



Well Information & Status Changes

Ministry of Economy

Directive R01 – Petrinex Reporting

March 2015

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Record of Change

Revision	Date	Author	Description
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1.00	April 26, 2013	Lori Berthelette	Standardized format and change PETRINEX to Petrinex.
1.01	November 5, 2013	Charene Kozak	Branch review for clarity. Edits made throughout.
1.02	May 27, 2014	Charene Kozak	Change logo and add "Ministry of Economy" to cover page.
1.03	March 10, 2015	Charene Kozak	Change chapter numbers to match website numbering.

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3 Well Information and Status Changes

3.1 Unique Well Identifier (UWI)

Petrinex utilizes a Unique Well Identifier (UWI) to represent an individual well and well event. The UWI is a unique 16 character string that is assigned by the Ministry. On Petrinex, the UWI for a well and well event in Saskatchewan includes an SKWI (i.e. Saskatchewan Well Indicator) prefix.

Petrinex UWI Example: SKWI111062705025W300

3.2 Well Event Statuses

On Petrinex, a well event status consists of four sequential components and an associated start date. The four components include Fluid, Mode, Status and Structure.

- **Fluid** – indicates the primary product of the well event (e.g. OIL, GAS, STEAM, etc.)
- **Mode** – indicates the level of development of the well event (e.g. DRILL (drilling), COMP (completed), ACTIVE, SUSP (suspended), ABAN (abandoned), etc.)
- **Status** – indicates the type of well event (e.g. PROD (producer), INJECT (injector), SOURCE, CAVERN, PROD/INJ (cyclic or steam assisted gravity drainage producer and injector)
- **Structure** – indicates the wellbore configuration for the well event (e.g. COMMING (commingled), REPORT (commingled reporting), DRAIN (horizontal leg), BOSS (horizontal reporting), etc.)
- **Status Start Date** – indicates the date in which the well event status became effective (YYYY-MM-DD)

Each of the four well event status components can have N/A as a valid entry. N/A entered in a particular component means that that component is currently not available for that particular well event. For example, a well event status of N/A DRILL N/A N/A 1996-11-26 means that the well is in the process of being drilled (i.e. its Mode) and its Fluid, Status and Structure statuses have not been determined.

Some other examples of valid well event statuses include:

- OIL ACTIVE PROD N/A 2011-06-11
- GAS ACTIVE PROD COMMING 2009-12-29
- STEAM ACTIVE INJECT BOSS 2005-03-16

Descriptions of specific well event statuses can be found in Appendix 4.

The responsibility for creating and maintaining a well event status is shared between the Ministry of the Economy (the Ministry) and the licensee. All well event statuses are recorded on Petrinex, whether they have been submitted by the Ministry or by the licensee.

Well event statuses must be submitted to Petrinex based on a pre-determined sequence or protocol. For example, a well event status mode cannot be changed to ACTIVE by the licensee unless it has an existing well event status mode of completed (COMP) as determined by the Ministry. The Ministry cannot create a well event status mode of COMP on Petrinex unless the completion information has been submitted to the Ministry by the licensee and processed by the Ministry.

The licensee of a well must notify the Ministry of a change in well event status. Depending on the change, it will either be recorded by the Ministry and uploaded to Petrinex or entered directly by the licensee on Petrinex.

The licensee of a well must notify the Ministry, through Petrinex, of the following changes:

- the dates that substances were produced from or injected into a wellbore, including production or injection from operations which took place before a well event is placed on production or injection (i.e. production while drilling) and STREC and STINJ activities related to storage and enhanced oil recovery operations.
- the date that a well event's production, injection or storage operations were suspended;
- the date that a well event's production, injection or storage operations resumed after a suspension; and
- the date that commingled production or injection first occurred.

Approvals must be obtained from the Ministry prior to commingling production or injection within a wellbore and prior to changing a well event status, such as changing a producer to an injector, an oil well to a gas well, a producer to a cyclic producer and injector, etc.

3.2.1 Ministry Well Event Statuses

Ministry well event statuses are derived from data that licensees submit to the Ministry via forms, reports and notification processes. Once data is received from a licensee and processed by the Ministry, it is then uploaded and appears as a well event status on Petrinex.

The Ministry is responsible for receiving and processing all well event status changes for a particular well event from the issuance of a well licence up to, and including, the completed (COMP) well event mode. The Ministry is also responsible for receiving and processing well event status changes from when a zone is abandoned (ABZONE) up to, and including, when the entire well is abandoned (ABAN).

Statuses are shown at a well event level on Petrinex, therefore a well event status that is reflective of the entire well is repeated on all associated well events. For example, if a well is abandoned on 2011-01-01, every well event associated with that well will have a status of ABAN with an effective date of 2011-01-01.

For a list of Ministry generated Well Event Statuses, see Table 4 below.

IMPORTANT - Industry cannot report monthly production on a well event unless the well event has an ACTIVE status, therefore it is critical to Petrinex reporting that required notifications on drilling, completion and work over data are provided to the Ministry in a timely manner.

Table 4. Well event statuses derived from Licensee submissions to the Ministry.

Well Event Status	Well Event Status descriptions
Initial (N/A)	A well licence has been issued but the drilling process has not yet started.
Drilling (DRILL)	A well that has started the drilling process by reporting a spud date. The well has not had production casing set but may or may not have a finished drilling date.
Cased (CASED)	A well that has a finished drilling date and has production casing set, but has not been completed or abandoned.
Completed (COMP)	A well that has production casing perforations or has no production casing set across a zone (i.e. open hole completion).
Boss (BOSS)	The main well event in a horizontal well that production or injection is assigned or reported to on behalf of all the associated legs that have a DRAIN status (each DRAIN is assigned its own well event).
Drain (DRAIN)	A secondary well event in a horizontal well (leg) that is open to the same zone as the BOSS well event and that is capable of production or injection. The DRAIN well event contributes to the production or injection assigned or reported to the BOSS well event but production or injection does not get reported to it.
Reporting (REPORT)	A well event that is representative of the comminglement of two or more well events. The REPORT well event has all commingled production or injection assigned or reported to it. The contributing, well events representing the individual zones that are commingled have a status of commingled (COMMIN) and do not have production or injection reported to them.
Abandoned Zone (ABZONE)	A well event that had been completed (COMP) in a zone which has had the completions permanently abandoned. Abandoned zones can only be re-activated when a subsequent completion (COMP) within the same zone (well event) takes place.
Abandoned (ABAN)	A well that has been drilled and the downhole and surface abandonment of the wellbore has been completed.
Abandoned – Re-entered (ABRENT)	A well that has been abandoned and subsequently re-entered. To re-enter an abandoned well, a new well licence is required.
Junked and Abandoned (J&A)	A well that has been abandoned prior to drilling operations being completed, typically due to problems encountered while drilling (e.g. lost circulation, kick, etc.).

3.2.2 Licensee Well Event Statuses

The licensee of a well is responsible for reporting, through Petrinex, all well event status changes that occur after a well event is completed (COMP) but prior to a zone being abandoned (ABZONE) or a well being abandoned (ABAN). This includes the well event statuses ACTIVE and suspended (SUSP).

For well event status descriptions, see Appendix 4.

There is one well event status that a licensee must report through Petrinex prior to a status of completed being assigned by the Ministry and that is production while drilling (DRILL PROD). The DRILL PROD status occurs after a DRILL N/A status and prior to a COMP N/A status. In order to report volumetric activity, well events with the DRILL PROD status must be linked to a facility with a subtype of 381 (BT - Drilling and Completing). A well event status of DRILL PROD can only be assigned if oil, gas or condensate is one of the substances produced.

3.2.3 Historic Well Event Statuses

Historic well event statuses are any statuses that have a start date prior to the Saskatchewan go-live date on Petrinex (March 15, 2012). Historical statuses already exist and cannot be changed by the licensee on Petrinex even if the status is considered a Licensee status. Historical statuses can only be changed by the Ministry. A licensee should contact the Ministry if an historical well event status requires a change.

3.3 Change Well Event Status

Well event statuses that are historic or belong to the Ministry, can only be changed by the Ministry. A licensee however, can change a licensee well event status but certain Petrinex validation rules will be applied before the well event status change will be permitted. A status change can occur by adding a new event status to the existing history of statuses for that event, deleting a status from that history, modifying an existing status, or inserting a new status between two existing statuses. These are known as ADD, DELETE, MODIFY and INSERT functions.

Any well event status change, regardless of which function is used, must exist on a drop down menu on the Edit Well Status screen. Only valid well event status combinations will exist for the licensee to choose from. However, there are other data validation checks and requirements that must be met prior to Petrinex accepting the change.

All licensee well event status changes must be made on-line by using the Edit Well Status screen found in the Well Infrastructure section of the Petrinex menu. While any Petrinex user can view non-confidential well infrastructure data, only the licensee of the well can change the status of a well event. The Edit Well Status screen will allow the licensee to choose a well event by Well ID or Licence Number, select a well event status and then choose one of the function keys: ADD, MODIFY, INSERT or DELETE.

[\[Infrastructure\]](#) > [\[Well Infrastructure\]](#)

Edit Well Status

Well ID: SK WI 121010100101W200 Licence No: 96Z999 Licence Issue Date: 1996-11-26
 Name: SASK REGINA 01-01-01-01 Licensee: 98765 SASK PRODUCER LTD.
 Licence Status: ISSUED Licence Status Date: 1996-11-26

Well Status	Well Status Start Date	Facility Link Start Date	Facility Link(s)
OIL ACTIVE PROD N/A	2011-06-01		SKBTB4L0221
N/A COMP N/A N/A	1997-02-12		
N/A DRILL N/A N/A	1997-01-04		
N/A N/A N/A N/A	1996-11-26		

3.3.1 ADD Well Event Status

To add a well event status, select the ADD button and choose the appropriate well event status from the drop down menu. A start date must be entered that corresponds to the day on which that status became effective.

[Infrastructure] > [Well Infrastructure]

ADD Well Status Details

	Well Status	Status Date
New Status:	OIL SUSP PROD N/A	2011-07-01
Before Status:	OIL ACTIVE PROD N/A	2011-06-01

OK Cancel

Note that a user cannot add a well event status with a start date that is the same as the previous status start date. For example, if the licensee wanted to add a status of OIL ACTIVE PROD N/A to follow a status of N/A COMP N/A N/A and the status start dates were the same, Petrinex would reject the submission. If this example is valid, the Ministry should be contacted to adjust the completion date in order to allow the status to be added with the correct date. In this case, the status date for the OIL ACTIVE PROD N/A well event status will affect volumetric reporting whereas the status date for the N/A COMP N/A N/A well event status would not.

3.3.2 DELETE Well Event Status

To delete a licensee well event status, choose the most current licensee well event status and select DELETE.

3.3.3 MODIFY Well Event Status

To modify a licensee well event status, choose the appropriate licensee well event status and select MODIFY. If the status date is being modified, the date being entered must be between the status date of the previous well event status and the status date of the subsequent well event status.

3.3.4 INSERT Well Event Status

To insert a licensee well event status between two existing well event statuses, choose the existing well event status that has a status date prior to that of the well event status being inserted and select INSERT.

Note that INSERT is commonly used to add a well event status of DRILL PROD between the well event statuses of DRILL N/A and COMP N/A.

3.4 Other Licensee Data Requirements

When a licensee submits a change to a well event status, additional information may be required depending on the type of status change that is being submitted.

When a well event status is changed to ACTIVE for the first time, in addition to adding the ACTIVE status and start date, the following data is required:

- The gross completion interval (GCI) top and bottom for the event,
- The oil density type for an OIL PROD well event status,
- The appropriate facility ID that the well event is linked to,
- The unit ID (if applicable), and
- Identification of commingled events (if applicable).

[\[Infrastructure\]](#) > [\[Well Infrastructure\]](#)

ADD Well Status Details

Well ID: SK WI 121010100202W200 Licence No: 03Z999 Licence Issue Date: 2003-02-14
Name: SASK REGINA 01-01-02-02 Licensee: 98765 SASK PRODUCER LTD.
Licence Status: ISSUED Licence Status Date: 2003-02-14

Well Status: OIL ACTIVE PROD N/A Status Date: 2011-06-01

Gross Completion Interval Top: Base:
Horizon Pool: 433006 Carnduff Midale Beds Pool

Oil Density Type: TENTATIVE

Facility ID Facility Name
Facility Link:

Click the check box for unit wells and enter the Unit ID if available.

Unit Well Unit Name
Unit ID:

3.4.1 Gross Completion Interval (GCI)

A GCI represents the interval within the wellbore that is open to the geological zone for a particular well event.

The Gross Completion Interval:

- Indicates the completed perforated, open-hole, slotted liner, or multi-stage fracture interval open to a specified zone(s) and may contribute to production or injection activity.
- Must be entered in a measured depth, in metres kelly bushing (mKB), reported to two decimal places. Petrinex can accept a GCI depth of up to 99,999.99 mKB.
- Must only include the completed interval (not the pay, permeable, or porous interval) that pertains to the well event.
- Must be entered as a GCI top and GCI base that align with the appropriate perforated, slotted liner, open hole, or multi-stage fracture interval, which represents the perforation interval.

- Must be entered for all well events that were licensed prior to the Saskatchewan Petrinex go-live date (March 15, 2012) that have their status changed to ACTIVE for the first time.
- Can be changed when adding a new well event status or when modifying an existing well event status.
- Can be changed independent of a well event status change by choosing GCI on the Edit Well Status screen.

3.4.2 GCI Status

A well event GCI has an associated status that is automatically generated based on perforation and completion data submitted to the Ministry and made available on Petrinex. Once submitted, Petrinex applies rules to the GCI values to determine if the submission should be accepted, denied or conditionally accepted.

Full acceptance of the GCI will result in a GCI status of CONFIRMED and conditional acceptance will result in a GCI status of PENDING. All PENDING GCI statuses are sent to the Ministry for review. Upon review, if the GCI is acceptable, the status will be changed to CONFIRMED. If the GCI is not acceptable, the status will be changed to REVIEW.

To obtain a GCI status of CONFIRMED, the GCI must:

- Match the perforation interval for the well event,
- Not have a plug or packer in existence within the perforation interval, and
- Not have perforated, open hole, slotted liner or multi-stage fracture intervals that are open above or below the GCI which are not separated from the GCI by a plug or packer,

A GCI status of REVIEW indicates to the licensee that the GCI did not match with the completion data (e.g. perforation/plug/packer) that was submitted to the Ministry and therefore should be reviewed by the licensee. If the GCI was submitted in error, a correction must be made and re-submitted through Petrinex. If the completion data was submitted in error, a correction must be submitted to the Ministry.

Note that if perforation data does not exist in Petrinex for a well licensed after Saskatchewan Petrinex go-live date, a GCI will not be accepted and a well event status change to ACTIVE will not be accepted.

3.4.3 Perforation/Packer Information

While entering a GCI, there is a function available to view the perforation and packer data for the well event. This function is available by choosing Perforation/Packer. The data available can be used to determine whether the GCI value to be entered will correlate with the perforation and packer data that was previously submitted to the Ministry.

3.4.4 Oil Density Type

The oil density type is represented by heavy (H), medium (M) or light (L) and must be submitted when the well event status is changed to OIL ACTIVE PROD for the first time. Note that if oil is produced while drilling, the oil density type must be submitted when the OIL DRILL PROD status is entered.

The oil density type can only be entered through Petrinex once for any particular well event. If the oil density is incorrect or needs to be changed, the licensee must contact the Ministry to make that change.

3.4.5 Oil Density Type Status

Every oil density type that is submitted is assigned an oil density type status of PENDING. PENDING oil density type statuses are sent to the Ministry for review and, after validation or correction, are returned to Petrinex as CONFIRMED.

3.4.6 Facility Link

Any well event that reports volumetrics must be linked to an appropriate facility ID when the well event status is changed to ACTIVE for the first time. The submission of a valid facility ID will be required prior to the status change being accepted. The facility link start date will default to the same date as the well event status start date. For data conversion purposes, well events that had an existing facility link prior to Saskatchewan Petrinex go-live date will have the facility link start date as March 15, 2012.

Note that a well event that has production of oil, gas or condensate while drilling will also require a facility link even though the event does not have an ACTIVE status.

Only PROD/INJ well event status types will require more than one facility link. For example, when the status type is PROD/INJ, two facilities are required, a battery and an injection facility. For all other status types, a well event can only be linked to one facility at a time.

For more information about facilities and facility links, see Directive R01-Petrinex Reporting - Facility Information.

3.4.7 Unit ID

Any well event that reports volumetrics and is within a unit must be linked to the unit. A Unit Well check box and unit ID entry box are only available to the licensee once, when the well event status is changed to ACTIVE for the first time, after which they are no longer available or displayed with the well event. The licensee must check the Unit Well check box and enter the Unit ID or select the Unit ID from the drop down list.

Once unit information has been entered with the well event status submission, the unit information is sent to the Ministry, by Petrinex, for review and validation. A notification is also sent to the user

stating that the information has been submitted to the Ministry. Based on the Ministry's review, the appropriate information will be available on the Royalty Tax Attribute (RTA) screen.

3.4.8 Commingling

Commingling occurs when two or more well events are combined and are represented by a commingled reporting event. Since production or injection is no longer segregated in the wellbore, all production or injection from the commingled well events are reported to the REPORT event (i.e. the Structure equals REPORT). Note that a REPORT well event can only be created by the Ministry and is only created when commingling has been approved and the work over to commingle the well event has been completed and reported to the Ministry.

When the REPORT well event is changed to ACTIVE for the first time, all the applicable data requirements must still be met (e.g. GCI, oil density type, unit ID and facility link). In addition, the individual well events that have been commingled and that are represented by the REPORT well event must be identified by checking the Commingled check box for each of the commingled well events. All well events that share a wellbore will be listed within the 'Commingled Events' field, and those available to be shown as commingled will have a check box available.

[Infrastructure] > [Well Infrastructure]

ADD Well Status Details

Well ID: SK 121010100101W304 Licence No: 01Z999 Licence Issue Date: 2001-05-01
 Name: SASK COMMINGLE 01-01-01-01 Licensee:
 Licence Status: ISSUED Licence Status Date: 2001-05-01
 Well Status: GAS ACTIVE PROD REPORT Status Date: 2011-07-05

Gross Completion Interval Top: 335 Base: 524 **Perforation/Packer**
 Horizon Pool:

Oil Density Type: MEDIUM Status: TENTATIVE

Facility ID Facility Name
 Facility Link: SKBTH333333

Click the check box for unit wells and enter the Unit ID if available.
 Unit Well Unit Name
 Unit ID:

Commingled Events
 Please ensure that all commingling is in accordance with Ministry Regulations.

Commingled	Well Event	Current Status	Start Date
<input type="checkbox"/>	SK W121010100101W300	N/A COMP N/A N/A	2011-07-01
<input type="checkbox"/>	SK W121010100101W302	N/A COMP N/A N/A	2001-06-01
<input checked="" type="checkbox"/>	SK W121010100101W303	GAS SUSP PROD N/A	2011-03-24

Submit **Cancel**

Well events that have been identified as commingled will have their well event status structure automatically changed to commingled (COMMIN) with a well event status start date the same as the start date that the REPORT well event was changed to ACTIVE. If an additional well event is commingled at a later date, a new REPORT well event status must be added with the new well event start date. Volumetric data submissions are not allowed for well events that have a status of COMMIN. Volumetric data is submitted on the REPORT well event.

If the wellbore is no longer commingled and the individual zones are segregated, the REPORT well event status will be changed to ABZONE by the Ministry. The licensee can change the well event status on any one of the previously commingled well events from COMP to ACTIVE if applicable.

Appendix 4 Well Event Status Descriptions

Well Event Status	Description
OIL ACTIVE PROD	Produces oil from a zone.
OIL ACTIVE PROD/INJ	Produces oil from a zone and injects a fluid into the same zone to assist oil recovery (i.e. cyclic or SAGD).
OIL DRILL PROD	Produces oil while drilling and prior to completion.
GAS ACTIVE PROD	Produces gas from a zone.
GAS ACTIVE INJ	Injects gas into a zone (may include butane, propane, methane etc.).
GAS ACTIVE PROD/INJ	Produces gas from a zone and injects a fluid into the same zone to assist gas recovery.
GAS DRILL PROD	Produces gas while drilling and prior to completion.
WATER ACTIVE INJ	Injects water into a zone.
WATER ACTIVE DISP	Injects water or waste into a non-hydrocarbon-bearing zone.
WATER ACTIVE SOURCE	Produces fresh or formation water from a zone.
STEAM ACTIVE INJ	Injects steam into a zone.
AIR ACTIVE INJ	Injects air into a zone.
CO2 ACTIVE INJ	Injects CO2 into a zone.
PLYMR ACTIVE INJ	Injects polymer into a zone.
WAG ACTIVE INJ	Alternates between water and gas injection into a zone.
POTASH COMP	A non-reporting well event that has been completed for the purpose of potash production. This status is set by the Ministry only.
WASTE ACTIVE CAVERN	A non-reporting well event that is associated with the operations of a Waste Plant Cavern Facility. This status is set by the Ministry only.
SUSP (ALL COMBINATIONS)	Production or injection operations have ceased for an indefinite period of time. A well event should be suspended within 12 months after the last production or injection has occurred. Note that a well event that has been suspended is not required to report.
COMMINGLED	A well event that has been approved by the Ministry to be commingled with one or more other well events and produce or inject in an un-segregated state. An individual commingled well event is non-reporting with production or injection being reported under the assigned commingled REPORT well event. Note that while an event is commingled, it cannot be used to report production or injection volumes.
HCOMMINGLED	A well event that was commingled historically but was no longer commingled at the time of data conversion for Petrinex (March 15/12). This status is set by the Ministry only.
COMP OBS	A well event designated by the Ministry that is used for observation purposes only. This status is set by the Ministry only.
RECLASSIFIED	A well event that had a gap in activity (i.e. it was not active or suspended but the perforations were still open and it was capable of production or injection.) The status was created for the conversion to Petrinex. No new instances will be created after Petrinex go-live (March 15/12). This status is set by the Ministry only.