

# Well Abandonment Requirements

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Directive PNG015

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Governing Legislation:

Act: *The Oil and Gas Conservation Act*

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

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### Record of Change

<b>Revision</b>	<b>Date</b>	<b>Author</b>	<b>Description</b>
0.0	September, 2015	PNG	Draft
1.0	November, 2015	PNG	Live version, updated wording to provide clarity, added directive number.

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## 1. Introduction

Saskatchewan oil and gas regulations stipulate that no well can remain unplugged or uncased after it is no longer used for the purpose for which it was drilled or converted.

This Directive sets out the requirements of the Saskatchewan Ministry of the Economy (ECON) for the abandonment of wells licensed under *The Oil and Gas Conservation Regulations, 2012 (OGCR)*. It also provides instruction on the processes to follow when submitting applications for abandonment.

Questions concerning the requirements outlined in this document should be directed to the PNG support line 1-855-219-9373.

### 1.1 Governing Legislation

The requirements set out in this Directive are based on regulations in *The Oil and Gas Conservation Regulations, 2012 (OGCR)*. In particular, sections 44, 45, 46 and 47, inclusive, contain regulations specific to well abandonment. Licensees should consult this document in conjunction with this Directive.

It is the responsibility of all operators, as specified in the legislation, to be aware of Ministry requirements and to ensure compliance with these requirements when submitting an application for well abandonment operations.

### 1.2 Definitions

**Cut and cap:** refers to the cutting and removal of surface and production casing stubs one metre (1 m) below ground level, and the capping of a well by approved means.

**Downhole abandonment:** means when all wellbores and completions are permanently plugged to prevent migration of fluids within the stratigraphic units and the well.

**Gas migration:** refers to situations where gas from stratigraphic units contacted within the well is present at surface in soils around the outermost string of well casing.

**Surface casing vent flow (SCVF):** refers to the movement of fluids and/or gas in any combination or volume between the production casing and surface casing.

**Wellbore abandonment:** means when a wellbore is permanently plugged to prevent migration of fluids within the stratigraphic units and the wellbore. 'Wellbore abandonment' is only relevant in relation to multi-bore horizontal wells. If the wellbore abandonment results in all wellbores being abandoned then the operation is a downhole abandonment.

## 2. Abandoning a Well

A company must submit an application and a plan of abandonment to the Ministry for any well that they will no longer be using.

All wells must have production casing landed and be cemented full length from surface to total depth (TD). An abandonment application or an application to repair allows for justification to be

provided if this requirement cannot be met due to technical or reservoir issues. In these situations, ECON may grant an exemption from the cementing requirement.

In an emergency situation where a non-cased abandonment is requested, contact the Emergency Support line at 1-844-764-3637.

### **3. Applying for Approval for a Well Abandonment**

An application for abandonment must comply with the requirements in the *OGCR* and this Directive, and must be submitted through the Integrated Resource Information System (IRIS).

**An application for abandonment must be received and approved prior to the start of any abandonment operations, including downhole and cut and cap abandonment programs.**

Appendix 1 shows an example of a completed application for well abandonment (called an 'Application for Non-Routine Abandonment'), and Table 1 lists the common attachments required for various types of abandonment applications.

#### **3.1 Wellbore Abandonment**

Wellbore abandonment applications can only be made on multi-bore horizontal wells where the well completion will not be abandoned.

#### **3.2 Downhole Abandonment and Cut and Cap**

Application for both the downhole abandonment and cut and cap should be made when the intent is to fully abandon the well. For completion abandonment where the intention is not to downhole abandon, an application to reclassify or recomplate the well in order to apply for the plug back operation should be used. See Guideline PNG024: Reclassification and Recompletion for additional details.

The activity of downhole abandonment and cut and cap will be reported in IRIS at separate times, but the application and plan for both operations should be submitted at the same time.

A company may apply for multiple-well downhole and cut and cap abandonments within a single application (see section 3.3, below).

Upon completion of the abandonment, an operator must complete and submit an abandonment report through IRIS.

Upon completion of surface abandonment, the operator must submit the surface abandonment details and any required attachments (see Table 1) through IRIS at the time they report cut and cap.

#### **3.3 Applying for Multiple-Well Downhole and Cut and Cap Abandonments**

If all the wells are within the same pool or stratigraphic zone (for example, depleted pool shallow gas wells), a single well schematic and program of operations may be submitted as a single application. However, any wells with known concerns or issues will be required to have a separate schematic and workover plan attached.

**Table 1.** Common attachments required with various types of abandonment applications.

<b>Attachment Type</b>	<b>Description</b>
Abandonment Application Form	A signed copy of the application form.
Program of Operations for Abandonment	A detailed step-by-step procedure of the proposed abandonment including the isolation procedure that will be used, the testing requirements, and a detailed wellbore history. The proposed operations and testing must comply with all current regulatory requirements.
Supporting Documentation	Any additional well information that may be requested by ECON.
Wellbore Schematic	A schematic drawing of the components—both surface and subsurface—of a well, the depth at which the components are located, and how the components relate to the principal dimensions of the well. The drawing must include any detail of known mechanical issues that may or may not influence the final approval of the proposed subsurface or surface abandonment operations.
Cut and Cap Procedures <b>(Only required for downhole/cut and cap abandonment applications)</b>	Part of the program of operations, the description of the proposed operations should include the SCVF testing procedures and gas migration testing procedures.
Gas Migration Report <b>(Only required for downhole/cut and cap abandonment applications)</b>	A required attachment after the well has been cut and capped. The report must indicate the concentration of natural gases in soils around the outermost string of well casing. (See <i>SEM Migration Guidelines</i> for further details.)

#### 4. How ECON will Process Abandonment Applications

Once an application is received through IRIS, ECON will review the submitted proposal information and, if approved, the operator will be given an authorization. An operator may then proceed with the approved proposal.

Prior to conducting abandonment operations, if any change or amendment is proposed, a new application should be submitted for approval.

Appendix 2 shows an idealized flow chart of the possible steps in the abandonment application process.

#### 5. Modifications to Approvals

Any changes to an approved abandonment program that occur during the course of abandonment operations require approval by ECON. Licensees must contact either the Emergency Support line at 1-844-764-3637 or the Field Office to obtain approval for the revised abandonment program.

Information on the changes to the program must be submitted as part of the final, post-abandonment report.

**6. Additional Obligations or Requirements by Ministerial Authority**

The Ministry has the authority to audit, add obligations, and impose additional requirements if it is deemed in the interest of public safety or environmental concern.

**Appendix 1: Example of Completed Application for Abandonment**



**ABANDONMENT APPLICATION**

**Application Typ**  Downhole Abandonment and Cut and Cap  
 Wellbore Abandonment

**Part I - General Information (must be completed in full)**

**Is this part of a multi-well abandonment**  YES  NO

\* If no, attach a list of wells with the Bottom hole, surface location and licence number and proceed to **Part II.**

**Bottom Hole Location:**

LSD	SEC	TWP	RGE		M
2	2	2	2	W	2

**Surface Location:**

LSD	SEC	TWP	RGE		M
2	2	2	2	W	2

**License # :**

**Part II - Downhole Abandonment Checklist**

The following information must accompany the abandonment application form and has been attached:

- Program of Operations
- Supporting Documents
- Wellbore Schematic

**Part III - Surface Abandonment Checklist**

The following information must accompany the abandonment application form and has been attached:

- Cut and Cap Procedure

**Declaration**

Please be advised:

- All cut and cap procedures/GM Surveys/SCVF testing must comply with *The Oil and Gas Conservation Regulations, 2012*, unless otherwise approved by the Ministry of the Economy.
- Cut and cap must be completed within 1 year of the downhole abandonment being performed, unless otherwise approved by the Ministry of the Economy.

**By signing below the licensee, is confirming that the above conditions will be met. If the proposed work does not conform to the above conditions, applicable orders, legislation, regulations, policies, or guidelines the licensee will be required to mitigate or abandon the well at their own expense.**

Contact Name:

E-mail address:

Phone Number:

Signature of Applicant:



**Appendix 2: Flow Chart Illustrating the Possible Steps in the Abandonment Application Process**

