

OBSERVATION WELL APPLICATION GUIDE

The Drilling and Production Regulation defines that a well or a portion of a well may be designated as an observation well under section 2(7).

- 2(7) An official may designate a well as an observation well if:
- a) the well is being used to monitor reservoir pressures or to obtain other formation information, and
 - b) the well is not used to produce from, or inject or dispose of fluids into, a formation being monitored.

Reservoir observation wells typically gather data on;

- formation pressure, fluid quality or fluid migration related to production, injection or disposal.
- monitoring well completion operations (microseismic) or seismicity observation.

Observation well designation is **not** required for routine short-term observation purpose, such as routine reservoir pressure build-up tests on production wells or micro-seismic monitoring for a period of less than 4 months.

A Well Permit may be applied for and approved as well type Observation. For the purpose of initial well classification (Development, Exploratory Outpost or Exploratory Wildcat) when licensing an observation well, a spacing area of 1 unit of $\frac{1}{4}$ section is used, however as noted, oil & gas tenure may not be required.

For use of either a purpose-drilled well, or conversion of an existing production, injection or disposal well to observation type, application and approval is required from the Reservoir Engineering Department of the Commission. Application requirements are listed below. An observation well approval under section 2(7) contains conditions for monitoring, data collection and reporting to maintain a valid designation.

APPLICATION

An application for observation well designation is made in the form of a letter addressed to the Supervisor of Reservoir Engineering. The letter will request the designation of Observation Well and include the following:

- WA (well permit) number,
- well name,
- purpose of observation well, and
- proposed monitoring plans; such as the type and frequency of observation (i.e. pressure and/or fluid sampling) and reporting.

The following information should be included, where applicable, as attachments to the letter:

- date and result of last surface casing vent flow test,
- if packer equipped, date and result of last packer isolation test,
- current wellbore schematic,
- proposed wellbore schematic, and
- reservoir pressure test history of the well, and pool.

In cases where the observation well is anticipated to come into contact with an acid gas subsurface plume, date of most recent casing integrity log and cement bond log must also be included.

UPDATING WELL STATUS TO OBSERVATION

Upon issuing approval for observation well designation, the Commission will update the well status to 'OBS'.

MAINTAINING DESIGNATION

In order to maintain observation well designation, the well permit holder must ensure that the conditions outlined in the approval letter are met. Failure to meet approval conditions will result in observation well designation being withdrawn. The Commission will notify the permit holder that this change is impending.

UPDATING WELL STATUS FROM OBSERVATION

If observation well designation is withdrawn, the well status will update to the operation status of suspended observation.

Conversion of an observation well to production type requires a status change in Petrinex by the 20th day of the month following the date of production.

Conversion of an observation well to injection or disposal use requires a new application or amendment of an appropriate Special Project. Guidelines and summary documents outlining application and Special Project requirements are available through the following links:

- [Pressure Maintenance or Improved Recovery](#)
- [Deep Well Disposal of Produced Water/Non-Hazardous Waste](#)
- [Summary Information – Water Source, Injection and Disposal Service Wells](#)