

Initiating a New Geothermal Well Licence Application

Intended User: Geothermal well licence applicants

Overview

This quick reference guide (QRG) describes how to initiate a geothermal well licence application, **specifically the geothermal sections of a new application.**

For detailed instructions on completing the general steps in a well licence application, watch “New Well Licence Application” video located on the AER website – Regulating Development > OneStop > OneStop Help > Guides for Well Licences.




Initiate New Application

1. Log in to OneStop and begin on the main landing page.
2. Click **Initiate** in the top navigation bar. Select **New Application**.



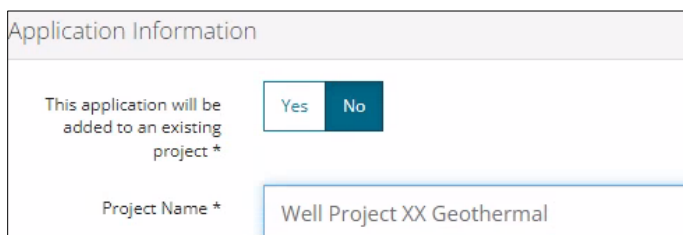
The General - Contact Information page opens.



General - Contact Information

1. Complete the mandatory fields (marked with an **asterisk***) in the Applicant section (**Name, Company Name, Phone, Email**). Some fields may already be autocompleted based on your login credentials.
 - a) Complete the Consultant section as needed.
2. Click **Validate**.  Click **Save** (lower right of screen). 
3. Click **Next** to go to General – Application. Information page. 

General - Application Information

1. After indicating (Yes or No) whether this application will be added to an existing project, enter the project name in the Project Name field. Include the word “**Geothermal**” in the title. Other discretionary details may be added.

A screenshot of the 'Application Information' form. The title 'Application Information' is at the top. Below it, the text 'This application will be added to an existing project *' is followed by two radio buttons: 'Yes' and 'No'. The 'No' radio button is selected. Below this, the text 'Project Name *' is followed by a text input field containing the text 'Well Project XX Geothermal'.


2. Click **Save**.  Click **Next** to go to General - Proposed Activity page. 

General - Proposed Activity

1. In the Proposed Activity section, select the **land type** and **specific activities (Wells)**.

The screenshot shows a form titled "Proposed Activity". It contains two rows of selection buttons. The first row is labeled "This activity is located on *" and has two buttons: "Public Land" (highlighted in dark blue) and "Freehold". The second row is labeled "This application is for the following activities" and has three buttons: "Pipelines", "Wells" (highlighted in dark blue), and "Facilities".

Tip



Hover over any information icon  for more information about a requirement.

Proposed Activity

The tip box shows a tooltip that appears when hovering over the "Public Land" button. The tooltip contains the following text: "Public Land - Provincial Crown Land administered under the Public Lands Act for the use of land in respect of energy resource activities." and "Freehold - Any land in Alberta not administered under the Public Lands Act including public land administered under other Acts or agreements." Below the tooltip, a smaller version of the "Proposed Activity" form is visible, with "Public Land" selected.

2. For the associated activity, select **Geothermal**.

The screenshot shows a form titled "This application is associated with *". It contains five buttons: "Mining", "In Situ", "Oil and Gas", "Transmission Pipeline", and "Geothermal" (highlighted in dark blue).

3. Click **Save**.  Click **Next** to go to General – Additional Information page. 

General - Additional Information

1. Select **Yes** or **No** for each mandatory requirement listed in this section. Depending on your selection more details will be needed.

The screenshot shows a form titled "Additional Information". It contains two rows of "Yes/No" selection buttons. The first row is labeled "There are outstanding concerns related to this application *" and has "Yes" and "No" buttons. The second row is labeled "This activity requires an EPEA approval *" and has "Yes" and "No" buttons. Below these is a text input field labeled "Application/Approval Number".



1. Click **Save**.  Click **Next** to go to Wells – Overview page. 

Wells – Overview

1. Complete the following sections: **Upload Shapefile**, **Public Land Approval**, and **Survey Plan**. Well Location Attributes and Surface Rights sections will autocomplete using data from the submitted shapefile.

Tip

For detailed instructions on submitting shapefiles, see *Importing Digital Spatial Data into OneStop QRG* located on the AER website – Regulating Development > OneStop > OneStop Help > Guides for Well Licences.


2. Click **Save**.  Click **Next** to go to Wells – Wells Details page. 

Wells – Wells Details



Some areas of the Wells Details page are autocompleted using data from the submitted shapefile.

Note: Greyed-out fields cannot be manually changed.

- Complete the mandatory fields marked with an **asterisk***.
 - Type of Drilling Operation**
 - Bottomhole Location**
 - Proposed bottomhole location is within a road allowance**
 - Depth Information (Surface Casing Depth, Projected Total Depth, True Vertical Depth)**
 - Mineral Rights**
 - Terminating Formation Name**

- A geothermal well name must include the letters “GT.” Click **Generate Well Name**. 
- The Generate Well Name window opens. Enter “GT” in Discretionary Information field. Additional characters may be added to the title (maximum 36 characters).

- Click **Generate Name** and **Accept**. The window closes and the new name appears in the Well Name field.

- Click **Save**.  Click **Next** to go to Wells – Licence Details page. 

Wells – Licence Details

Tip

For Purpose and Classification sections, see [Classification Guide](#) at the end of this QRG.

- In the Participant Involvement Requirements section, select **Yes** or **No**: Requirements have been met.
 - If **No**, click **Attach**. Locate the required file(s) from your computer and attach them.

- In the Purpose section, select the **well type** from the drop-down menu.

- Select the **substance(s)** from the drop-down menu.

- Select the **formation(s)** from the drop-down menu.

Note: The Governing Legislation field will autocomplete based on your well type, and substance selections.

- In the Classification section, select the **AER classification** from the drop-down menu.

The screenshot shows a form titled 'Classification' with an information icon. Below the title is a label 'AER Classification *' followed by a dropdown menu. The dropdown menu is open, showing 'Development Service' as the selected option.

Note: Geothermal wells default to Confidential status.

The screenshot shows two dropdown menus. The top one is labeled 'AER Classification *' and has 'Development Service' selected. The bottom one is labeled 'Confidential Status *' and has 'Confidential' selected.

- Select **Yes** or **No**: Drill cutting samples are required to be taken.

The screenshot shows a form field with the text 'Drill cutting samples are required to be taken *' and two buttons: 'Yes' and 'No'.

Tip

Watch “Drill Cutting” video for help in completing this requirement. The video is located on the AER website – Regulating Development > OneStop > OneStop Help > Guides for Well Licences. Refer to *Directive 089* for drill cutting requirements.

- Select **Yes** or **No** to indicate meeting the requirements outlined in the following sections: **Minerals Rights, Surface Impact, Additional Information, and Operational Disclosure.**

The screenshot shows two buttons: 'Yes' and 'No'.

- Based on your “Yes” or “No” response to meeting requirements, more information may be needed. Provide those requirements in the appropriate sections.

Example:

The screenshot shows a form titled 'Operational Disclosure'. It contains a label 'Specialized drilling operations will be conducted *' with 'Yes' and 'No' buttons. Below it is a label 'Type of specialized drilling *' followed by a text input field.

- Click **Save**.  Click **Next** to go to Wells – Working Interest Participants page. 

Well – Working Interest Participants (WIP)

Tip

Watch “Wells Working Interest Participants (WIP)” video for help in completing this section. The video is located on the AER website – Regulating Development > OneStop > OneStop Help > Guides for Well Licences.

The Working Interest Participants table autocompletes with parties who are participants in the application.

1. To add new participants to the table, Click **Add**. Search for business associate(s) and add them to the table.

Note: The interest total must equal 100%.

<input type="checkbox"/>	Business Associate Code	Company Name
<input type="checkbox"/>	OHL	CANADIAN
<input type="checkbox"/>	01	CITY OF

2. Click **Save**. Click **Next** to go to Wells – H₂S Information page.

Wells – H₂S Information

Tip

Watch “H₂S Information Well Application” video for help in completing this section. The video is located on the AER website – Regulating Development > OneStop > OneStop Help > Guides for Well Licences.

1. Select **Yes** or **No**: Wells included in this activity are expected to encounter H₂S.

- a) If **No**, the Well Category field auto completes. Proceed to **Step 2**.

- b) If **Yes**, more information is needed. New sections appear: Potential H₂S Release Rate by Formation, Cumulative H₂S Release Rate, and Emergency Planning. **Complete these sections**.

Note: Grey-out fields will be auto completed based on the information entered in the form.

2. Click **Save**. Click **Next** to go to Wells – Additional Attachments page.

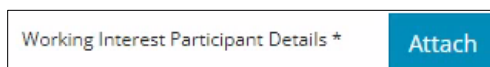
Wells – Additional Attachments

Geothermal wells require supporting documents to form part of the application.

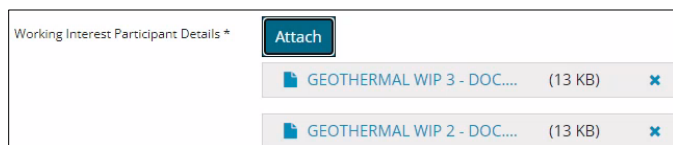
Tip

For more details about attachments, see *Directive 089* and *Directive 056* (Audit Material only) located on the AER website - Regulating Development > Directives.

3. Click **Attach** beside Working Interest Participant Details, a **mandatory** requirement.



- a) Locate the file(s) from your computer and attach them.



4. Repeat **Step 1** to attach supporting documents to other requirements in this section.

5. Click **Save**.

6. You may close your application and return to it later or click **Next** to go to the Confirmation page and submit the application.

Note: The Geothermal Well Rule will trigger additional review which will be listed in the Rules Triggered section on the Confirmation page.

Rules Triggered		
Filter by...		
Activity ID	Rule Name	Outcome
31802961	Geothermal Well	Additional Review
31802961	Operator Criteria	Baseline Review
31802961	Participant Involvement	Baseline Review

Classification Guide

Oil and Gas Conservation Rules (OGCR), section 2.020					
Well type	Code	Substance name	Code	Classification options	Confidential options
Evaluation	02	Miscellaneous	98	OTH	NC
		None		OTH	NC
Injection	04	Gas	02	DSW	C, NC
		Water	06	DSW	C, NC
		LPG	16	DSW	C,NC
		Carbon Dioxide	13	DSW	NC
Disposal	12	Brine	07	OTH	NC
		Water	06	OTH	NC

Oil and Gas Conservation Rules (OGCR), section 2.020					
Well type	Code	Substance name	Code	Classification options	Confidential options
		Waste	08	OTH	NC
		Carbon Dioxide	13	OTH	NC
Observation	05	Crude oil	01	DSW	C, NC
		Gas	02	DSW	C, NC
		None		DSW	C, NC
Production	07	Crude oil	01	XPL	C
				DEV	C, NC
		Gas	02	XPL	C
				DEV	C, NC
		Brine	07	OTH	NC
		Crude bitumen	17	DEV	NC
		Coalbed methane	22	XPL	C
				DEV	C, NC
Production (Scheme)	08	Crude bitumen	17	DEV	NC
Storage	09	Gas	02	OTH	NC
		LPG	16	OTH	NC
Training	11	None		OTH	NC
OGCR, section 2.030					
Well type	Code	Substance name	Code	Classification options	Confidential options
Experimental	03	None		EX	C
Oil Sands Evaluation	06	Crude bitumen	17	OV	C
Test	10	None		TH	C
OGCR, section 2.040					
Well type	Code	Substance name	Code	Classification options	Confidential options
Domestic	01	Water	06	OTH	NC
Observation	05	Water	06	OTH	NC
Production	07	Water	06	OTH	NC
Geothermal Resource Development Rules (GRDR), section 7					
Well type	Code	Substance name	Code	Classification options	Confidential options
Geothermal Open-Loop Production		Brine Water		XPL	C
				DEV	
Geothermal Open-Loop Injection		Brine Water		DSW	C
Geothermal Closed-Loop single		Working Fluid		XPL	C
				DEV	
Geothermal Closed-Loop in - Multi		Working Fluid		XPL	C
				DEV	
Geothermal Closed Loop out - Multi		Working Fluid		XPL	C
				DEV	
Geothermal Other		Miscellaneous None		OTH	C
Geothermal Observation		Miscellaneous None		DSW	C