are available.

AR 151/71 s11.080;89/2013

11.090 The operator of an oil sands scheme shall assist the Regulator representative in taking such samples of rejected oil

sands or any process stream of gases, liquids, solids or mixtures thereof as the Regulator may require.

AR 151/71 s11.090;89/2013

11.100 The licensee shall supply to the Regulator within one month of the finished drilling date of a well a clear and non-fading print of a pressure chart and report containing complete details on fluid recoveries and other pertinent particulars for each drill stem test or wire line test taken at the well.

AR 151/71 s11.100(1);233/72;89/2013

11.101 Where a well is drilled with air as the drilling fluid, the licensee shall supply to the Regulator, within one month of the finished drilling date of the well, a report containing complete details concerning each test made to determine the rate at which gas flowed from the well.

AR 151/71 s11.100(2);233/72;89/2013

11.102(1) The licensee of a well shall conduct and submit to the Regulator tests for all gas and oil wells in accordance with Directive 040.

(2) Notwithstanding subsection (1), the Regulator may, on application by the licensee of a well, grant relief from any or all of the requirements of the Directive referred to in subsection (1).

AR 233/72 s5;229/79;12/98;269/2006;208/2011;89/2013

11.103 Repealed AR 12/98 s13.

11.104 Notwithstanding sections 3.050, 3.051, 3.060, 4.021, 4.030, 4.040, 7.025, 10.060, 11.010, 11.102 and 11.145, if the Regulator is satisfied that it is appropriate to do so, the Regulator may, on its own motion, issue a subsurface order that

- (a) designates a zone in a specific geographic area, and
- (b) prescribes requirements pertaining to spacing, target areas, multi-zone wells, allowables, production rates and other subsurface matters within that zone,

in which case if there is a conflict or inconsistency between the subsurface order and any of the sections referred to above, the subsurface order prevails to the extent of the conflict or inconsistency.

AR 6/2015 s2

11.110 The operator of a well shall use instruments that meet the following requirements:

1. any dead weight gauge that is used to calibrate wire line instruments for taking subsurface pressure measurements must be certified annually by a calibration laboratory accredited by the Standards Council of Canada through the Calibration Laboratory Assessment Service of the National Research Council of Canada or another calibration laboratory certified as meeting ISO/IEC 17025 standards;
2. the calibration shall be obtained using an approved dead weight gauge at a minimum frequency
 - (i) within 3 months prior to use in any survey,
 - (ii) twice after repairs or abnormal stresses, and
 - (iii) once annually under the necessary conditions to check temperature sensitivity.

AR 151/71 s11.110;229/79;12/98;202/2004

11.120(1) The licensee of a well shall supply to the Regulator without delay the data and results of

- (a) each bottom hole sample analysis or other pressure-volume-temperature analysis, in duplicate,
- (b) each measurement or test made on the well for the purpose of obtaining information pertaining to a formation in which the well is completed, including volumes of oil, gas, condensate or water produced, flowing or static pressure measurements, pressure build-up, fall-off and drawdown tests, reservoir limit tests, interference tests, and two-rate tests,
- (c) where the well is primarily productive of gas, one copy of each deliverability test including field notes, flow rate calculations, summary sheet (Form EG-32) and any supplementary data and calculations related to a proper interpretation of the test, and
- (d) each measurement of the reservoir gas-oil, oil-water, or gas-water interface.

(2) The licensee of a well shall supply to the Regulator, within six months of the date of any relevant laboratory analysis, two copies of a report of any laboratory study assessing miscible displacement of reservoir oil or gas.

AR 151/71 s11.120;69/72;179/76;51/81;89/2013

11.130 Repealed AR 12/98 s15.

11.135(1) Where a gas well is being cleaned up or tested, the amount of gas flared shall not exceed 600 thousand cubic metres including that produced during the initial clean-up period, unless the prior approval of the Regulator therefor has been obtained.

(2) Where a gas well is being cleaned up or tested, the flaring shall be minimized and be subject to section 7.060 of these Rules.

(3) The licensee of the well to be cleaned up or tested in accordance with this section shall notify the Regulator, through its appropriate area office, of the intention to perform such operations not less than three days prior to commencement of the operations.

AR 179/76 s10;229/79;51/81;89/2013

11.140(1) The licensee shall,

- (a) before completion, abandonment or suspension of drilling operations at a well, take well logs in accordance with Directive 080,
- (b) within one month of the rig release date of a well, submit to the Regulator a copy of each log, survey or chart taken at the well together with all pertinent data other than the check shot calibrations made with reference to a velocity survey, and
- (c) within one month of the run date, submit to the Regulator any additional logs, including flow meter logs and related analysis, taken at the well after the original logging operation.

(2) Logs, surveys, charts and other data submitted under this section must be in a format acceptable to the Regulator.

(3) The Regulator may on application allow substitution or grant relief from the requirements of this section where special circumstances warrant.

(4) This section does not apply in respect of any wells associated with an in situ coal scheme.

AR 151/71 s11.140;186/93;269/2006;55/2013;89/2013;
88/2014

11.145(1) The licensee of each control well designated under section 7.025(1)(a) shall conduct and report to the Regulator

- (a) initial segregated pressure, and annual segregated pressure in each calendar year thereafter, for each coal zone in accordance with Directive 040, and
 - (b) initial flow meter logging, and annual flow meter logging in each calendar year thereafter, encompassing the entire coal completions in the well bore.
- (2)** The licensee of each control well designated under section 7.025(1)(b) shall conduct and report to the Regulator the results of a desorption test for each coal zone within the control well, including manometer readings, calculated gas content, all coal quality analysis and, where required, scientific calibration of cuttings results to the core taken from within an offsetting township.
- (3)** The desorption test referred to in subsection (2) may be conducted from core, or from cuttings, if the test has been calibrated to core taken from within an offsetting township.
- (4)** The licensee of each control well designated under section 7.025(2)(a) shall conduct and report to the Regulator
- (a) initial segregated pressure, and annual segregated pressure in each calendar year thereafter, in accordance with Directive 040, for each 30-metre interval of contiguous shale,
 - (b) initial flow test or flow meter logging, and annual flow test or flow meter logging in each calendar year thereafter, for each 30-metre interval of contiguous shale,
 - (c) initial fluid analysis for each shale zone in accordance with section 11.070(2) for each 30-metre interval of contiguous shale, and
 - (d) total organic carbon content every 5 meters from cuttings.
- (5)** The licensee of each control well designated under section 7.025(2)(b) shall conduct and report to the Regulator the results of a desorption analysis, where the desorption test is conducted on core only and data including manometer readings, calculated gas content, all shale quality analysis and total organic carbon content on a representative sample from each desorption test canister.
- (6)** The initial data required under subsections (1) and (4) must be submitted to the Regulator within 4 months following the designation of the control well.
- (7)** The results of the desorption tests referred to in subsections (2) and (5) must be submitted to the Regulator within

- (a) 6 months following the completion of the analysis of the test, or
- (b) 12 months following the designation of the control well,

whichever occurs first.

(8) Notwithstanding this section, the Regulator may, on application by the licensee of a well, grant relief from any or all of the requirements set out in this section.

AR 269/2006 s25;208/2011;89/2013

Segregation Tests

11.150(1) Where a well is completed as a multi-zone well, the licensee shall, within 30 days of such completion, submit in duplicate to the Regulator

- (a) an analysis and interpretation of the tests conducted to confirm that segregation has been established both within and behind the well casing, and
- (b) information on gas, oil, water and other characteristics where proof of segregation is based on differences in such characteristics.

(2) The licensee of a multi-zone well shall, once during each year or at such other frequency as the Regulator may require, and after a change of subsurface equipment or any other operation that may disturb or exert abnormal pressure differentials upon subsurface equipment,

- (a) prove to the satisfaction of the Regulator that segregation persists between the pools and their flow channels in the well,
- (b) notify a Regulator representative at the appropriate field centre at least 3 days in advance of any segregation test at the well,
- (c) retain the data that substantiate segregation in the well and the analysis and interpretation verifying segregation in the well for a period of 5 years from the date of each segregation test, and
- (d) make the data, analysis and interpretation available to the Regulator on request.

(3) The licensee of a multi-zone well shall, during multi-zone operation, separately measure production from or injection to each pool of gas, oil, water or other substances, and report production

from or injection to each pool in the manner prescribed by section 12.030 of these Rules and section 84 of the Act.

(4) If at any time subsurface segregation of fluids in a multi-zone well is not effective, the licensee shall

- (a) diligently endeavour to obtain segregation, and
- (b) if directed to do so by the Regulator, seal off or abandon any or all pools.

(5) Where a licensee fails to comply with subsection (4), the Regulator may, at the licensee's expense, enter upon the well site and do whatever is necessary to restore segregation or to abandon any or all pools.

(6) If at any time the licensee of a multi-zone well fails to submit satisfactory proof of segregation to the Regulator within the time required by subsection (1) or (2), the well shall not be entitled to an allowable or shall be produced only as the Regulator may direct.

AR 151/71 s11.150;51/74;350/87;36/2002;89/2013

Experimental Schemes

11.160 Where the Regulator approves an experimental scheme, it may relieve the operator or licensee from any requirement of this Part with respect to any well or wells drilled or operated pursuant to the scheme.

AR 151/71 s11.160;89/2013

Part 12 Records and Reports

Records and Reports of Operations and Production

12.010 The licensee of a well or the representative of the licensee of a well shall keep and file with the Regulator records and reports relating to the operations of the well in accordance with Directive 059: Well Drilling and Completion Data Filing Requirements.

AR 151/71 s12.010;69/72;229/79;350/87;
229/98;269/2006;208/2011;89/2013

12.020(1) The operator of a well shall, when required by Directive 007, keep a record relating to the status of a well and file the record in accordance with that Directive.

(2) An operator of a well shall keep records in addition to those described in subsection (1) and file with the Regulator any other reports that the Regulator may, by order, require.

AR 151/71 s12.020;78/98;32/2003;
269/2006;208/2011;89/2013

12.030(1) The operator of a well, a facility or an oil sands scheme shall, when required by Directive 007, keep records of the crude oil, condensate gas, natural gas liquids, crude bitumen, oil sands excavated, water, air or other substance produced and file those records in accordance with that Directive.

(2) The operator of a well, facility or oil sands scheme shall keep a daily record of the production operations of the well, facility or oil sands scheme in a form satisfactory to the Regulator and the original recording of the measurement used to determine the particulars for the record filed with the Regulator under subsection (1).

(3) In the case of a pipeline, the licensee under the *Pipeline Act* shall, when required by Directive 007, keep records of the crude oil, synthetic crude oil, gas, marketable gas, ethane, propane, butanes, natural gas liquids, sulphur products, crude bitumen and any other substance that is received into the pipeline for transportation and file the records with the Regulator in accordance with that Directive.

(4) The distributor of marketable gas, ethane, propane, butanes or sulphurs shall, when required by Directive 007, keep records of the marketable gas, ethane, propane, butanes or sulphur purchased or received for distribution and file the records with the Regulator in accordance with that Directive.

(5) The operator of a well, facility or oil sands scheme, or in the case of a pipeline the licensee under the *Pipeline Act*, or a distributor of marketable gas shall keep any other records in addition to those described in this section and file with the Regulator any other reports that the Regulator may, by order, require.

AR 151/71 s12.030;93/73;78/98;32/2003;
269/2006;208/2011;89/2013

12.040 Repealed AR 32/2003 s3.

12.050 to 12.055 Repealed AR 32/2003 s3.

12.056 The operator of a storage facility shall, when required by Directive 007, keep records of the marketable gas, ethane, propane, butanes, natural gas liquids and sulphur purchased or received into the storage facility and file the records with the Regulator in accordance with that Directive.

AR 93/73 s8;32/2003;269/2006;208/2011;89/2013

12.057 Repealed AR 32/2003 s3.

12.060 The owner of a refinery or a person who has control or management of a refinery shall, when required by Directive 007, keep records of the oil, gas, natural gas liquids, oil sands, crude bitumen and synthetic crude oil received into the refinery and file the records with the Regulator in accordance with that Directive.

AR 151/71 s12.060;93/73;32/2003;
269/2006;208/2011;89/2013

12.061 Where Directive 076 applies to a well or facility, the operator of the well or facility shall keep records in accordance with the requirements of Directive 076 and provide copies of the records to the Regulator on request.

AR 44/2013 s3;45/2014

12.070 Repealed AR 32/2003 s3.

12.080(1) The operator of a processing plant in which raw gas is processed for the removal of hydrogen sulphide must submit, on or before the 15th day of each month, to the Regulator's Operations Group, a daily summary and monthly totals of plant operating data for the preceding month, including

- (a) the volume of raw gas and the gas equivalent of condensate processed,
- (b) the hydrogen sulphide content of the plant feedstock in mole per cent, determined at a frequency required by the Regulator,
- (c) the plant's total inlet sulphur, in tonnes,
- (d) the quantity of sulphur produced, in tonnes,
- (e) the quantity of sulphur emitted from the incinerator stack, in tonnes,
- (f) the volume and hydrogen sulphide content in mole per cent of the sour gas directed to the plant's flare stack,
- (g) the quantity of sulphur emitted from the flare stack, in tonnes,
- (h) the quantity of sulphur in the sour gas injected to an underground formation or disposed in any other manner, in tonnes,
- (i) the total amount of sulphur out, in tonnes, and

(j) the sulphur recovery efficiency level, in per cent.

(2) The Regulator may vary the reporting requirements described in subsection (1) for any processing plant or type of processing plant.

AR 151/71 s12.080;265/85;70/89;32/2003;209/2011;89/2013

12.090 to 12.111 Repealed AR 32/2003 s3.

Enhanced Recovery Schemes

12.120 The operator of a scheme for enhanced recovery of oil must, on the request of the Regulator, file reports containing the information respecting the progress, performance and efficiency of the scheme.

AR 151/71 s12.120;70/89;36/2002;32/2003;89/2013

12.130 Repealed AR 36/2002 s64.

Reports of Certain Losses

12.140(1) Each operator of a well, facility or oil sands scheme and each holder of an approval for an in situ coal scheme must immediately report to the Regulator, by the quickest effective means, and shall further report to the Regulator by letter,

- (a) any fire that occurs at a well, facility, in situ coal scheme or at an oil sands oil storage tank or pit owned or operated by the licensee, approval holder or operator where the loss exceeds 2 cubic metres of oil or 30 000 cubic metres of gas or where damage to the well head occurs,
- (b) any break or leak in a vessel or gathering line from which the loss exceeds 30 000 cubic metres of gas, or
- (c) any unexplained loss, including theft of oil at a well, facility, in situ coal scheme or oil sands facility, where the loss exceeds 2 cubic metres of oil, condensate or crude bitumen.

(2) Each report to the Regulator under subsection (1) must specify the location of the well, facility, in situ coal scheme, tank, pit or line break.

AR 151/71 s12.140;2/76;229/79;217/88;32/2003;
55/2013;89/2013

12.141 The licensee of a well shall notify the Regulator immediately on detection of a casing leak or failure and, if

requested by a representative of the Regulator, shall provide a report assessing the leak or failure, including a discussion of the cause, duration, damages, proposed remedial program, and measures to prevent future failures.

AR 217/88 s10;89/2013

Release of Information

12.150(1) In this section

1. “confidential pool” means a designated pool other than a non-confidential pool;
2. “confidential well” means a well for which the data referred to in subsection (4) has not been made available to the public;
3. “non-confidential pool” means
 - (i) a designated pool in respect of which
 - (a) the one-year confidential status of the initial well has expired,
 - (b) 5 or more wells are cased for production, or
 - (c) in the case of a gas pool, gas has been produced, gathered and marketed,
 - or
 - (ii) a pool that the Regulator has designated as a non-confidential pool on application by the licensees of the wells in the pool.

(2) The Regulator, at any time, shall make available to the public, from records, reports or information submitted to or acquired by it,

- (a) subject to subsections (8), (8.1) and (9), any application or submission of an applicant or intervener in any proceedings before the Regulator pursuant to the Act or these Rules and to which the Regulator’s Rules of Practice apply, whether or not the proceeding goes to a hearing or is otherwise disposed of, or any record, report or information of an applicant or intervener filed by him in connection with the proceeding, or
- (b) any application processed by the Regulator concerning the setting of the reserves for a non-confidential oil pool or any submission, record, report or information filed by an applicant in connection with the application, or

- (c) the surface and bottom hole locations, elevation, current depth, drilling status or casing and cementing data of a well other than a test hole, or
 - (d) monthly totals of oil, gas or water production from a well other than an experimental well, and, for a well in a non-confidential pool, the hours on production, or
 - (e) the monthly totals of each type of fluid injected into an injection well other than an experimental well, and, for a well in a non-confidential pool, hours on injection, or
 - (f) with respect to the interval from surface to the base of the stratum containing the non-confidential pool in a well drilled inside a non-confidential pool to develop, extend or service the pool
 - (i) any gas, oil or water analysis, or
 - (ii) any routine pressure, temperature or flow test data, or
 - (iii) any log, drill stem test data, wire line formation test data, completion details, any sample cuttings or core preserved by the Regulator, or
 - (iv) any core analysis supplied pursuant to section 11.040, subsection (1),
 - (g) repealed AR 302/86 s2.
 - (h) any application granted by the Regulator concerning the establishment of a block, project or holding in a non-confidential oil pool or any submission filed by the applicant in connection with the application,

or
 - (i) notwithstanding the classification of a well as a confidential well, any information submitted pursuant to section 12.010 regarding hydraulic fracturing fluids used in operations at any well.
- (3)** The Regulator, at any time, shall make available to the public
- (a) any report required by sections 11.080, 12.080 or 12.120, or
 - (b) any report required by the terms and conditions of an approval granted pursuant to section 39 of the Act, or an order issued pursuant to the *Turner Valley Unit Operations Act*,

unless the approval of these Rules otherwise specify.

(4) Subject to subsection (2)(i), the Regulator, after one year from the finished drilling date or the start of substantially uninterrupted suspension of drilling operations at a well or an oil sands evaluation well, shall make available to the public, from records, reports or information submitted to or acquired by it, in any case where such data are not earlier available under subsection (2), any log, drill stem test data, wire line formation test data, pressure, temperature and flow test data, completion details, gas, oil or water analysis data, sample cuttings or core analysis submitted pursuant to section 11.040, subsection (1), but in the case of an experimental well, the Regulator may make such data available in accordance with subsection (6), and in the case of a test hole, in accordance with subsection (7).

(5) The Regulator, on the first day of the month following the expiry of one year from the date of a test, shall make available to the public, from records, reports or information submitted to or acquired by it,

- (a) any core analysis supplied pursuant to section 11.040, subsection (2), or
- (b) any bottom hole sample analysis or other pressure-volume-temperature analysis supplied pursuant to section 11.120, subsection (1), clause (a), or
- (c) laboratory data or experimental data concerning miscible flood recovery,

but, in the case of an experimental well, data that are required to monitor or evaluate the performance of the scheme shall be made available in accordance with subsection (8) or (9).

(6) Notwithstanding the other provisions of this section regarding experimental wells, the Regulator, after one year from the finished drilling date or the start of substantially uninterrupted suspension of drilling operations at an experimental well, shall make available to the public, from records, reports or information submitted to or acquired by it, in any case where such data are not earlier available under subsection (2), data other than completion details or data which, in its opinion, were secured for the purpose of evaluating the performance of an experimental scheme, in which case the data may be released in accordance with subsection (8) or (9).

(7) The Regulator, after five years from the finished drilling date of a test hole, shall make available to the public from the record submitted to or acquired by it the log, location and elevation of the test hole.

(8) Where information or data pertaining to an experiment in any field, pool or well, or pertaining to a scheme for enhanced recovery in any field or pool, or laboratory data or other information concerning the development or application of methods for the recovery of oil or gas, are submitted to and accepted by the Regulator as confidential, the Regulator shall make the information or data available to the public

- (a) 5 years after approval of the scheme or after such lesser period of time as the Regulator directs after having consulted with the operator, or
- (b) if the operator satisfies the Regulator that continued confidentiality is warranted after the period referred to in clause (a), following such further period as the Regulator considers appropriate.

(8.1) If interpretive data to determine the maximum hydrogen sulphide release rate of a well that may encounter hydrogen sulphide are submitted to and accepted by the Regulator as confidential, the Regulator shall make the data available to the public only with the consent of the applicant or licensee.

(9) Notwithstanding subsection (8), the Regulator may make the information and data referred to in that subsection available to the public before the time referred to in that subsection if it considers that failure to release the information or data would severely prejudice the Regulator's position in making decisions in further proceedings or seriously restrict benefits to conservation in Alberta.

(9.1) Before making a decision on the period of confidentiality or the release of the information or data referred to in subsection (8) or (9), the Regulator shall afford the person who submitted the information or data an opportunity to substantiate the period of confidentiality or to justify continued confidentiality.

(10) Where any record, report or information submitted to or acquired by the Regulator is not available to the public by reason of this section, the Regulator may, with the consent in writing of the person by whom it was submitted or from whom it was acquired, make the record, report or information available to the public.

(10.1) Notwithstanding these Rules, the Regulator may make any data, record, report or information available to a peace officer for the purpose of enforcing the *Criminal Code* (Canada) or the laws of Alberta.

(11) Nothing in this section requires the Regulator

- (a) to obtain for the purpose of making them available any data it otherwise does not have, or

- (b) to publish any data or make them available otherwise than upon request, or
- (c) to make any data available otherwise than upon view at the facilities provided for the purpose by the Regulator in the ordinary routine observed in the Regulator offices and upon payment of its usual fees for such services.

(12) Notwithstanding anything in this section, the Regulator may make any data, record, report or information submitted to the Regulator under Part 11 or 12 available to the Minister of Energy for the sole purpose of calculating or otherwise determining royalties on oil, gas or other substances receivable by or payable to the Crown in right of Alberta.

AR 151/71 s12.150;241/71;51/81;433/82;302/86;350/87;70/88;
332/92;226/93;36/2002;180/2008;156/2010;209/2011;
220/2012;89/2013

12.151(1) In this section, “Large Facility Liability Management Program” means the program established by the Regulator under Directive 024: Large Facility Liability Management Program.

(2) The Regulator must keep confidential the information submitted to or acquired by the Regulator for the purpose of conducting a liability management rating assessment under the Large Facility Liability Management Program.

(3) With respect to information referred to in subsection (2), after 5 years following the end of the year in which the information was submitted or acquired, the *Freedom of Information and Protection of Privacy Act* applies to the information.

AR 184/2005 s2;208/2011;89/2013

General

12.160(1) No person shall alter, remove, deface or destroy any entry or marking of any kind made by the Regulator or a representative of the Regulator in or upon any record or recording of measurements required to be kept by the Act or the rules.

(2) No person shall enter in any record or report required to be kept or made, as an amount determined by measurement or as an amount the measurement of which is required by the Act or the rules, an amount not so determined.

(3) No person shall wilfully alter, remove, deface or destroy any record or recording of measurements required to be kept until the expiration of the period during which such report or recording is required to be kept by the Act or the rules.

(4) No person shall knowingly make a false statement in any record or return.

AR 151/71 s12.160;89/2013

12.170 Unless otherwise specified in the Act, these Rules or another rule under the Act, each record required to be kept by these Rules or by the Act must be retained at the place and by the person specified in these Rules or in Directive 007 for a period of one year from the time the record is created.

AR 151/71 s12.170;350/87;32/2003;
269/2006;208/2011;89/2013

12.180 Where the Regulator grants an approval of an experimental scheme, it may relieve the operator of the scheme from any of the requirements of this Part.

AR 151/71 s12.180;89/2013

Part 13

Well and Battery Names

Well Names

13.010(1) A well shall be identified by the unique identifier assigned to the well or by the well licence number.

(2) The Regulator shall maintain at its office a copy of each well licence issued by it and a record in which it shall enter

- (a) the unique identifier assigned to the well,
- (b) the surface location of the well,
- (c) the name of the licensee and, when required, its agent, and
- (d) the well name.

(3) Repealed AR 32/2003 s4.

(4) The Regulator in its discretion may, at any time, initiate and complete a change to a well name to meet the requirements of section 13.020.

AR 151/71 s13.010;9/93;179/98;32/2003;89/2013

13.020(1) The length of a well name shall not exceed 36 characters and spaces.

(2) A well name shall be created at the time the well is licensed and shall include

- (a) the licensee name by an abbreviation which is satisfactory to the Regulator,
 - (b) any optional particulars that the applicant proposing the well name desires and the Regulator approves, or as may be required to distinguish it from an existing well name,
 - (c) one of the following:
 - (i) if a well is located in or adjacent to a field, the designated field name or the approved abbreviation;
 - (ii) if the well is not located in or adjacent to a designated field, the name of the strike area or the approved abbreviation;
 - (iii) if a crude bitumen well is located in a sector, the sector name or the approved abbreviation;
- and
- (d) the legal subdivision, section, township and range in which the bottom hole of the well is located, in that order, indicated by numbers separated by hyphens.

AR 151/71 s13.020;229/79;9/93;89/2013

13.030 Repealed AR 32/2003 s4.

Part 14 Measurement

Application

14.010 The units and the methods of measurement and standard conditions prescribed by this Part shall be used whenever the measurement of oil, gas, oil sands, crude bitumen, or products derived therefrom or water is required by the provisions of

- (a) any statute of the Province, or
- (b) any regulation or rule established pursuant to a statute of the Province, or
- (c) any order, direction, term or condition made or imposed by the Minister of Energy or the Regulator,

whether the provisions deal with conservation, preservation, utilization, taxation, royalties or any other matter.

AR 151/71 s14.010;460/82;25/98;89/2013

14.011 In addition to any other provision of this Part, the measurement, accounting and reporting of fluid production, injection, receipts and disposition associated with oil and gas operations must be done in accordance with Directive 017: Measurement Requirements for Oil and Gas Operations.

AR 65/2011 s2;208/2011

14.012 Where Directive 076 applies to a well or facility, the operator of the well or facility shall comply with the requirements of Directive 076 in addition to the requirements of this Part.

AR 44/2013 s4

Units of Measurement

14.020(1) A record or report of any measurement of gas required by the Act or these Rules shall be made in units of 1000 cubic metres to one decimal place.

(2) A record or report of any measurement of liquid required by the Act or these Rules shall be made in units of cubic metres to one decimal place.

AR 151/71 s14.020;69/72;229/79;36/2002;89/2013

Metering and Measurement of Gas

14.030 and **14.040** Repealed AR 65/2011 s3.

14.050 Upon the discovery of any gas metering error, the licensee shall have the meter corrected immediately and shall report corrected production for the period during which the meter measured incorrectly.

AR 151/71 s14.050

14.060(1) The licensee of a well or battery at which gas is produced shall

- (a), (b) repealed AR 65/2011 s3,
- (c) where there is a by-pass around a meter, fit it with valves that, when closed, effectively stop all flow of gas through the by-pass, and
- (d) when a by-pass around a meter is opened or when, for any other reason, gas does not reach the meter, make a suitable entry in the daily record of the well and on the meter chart where one is taken.

(2), (3) Repealed AR 65/2011 s3.

AR 151/71 s14.060;65/2011

14.070 Repealed AR 65/2011 s3.

14.080 Repealed AR 65/2011 s3.

14.090 Repealed AR 65/2011 s3.

14.100 Repealed AR 65/2011 s3.

14.110 Repealed AR 65/2011 s3.

14.120 Repealed AR 65/2011 s3.

Measurement of Oil Sands

14.130 The operator of an oil sands mining scheme shall measure in a manner satisfactory to the Regulator all mined oil sands, all rejected oil sands and all significant process streams which have a bearing on the calculation of material balances of hydrocarbons or sulphur.

AR 151/71 s14.130;89/2013

14.140 Repealed AR 65/2011 s3.

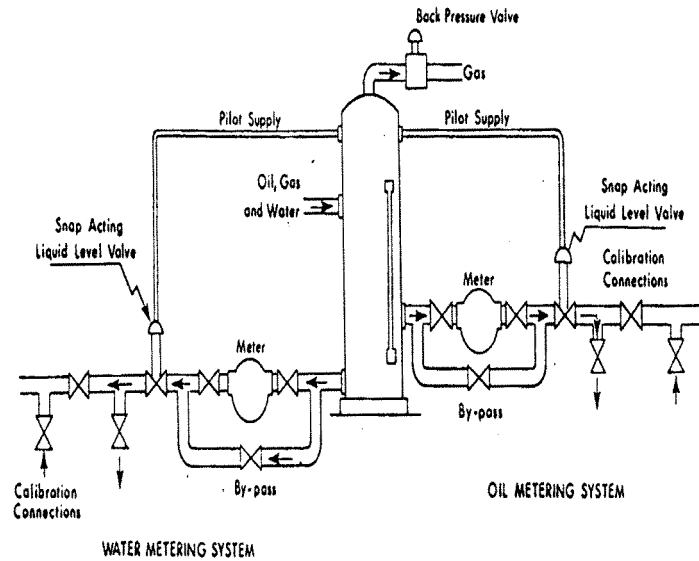
14.150 Repealed AR 65/2011 s3.

14.160 Repealed AR 65/2011 s3.

Water Measurement at a Gas Well or Battery

14.170 Repealed AR 65/2011 s3.

Liquid Meter Installations



14.180 Repealed AR 65/2011 s3.

14.190 Repealed AR 65/2011 s3.

Injection Wells

14.200 Where gas, air, water or other substance is injected through a well to an underground formation, it shall be continuously measured by a method satisfactory to the Regulator.

AR 151/71 s14.200;89/2013

Part 15 Certain Applications

Rateable Take

15.005 Unless otherwise directed by the Regulator, an applicant must file an application in accordance with Directive 065 and must include any other information that the Regulator requires when filing the following:

- (a) an application under section 36 of the Act for an order
 - (i) limiting the total amount of gas that may be provided from a pool, or

- (ii) distributing the amount of gas that may be produced from a pool in an equitable manner among the wells in a pool;
- (b) an application under section 39(1)(a) of the Act for approval of a scheme for enhanced recovery in a field or a pool;
- (c) an application under section 39(1)(b) of the Act for approval of a scheme for the underground storage of gas;
- (d) an application under section 39(1)(c) of the Act for approval of a scheme for gathering, storing and disposing of water produced in conjunction with oil or gas;
- (e) an application under section 39(1)(d) of the Act for approval of a scheme for the storage or disposal of any fluid or other substance to an underground formation through a well;
- (f) an application for an amendment to a scheme approved under section 39 of the Act with respect to the name of the holder of the approval;
- (g) an application under section 39(1)(f) of the Act for approval of a scheme for the concurrent production of an oil accumulation and its associated gas cap in a pool or a distinct separable part of a pool;
- (h) an application under section 48(4) of the Act for a declaration that the proprietor of a pipeline is a common carrier, and the terms and conditions of such a declaration;
- (i) an application under section 50 or 51 of the Act for a declaration that a person is a common purchaser of oil or gas, and the terms and conditions of such a declaration;
- (j) an application under section 53(5) of the Act for a declaration that an owner or operator of a gas processing plant is a common processor, and the terms and conditions of such a declaration;
- (k) an application under section 10.060 for relief from a gas-oil ratio penalty in a pool or in a distinct separable portion of a pool;
- (l) an application for a change in the ultimate reserves assigned to a pool;
- (m) an application under section 33 of the Act to vary the assigned pool delineation;

- (n) an application under section 10.060 for approval of the production of one or more oil wells in accordance with good production practice;
- (o) an application under section 56 of the Act for a declaration or order under Part 9 of the Act to be retroactive to a date previous to the date the declaration or order is to be made.

AR 416/83 s5;32/2003;269/2006;203/2011;89/2013

15.010 to 15.040 Repealed AR 203/2011 s15.

Gas Processing and Underground Storage

15.050 An application under section 9.020 for approval of a new scheme or an amendment to an existing scheme for the processing of gas shall include

- (a) a completed form prescribed for that purpose and obtained from the Regulator entitled "Schedule 2 Production Facility Application" and the appropriate documentation to support the information provided on that form, as detailed in Directive 056, and
- (b) any other information that the Regulator may require.

AR 151/71 s15.050;69/72;71/74;179/76;229/79;
326/79;14/98;269/2006;208/2011;89/2013

15.060 to 15.090 Repealed AR 203/2011 s16.

15.100 Repealed AR 226/93 s32.

15.110 Repealed AR 226/93 s32.

15.120 Repealed AR 226/93 s32.

Production Tests and Measurement

15.130 Repealed AR 36/2002 s76.

15.140(1) An application under section 14.040 for relief from the requirement of the measurement of gas produced from an oil producing pool shall include

- (a) a map showing the structure of the pool and indicating the positions of the gas caps,
- (b) a tabulation showing

- (i) virgin, bubble point, estimated abandonment and current reservoir pressures,
- (ii) the pool solution gas-oil ratio, and
- (iii) current drive indices,
- (c) graphs showing the pool's production history including gas-oil ratio, and
- (d) discussion of the suitability of the gas-oil ratio proposed for the period of the exemption.

(2) An application under section 14.040 for relief from the requirement of the measurement of the gas produced at each gas well shall include

- (a) a map showing
 - (i) the lessors and lessees in the area of application, and
 - (ii) the wells, gathering lines and group metering points,
- (b) graphs showing
 - (i) the pressure history of the pool, and
 - (ii) flow rates, gas-water ratios and well head pressures for each of the wells during the previous 12-month period,

and

- (c) discussion of how gas production will be attributed to wells.

(3) An application under section 14.040 for relief from the requirement to measure gas produced from a crude oil or crude bitumen well where the daily gas production is less than the volume prescribed by the Regulator for the purposes of this subsection, or a higher or lower volume as the Regulator may stipulate, shall include

- (a) the data obtained from a representative production test of the well showing, if applicable,
 - (i) the type of gas measurement device,
 - (ii) the original gas charts or displacement meter readings,
 - (iii) the measured gas volume computations,

- (iv) the volume of gas used as fuel upstream of the meter and the method of calculation,
 - (v) the method of calculating gas still in solution with the oil at separator conditions,
 - (vi) the oil density, and
 - (vii) the oil and water volumes produced during the test,
- (b) where the volume of gas produced at a well during the test cannot be measured using conventional measurement equipment, the gas production as determined from
- (i) reservoir solution gas data determined by a PVT analysis of a reservoir sample obtained from the well or from another well in the same designated pool, or
 - (ii) any other method deemed appropriate by the licensee for the well and the reasons for utilization of this method,
- (c) a graph showing the production history of the well including gas-oil ratio, or
- (d) a discussion of the suitability of the gas-oil ratio proposed for the period of exemption.

AR 151/71 s15.140;70/88;36/2002;89/2013

15.150 An application under section 14.140 for relief from the requirement of the measurement of water produced from or injected into a well shall include

- (a) graphs showing the production history of the pool illustrating that it is in the final stage of depletion,
 - (b) statement that
 - (i) the producing batteries are tied into a closed injection system so that the hazard of contamination of top soil and ground water is minimized, and
 - (ii) no penalties are imposed for water production,
- and
- (c) discussion showing that the knowledge of the pool is sufficient so that accurate water measurements are no longer required for reserve estimates or enhanced recovery evaluations.

AR 151/71 s15.150

15.160 Repealed AR 203/2011 s17.

15.170 Repealed AR 226/93 s33.

15.180 to 15.200 Repealed AR 203/2011 s17.

Facility Construction

15.210 An application under section 7.002 for approval of a new battery or compressor station, or modification to an existing battery or compressor station, shall include

- (a) a completed form prescribed for that purpose and obtained from the Regulator entitled "Schedule 2 Production Facility Application" and the appropriate documentation to support the information provided on that form, as detailed in Directive 056, and
- (b) any other information that the Regulator may require.

AR 151/71 s15.210;51/74;80/74;144/74;229/79;
326/79;51/81;70/88;14/98;269/2006;208/2011;89/2013

15.211 Repealed AR 14/98 s8.

Oilfield Waste Management Facility

15.212 An application under section 7.002 for approval of a new oilfield waste management facility or for approval of a modification to an existing oilfield waste management facility shall include

- (a) information to appropriately address the application requirements outlined in Directive 058, and
- (b) any other information the Regulator may require.

AR 399/83 s9;36/2002;269/2006;208/2011;89/2013

15.220 Repealed AR 203/2011 s18.

15.230 Repealed AR 264/84 s12.

15.240 Repealed AR 36/2002 s80.

Part 16 Repealed AR 114/2008 s12.

Part 16.5 Orphan Fund

16.510 In this Part,

- (a) “facility” means facility as defined in Part 11 of the Act;
- (b) “unreclaimed site” mean an uncertified site within the meaning of Directive 006.

AR 237/94 s6;144/96;194/2002;7/2010;208/2011

16.520 All facilities, wells and unreclaimed sites constitute one class for the purpose of determining the orphan fund levy under this Part.

AR 237/94 s6;144/96;194/2002

16.530(1) For the 2017-2018 fiscal year of the Regulator, the orphan fund levy payable by a licensee or approval holder is calculated in accordance with the following formula:

$$\text{Levy} = \frac{A}{B} \times \$15\,000\,000$$

where

- A is the licensee’s or approval holder’s deemed liability on February 4, 2017 for all of its facilities, wells and unreclaimed sites included within the LLR and OWL programs, as calculated in accordance with Directive 006, Directive 011 and Directive 075, and
- B is the sum of the industry’s liability on August 5, 2017 for all facilities, wells and unreclaimed sites included within the LLR and OWL programs, as calculated in accordance with Directive 006, Directive 011 and Directive 075.

(2) A licensee or approval holder shall pay the amount of the orphan fund levy not later than the 30th day following the mailing date shown on the notice under section 75 of the Act.

(3) The penalty referred to in section 74(2) of the Act is payable on the day following the 30-day period referred to in subsection (2).

AR 237/94 s6;144/96;194/2002;222/2003;390/2003;17/2005;
40/2006;12/2007;26/2008;9/2009;7/2010;2/2011;208/2011;
18/2012;1/2013;89/2013;1/2014;33/2015;114/2015;1/2016;128/2016;
10/2017;158/2017

16.540(1) A person to whom a notice under section 75 of the Act is given may appeal to the Regulator by serving a notice of appeal on the Regulator not later than 30 days after the mailing date shown on the notice under section 75 of the Act.

(2) In addition to the grounds for appeal set out in section 76(1)(a) and (b) of the Act, a notice under section 75 of the Act may be appealed on any ground the Regulator considers proper.

(3) Within 30 days after the last day for receipt of a notice of appeal, the Regulator shall send the appellant a notice indicating how, when and where the appeal will be considered.

(4) The date for consideration of the appeal must be no sooner than 10 days after the mailing date shown on the notice referred to in subsection (3).

AR 237/94 s6;144/96;222/97;128/98;131/99;194/2002;89/2013

Payment from Orphan Fund

16.541(1) An application under section 70(1) of the Act for payment from the orphan fund of a defaulting working interest participant's share of suspension costs, abandonment costs and related reclamation costs incurred by the working interest participant who carried out the work must be made in accordance with this section.

(2) The application referred to in subsection (1) must include

- (a) the applicant's full legal name, address, telephone number, fax number and a contact person,
- (b) the legal description and licence number of the well or facility that has been suspended or abandoned or of the site that has been reclaimed,
- (c) a complete list, totalling 100 per cent of the working interest, of the working interest participants in the well or facility at the time the costs were incurred,
- (d) the full legal name, last known address, telephone number, fax number and a contact person for each working interest participant and the proportionate share of the costs for each participant for which the determination referred to in subsection (1) is being sought,
- (e) a detailed description of the total costs incurred in the work of suspension, abandonment or reclamation, supported by receipts for work performed, less salvage revenue, if any,
- (f) in the case of a determination of costs for
 - (i) suspension or abandonment, a statement that the suspension or abandonment of the well or facility has been completed, was carried out in accordance with

the Regulator's rules and other requirements, and that the Regulator's records have been updated to reflect the work performed, or

- (ii) reclamation, a statement that a reclamation certificate has been issued for the well or facility site,
- (g) a request that the Regulator deem a working interest participant to be a defaulting working interest participant in accordance with section 70(2)(b)(iii) of the Act, and
- (h) a summary of the steps taken to collect the costs from the defaulting working interest participant.

AR 185/2005 s7;89/2013

16.550 Repealed AR 194/2002 s2.

16.610 Repealed AR 194/2002 s2.

16.620 Repealed AR 194/2002 s2.

16.630 Repealed AR 194/2002 s2.

Part 16.6 Security

Definition

16.635 In this Part, "oilfield waste management facility" means an oilfield waste management facility that is excluded from the operation of Directive 075.

AR 234/2009 s2;208/2011

Security required

16.640(1) Where an approval is required in respect of an oilfield waste management facility, the applicant for the approval shall provide security in accordance with this Part before construction or operation of the facility commences.

(2) Where, before the coming into force of this subsection, an approval is granted in respect of an oilfield waste management facility, the approval holder shall provide security in accordance with this Part.

AR 182/2001 s2;202/2004

Exemption from security

16.641 Section 16.640 does not apply where the oilfield waste management facility, other than an oilfield landfill, is or will be

integrated as a waste management component into an approved or licensed production system that only manages waste originating from within the same interconnected system of upstream production facilities.

AR 182/2001 s2

Failure to provide security or liability assessment

16.642 If an approval holder fails to provide security as required under section 16.640 or to submit a liability assessment as required under section 16.649, the Regulator may direct that operations at the oilfield waste management facility be suspended until the security has been provided or the liability assessment has been submitted.

AR 182/2001 s2;202/2004;89/2013

Amount of security

16.643(1) Subject to subsection (2), the amount of security that is to be provided under section 16.640(1) and (2) is the total amount of the costs set out in the liability assessment prepared and submitted under section 16.649.

(2) The Regulator shall review the liability assessment and determine whether the amount of security provided for the oilfield waste management facility is sufficient for the estimated costs associated with the suspension, abandonment, site decontamination and surface land reclamation of the facility.

(3) If the Regulator determines that the amount of security required is different from the amount provided under subsection (1), it shall send a notice to the approval holder that states the amount of any additional security required and the time within which it must be provided.

(4) An approval holder of an oilfield waste management facility must provide to the Regulator the amount of any additional security set out in the notice within 30 days from the day the notice was sent to the approval holder.

(5) The amount of security or additional security shall be rounded to the nearest \$100.

(6) If an approval holder fails to provide additional security when given notice to do so, the Regulator may direct that operations at the oilfield waste management facility be suspended until the additional security has been provided.

(7) Any amount of security that has been provided by an approval holder under this Part prior to September 15, 2004 shall be retained

by the Regulator and applied to offset the security required under this section and section 16.649.

AR 182/2001 s2;202/2004;89/2013

Use of security

16.644 The Regulator may use any security provided under this Part for the suspension, abandonment, site decontamination or surface land reclamation, or any combination of them, of an oilfield waste management facility.

AR 182/2001 s2;202/2004;89/2013

Adjustment of security

16.645(1) The Regulator may increase or decrease the amount of security required to be provided where

- (a) the cost of suspending, abandoning, decontaminating the site or reclaiming the surface land at an oilfield waste management facility has changed, or
- (b) any other circumstances exist that may increase or decrease the estimated cost of suspending, abandoning, decontaminating the site or reclaiming the surface land at an oilfield waste management facility.

(2) The Regulator shall notify an approval holder of a proposed adjustment to the amount of security.

AR 182/2001 s2;202/2004;89/2013

Form of security

16.646(1) Security must be in one or more of the following forms as required by the Regulator:

- (a) cash;
- (b) irrevocable letter of credit in a form acceptable to the Regulator;
- (c) any other form of security that is acceptable to the Regulator.

(2) Once an irrevocable letter of credit has been accepted by the Regulator, no amendments to it are permitted.

AR 182/2001 s2;202/2004;89/2013

Return of security

16.647 The Regulator shall return all or part of the security provided by an approval holder where

- (a) the security has been replaced with other security acceptable to the Regulator,
- (b) the oilfield waste management facility has been suspended and abandoned, the site has been decontaminated and the surface land reclaimed such that the site has been rendered suitable for the next intended land use, or
- (c) the approval for the oilfield waste management facility has been transferred to a new approval holder who has provided security to the Regulator for the facility in accordance with this Part.

AR 182/2001 s2;202/2004;89/2013

Forfeiture of security

16.648(1) The Regulator may direct that all or part of the security provided by the approval holder be forfeited to the Regulator if

- (a) the approval holder fails to suspend and abandon the oilfield waste management facility, decontaminate the site and reclaim the surface land in accordance with applicable legislation and any requirements or directions of the Regulator,
- (b) a receiver, receiver-manager or trustee has been appointed in respect of the operations of the approval holder,
- (c) the approval holder is subject to any proceedings under the *Companies' Creditors Arrangement Act* (Canada),
- (d) the security is in the form of an irrevocable letter of credit and the Regulator receives notice from the issuing bank that it will not renew the letter of credit,
- (e) the approval holder fails to adjust the amount of security as required by the Regulator, or
- (f) the approval holder fails to commence or complete site decontamination or surface land reclamation in a timely fashion.

(2) If security is forfeited under subsection (1), the Regulator shall use as much of the security as the Regulator considers necessary to carry out the suspension and abandonment of the oilfield waste management facility, site decontamination and surface land reclamation such that the site is rendered suitable for the next intended land use.

- (3) If the Regulator directs security to be forfeited under subsection (1), the Regulator shall give written notice of its decision to the approval holder.
- (4) If the amount of forfeited security exceeds the amount required to ensure that the oilfield waste management facility has been suspended and abandoned, the site has been decontaminated and the surface land has been reclaimed such that the site has been rendered suitable for the next intended land use, the Regulator shall pay the excess amount to the person or persons entitled to that amount.
- (5) If the amount of forfeited security is not sufficient to pay for the costs to ensure that the oilfield waste management facility has been suspended and abandoned, the site has been decontaminated and the surface land has been reclaimed such that the site has been rendered suitable for the next intended land use, the approval holder and any other working interest participants remain liable for the balance of the costs.

AR 182/2001 s2;202/2004;89/2013

Liability assessment

16.649(1) and (2) Repealed AR 208/2011 s37.

- (3) An applicant for an approval for a new oilfield waste management facility shall estimate the costs associated with suspension and abandonment of the facility from accurate blueprints or other construction documents for the proposed facility and submit the estimates to the Regulator, and if deviations from the blueprints or construction documents during construction result in changes in the facility that materially affect the estimates, the estimates must be updated accordingly and resubmitted to the Regulator.
- (4) On and after September 1, 2006, an applicant for an approval for a new oilfield waste management facility shall include the costs associated with site decontamination and surface land reclamation of the facility in the estimates referred to in subsection (3).
- (5) The estimates referred to in subsections (1), (2), (3) and (4) must reflect the amount reasonably required to pay a third party contractor to carry out the activity.
- (6) An approval holder of an oilfield waste management facility or an applicant for an approval for an oilfield waste management facility shall not reduce estimated costs for suspension, abandonment, site decontamination or surface land reclamation by claiming credit for saleable assets, by undertaking to have the approval holder perform the activity or by applying the net present value for costs to be borne in the future.

- (7) An approval holder of a small oilfield waste management facility may apply to the Regulator for an exemption from subsections (1) and (2) on the basis that the facility
- (a) is of minimal capacity,
 - (b) consists solely of storage facilities or transfer stations, and
 - (c) presents limited environmental risk.

AR 202/2004 s11;208/2011;89/2013

Re-evaluation of liability assessment

16.650(1) An approval holder of an oilfield waste management facility must re-evaluate the liability assessment for the facility at least every 5 years to adjust for changes in the estimated costs associated with suspension, abandonment, site decontamination and surface land reclamation of the facility and for inflation.

(2) Despite subsection (1), an approval holder of an oilfield waste management facility must re-evaluate its liability assessment at any time when

- (a) changes in site conditions, in combination with inflation, result in an increase in the estimated costs associated with suspension, abandonment, site decontamination or surface land reclamation that exceeds 10% of the amount of security provided, or
- (b) an application is made to amend or transfer the oilfield waste management facility approval.

(3) Inflation must be calculated using the Mining, Quarrying, and Oil Wells Domestic Index V91345 published by Statistics Canada.

(4) An approval holder of an oilfield waste management facility shall not commence modifications to the facility until the liability assessment has been re-evaluated and any additional security required has been provided.

AR 202/2004 s11

Part 17 Schedule of Fees

Fees

17.010(1) The following fees are prescribed:

- (a) to (d) repealed AR 179/98 s9;

- (d.1) application for a non-routine Regulator-directed transfer of licence \$10 000;
- (e) to (k) repealed AR 179/98 s9;
- (l) for submission of each of the following data discrepancies that is not corrected prior to the Regulator filing deadline:
- (i) facility imbalance error;
 - (ii) facility metering difference error;
 - (iii) well missing from a submission \$100;
- (m) for filing each of the following after the filing deadline date:
- (i) current month submissions;
 - (ii) amendment required because of the change to the disposition;
 - (iii) amendment required because of the change in a well or facility infrastructure data \$500;
- (n) for follow-up when data or information .has not been supplied as specified under section 11.070, 11.102, 11.110, 11.120, 11.145 \$1000;
- (o), (p) repealed AR 208/2011 s38.

(1.1) An applicant for a licence who has not held a licence issued under these Rules must pay a fee of \$10 000.

(2) Repealed AR 179/98 s9.

(3) The Regulator may vary or waive any fee prescribed in this section if, in the opinion of the Regulator, circumstances so warrant.

AR151/71s17.010;103/73;80/74;428/78;51/81;485/87;360/88;19/90;
169/90;371/92;9/93;225/93;117/94;144/96;10/98;179/98;82/2000;
32/2003;269/2006;208/2011;89/2011

17.020 The fees payable to the Regulator for any map, report, document or other record of the Regulator or for any other service provided by the Regulator shall be as prescribed by the Regulator.

AR 151/71 s17.020;19/90;89/2013

17.030 The Regulator may modify or waive any fee referred to in this Part where it is payable by a university, a technical institute, the Research Council of Alberta, the Petroleum Recovery Institute, the Institute of Sedimentary and Petroleum Geology, a government department or similar institution.

AR 151/71 s17.030;229/79;89/2013

Part 17.5 Enforcement of Lien

17.510 In this Part, “debtor” and “payor” have the same meaning as in section 103 of the Act.

AR 226/2002 s2

17.520 A notice of garnishment served on a debtor and a payor pursuant to section 103(4) of the Act must be in the form set out in Schedule 17.

AR 226/2002 s2

17.530 A notice of garnishment may be served on the payor as follows:

- (a) if the payor is an individual, by leaving the document with the individual or by sending the document by registered mail addressed
 - (i) to the individual at the individual’s residence, or
 - (ii) to the name and address of any business of the individual;
 - (b) if the payor is a partnership, on all members of the partnership
 - (i) by leaving the document with one or more of the general partners or a person having control or management of the partnership business, or
 - (ii) by sending the document by registered mail addressed to
 - (A) the partnership,
 - (B) any one or more of the general partners, or
 - (C) any person having control or management of the partnership business,
- at the address of the partnership business;

- (c) if the payor is a corporation, other than a municipality,
 - (i) by leaving the document with an officer or director of the corporation or person in charge of any office or place of business of the corporation,
 - (ii) by leaving the document at, or by sending the document by registered mail addressed to, the registered or head office of the corporation, or
 - (iii) where the corporation has its registered or head office outside of Alberta, by leaving the document with, or by sending the document by registered mail addressed to, its attorney for service appointed under Part 21 of the *Business Corporations Act*;
- (d) on a municipal corporation, by leaving the document with, or by sending the document by registered mail addressed to, the principal office of the corporation or the chief administrative officer of the corporation;
- (e) on an association,
 - (i) by leaving the document with an officer of the association, or
 - (ii) by sending the document by registered mail addressed to an officer of the association at the address of the officer.

AR 226/2002 s2

17.540 A notice of garnishment is deemed to have been served on and received by the debtor when

- (a) it is delivered by registered mail or by courier service to the last address of the debtor known to the Regulator,
- (b) it is sent by facsimile to the last facsimile number of the debtor known to the Regulator, or
- (c) it is served in accordance with section 95 of the Act, if the debtor is a licensee or approval holder.

AR 226/2002 s2;89/2013

17.550 If the payor is required by section 103 of the Act to forward money and revenue to the Regulator, the Payor shall forward it to the Regulator together with

- (a) the notice number and date of the notice of garnishment,

- (b) the name of the debtor, and
- (c) an expected payment schedule setting out the following information, if known by the payor:
 - (i) the date or dates on which the payor expects to have money or revenue owing to the debtor;
 - (ii) the amount that is expected to be payable on each date referred to in subclause (i);
 - (iii) the date or dates on which the payor will forward the money or revenue referred to in subclause (i) to the Regulator.

AR 226/2002 s2;89/2013

Part 18

Repeal, Expiry and Coming into Force

18.010 The *Oil and Gas Conservation Regulations*, being Alberta Regulation 183/69, are rescinded.

AR 151/71 s18.010

18.015 For the purpose of ensuring that these Rules is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, these Rules expires on February 28, 2018.

AR 26/2008 s4;89/2013

18.020 These Rules come into force on the first day of June, 1971.

AR 151/71 s18.02;89/2013

Schedule 1 Repealed AR 144/96 s13.

Schedule 2 Repealed AR 350/87 s13.

Schedule 3 Repealed AR 229/98 s4.

Schedule 4 Repealed AR 226/93 s35.

Schedule 5

Tabulation of Basic Well Rates

Effective 1 February 1984

Pool Average Well Depth - M	Basic Well Rate - m ³ Per Day
0 - 2000	8.0
2001 - 2100	8.5
2101 - 2170	9.0
2171 - 2230	9.5
2231 - 2290	10.0
2291 - 2340	10.5
2341 - 2390	11.0
2391 - 2440	11.5
2441 - 2490	12.0
2491 - 2530	12.5
2531 - 2570	13.0
2571 - 2610	13.5
2611 - 2650	14.0
2651 - 2690	14.5
2691 - 2730	15.0
2731 - 2760	15.5
2761 - 2790	16.0
2791 - 2820	16.5
2821 - 2850	17.0
2851 - 2880	17.5
2881 - 2910	18.0
2911 - 2940	18.5
2941 - 2970	19.0
2971 - 3000	19.5
3001 and deeper	20.0

AR 151/71 Sched. 5;140/72;229/79;264/84

Schedule 6

Gas-Oil Ratio (GOR) Penalty Factor Formula

$$\text{GOR Penalty Factor} = \frac{\text{Base GOR}}{\text{Produced GOR}}$$

Penalty Factor rounded to nearest 0.01.

Where:

1. The Base GOR for the pool in which the well, block or project is located is calculated according to the following equation, unless the Regulator otherwise directs:

$$\text{Base GOR} = R_{si} + 1.67 \frac{P_b \text{ (kPa)}}{T \text{ (K)}}$$

Rounded to nearest $10 \text{ m}^3/\text{m}^3$

R_{si} is the initial solution GOR rounded to the nearest m^3/m^3

P_b is bubble point pressure rounded to the nearest 10 kPa

T is the reservoir temperature rounded to the nearest 0.5 Kelvin

- the minimum base GOR shall be $70 \text{ m}^3/\text{m}^3$.

2. Produced GOR is calculated for the well, block or project to the nearest $0.1 \text{ m}^3/\text{m}^3$.

AR151/71 Sched.6 Pt.A,B;226/93;45/2014

Schedule 7 Repealed AR 264/84 s13.

Schedule 8 Repealed AR 208/2011 s39.

Schedule 9

Standards of Accuracy for Gas and Liquid Measurement

A Oil Systems	Maximum Uncertainty of Monthly Volume
(i) Total battery oil (delivery point measurement)	
Delivery point measures more than 100 cubic metres per day	0.5%
Delivery point measures less than or equal to 100 cubic metres per day	1%
(ii) Total battery gas, fuel gas or flare gas	
More than 16.9 thousand cubic metres per day	5%
More than 500 cubic metres per day but less than or equal to 16.9 thousand cubic metres per day	10%
Less than or equal to 500 cubic metres per day	20%
(iii) Total battery water	

More than 50 cubic metres per month	5%
Less than or equal to 50 cubic metres per month	20%
(iv) Well oil (proration battery)	
Class 1 (High), more than 30 cubic metres per day	5%
Class 2 (Medium), more than 6 cubic metres per day but less than or equal to 30 cubic metres per day	10%
Class 3 (Low), more than 2 cubic metres per day but less than or equal to 6 cubic metres per day	20%
Class 4 (Stripper), less than or equal to 2 cubic metres per day	40%
(v) Well gas (measurement uncertainty only)	
More than 16.9 thousand cubic metres per day	5%
More than 500 cubic metres per day but less than or equal to 16.9 thousand cubic metres per day	10%
Less than or equal to 500 cubic metres per day	20%
(vi) Well water (measurement uncertainty only)	10%

B Gas Systems

(i) Gas deliveries	3%
(ii) Plant inlet gas or group gas	5%
(iii) Fuel gas	
More than 500 cubic metres per day	5%
Less than or equal to 500 cubic metres per day	20%
(iv) Flare gas	20%
(v) Acid gas	10%
(vi) Dilution gas	5%
(vii) Well gas	
More than 16.9 thousand cubic metres per day	5%
Less than or equal to 16.9 thousand cubic metres per day	10%
Proration battery	15%
(viii) Total water	5%
(ix) Well water	10%

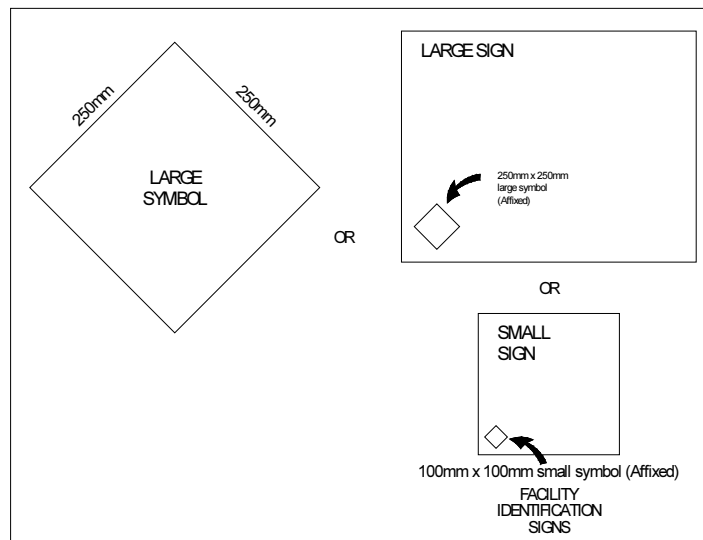
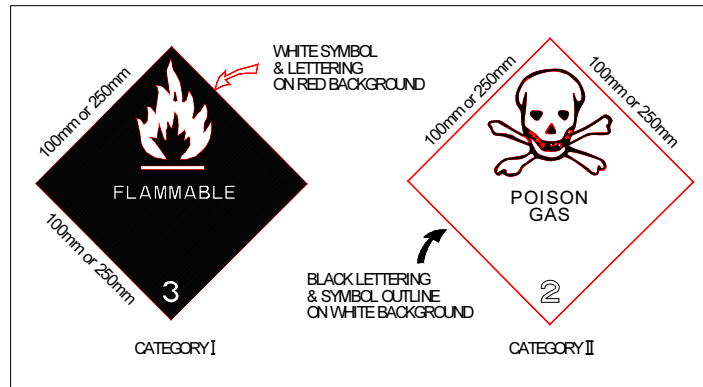
C Injection Systems

- (i) Total gas 5%
- (ii) Well gas 10%
- (iii) Total water 3%
- (iv) Well water 10%

AR 229/79 s59;36/2002

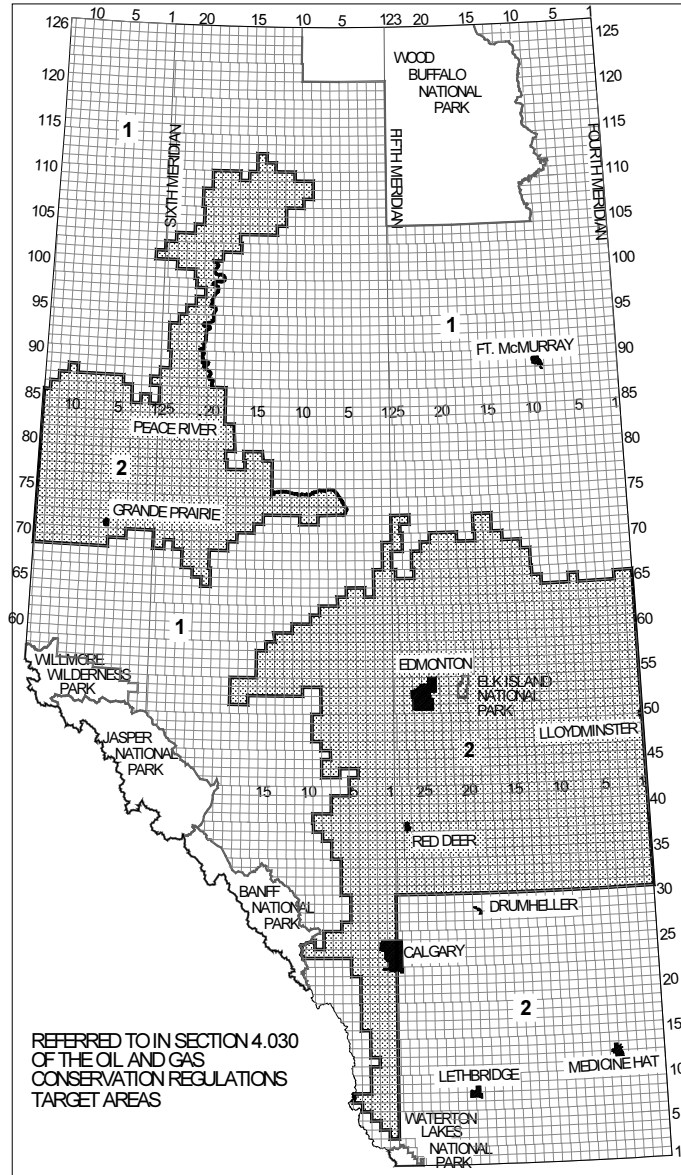
Schedules 10 and 11 Repealed AR 208/2011 s39.

Schedule 12



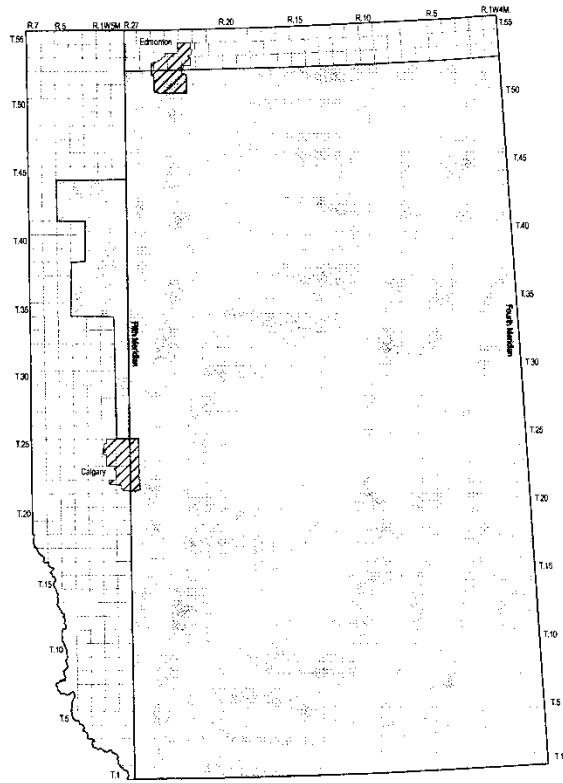
AR 321/90 s7;67/98

Schedule 13



AR 374/91 s5

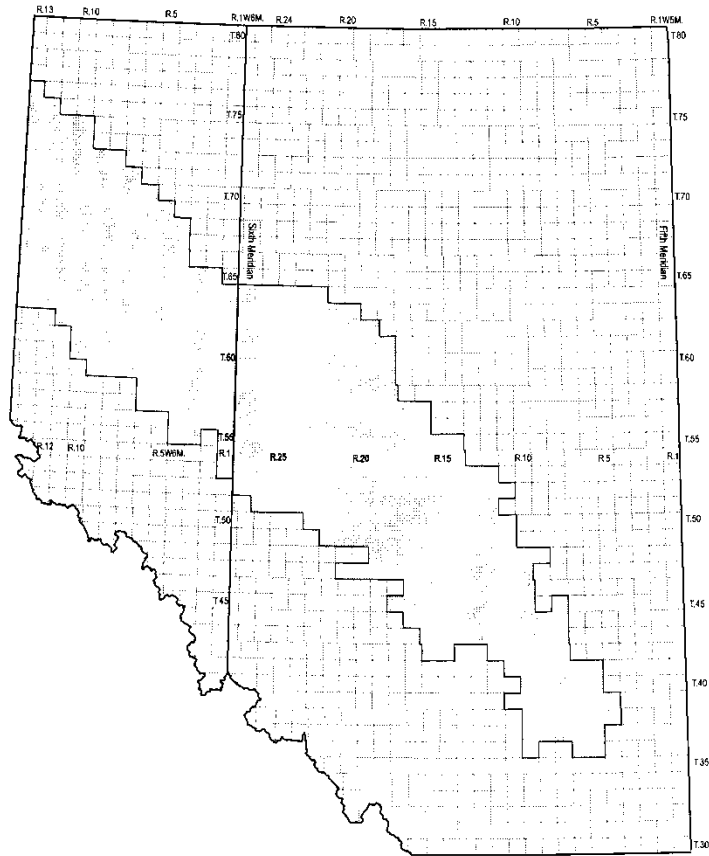
Schedule 13A
Referred to in section 4.021



AR 153/2006 s5;39/2010

13B

Referred to in Section 4.021

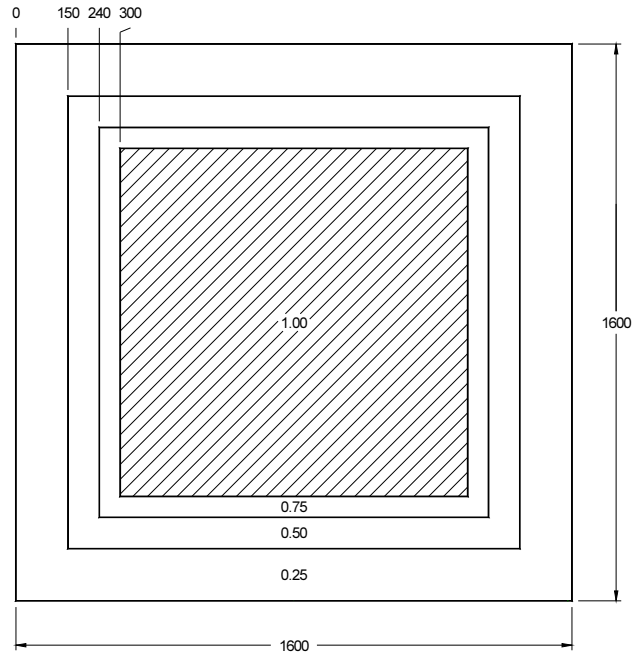


AR 39/2010 s5

Schedule 14

**Figure 1
Off-target Penalty Factors**

One Section Spacing



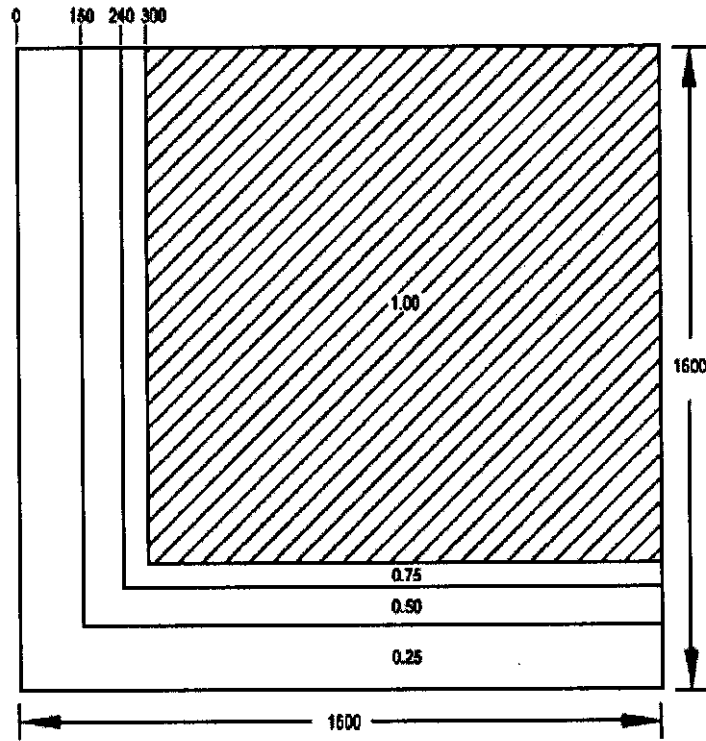
Target Area

Penalty Factors: 1.00, 0.75, 0.50, 0.25

* All distances are in Metres

Schedule 14

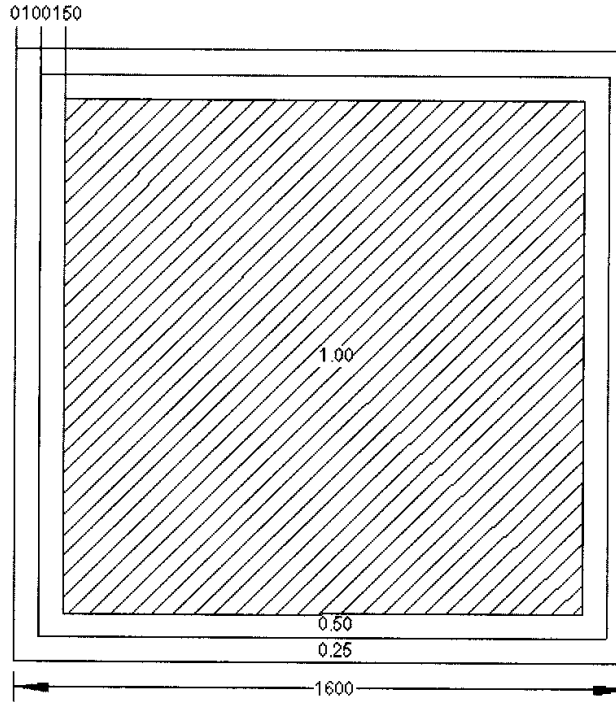
Figure 1A
Off-target Penalty Factors
One Section Spacing




 Target Area Penalty factors: 1.00, 0.75, 0.50, 0.25

* All distances are in meters

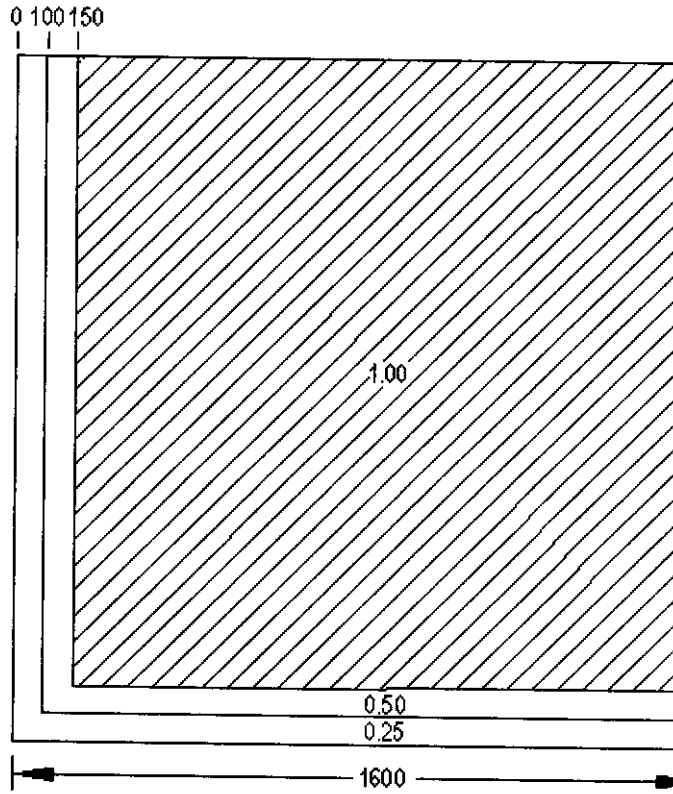
Figure 1B
Off-target Penalty Factors
One Section Spacing



 Target Area Penalty factors : 1.00, 0.50, 0.25

* All distances are in meters

Figure 1C
Off-target Penalty Factors
One Section Spacing



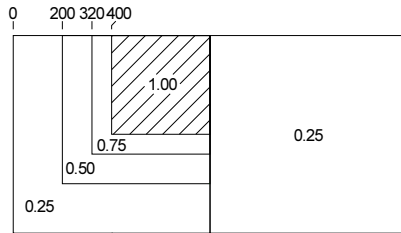
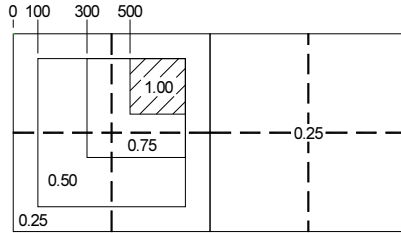
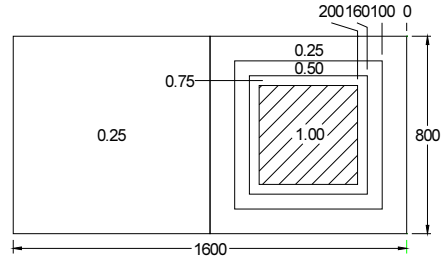
 Target Area Penalty factors: 1.00, 0.50, 0.25

* All distances are in meters

Schedule 14

**Figure 2
Off-target Penalty Factors**

One - Half Section Spacing



Target Area

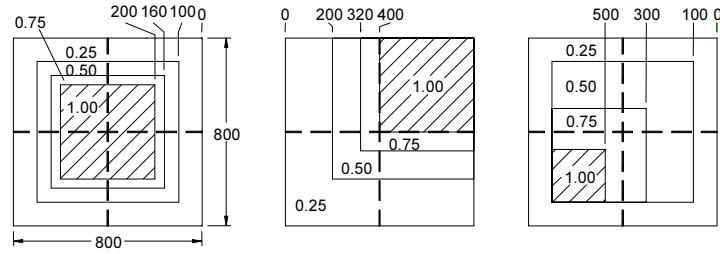
Penalty Factors: 1.00, 0.75, 0.50, 0.25

* All distances are in Metres

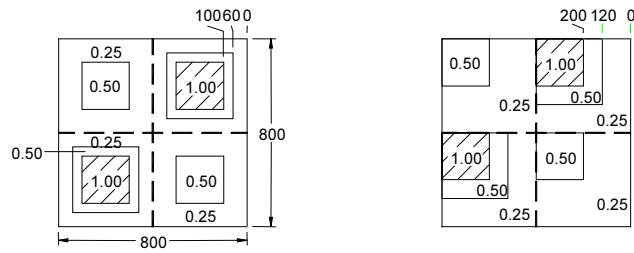
Schedule 14

**Figure 3
Off-target Penalty Factors**

One Quarter Section Spacing



Two Legal Subdivisions Spacing

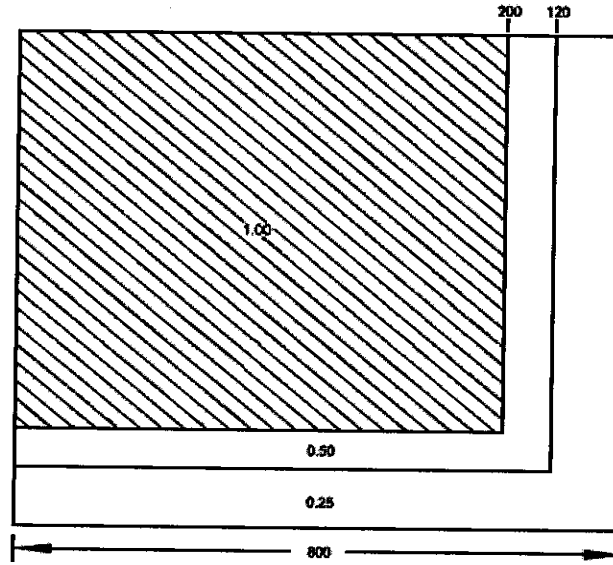


Target Area

Penalty Factors 1.00, 0.75, 0.50, 0.25

* All distances are in Metres

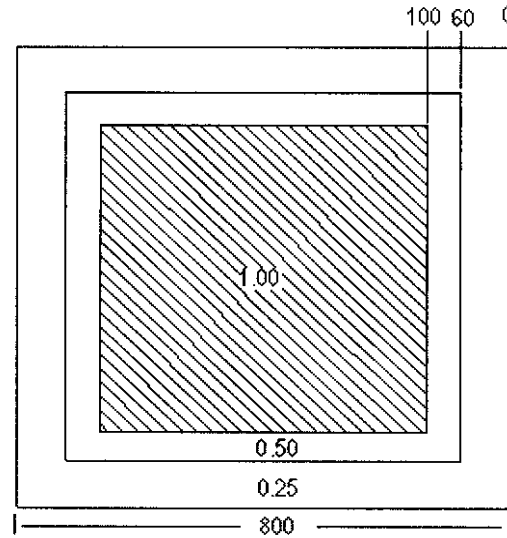
Figure 3A
Off-target Penalty Factors
One Quarter Section Spacing




 Target Area Penalty factors: 1.00, 0.50, 0.25

* All distances are in meters

Figure 3B
Off-target Penalty Factors
One Quarter Section Spacing

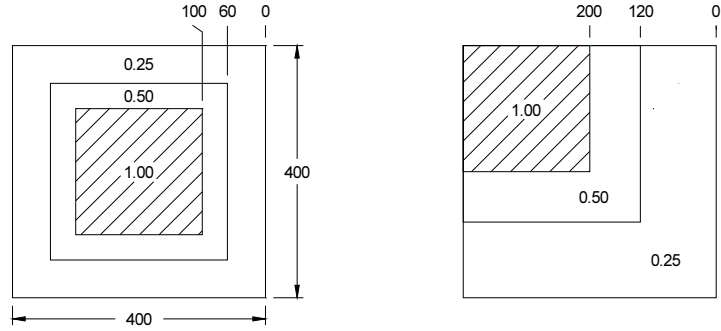


 Target area Penalty factors: 1.00, 0.50, 0.25
* All distances are in metres

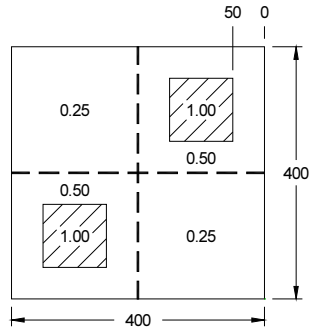
**Schedule 14
Figure 4**

Off-target Penalty Factors

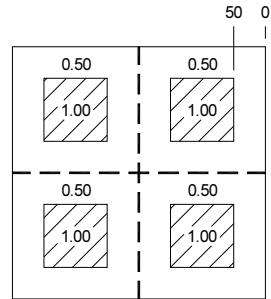
One Legal Subdivision Spacing



1/2 Legal Subdivision Spacing



1/4 Legal Subdivision Spacing



Target Area

Penalty Factors: 1.00, 0.75, 0.50, 0.25

* All distances are in Metres

AR 151/71 Sched.14;12/98;153/2006;203/2011

Schedule 15
Security Costs

Type of facility	Security required based on cost of immediate site suspension	Security required per month	Total number of months	Total security required
Oilfield waste processing facility	\$50 000	\$3 000	36	\$158 000
Surface facility associated with stand-alone waste disposal wells (class Ia or Ib)	\$10 000	\$1 000	36	\$46 000
Oilfield waste storage facility or transfer station	\$20 000	\$2 000	36	\$92 000
Biodegradation facility	\$20 000	\$1 000	36	\$56 000
Oilfield landfill	\$20 000	\$1 000	36	\$56 000

AR 182/2001 s3

Schedule 16
referred to in section 7.030 of the
Oil and Gas Conservation Rules

Proration Testing Requirements for
Light and Medium Density Crude Oil Wells

Class ^a No.	Name	Oil Rate m ³ /d	Minimum Test Frequency	Minimum Test Duration (Hours)
1	High	>30	3 per month	12
2	Medium	>6 but 30	2 per month	24
3	Low	>2 but 6	1 per month	24 ^b
4	Stripper	2	1 every quarter	24 ^b

- a Classification for each well shall be determined at least semi-annually based on the average daily oil rate since the last assessment. If a well experiences a large rate change, the operator shall immediately change the classification.

- b Operators should conduct longer duration tests for wells exhibiting erratic rates.

AR 36/2002 s82;89/2013

Schedule 17

Form Alberta Energy Regulator

Notice of Garnishment (section 103 *Oil and Gas Conservation Act*)

Notice Number:

To: (payor)

Regarding a debt owed to the Alberta Energy Regulator
from: (debtor)

In the amount of: (\$ amount)

1 This Notice of Garnishment is issued for the amount
of (\$ amount) against the following:

- (a) money owed by you to (debtor) as a result of a sale of (debtor's) proportionate share of any gas, oil or other hydrocarbon produced from a well or facility;
- (b) money held or received by you on behalf of (debtor) as a result of a sale of (debtor's) proportionate share of any gas, oil or other hydrocarbon produced from a well or facility;
- (c) revenue held or received by you that is owing to (debtor) resulting from
 - (i) the use of a well or facility by another person, or
 - (ii) the provision of services by (debtor) ;
- (d) money and revenue described in clauses (a), (b) and (c) that you may hold or receive in the future.

Current Obligation

2 On receiving this Notice you must pay to the Regulator the lesser of

- (a) all money and revenue described in section 1(a) to (c) of this Notice, and

- (b) the amount of the debt owing to the Regulator by the debtor, as shown on this Notice.

Future Obligation

3 Until you are notified by the Regulator that the debt of (debtor) has been paid in full you must, if any money or revenue described in section 1(a) to (c) of this Notice later becomes owing by you to (debtor), pay to the Regulator the lesser of

- (a) that money or revenue, and
- (b) the amount of the debt then owing to the Regulator by the debtor.

Information That Must Accompany Payments

4 You must include with any payment forwarded to the Regulator

- (a) the notice number and date of this Notice,
- (b) the name of the debtor, (debtor), and
- (c) an expected payment schedule setting out the following information:
 - (i) the date or dates on which you expect to have money or revenue owing to the debtor;
 - (ii) the amount that is expected to be payable on each date referred to in subclause (i);
 - (iii) the date or dates on which you will forward the money or revenue referred to in subclause (i) to the Regulator.

Regulator Address

5 You must forward all payments and the information referred to in section 4 to the Regulator at the address below.

Date: _____

Alberta Energy Regulator Signed: _____

Failure to Comply

If you fail to comply with this Notice of Garnishment, or if you make payments to (debtor) in contravention of this Notice of Garnishment, you will be indebted to the Regulator for an amount equal to the amount you are required to pay pursuant to this Notice

of Garnishment, or the amount you paid to (debtor) in contravention of this Notice of Garnishment, whichever is less.

If you become indebted to the Regulator, it will be entitled to collect the debt from you using all remedies available to it.

Failure to comply with this Notice of Garnishment also constitutes an offence under the *Oil and Gas Conservation Act*, punishable on conviction by a fine, or on default of payment of the fine, by imprisonment.

AR 226/2002 s3;254/2007;89/2013



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