

Surface Lease Construction Requirements

Directive PNG004

November 2015

Revision 1.0

Governing Legislation:

Act: *The Oil and Gas Conservation Act*

Regulation: *The Oil and Gas Conservation Regulations, 2012*

Order: 501/15

Record of Change

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1. Introduction

This Directive outlines the set-back distances and other requirements related to the location of wells, which must be met for any well in Saskatchewan constructed for the purpose of injection, disposal or producing oil or gas. The requirements in this Directive provide details in addition to *The Oil and Gas Conservation Regulations, 2012* (OGCR), section 25.

Questions concerning the requirements set out in this document should be directed to the ER support desk at ER.servicedesk@gov.sk.ca or 1-855-219-9373.

1.1 Governing Legislation

The requirements set out in this Directive are based on the OGCR and *The Oil and Gas Conservation Act* (OGCA). Licensees should consult these documents in conjunction with this Directive.

It is the responsibility of all operators, as specified in the legislation, to be aware of the requirements of the Ministry of Energy and Resources (ER) and to ensure compliance with all requirements prior to the start of well construction on a lease.

At any point, ER may require a licensee to provide any or all documentation that proves compliance with the requirements set out below. ER has the authority to inspect the lease, add obligations and impose additional lease construction requirements if deemed in the interest of public safety. Failure to provide documentation within 48 hours upon request by ER may result in action being taken against the licence or well.

1.2 Restricted Drilling and Areas Set Aside for Conservation

Areas of the province in which drilling for oil or gas is restricted because of the proximity to potash resources are outlined in section 26 and section 27 of the OGCR.

In addition, Appendix 2 lists specific land locations within the province where the land has been set aside as 'Prime Conservation Area' and no well licences are granted in those lands.

1.3 Definitions

Dike: A dike is an impermeable barrier that is constructed within the lease boundary to prevent migration of fluids off-lease.

Major water body: means a water body that includes, but is not limited to, a lake, river, creek, stream, or other body of water that is fish bearing.

Minor water body: means a water body that includes, but is not limited to, field/seasonal drainage, a water run, an irrigation ditch, a slough, a wet low areas, or an area that may potentially flood (e.g., dry sloughs, low areas, etc.).

Occupied dwelling: means a building occupied by a person on a temporary or permanent basis.

Private water body: means a water body that belongs to an individual or group (e.g., a dugout).
Set-back or set-back distance: means the distance by which a well must be separated from a specific entity such as a body of water, another well, or a road allowance.

Surface improvement: Includes, but is not limited to, railways, canals, dugouts, water wells, above-ground pipelines, power/telephone or other utility lines, road allowances, surveyed roadways, aircraft runways or taxiways.

Underground utility: Includes, but is not limited to, pipelines, Saskatchewan water lines, power cables, etc.

Water body: means a body of water or an area where water flows or is present, whether the flow or the presence of water is continuous, seasonal or intermittent, or occurs only during a flood. There are three main categories of water bodies.

2. Set-Back Requirements

The following set-back requirements are taken from section 25 of the OGCR.

25(1) Unless otherwise approved by the minister on an application pursuant to section 6, no person shall drill any well, structure test hole or oil shale core hole within:

- (a) 75 metres from the right of way of any surface improvement other than a surveyed roadway or road allowance; or*
- (b) 40 metres from the right of way of a surveyed roadway or road allowance or an underground utility, other than an underground utility that is owned or operated by the licensee or that services the licensee's well or facility.*

(2) Unless otherwise approved by the minister on an application pursuant to section 6, no person shall drill a well for which the surface centre of the well is located:

- (a) in the case of a well drilled on or after July 1, 2013, within 125 metres of:*
 - (i) a water body;*
 - (ii) an occupied dwelling;*
 - (iii) a public facility; or*
 - (iv) an urban centre; or*
- (b) in the case of a well drilled before July 1, 2013, within 100 metres of:*
 - (i) a water body;*
 - (ii) an occupied dwelling;*
 - (iii) a public facility; or*
 - (iv) an urban centre.*

(3) No person shall drill a well, structure test hole or oil shale core hole on a road allowance in a location that interferes with public travel.

(4) No person shall drill a well on the intersection of two road allowances.

3. Exceptions to Set-Back Requirements

3.1 Water Bodies

Exceptions can be made to water body set-back requirements in the following situations:

- The proposed well origin is less than 125 m from a private water body and consent has been obtained from the rightful owner. A dike will be required (see 'Lease Construction Conditions' in this Directive).
- The proposed well origin is less than 125 m from a minor water body. A dike is required in accordance with 'Lease Construction Conditions' in this Directive.

4. If Set-Back Requirements Are Not Met

4.1 Surface Improvements and Underground Utilities

When set-back requirements as outlined in paragraphs (1)(a) and (b), and (2) (i) in section 2 of this Directive, are not met, consent must be obtained from the rightful owner prior to applying for a licence.

4.2 Occupied Dwellings

When set-back requirements as outlined in paragraph (2)(ii) in section 2 of this Directive are not met:

- Consent must be obtained from the resident and owner of the occupied dwelling;
- The licensee must be able to provide ER with a written estimate of the hydrogen sulphide (H₂S) concentration in the proposed production stream.
(For additional information refer to *Directive S10: Saskatchewan Upstream Petroleum Industry Associated Gas Conservation* and *Directive S-20: Saskatchewan Upstream Flaring and Incineration Requirements*).
- No venting may take place.

5. Lease Construction Conditions

All wells shall use mud tanks while drilling.

All leases must be elevated or constructed in such a way as to prevent the inflow or outflow of water to or from the lease.

5.1 Diking

The lease must be diked if any of the following situations apply:

- Set-back distances to water bodies as outlined in section 3.1 of this Directive, are not being met.
- Any surveyed corner of the lease is 1.5 m lower than that of the proposed well origin's elevation.
- The lease is in close proximity (less than 125 m from the well origin) to low (dry) areas/slopes, e.g., valley, dry ravine, etc.

The dike must be constructed to prevent migration of fluids off-lease to the water bodies, the low lease edges or any low-lying areas that have been identified. An exemption to this requirement may be obtained after licensing in accordance with section 6 (below).

5.2 Lease Construction Requiring Prior Field Office Approval

Lease construction requires approval from the nearest Field Office prior to submission of an application for an oil or gas well licence when:

- The proposed well origin is situated on a topographic high (e.g., hill, ridge, etc.); is in a topographic low (e.g., bottom of a valley, dry ravine, etc.); or is less than 125 m from a topographic high/low, where the difference in surveyed elevation between proposed well origin and lease edge exceeds 5 m.
- The lease contains a minor water body that results in a need to build up the well pad location.

If any of the above situations apply, the Field Office will review the proposed lease site to assess the risk. The well licensee is required to contact the local area Field Office and provide a survey plan of the lease, and any additional information that may be requested. For Field Office information, please contact the ER Service Desk at ER.servicedesk@gov.sk.ca or 1-855-219-9373.

Once approval is obtained, the licensee may then apply for a well licence and will be required to submit the approval from the Field Office with their licence application.

5.3 Additional Lease Construction Requirements

A chain-link fence is required around the perimeter of the well and equipment when:

- Occupied dwellings, public facilities or urban centres are within 400 m of well origin. (This requirement is waived if all affected parties within the 500 m set-back provide the licensee with written consent).

Construction on a lease shall not alter existing trails when:

- Trails/pathways exist within the confines of the lease.

Construction on a lease shall not alter the natural course of drainage when:

- Drainage and/or a water run exist within the confines of the lease.

6. Relief from Diking or Fencing Requirements

A licensee shall disclose in accordance with this Directive at time of the licence application its diking and fencing requirements. After the licence has been issued the Field Office has the authority to provide an exemption to diking or fencing requirements if it is satisfied that a dike or fence is not required for the site. Contact the Field Office through the ER Service Desk at ER.servicedesk@gov.sk.ca or 1-855-219-9373 to request the exemption.

Appendix 1: Areas with Additional Lease Construction Requirements

- Ground elevation must be more than 567.0 m for wells adjacent to a lake in the following lands lying West of the Second Meridian:
 - In Township 4, Range 5: All Sections;
 - In Township 5, Range 5: All Sections.

- Ground elevation must be more than 555.0 m for wells adjacent to a lake in the following lands lying West of the Second Meridian:
 - In Township 2, Range 9: Sections 31 to 36;
 - In Township 3, Range 9: All Sections.

- A pad must be constructed if ground elevation is less than 553.5 m in the following lands lying West of the Second Meridian:
 - In Township 3, Range 10: All Sections;
 - In Township 3, Range 11: All Sections;
 - In Township 4, Range 11: All Sections;
 - In Township 4, Range 12: All Sections;
 - In Township 5, Range 12: All Sections;
 - In Township 5, Range 13: All Sections;
 - In Township 6, Range 12: All Sections;
 - In Township 6, Range 13: All Sections;
 - In Township 7, Range 13: All Sections.

- A pad must be constructed if ground elevation is less than 738.0 m in the following lands lying West of the Third Meridian:
 - In Township 12, Range 21: Section 31;
 - In Township 13, Range 21: Sections 6, 7, 18, 19, 30, and 31;
 - In Township 14, Range 21: Section 6;
 - In Township 12, Range 22: Sections 30 to 36;
 - In Township 13, Range 22: All Sections;
 - In Township 14, Range 22: Sections 1 to 5;
 - In Township 12, Range 23: Sections 19 to 36;
 - In Township 13, Range 23: All Sections;
 - In Township 12, Range 24: All Sections;
 - In Township 13, Range 24: All Sections;
 - In Township 12, Range 25: Sections 1, 2, 10, 11, 12, 13, 24, 25, and 36

Appendix 2: Areas Removed from Well Licensing

- No well licence may be applied for in the Prime Conservation Lands of the Manitou Sand Hills lying West of the Third Meridian:
 - In Township 41, Range 28: Section 32;
 - In Township 42, Range 28: Sections 4, 5, 8, 9, 10; the north half of Section 11; the north half of Section 12; Sections 13 to 17; Sections 20 to 23; the south half of Section 24; the north half of Section 25; Sections 26 and 27; the east half and south-west quarter of Section 28; Section 29; Sections 32 to 36;
 - In Township 43, Range 27: Sections 6 and 7;
 - In Township 43, Range 28: Sections 1, 2, 11, and 12;
 - In Township 43, Range 26: Sections 15 and 16; the north half of Section 17; Sections 20 to 23; Sections 26 to 29; Sections 32 to 35;
 - In Township 44, Range 26: Sections 2 to 5.