Filing Completions for Oil & Gas

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July 2020

COMPLETIONS
OVERVIEW AND DISCUSSION

Form W-2/G-1

Class Synopsis

This presentation is a general overview of how to file Completion Reports utilizing the Railroad Commission of Texas Online Completion Filing System.

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- By the end of this presentation you will understand how to properly file online completions for oil wells drilled in the State of Texas.
- During the presentation we will also review common problems that delay the processing and final approval of these filings.

Texas Administrative Code Rule 3.16

Completion Reports are **due**:

- within **90 days** after completion of the well
- or within **150 days** after the drilling operation is completed
- **whichever** is earlier

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- 3.16(b)(1) The operator of a well shall file with the Commission the appropriate completion report within **90 days after completion** of the well or within **150 days after** the date on which the **drilling operation** is completed, ***whichever is earlier***.
- Special Field Rules *always* supersede Statewide Rules
  - Check to see if the field has exception(s) to…
    SWR-16 Log and Completion or Plugging Report,
    SWR-51(a) Oil Potential Test Forms Required or
    SWR-28 Potential and Deliverability of Gas Wells to be Ascertained and Reported.
  - Please note many Special Field Rules are now mirroring SWR-16.

Rule 3.16 (cont'd)

Subsequent Completion Reports are due:

- within **30 days** of any *physical changes* made to wellbore structure
  - Adding new and/or squeezing perforations
  - Adding a liner
  - Adding tubing
  - Setting CIBP with/without cement

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SWR-16(b)(2) The operator of a well shall file with the Commission an amended completion report within **30 days of any physical changes** made to the well, such as any change in perforations, or openhole or casing records.

- Example(s) when Completion Report is **NOT** required:
  - Tubing Leak Workover – simply repairing the tubing – same zone – same production setup
  - Tubing Leak Workover – depth of tubing is slightly different with packer set higher than before – same zone – same production setup
  - Changing from Gas Lift to Rod Pump – same zone – same production setup
- SWR-16 does not accommodate ***evaluation period*** of well.
  - Status cannot remain Open-Ended due to well not yet at Total Depth
  - Operator is encouraged to submit a Well Record Only W-2/G-1 adding Remark: "Leave Drilling Permit open pending further wellbore evaluation."
  - Once drilling operations resume, subsequent completion can be filed as an IP.
- Not reporting wellbore structure change may affect future plugging procedure. Prior to approving W-3A Intent to Plug and Abandon, if change to wellbore structure required cement, District Office will request W-15 Cementing Report.

Navigating to the Online System

https://www.rrc.texas.gov/

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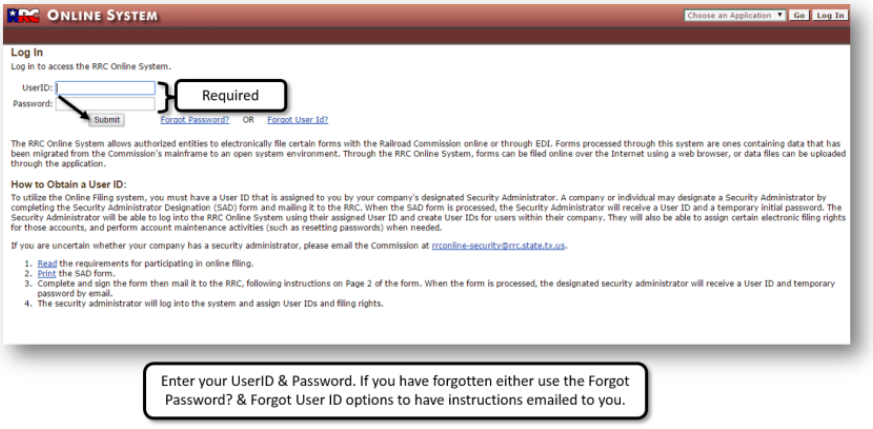
- Start off by going to the Railroad Commission website by typing www.rrc.texas.gov.
- As of June of 2014 the website has changed, and you can now find the RRC Online Login at the top of your screen in the center of the page.

Log In



Enter your UserID & Password. If you have forgotten either use the Forgot Password? & Forgot User ID options to have instructions emailed to you.

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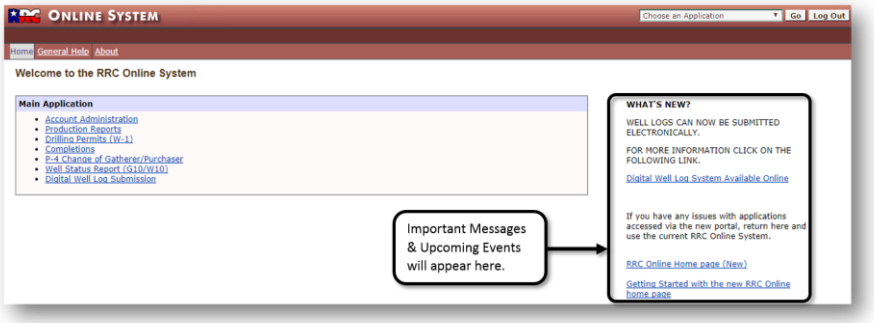
- The User ID and Password are required fields.
- You can select *Forgot User ID* to have your User ID emailed to the registered email address.
- You can select *Forgot Password* to have a link to reset your login password emailed to your registered email address.
- Security Administrators should not be filing. You should have at least two different accounts, one for the security administrator and individual accounts for the filer(s).

Online Applications



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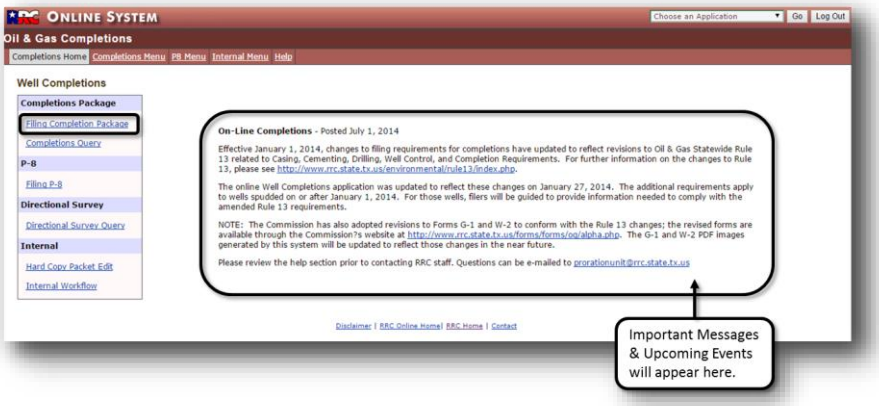
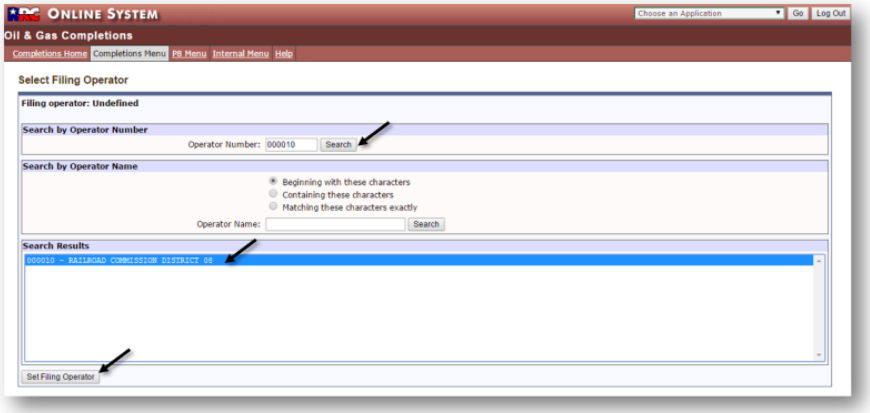
- The completions home screen is the first place you might see an important message about the RRC Online System.
- You might also get a notification regarding the expiration of your password between the *Welcome to the RRC Online System* greeting and *Main Application*.

Completion Application



- We will be focusing on filing a new completion so you will be selecting the filing completion package option.
- Note that this is the second place you might see an important notification about changes to the online system or message about an upcoming event.

Select Filing Operator



If you are filing as a Consultant/Agent you will need to enter the appropriate Operator information here. If you are filing as an Operator then the online system will automatically select your operator number.

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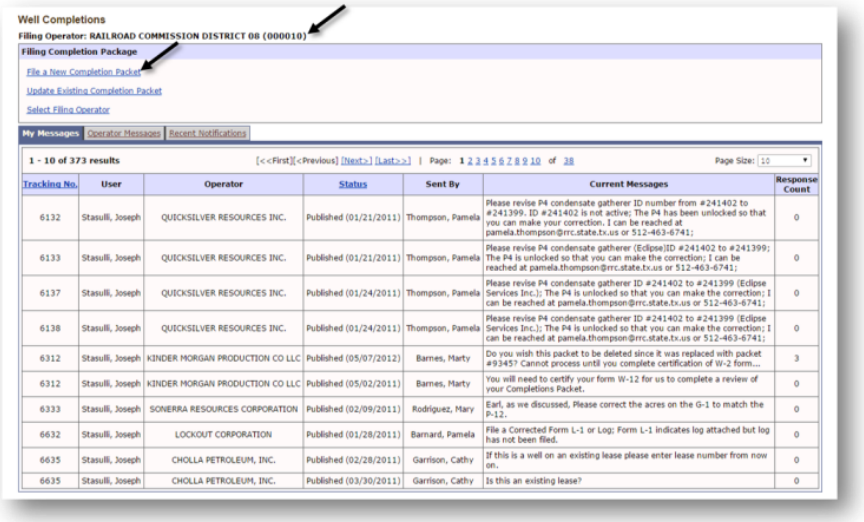
- If you are filing as the operator you will not see this screen.
- If you are filing as a consultant, you will need to enter the operator number or name you are filing for in order to continue.

Filing Options



Tracking No.	User	Operator	Status	Sent By	Current Messages	Response Count
6132	Stasulli, Joseph	QUICKSILVER RESOURCES INC.	Published (01/21/2011)	Thompson, Pamela	Please revise P4 condensate gatherer ID number from #241402 to #241399. ID #241402 is not active; The P4 has been unlocked so that you can make your correction, I can be reached at pamela.thompson@rrc.state.tx.us or 512-463-6741;	0
6133	Stasulli, Joseph	QUICKSILVER RESOURCES INC.	Published (01/21/2011)	Thompson, Pamela	Please revise P4 condensate gatherer (Eclipse)ID #241402 to #241399; The P4 is unlocked so that you can make the correction; I can be reached at pamela.thompson@rrc.state.tx.us or 512-463-6741;	0
6137	Stasulli, Joseph	QUICKSILVER RESOURCES INC.	Published (01/24/2011)	Thompson, Pamela	Please revise P4 condensate gatherer ID #241402 to #241399 (Eclipse Services Inc.); The P4 is unlocked so that you can make the correction; I can be reached at pamela.thompson@rrc.state.tx.us or 512-463-6741;	0
6138	Stasulli, Joseph	QUICKSILVER RESOURCES INC.	Published (01/24/2011)	Thompson, Pamela	Please revise P4 condensate gatherer ID #241402 to #241399 (Eclipse Services Inc.); The P4 is unlocked so that you can make the correction; I can be reached at pamela.thompson@rrc.state.tx.us or 512-463-6741;	0
6312	Stasulli, Joseph	KINDER MORGAN PRODUCTION CO LLC	Published (05/07/2012)	Barnes, Marty	Do you wish this packet to be deleted since it was replaced with packet #93457 Cannot process until you complete certification of W-2 form...	3
6312	Stasulli, Joseph	KINDER MORGAN PRODUCTION CO LLC	Published (05/02/2011)	Barnes, Marty	You will need to certify your form W-12 for us to complete a review of your Completions Packet.	0
6333	Stasulli, Joseph	SONERRA RESOURCES CORPORATION	Published (02/09/2011)	Rodriguez, Mary	Earl, as we discussed, Please correct the acres on the G-1 to match the P-12.	0
6632	Stasulli, Joseph	LOCKOUT CORPORATION	Published (01/28/2011)	Barnard, Pamela	File a Corrected Form L-1 or Log; Form L-1 indicates log attached but log has not been filed.	0
6635	Stasulli, Joseph	CHOLLA PETROLEUM, INC.	Published (02/28/2011)	Garrison, Cathy	If this is a well on an existing lease please enter lease number from now on.	0
6635	Stasulli, Joseph	CHOLLA PETROLEUM, INC.	Published (03/30/2011)	Garrison, Cathy	Is this an existing lease?	0

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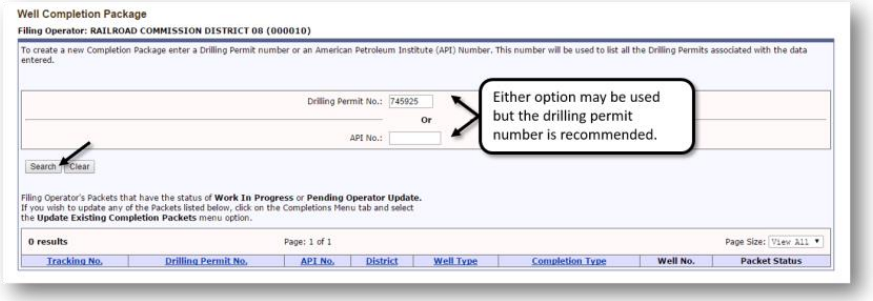
- Notice the operator name and number will be listed at the top of the screen.
- You will also notice that the system defaults to any pending messages under this operator number for the logged in user.
- If you want to see messages for this operator number, you can switch to *Operator Messages*.

Identify the Well



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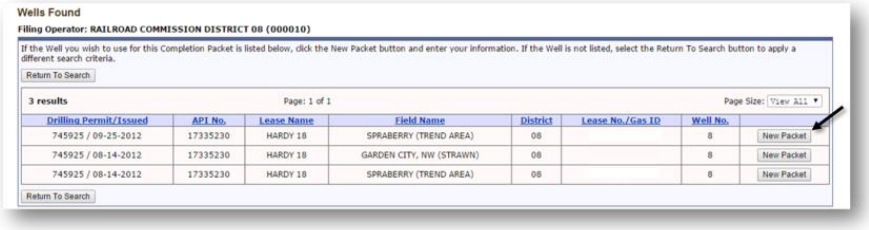
- Enter your first identifier for the well.
- We suggest the drilling permit number be used over the API number as the system will auto fill some of the information for you based on the approved W-1.

Select the Field



Select the field the well was completed in. If the well is downhole commingled you need to select the primary reporting field specified on your approved SWR-10 letter.

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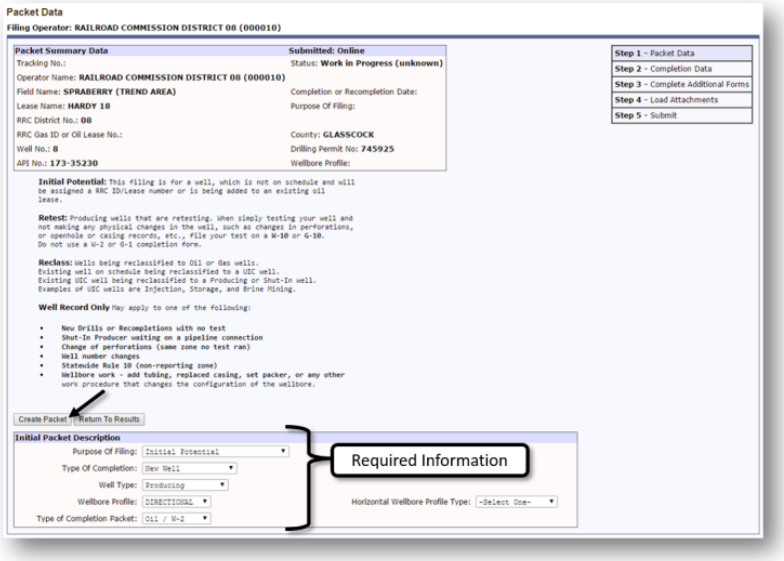
- Select *New Packet* next to the field this well was completed in or is producing from.
- If this well is downhole commingled, please make sure to check your approved SWR-10 letter for the reporting zone.
- In this case the well is in fact downhole commingled and the approval letter specified *Spraberry (Trend Area)* as the reporting zone.
- For UIC wells, the field that the well is completed in must match the field on the injection permit.

Initial Packet Description



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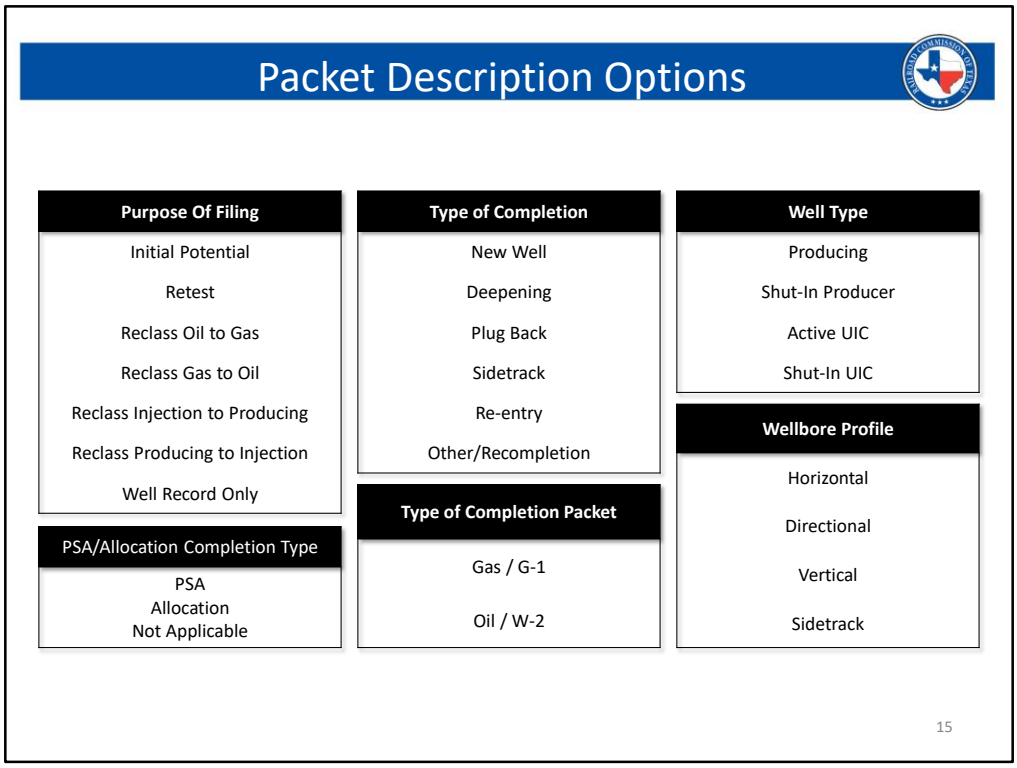
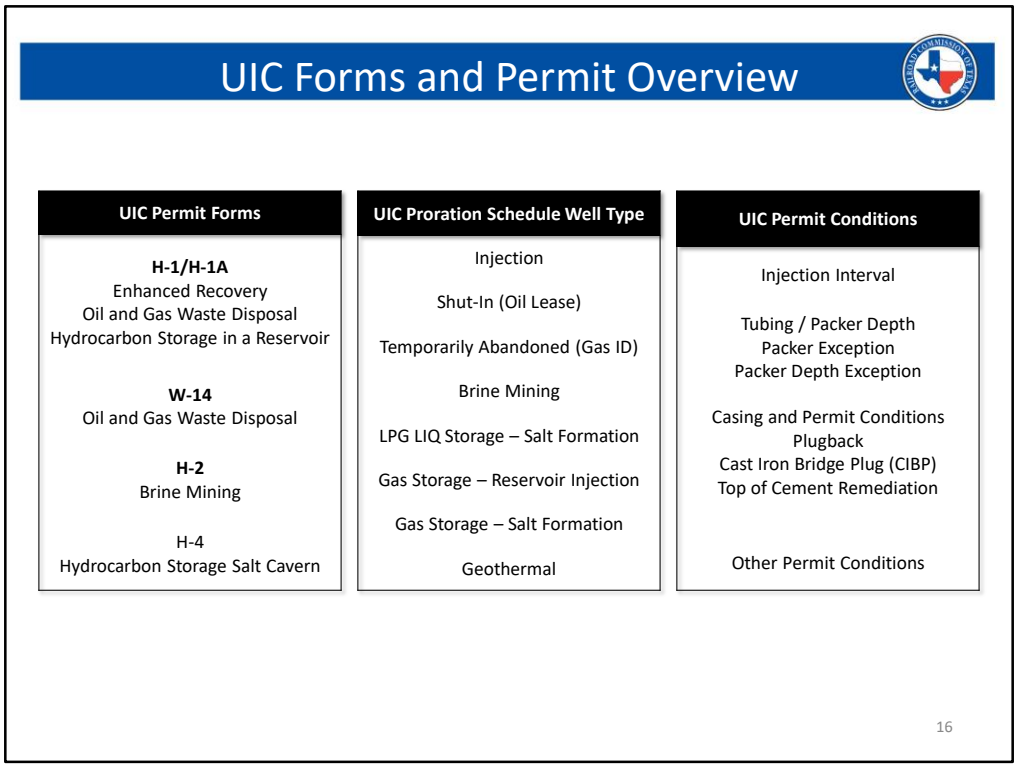
- Once the field has been selected the system will prompt you to start filling out the packet data.
- The top portion of the page explains the different purpose of filing options available.
- You will need to select the *Purpose Of Filing, Type Of Completion, Well Type, Wellbore Profile* and *Type of Completion Packet*.
- Once you have completed the initial packet description section select the “Create Packet” button.
- The options for the wellbore profile will be limited based on the way the well was permitted.
- Once the packet is created as either a G-1 or W-2 it can not be changed. If you selected the wrong type of completion packet you will actually need to delete the completion and start over.



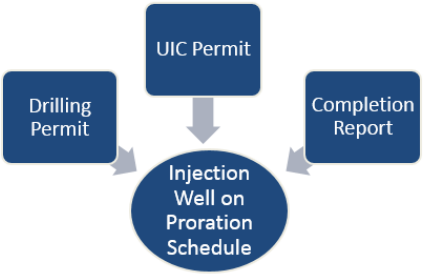
- Above you will find the available filing options.
- Because we are filing a new well with the first test, we have selected *New Well, Initial Potential, Producing*.
- For UIC Purpose of Filing, select “Reclass Injection to Producing” or “Well Record Only” for “New Well” and all others.
- For UIC, Type of Completion Packet Gas/G-1 is applicable for fields that allow gas completions by field rules.



- Available filing options for UIC wells.
- Permit conditions are often met by filing completions that show the required work done on the well.
- A Notice to Operators dated 5/5/2020 in response to national and global economic conditions currently impacting the oil and gas industry did the following among other steps: waived fees for the remainder of 2020 for Forms H-1, H-4, and W-14.
- For 5 years, Form H-4 can be filed to request a permit under an exception to SWR-95 authorizing underground hydrocarbon storage in a geological formation other than an underground salt formation.

UIC Well on the Proration Schedule

Field Name & Field Number must match on the Drilling Permit, UIC Permit & Completion Report



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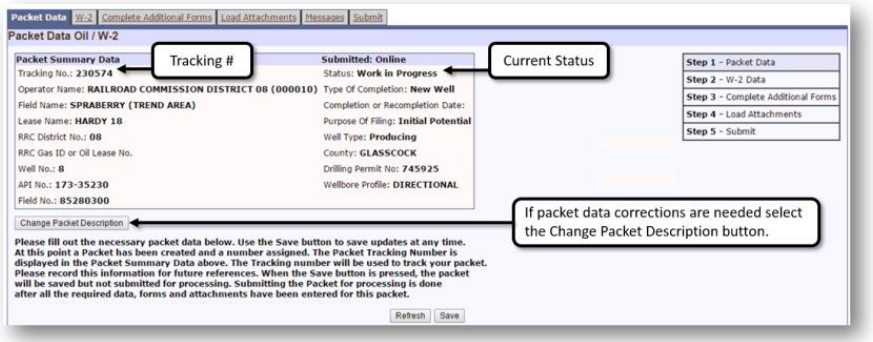
- This is an overview of the relation between the Injection Permit, the Drilling Permit and the Completion Report.
- This is important for the user to show how the injection well is added to the proration schedule by the Completion Report.
- This is important for the RRC staff because the sketch suggests how the RRC Mainframe links the UIC Permit to the well on the proration schedule. The Completion Report has to tie the 2 permits together.
- Here I am indicating that the Field Name & Field Number must match on all 3 forms.

Verify Packet Data



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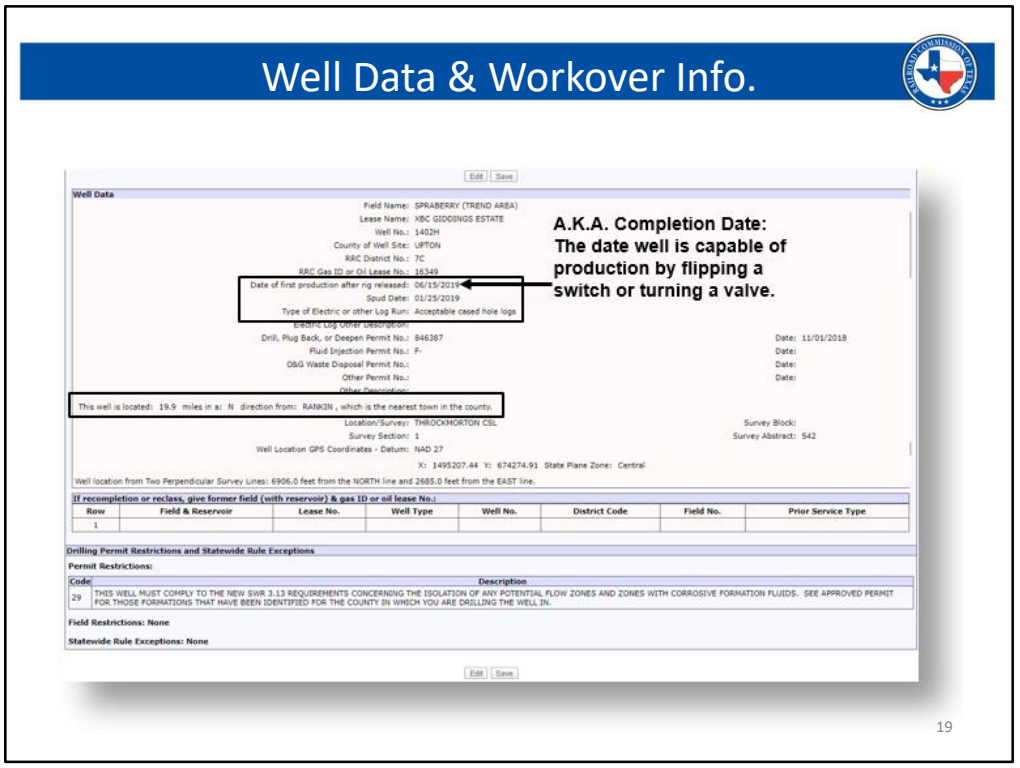
- Once you select the *Create Packet* button the system will assign your tracking number and show you that this tracking number is a work in progress.
- At this point you can verify that the information in your packet data is correct and choose to change the packet description if you need to make changes to the information on the right side of the *Packet Summary Data*.
- This page is continued on the next slide.



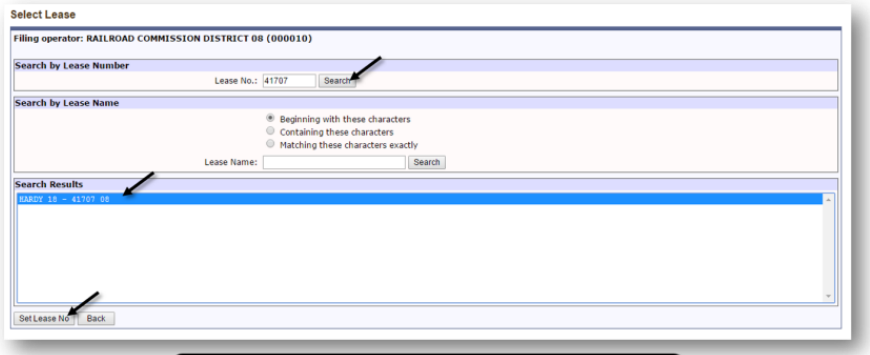
- **Required** Fields:
  - Date of first production after rig released
    - If the well is not completed, use the date the rig was released.
  - Spud Date
  - Type of Electric or other Log Run
  - Distance in miles and direction from nearest town in the county
- This page will allow you to make changes to the information on the left-hand side of the packet summary data.
- Don't forget to always save your work before moving on to the next page.
- Some of the information on this page will auto fill from your approved W-1.
- Well latitude & longitude are optional.
- For UIC, enter on the left side either the fluid injection permit no. after "F-", or the O&G waste disposal permit no. as on the injection permit.
- Enter on the right side the date of the injection permit.
- Definition of Spud:
  - SWR-16(a)(2): Drilling operation--A **continuous effort** to drill or deepen a wellbore for which the commission has issued a permit.
    - Run and cemented pipe…it's a permanent installation…well **has** been spud.
    - Set conductor casing to stabilize wellbore, *never cemented* then pulled once drilling resumed…simply prepping location…well **has not** been spud.
  - *Gentle Reminder:* If drilling on multi-well pad, please do not use date rig returned to resume drilling on next casing string as the spud date.

→ FAILURE TO NOTIFY District Office drilling operations have commenced will result in Enforcement or

Penalty Action.

- District would like to witness cementing protecting freshwater strata.

Setting the Lease Number



If this well is going onto an existing lease then you should be adding the lease number to the packet data at this time.

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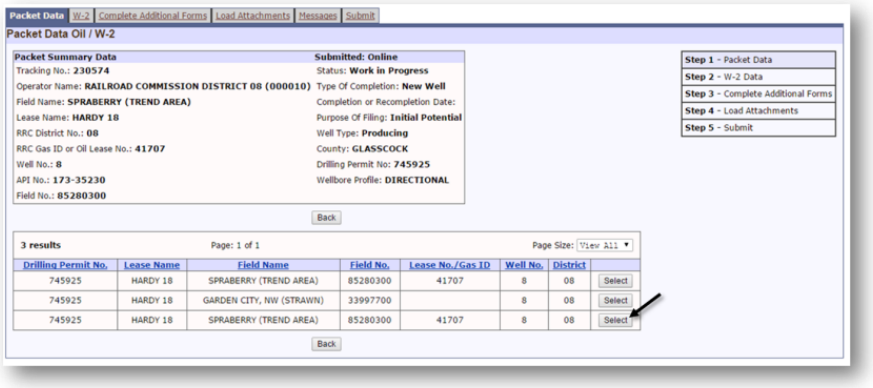
- If the lease number is known you should be adding it to the packet data prior to submittal of the W-2/G-1.
- Remembering to add the lease number will help prevent the creation of a second lease number causing a SWR-40 violation.

Search for Field & Reservoir



Always use the Search for Field & Reservoir button instead of manually keying the workover information. This will automatically fill in the workover information with the correct field number, well number etc.

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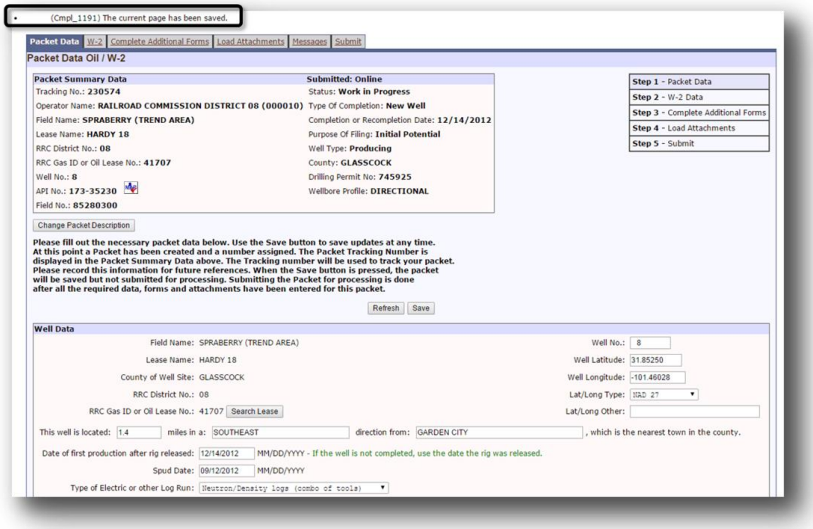
- Selecting one of these lines will auto fill the workover section and avoid any typos.
- This prevents the analyst from having to go in and correct field numbers, well number spacing etc.

Packet Data Successfully Saved



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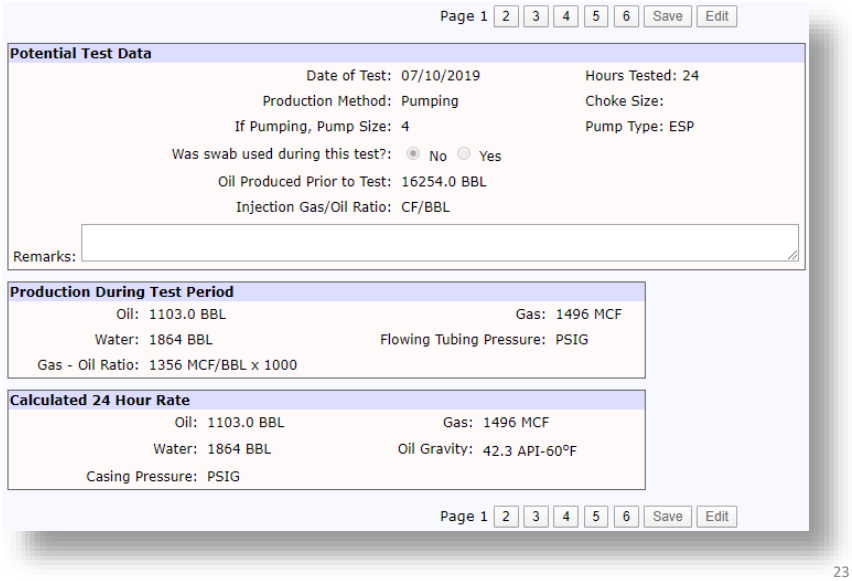
- Once you have completed all the required information for the packet data you will get a message at the top of the screen that says, “The current page has been saved.”
    - Otherwise the system will prompt you with red messages requiring correction in order to continue.
- Please note that there is now a GIS link to the right of the API number.

W-2 Page 1 (Potential Test Data)



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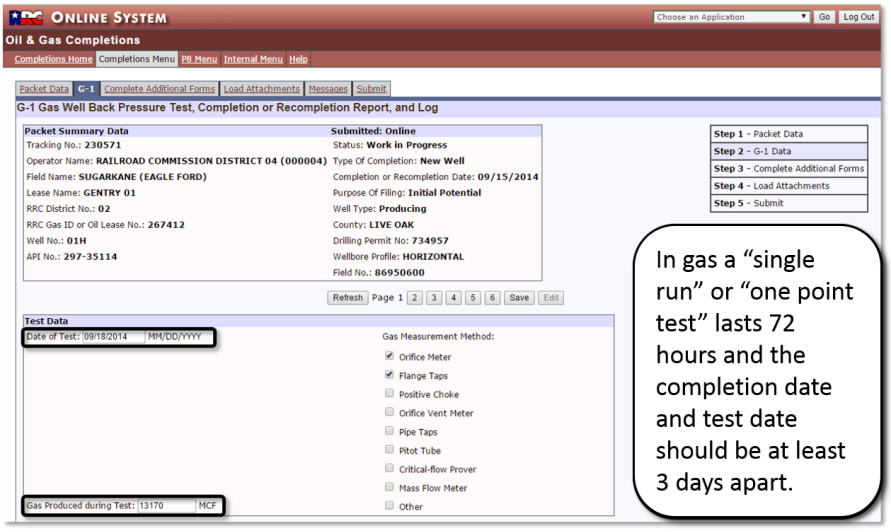
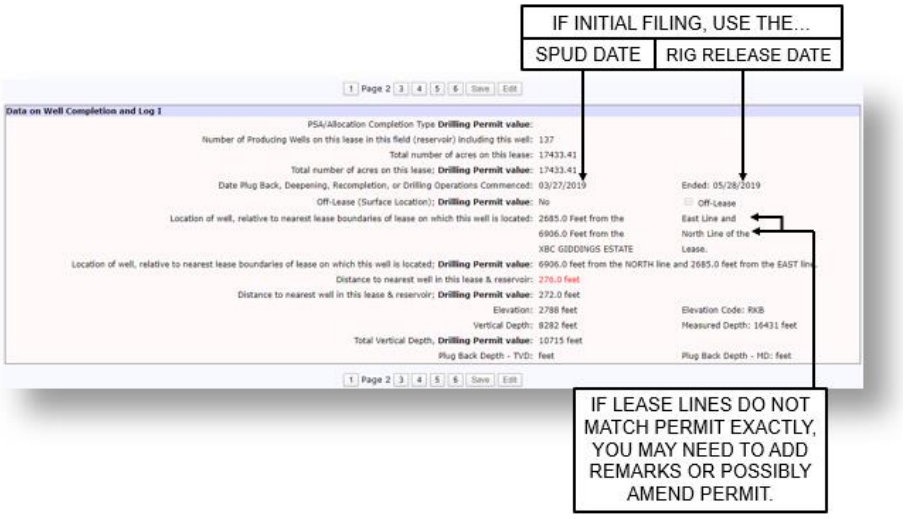
- The *Calculated 24-Hour Rate* must match the *Production During Test Period* if your potential test was a 24-hour test.
- Make sure to hit the save button on each page before continuing to the next.
- For UIC wells, no data is entered on page 1 of the W-2/G-1.
- District will verify production method
  - If flowing, District will verify on page 4 if tubing was installed.
    - If no tubing, please attach SWR-13 exception.
- Exception on no tubing does not give an exception on not filing completion reports.
  - Ideally, we would like to see IP completion filed without tubing [attach SWR-13 exception]; with subsequent filing as Well Record Only showing tubing installed.
- Question *Was swab used during this test?*
  - Swabbing is not allowed during the test **without prior** District approval. Add Remark and attach SWR-21 exception approval (Form W-21 handout attached).

Form G-1 Page 1 (Test Data)



- Page 1 of the G-1 is the only page that differs from the W-2.
- If you are providing data for a single run on a G-1 then it will be a one-point test and should have been 72 hours.
- Please note that the date of the test should be 3 days (72 hours) after the *Completion Date.*
- For UIC wells, no data is entered on page 1 of the W-2/G-1.

Page 2 (Completion Data I)



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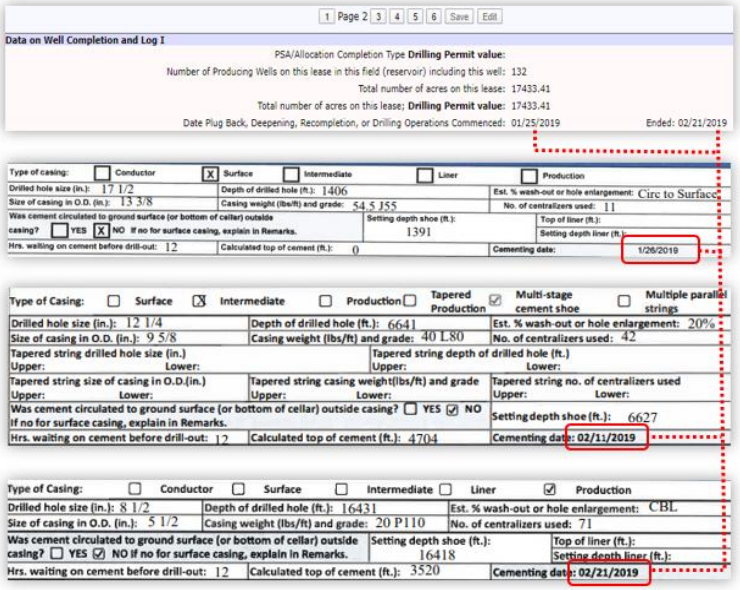
- You might get a warning if the number of producing wells is different than the number you listed on your drilling permit. That is ok as long as it doesn't cause a SWR-38 issue.
- We need to know the number of wells (including this one) holding acres in this field at the time of this completion.
- "The Packet agrees with the Drilling Permit (Total Depth, Density, and Field)." If you do not get this message you might need to obtain an amended drilling permit.
- If the total lease acreage on an existing lease has changed then a Well Record W-2/G-1 should be filed to update records with the commission per SWR-1(b).
- SWR-1(b) Record requirements. All entities who perform operations which are within the jurisdiction of the Commission shall keep books showing accurate records of the drilling, re-drilling, or deepening of wells, the volumes of crude oil on hand at the end of each month, the volumes of oil, gas, and geothermal resources produced and disposed of, together with records of such information on leases or property sold or transferred, and other information as required by Commission rules and regulations in connection with the performance of such operations, which books shall be kept open for the inspection of the Commission or its representatives, and shall report such information as required by the Commission to do so.
- TD is verified (cannot be shallower than deepest casing depth, deepest producing interval or tubing depth).
- PB is verified (cannot be above deepest producing interval; should be less than TD).

Page 2 (Drilling Operations)



1 Page 2 3 4 5 6 Save Edit

Data on Well Completion and Log I

PSA/Allocation Completion Type **Drilling Permit value:**

Number of Producing Wells on this lease in this field (reservoir) including this well: 132

Total number of acres on this lease: 17433.41

Total number of acres on this lease; **Drilling Permit value:** 17433.41

Date Plug Back, Deepening, Recompletion, or Drilling Operations Commenced: 01/25/2019 Ended: 02/21/2019

Type of casing: ☐ Conductor ☒ Surface ☐ Intermediate ☐ Liner ☐ Production		
Drilled hole size (in.): 17 1/2	Depth of drilled hole (ft.): 1406	Est. % wash-out or hole enlargement: Circ to Surface
Size of casing in O.D. (in.): 13 3/8	Casing weight (lbs/ft) and grade: 54.5 J55	No. of centralizers used: 11
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☒ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 1391	Top of liner (ft.): Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 12	Calculated top of cement (ft.): 0	Cementing date: 1/26/2019

Type of Casing: ☐ Surface ☒ Intermediate ☐ Production ☐ Tapered Production ☑ Multi-stage cement shoe ☐ Multiple parallel strings		
Drilled hole size (in.): 12 1/4	Depth of drilled hole (ft.): 6641	Est. % wash-out or hole enlargement: 20%
Size of casing in O.D. (in.): 9 5/8	Casing weight (lbs/ft) and grade: 40 L80	No. of centralizers used: 42
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D.(in.) Upper: Lower:	Tapered string casing weight(lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☑ NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.): 6627
Hrs. waiting on cement before drill-out: 12	Calculated top of cement (ft.): 4704	Cementing date: 02/11/2019

Type of Casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☑ Production		
Drilled hole size (in.): 8 1/2	Depth of drilled hole (ft.): 16431	Est. % wash-out or hole enlargement: CBL
Size of casing in O.D. (in.): 5 1/2	Casing weight (lbs/ft) and grade: 20 P110	No. of centralizers used: 71
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☑ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 16418	Top of liner (ft.): Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 12	Calculated top of cement (ft.): 3520	Cementing date: 02/21/2019

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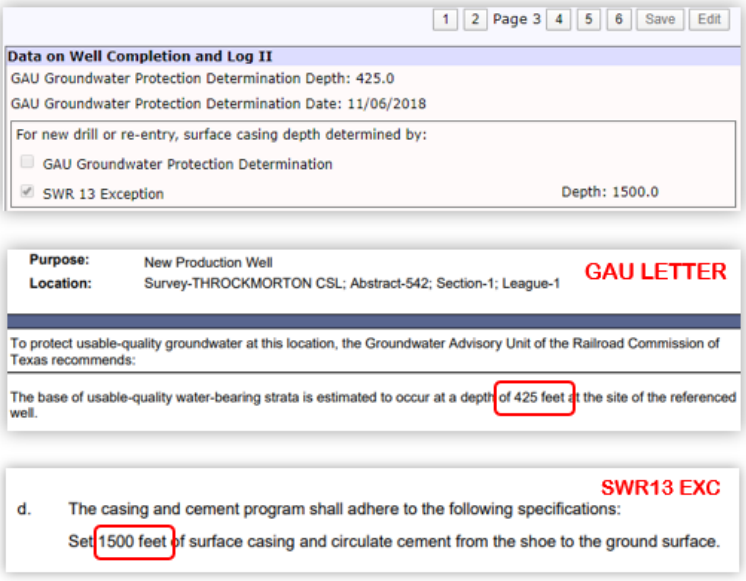
- On New Drills, **Commenced/Ended** Dates are compared to Spud Date on Packet Data Tab and W-15 cementing reports date range.
- Only initial filing will show ***Drilling*** rig release date
  - Example shows W-15 dates agree with well's Drilling Operations ranging from 1/25/2019 to 2/21/2019.
    - As instructed on first two pages of Drilling Permit, it is very important field representative call in every casing size cemented during drilling operations.
      - Can possibly affect P-8 approvals when drilling notification is incomplete
- Subsequent filings will reflect date of Completion Rig operations such as perfs were added, tubing was installed, etc.

Page 3 (SWR-13 Excess Surface Casing)



1 | 2 | Page 3 | 4 | 5 | 6 | Save | Edit

Data on Well Completion and Log II

GAU Groundwater Protection Determination Depth: 425.0

GAU Groundwater Protection Determination Date: 11/06/2018

For new drill or re-entry, surface casing depth determined by:

☐ GAU Groundwater Protection Determination

☑ SWR 13 Exception Depth: 1500.0

Purpose: New Production Well

Location: Survey-THROCKMORTON CSL; Abstract-542; Section-1; League-1

GAU LETTER

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The base of usable-quality water-bearing strata is estimated to occur at a depth of 425 feet at the site of the referenced well.

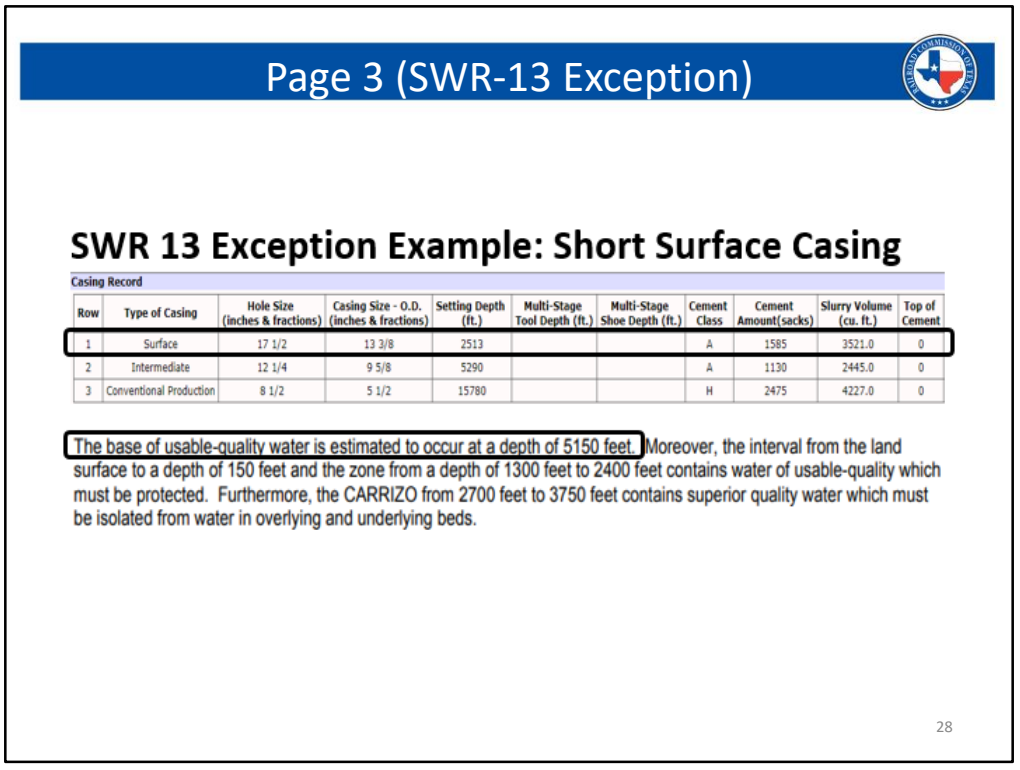
SWR13 EXC

d. The casing and cement program shall adhere to the following specifications:

Set 1500 feet of surface casing and circulate cement from the shoe to the ground surface.

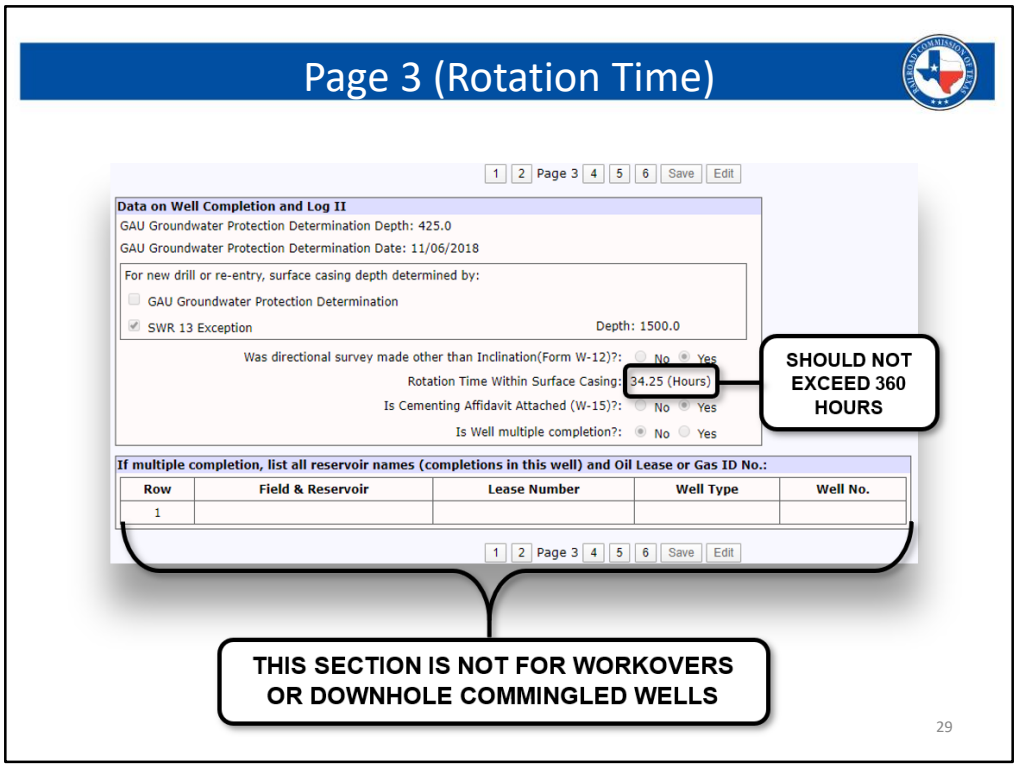
27

- GAU Determination Depth: Looking for deepest depth on GAU.
- SWR-13 exception will be questioned by District if…
  - Item specifically instructs DVT installation to ensure cement will circulate to surface resulting in cement not circulating and DVT not opened.
  - Exceeding granted depth (*i.e.* SWR-13 exception for 1200 but set 1300) Rule of Thumb: No more than one joint of casing (30'-50')
  - *Example:*
    - GAU Depth 425'
    - SWR-13 exception approved 1500' surface casing
    - Actual setting depth 1391' (not shown)
- Exception to surface casing deeper than 3500' is not an online option.
  - Request must be made by letter to District showing plans to maintain well control during drilling & ensure successful circulation of cement.
  - District's letter of authorization must be attached to completion.
  - Operator is still required to file online SWR-13 exception for obviously exceeding 200' GAU recommendation.
- District may request SWR-13 exception be filed for a well drilling has been temporarily suspended; please select "YES" on question *if drilling is completed*, otherwise, system will require info on Intermediate and Production Casing(s).



SWR-13 Exception Request Types

- Short Surface Casing
- Excess Surface Casing
- Single-String
- No Tubing/Tubing Only
    - *Example:*
        - GAU BUQW depth at 5150.
        - 13-3/8” surface casing set to 2513.
        - Although 9-5/8” intermediate casing set to 5290 circulated to surface, exception is required.



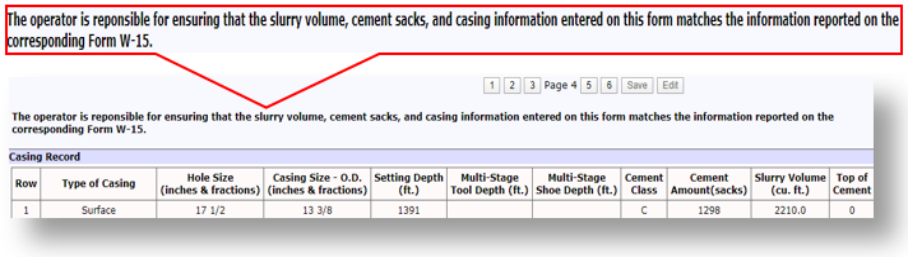
SWR-13(b)

(I) Mechanical integrity test of surface casing after drillout.

(i) If the surface casing is **exposed to more than 360 rotating hours** after reaching total depth or the depth of the next casing string, the operator shall verify the integrity of the surface casing by using a casing evaluation tool or conducting a mechanical integrity test or equivalent Commission approved casing evaluation method, unless otherwise approved by the district director.

- *Rotation Time* **is a required field** now and should not exceed 360 hours.
  - If it does, contact District Office & attach SC MIT for district technical review.
- Selecting Yes on the directional survey question will prompt engineering approval of the W-2/G-1.

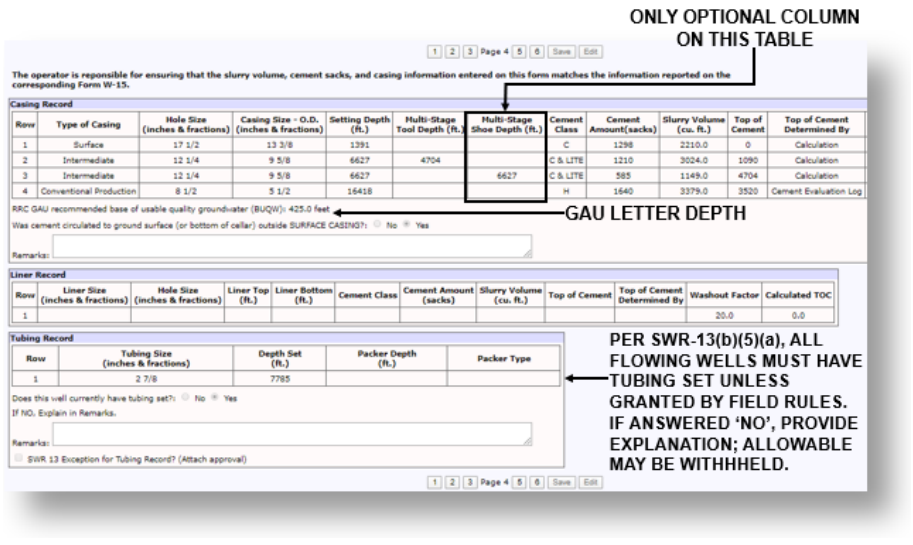
Page 4 (Corresponding W-15)



30

The operator is responsible for ensuring that the slurry volume, cement sacks, and casing information entered on this form matches the information reported on the corresponding Form W-15.

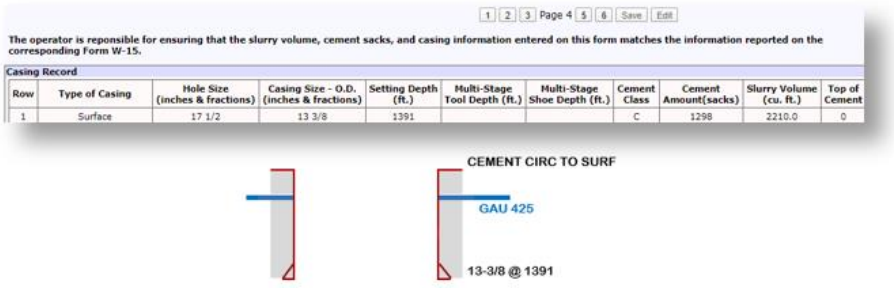
Page 4 (Casing, Liner & Tubing)



31

- Page 4 has been sectioned into three parts:
  - Casing Record
    - Should be entered from the surface to total depth of the wellbore in that order.
    - For *Casing Record* data, only the *Multistage Shoe Depth is* optional.
  - Liner Record
  - Tubing Record
    - Attach approved SWR-13 exception for tubing or if in field rules, add remark "allowed by field rules"
    - If the well is a storage well or brine mining well, the tubing may instead be known as the "hanging string" or "dissolution string." Still report it in this tubing section.
- For District audit, SWR-13 flags not visible to industry and not all flags are a violation.
- GAU depth is already listed on page 3, why do I have to put it again on page 4?
    - Page 4 has built-in formulas; calculations are not seen by industry (for example, District will message if cement doesn't look as high as operator shows).

Page 4 (Surface Casing)



1 2 3 Page 4 5 6 Save Edit

The operator is reponsible for ensuring that the slurry volume, cement sacks, and casing information entered on this form matches the information reported on the corresponding Form W-15.

Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	17 1/2	13 3/8	1391			C	1298	2210.0	0

32

- If District cannot build wellbore schematic based on well completion information, Operator will be requested to provide wellbore schematic.
- *Example:*
  - GAU Depth at 425’
  - 13-3/8” surface casing set to 1391’
    - Cement circulated to surface
  - SWR-13 exception attached

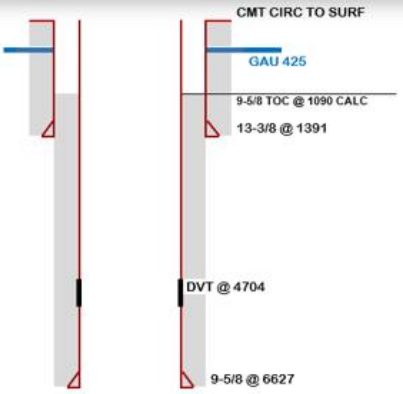
Page 4 (Intermediate Casing)

1 2 3 Page 4 5 6 Save Edit

The operator is reponsible for ensuring that the slurry volume, cement sacks, and casing information entered on this form matches the information reported on the corresponding Form W-15.

Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	17 1/2	13 3/8	1391			C	1298	2210.0	0
2	Intermediate	12 1/4	9 5/8	6627	4704		C & LITE	1210	3024.0	1090
3	Intermediate	12 1/4	9 5/8	6627		6627	C & LITE	585	1149.0	4704



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- Not Required…Optional…to fill in Multi-Stage Shoe Depth (ft) Column; depth already appears in Setting Depth (ft) Column.
- Example:
  - 9-5/8” intermediate casing shoe set to 6627’
    - Cement circulated to DVTool at 4704’
    - From DVTool at 4704’ cement circulated to 1090’

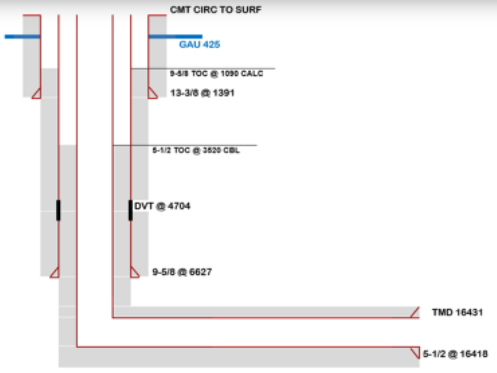
Page 4 (Production Casing)

1 2 3 Page 4 5 6 Save Edit

The operator is reponsible for ensuring that the slurry volume, cement sacks, and casing information entered on this form matches the information reported on the corresponding Form W-15.

Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	17 1/2	13 3/8	1391			C	1298	2210.0	0
2	Intermediate	12 1/4	9 5/8	6627	4704		C & LITE	1210	3024.0	1090
3	Intermediate	12 1/4	9 5/8	6627		6627	C & LITE	585	1149.0	4704
4	Conventional Production	8 1/2	5 1/2	16418			H	1640	3379.0	3520



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Example:

- 5-1/2” production casing set to 16,418’
  - Per Cement Bond Log, cement circulated to 3520’
- Schematic shows continuous cement coverage from 5-1/2” Shoe to Surface in compliance with SWR-13.

Page 4 (Tubing)

Tubing Record

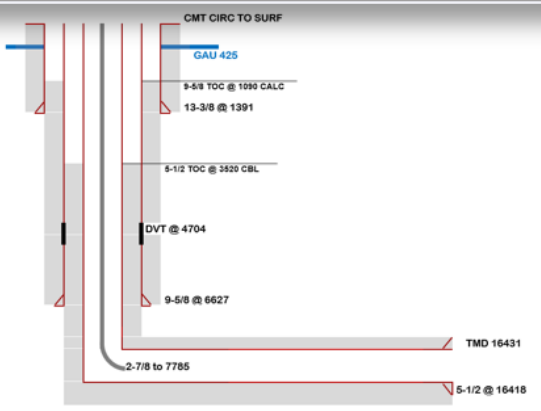
Row	Tubing Size (inches & fractions)	Depth Set (ft.)	Packer Depth (ft.)	Packer Type
1	2 7/8	7785		

Does this well currently have tubing set?: ○ No ◉ Yes

If NO, Explain in Remarks.

Remarks:

☐ SWR 13 Exception for Tubing Record? (Attach approval)



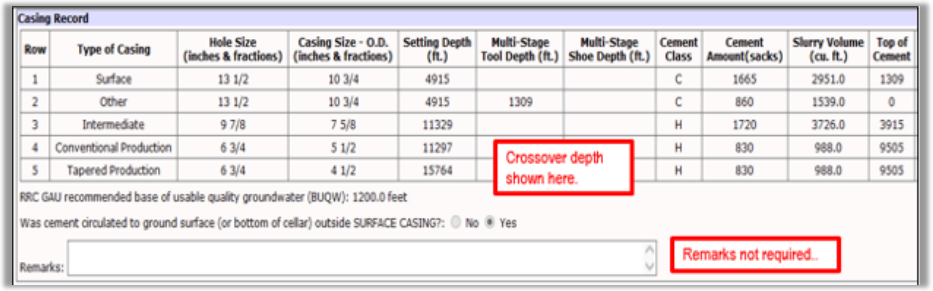
35

Example:

- 2-7/8” tubing set to 7785’
- Attach approved SWR-13 exception for No Tubing
    - Exception for no tubing is granted for only **six months**
        - Subsequent completion will be required to be filed after tubing is set

Page 4 (Tapered Casing Example 1)

Crossover depth in Casing Record is **preferred**.



Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	13 1/2	10 3/4	4915			C	1665	2951.0	1309
2	Other	13 1/2	10 3/4	4915	1309		C	860	1539.0	0
3	Intermediate	9 7/8	7 5/8	11329			H	1720	3726.0	3915
4	Conventional Production	6 3/4	5 1/2	11297			H	830	988.0	9505
5	Tapered Production	6 3/4	4 1/2	15764			H	830	988.0	9505

Crossover depth shown here.

RRC GAU recommended base of usable quality groundwater (BUQW): 1200.0 feet

Was cement circulated to ground surface (or bottom of cellar) outside SURFACE CASING?: No Yes

Remarks:

Remarks not required...

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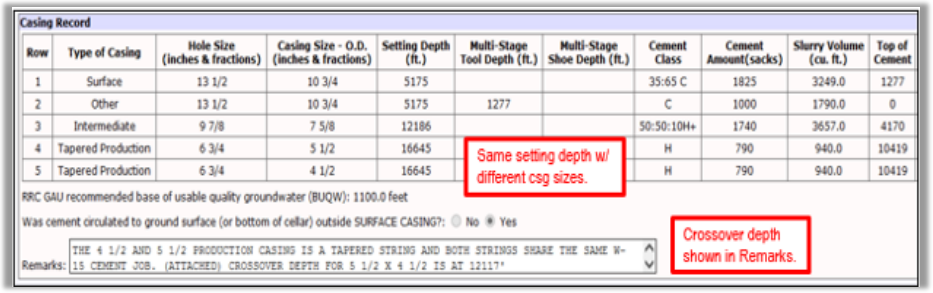
Tapered Casing Example 1 – **District Preference**

- 5-1/2 to 11,297
- 4-1/2 to 15,764
- If crossover depth is shown in Casing Record, a Remark is not necessary
  - Both casing sizes show same cement sacks, slurry volume & TOC
- Optional - Type of Casing - showing 1st line as Conventional Production and 2nd line as Tapered Production

Page 4 (Tapered Casing Example)

Crossover depth shown in Remarks.



Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	13 1/2	10 3/4	5175			35:65 C	1825	3249.0	1277
2	Other	13 1/2	10 3/4	5175	1277		C	1000	1790.0	0
3	Intermediate	9 7/8	7 5/8	12186			50:50:10H+	1740	3657.0	4170
4	Tapered Production	6 3/4	5 1/2	16645			H	790	940.0	10419
5	Tapered Production	6 3/4	4 1/2	16645			H	790	940.0	10419

Same setting depth w/ different csg sizes.

RRC GAU recommended base of usable quality groundwater (BUQW): 1100.0 feet

Was cement circulated to ground surface (or bottom of cellar) outside SURFACE CASING?: No Yes

Remarks: THE 4 1/2 AND 5 1/2 PRODUCTION CASING IS A TAPERED STRING AND BOTH STRINGS SHARE THE SAME W-15 CEMENT JOB. (ATTACHED) CROSSOVER DEPTH FOR 5 1/2 X 4 1/2 IS AT 12117'

Crossover depth shown in Remarks.

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Tapered Casing Example 2 –

- Same setting depth 16,645 for both 5-1/2 & 4-1/2 casings, same cement sacks, slurry volume and TOC
- Remarks show crossover depth @ 12117'.
- Optional - Lines 4 & 5 – Type of Casing – Tapered Production
- System does not give option for tapered surface casing
- "Surface" should be listed twice

Page 4 (Tapered Hole Size)

If hole size is tapered, option to show on one line showing largest hole size.

- Tapered Hole size not offered on drop down.
- W-15 must reflect two different hole sizes.
- Remarks should show depth hole size tapered.

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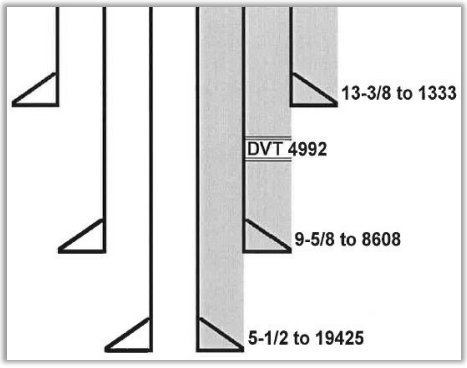
- Tapered hole size is not required to be divided into two lines
  - Hole size usually does not affect plugging recommendation unless casing is pulled or P&S; otherwise, same casing size all the way up.
- Remarks Example:
  - Production Hole crosses over from 8-3/4 to 8-1/2 at 9827.

Page 4 (Multi-Stage Example 1)

Order of Casing is **preferred**.

Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	17 1/2	13 3/8	1333			C	1246	2303.0	0
2	Intermediate	12 1/4	9 5/8	8608	4992		TXI & C	1242	3074.7	0
3	Intermediate	12 1/4	9 5/8	8608			TXI & C	856	2053.7	4992
4	Conventional Production	8 1/2	5 1/2	19425			H	2575	3965.5	450



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Example 1 - Order of Casing - **District Preference**

Separate Shoe and Tool into two lines:

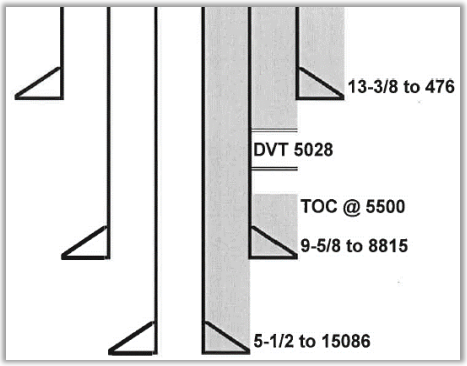
- 1st line – **Both** Shoe & Tool Depths, Cement Sacks, Top of Cement & Slurry Volume
- 2nd line – Shoe Depth **Only**, Cement Sacks, Top of Cement & Slurry Volume
- Most common is one DVT in hole; if two DVTs, separate into lines
- Per SWR-13, Operator must indicate Top of Cement (TOC) in order to determine void
    - Order of Casing is preferred…easier to visually determine if there is no-cement gap working up from bottom.
    - FYI…**not required** to fill in M/S Shoe Depth Column.

Page 4 (Multi-Stage Example 2)

Order of Cementing

Casing Record

Row	Type of Casing	Hole Size (inches & fractions)	Casing Size - O.D. (inches & fractions)	Setting Depth (ft.)	Multi-Stage Tool Depth (ft.)	Multi-Stage Shoe Depth (ft.)	Cement Class	Cement Amount(sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	Surface	17 1/2	13 3/8	476			C	450	594.0	0
2	Intermediate	12 1/4	9 5/8	8815			TXI	765	1783.8	5500
3	Intermediate	12 1/4	9 5/8	8815	5028		C	1129	2671.6	0
4	Conventional Production	8 1/2	5 1/2	15086			TXI H	2111	4136.9	0



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Example 2 – Order of Cementing:

- 9-5/8 shows no-cement gap from 5028 to 5500 .
- 5-1/2 shows cement circulated to surface.

Page 4 (Multi-Stage Cementing)

If DVT did not open, include Tool depth in Casing Record:

- Combine cement sacks, including if perforated & squeezed, into **one line only**.
- Add Remark “DVT did not open”.
- Important to show depth of DVT as it might affect future plugging procedure; 100’ plug will have to be placed across tool.

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Page 4 (Liner)

Liner with Cement:

- W-15 will be attached to completion.

Liner Record

Row	Liner Size (inches & fractions)	Hole Size (inches & fractions)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	7	8 3/4	10492	10504	H	310	420.67	7832

Liner without Cement:

- Will **not** have W-15 attached to completion.

Liner Record

Row	Liner Size (inches & fractions)	Hole Size (inches & fractions)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement
1	3 1/2	6 1/8	3106	7216	N/A- NO CEMENT PUMPED			

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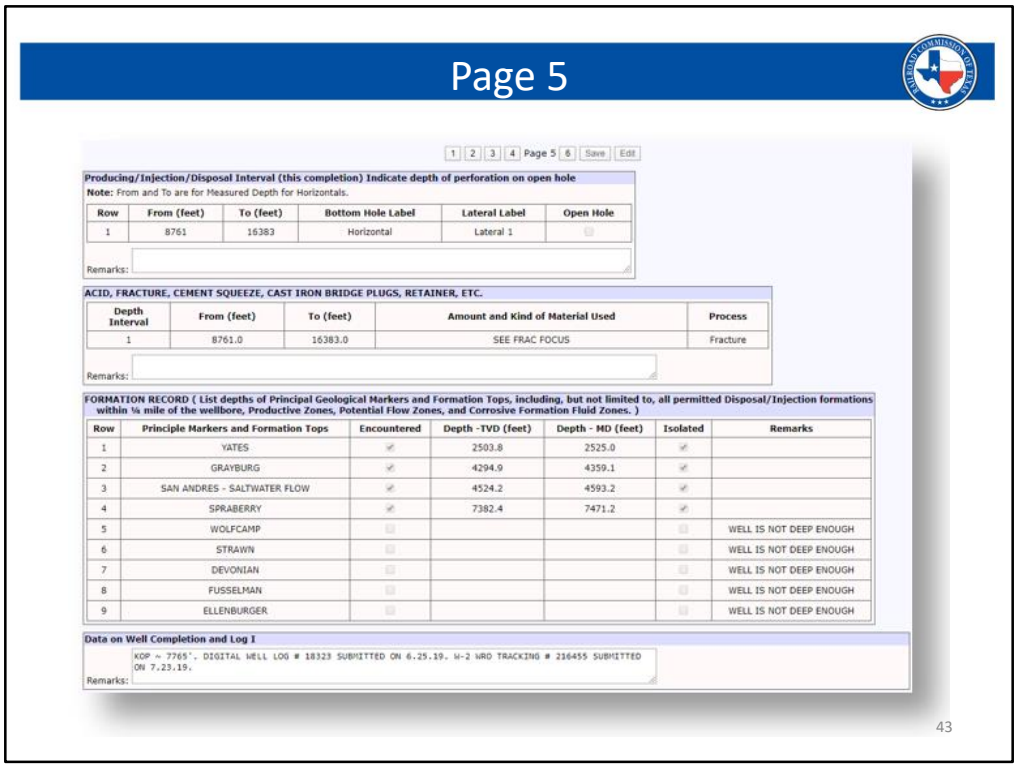
- **Liner With Cement Example** –
  - Shows 12’ of liner from 10492 to 10504 was cemented.
    - Question: *“Do I really have to report just 12 feet of liner?”*
    - Answer: Something had to have happened downhole:
      - First, for hole to require a liner
      - Second, requiring 310sx of cement be pumped for just 12 feet of liner.
- **Liner Without Cement Example** -
  - If liner was hung w/out cement, NO W-15 REQUIRED
  - Operator must add REMARK stating how was liner secured inside casing.



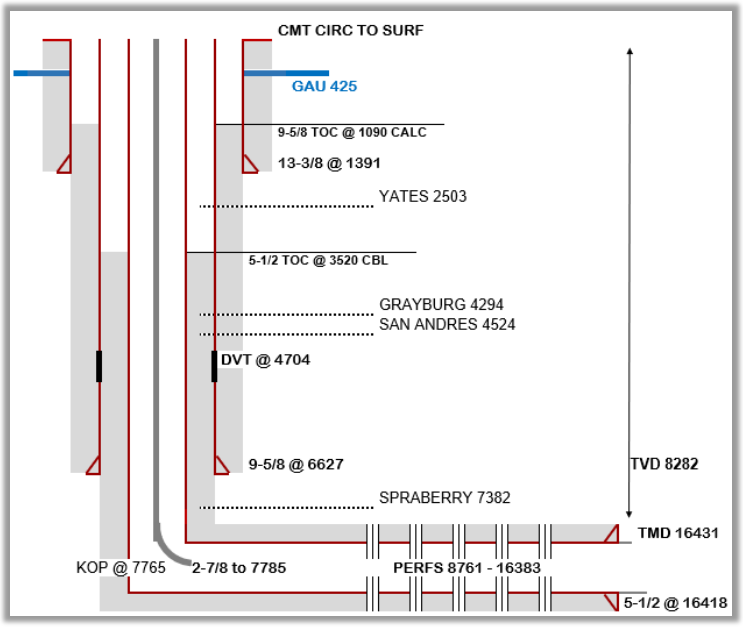
Three sections on page 5:

- Producing/Injection/Disposal Interval
  - Producing interval cannot be deeper than total depth and PB depth cannot be above the deepest perforation.
    - If interval is a combination of both perforated and open hole, separate into two lines designating OH as the deeper interval.
- Acid, Fracture, Cement Squeeze, Cast Iron Bridge Plugs, Retainer, Etc.
- Formation Record
  - It is **not necessary** to add Remark in far-right column if formation is both encountered and isolated.
  - If well is either directional or horizontal, both TVD & TMD depths must be entered.
  - The kick off point is verified against formation top.
  - The formation record will prepopulate based on the county the well is associated with.
    - Operator is encouraged to add row showing principal geological marker relevant to well completion if not already listed.

There are three (3) REMARKS sections on page 5 to assist in explaining current wellbore structure, for example:

- Kick off point
- Downhole issues requiring remedial work.
- SWR-10 Commingled Fields include perforated intervals.
- Docket number/field rule exception especially if recent changes.
- If not enough space, an extra page can be attached.

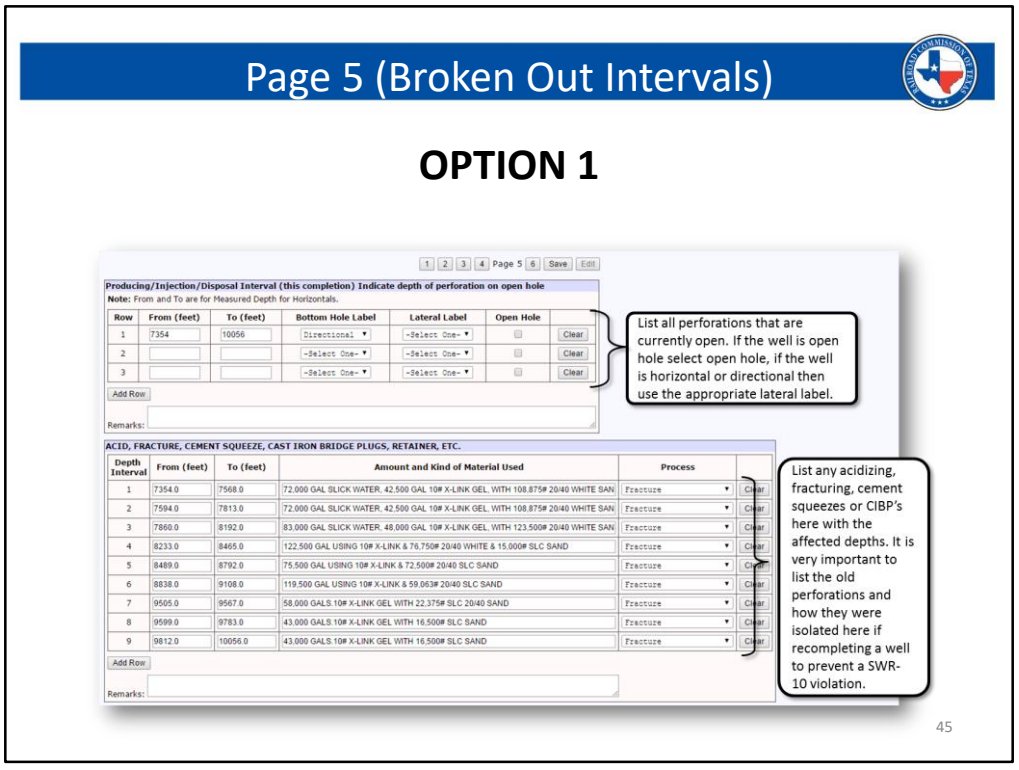
Pages 4 & 5 Summarized



SWR-13 compliance by bringing top of cement above formation top either by:

- 600’ by calculation
- 250’ per temperature survey
- 100’ per cement bond log

→ District is actively seeking no-cement gap between Formation Top and Top of Cement.



OPTION 1 –

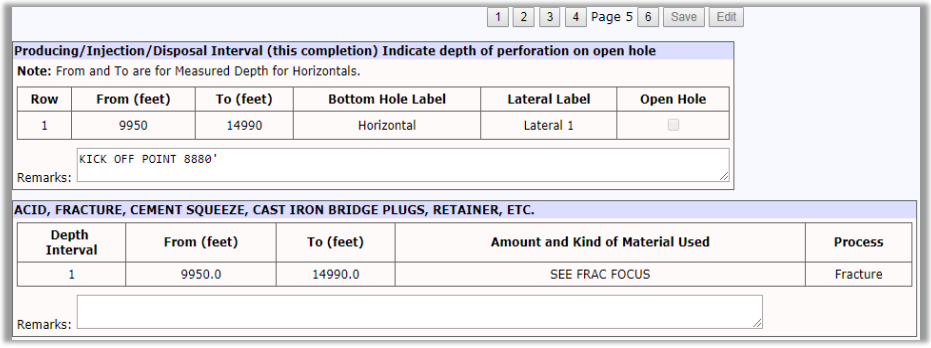
Same producing interval (7354-10056) with fractured intervals separated.

Producing/Injection/Disposal Intervals…

- If well has been Temporarily Abandoned maybe new well still be evaluated & set CIBP…perforation table **will be left blank.**
- In this example, Operator identified how intervals were stimulated/treated for production.
- If a well completion is brine mining, salt cavern disposal, or salt cavern storage, enter an interval for which "from" = shoe of long string casing; and "to" = bottom of cavern void space.
- If a well completion is reservoir injection-storage permitted under new SWR-95 exceptions, enter any interval that is known to be part of the direct hydraulic connection between the injection well completion and the storage reservoir.
    - Fracture PROCESS has been selected from dropdown

Page 5 (Using a Reference)

OPTION 2



1 2 3 4 Page 5 6 Save Edit

Producing/Injection/Disposal Interval (this completion) Indicate depth of perforation on open hole

Note: From and To are for Measured Depth for Horizontals.

Row	From (feet)	To (feet)	Bottom Hole Label	Lateral Label	Open Hole
1	9950	14990	Horizontal	Lateral 1	

Remarks: KICK OFF POINT 8880'

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUGS, RETAINER, ETC.

Depth Interval	From (feet)	To (feet)	Amount and Kind of Material Used	Process
1	9950.0	14990.0	SEE FRAC FOCUS	Fracture

Remarks:

- SEE FRAC FOCUS…acceptable option
- Kick off point in remarks
- Producing and Fractured intervals are the same

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OPTION 2 –

- Example SEE FRAC FOCUS
  - SWR-29 adopted January 2, 2012 (see below SWR-29 in part)
  - If Frac Focus is running behind releasing report, this may not be an option if completion report is due.
- SWR-29 adopted January 2, 2012:

  Section (c) Required disclosures.

  (1) Supplier and **service company disclosures**.

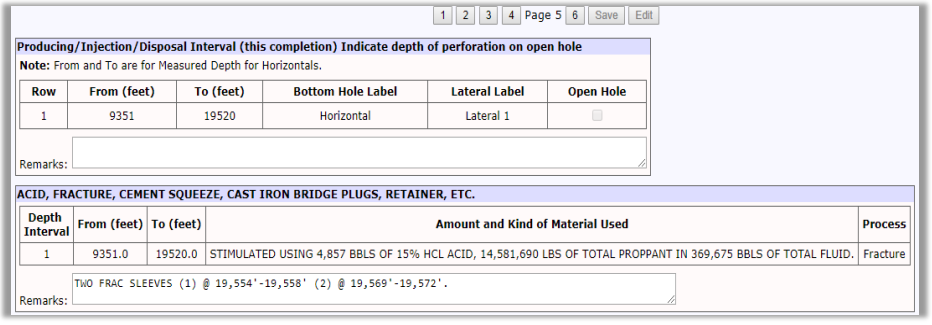
  (A) As soon as possible, but not later than **15 days** following the completion of hydraulic fracturing treatment(s) on a well, the supplier or the service company must provide to the operator of the well the following information concerning each chemical ingredient intentionally added to the hydraulic fracturing fluid.

  (2) **Operator disclosures**.

  (A) **On or before the date the well completion report** for a well on which hydraulic fracturing treatment(s) was/were conducted is submitted to the Commission in accordance with §3.16(b) of this title.

Page 5 (Intervals Summarized)

OPTION 3



1 2 3 4 Page 5 6 Save Edit

Producing/Injection/Disposal Interval (this completion) Indicate depth of perforation on open hole

Note: From and To are for Measured Depth for Horizontals.

Row	From (feet)	To (feet)	Bottom Hole Label	Lateral Label	Open Hole
1	9351	19520	Horizontal	Lateral 1	

Remarks:

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUGS, RETAINER, ETC.

Depth Interval	From (feet)	To (feet)	Amount and Kind of Material Used	Process
1	9351.0	19520.0	STIMULATED USING 4,857 BBLS OF 15% HCL ACID, 14,581,690 LBS OF TOTAL PROPPANT IN 369,675 BBLS OF TOTAL FLUID.	Fracture

Remarks: TWO FRAC SLEEVES (1) @ 19,554'-19,558' (2) @ 19,569'-19,572'.

- Summarize Frac Stimulants
- Add any helpful Remarks

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OPTION 3 –

Summarize Frac Stimulants

Page 5 (Encountered & Isolated)

* When to mark "encountered" in the formation record section?

The "encountered" checkbox must be marked if the formation/zone was penetrated by this wellbore.
If "encountered" is marked, the operator must enter a depth.
If the formation/zone was penetrated but not logged, the operator is expected to give a reasonable estimate based on existing available information. Please specify in remarks if the depth is an estimate.
If "encountered" is not marked, the operator must explain in remarks as to why the formation/zone was not encountered (e.g. pinched-out, well is not deep enough, etc.).

* When to mark "isolated" in the formation record section?

"Isolated" means that the formation/zone has been isolated by cemented casing pursuant to Statewide Rule 13(a)(4)(C), (b)(2)(A), and (b)(3)(B.
If the formation/zone was encountered by the wellbore, the operator must indicate whether that formation/zone was isolated by cemented casing pursuant to these requirements of Statewide Rule 13.
If the formation/zone is part of the completion interval, and is adequately confined by cemented casing, do mark isolated.
If the formation/zone was not encountered, the "isolated" checkbox will not be applicable.
If the formation/zone was encountered but is not isolated by cemented casing, do not mark isolated. In this case, the operator must explain in remarks as to why the formation/zone was not isolated.

Page 5 (Encountered)

When to mark to “encountered” in the formation record section?

- The “encountered” checkbox must be marked if the formation/zone was penetrated by this wellbore.
- If “encountered” is marked, the operator must enter a depth.
  - Approach staff geologist for assistance with depths.

Page 5 (Encountered Cont.)

- If the formation/zone was penetrated but not logged, the operator is expected to give a reasonable estimate based on existing available information. Please specify in remarks if the depth is an estimate.
  - Explanations such as “not logged, null, N/A or cement squeeze” are not valid explanations of why not logged.

50

- Estimated depth **is required** when not logged
- Make note ESTIMATED DEPTH in Remark

Page 5 (Not Encountered)

- If “encountered” is not marked, the operator must explain in remarks as to why the formation/zone was not encountered (e.g. pinched-out, well is not deep enough, etc.).
  - Also a good explanations
    - Does not exist in the immediate area
    - Not geologically present
- Remark can be listed below productive formation
  - Below TD
  - Well not drilled deep enough vertically.

51

“Immediate area”…within a quarter-mile radius of the wellbore.

Page 5 (Isolated)

When to mark “isolated” in the formation record section?

- “Isolated” means that the formation/zone has been isolated by cemented casing pursuant to SWR-13(a)(4)(c), (b)(2)(A), and (b)(3)(B):
  - 600’ Calculation or 200’ inside next casing string
  - 250’ Temperature Survey
  - 100’ Cement Bond Log

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- **SWR-13(a)(4)(c):**

  Casing shall be cemented across and above all formations permitted for injection under §3.9 of this title (relating to Disposal Wells) at the time the well is completed, or cemented immediately above all formations permitted for injection under §3.46 of this title (relating to Fluid Injection into Productive Reservoirs) at the time the well is completed, in a well within one-quarter mile of the proposed well location, as follows:

  (i) if the top of cement is determined through **calculation**, at least **600 feet** (measured depth) above the permitted formations;

  (ii) if the top of cement is determined through the performance of a **temperature survey** conducted immediately after cementing, **250 feet** (measured depth) above the permitted formations;

  (iii) if the top of cement is determined through the performance of a **cement evaluation log**, **100 feet** (measured depth) above the permitted formations;

  (iv) at least **200 feet into the previous casing** shoe (or to surface if the shoe is less than 200 feet from the surface); or

  (v) as otherwise approved by the district director.

- **SWR-13(b)(2)(A):**

  Intermediate casing requirements for land wells and bay wells.

  (A) Cementing method. Each intermediate string of casing shall be cemented from the shoe to a point at least 600 feet (measured depth) above the shoe. If any productive zone, potential flow zone, or zone with corrosive formation fluids is open to the wellbore above the casing shoe, the casing shall be cemented;

(i) if the top of cement is determined through calculation, from the shoe up to a point at least 600 feet (measured depth) above the top of the shallowest productive zone, potential flow zone, or zone with corrosive formation fluids;

(ii) if the top of cement is determined through performance of a temperature survey, from the shoe up to a point at least 250 feet (measured depth) above the top of the shallowest productive zone, potential flow zone, or zone with corrosive formation fluids;

(iii) if the top of cement is determined through performance of a cement evaluation log, from the shoe up to a point at least 100 feet (measured depth) above the top of the shallowest productive zone, potential flow zone, or zone with corrosive formation fluid; or

(iv) to a point at least 200 feet (measured depth) above the shoe of the next shallower casing string that was set and cemented in the well (or to surface if the shoe is less than 200 feet from the surface); or

(v) as otherwise approved by the district director.

- **SWR-(b)(3)(B):**

  Cementing method. The production string of casing shall be cemented by the pump and plug method, or another method approved by the Commission, with sufficient cement to fill the annular space back of the casing to the surface or to a point at least 600 feet above the shoe. If any productive zone, potential flow zone and/or zone with corrosive formation fluids is open to the wellbore above the casing shoe, the casing shall be cemented in a manner that effectively seals off all such zones by one of the methods specified for intermediate casing in paragraph (2) of this subsection. A float collar or other means to stop the cement plug shall be inserted in the casing string above the shoe. Cement shall be allowed to stand under pressure for a minimum of eight hours before drilling the plug or initiating casing pressure tests. In the event that the distance from the casing shoe to the top of the shallowest productive zone, potential flow zone and/or zone with corrosive formation fluids make cementing, as required above, impossible or impractical, the multi-stage process may be used to cement the casing in a manner that will effectively seal off all such zones, and prevent fluid migration to or from such zones within the wellbore. Uncemented casing is allowable within a producing reservoir provided the production casing is cemented in such a manner to effectively isolate and seal off that zone from all other productive zones in the wellbore as required by §3.7 of this title (relating to Strata To Be Sealed Off).

Page 5 (Isolated Cont.)

- If the formation/zone was encountered by the wellbore, the operator must indicate whether that formation/zone was isolated by cemented casing pursuant to these requirements of SWR-13.

Page 5 (Not Isolated)

- If the formation/zone is part of the completion interval, and is adequately confined by cemented casing, **do mark isolated**.
  - Yes, mark “isolated” zone perforated!
- If the formation/zone was not encountered, the “isolated” checkbox will not be applicable.
  - Zone may be below TD.

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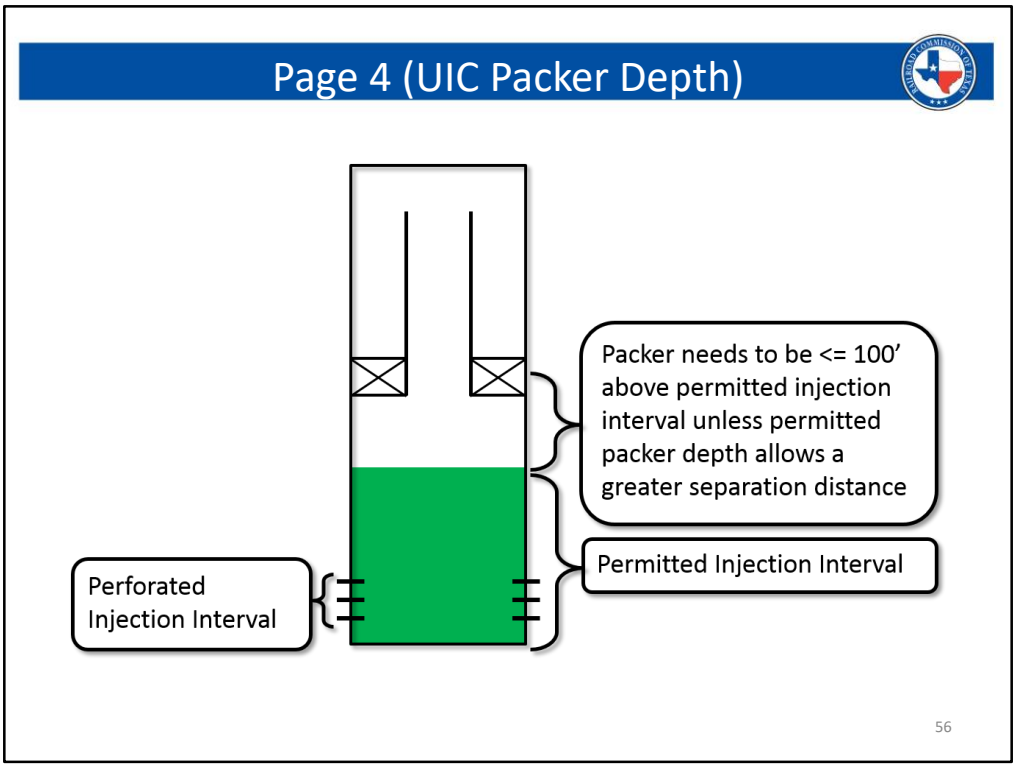
Page 5 (Not Isolated Cont.)

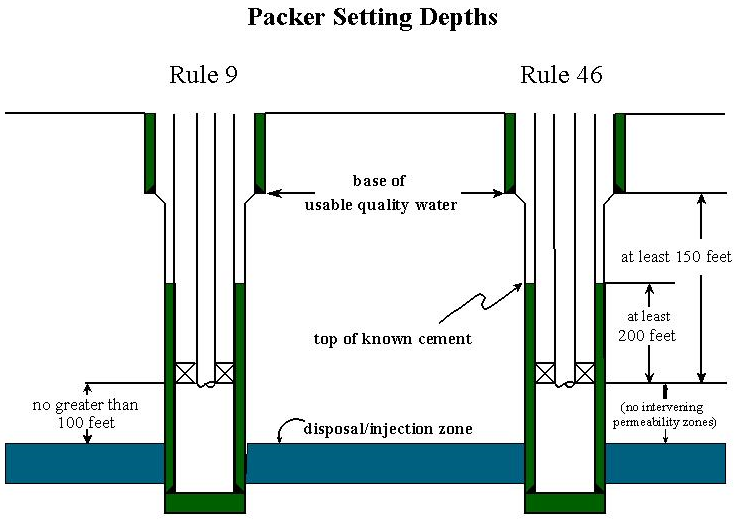
- If the formation/zone was encountered but is not isolated by cemented casing, do not mark isolated. In this case, the operator must explain in remarks as to why the formation/zone was not isolated.
  - If formation is present but not productive in the immediate area [within quarter-mile radius of wellbore], add a Remark.

55

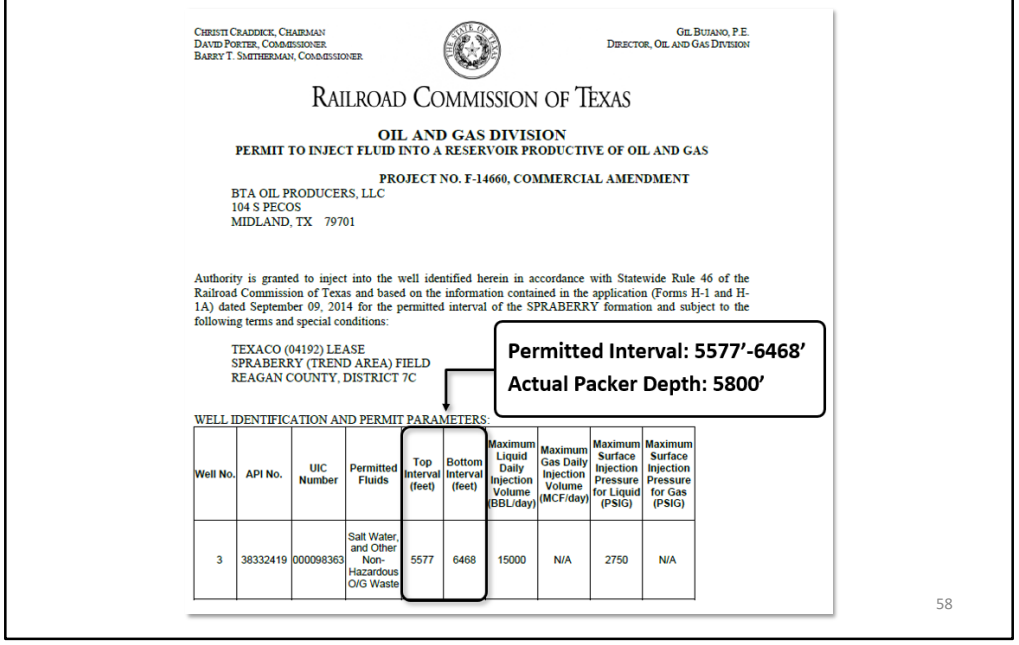


- This diagram is to illustrate packer depth and perforated injection intervals for UIC wells with packer required which is the vast majority.
- Certain UIC wells are exempted from a packer requirement by permit or rule, and certain UIC wells have packer depth exceptions with greater than 100' of separation.
- Completions for Shut-In UIC wells often have no packer set.
- Completions for brine mining injection wells, salt cavern disposal wells, and salt cavern storage wells, also often do not use packers.

SWR-9 & SWR-46 Packer Setting Depths



Page 4-5 (UIC Permit Example)



CHRISTI CRADDICK, CHAIRMAN
DAVID PORTER, COMMISSIONER
BARRY T. SMITHERMAN, COMMISSIONER

GIL BUJANO, P.E.
DIRECTOR, OIL AND GAS DIVISION

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION
PERMIT TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL AND GAS

PROJECT NO. F-14660, COMMERCIAL AMENDMENT

BTA OIL PRODUCERS, LLC
104 S PECOS
MIDLAND, TX 79701

Authority is granted to inject into the well identified herein in accordance with Statewide Rule 46 of the Railroad Commission of Texas and based on the information contained in the application (Forms H-1 and H-1A) dated September 09, 2014 for the permitted interval of the SPRABERRY formation and subject to the following terms and special conditions:

TEXACO (04192) LEASE
SPRABERRY (TREND AREA) FIELD
REAGAN COUNTY, DISTRICT 7C

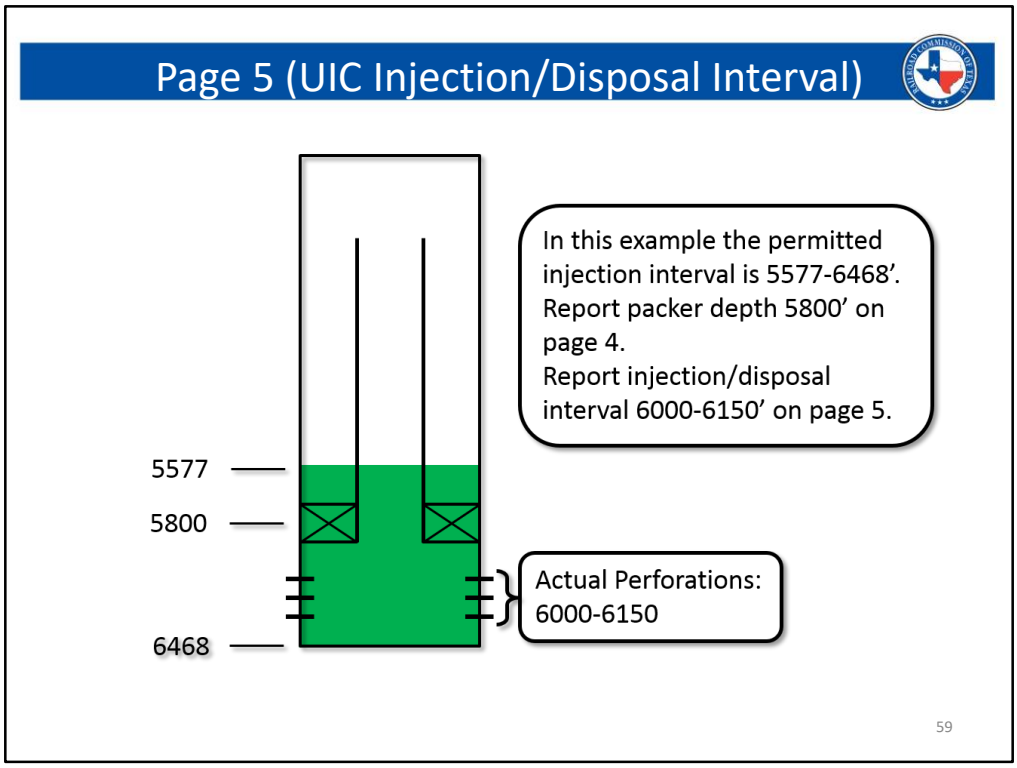
Permitted Interval: 5577'-6468'
Actual Packer Depth: 5800'

WELL IDENTIFICATION AND PERMIT PARAMETERS:

Well No.	API No.	UIC Number	Permitted Fluids	Top Interval (feet)	Bottom Interval (feet)	Maximum Liquid Daily Injection Volume (BBL/day)	Maximum Gas Daily Injection Volume (MCF/day)	Maximum Surface Injection Pressure for Liquid (PSIG)	Maximum Surface Injection Pressure for Gas (PSIG)
3	38332419	000098363	Salt Water, and Other Non-Hazardous O/G Waste	5577	6468	15000	N/A	2750	N/A

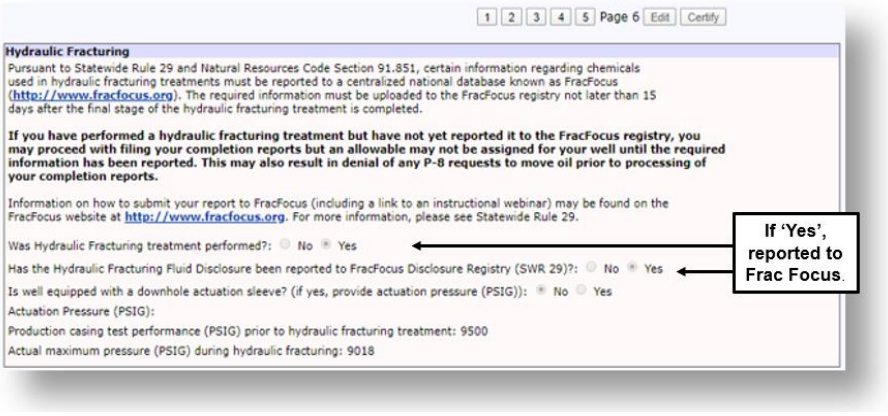
58

Here is the injection permit used in this example illustrating packer depth and perforated injection intervals.



- This diagram illustrates the comparison between permitted injection interval and the actual perforations.
- Only report actual perforations on page 5 in the table "Producing/Injection/Disposal Interval".

Page 6 (Hydraulic Fracturing)



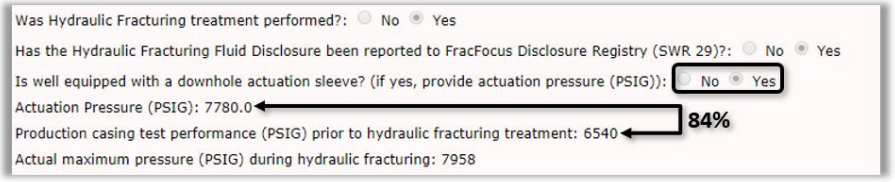
60

- SWR-29 does not make distinctions in well type (oil, gas, injection). If well was frac'd, it must be reported.
- If Process shows FRACTURE on page 5, then we are going to be looking for ●YES to be bubbled on both questions on page 6.

Page 6 (Actuation Pressure)

Is well equipped with a downhole actuation sleeve?

If **yes**, production casing test pressure has to be >= 80% of the actuation pressure.



61

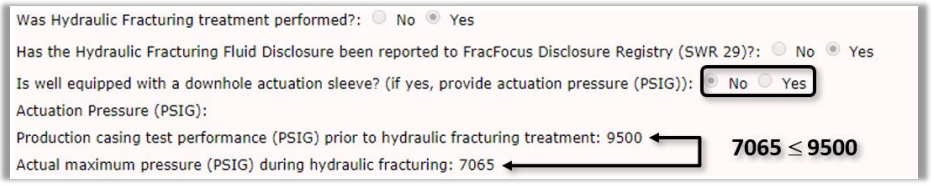
Is well equipped with a downhole actuation sleeve?

- If YES, then the production casing test pressure must be >= 80% of the actuation pressure.
- If the above is not met, then the operator is in violation of SWR-13(a)(7)(B) unless they have documentation of approval from the district office.
  - Please attach documentation showing approval and add a REMARK.
  - Discrepancies in calculations are referred appropriate District Office for further direction and/or instructions to operator.
- In above example: 6540 is **84%** of 7780

Page 6 (Actual Maximum Pressure)

Is well equipped with a downhole actuation sleeve?

If **no** downhole actuation sleeve, Actual Maximum Pressure should be less than or equal to Production Casing Test Performance.

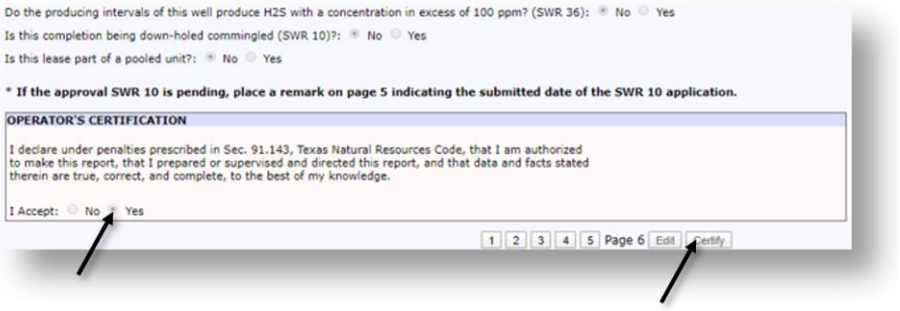


62

Is the well equipped with a downhole actuation sleeve?

- If NO, then the production test pressure must be >= actual maximum pressure.
- If the above is not met, then the operator is in violation of SWR-13(a)(7)(B) unless they have documentation of approval from the district office.
  - Please attach documentation showing approval and add a REMARK.
  - Discrepancies in calculations are referred to appropriate District Office for further direction and/or instructions to operator.
- In above example: 7065<=9500

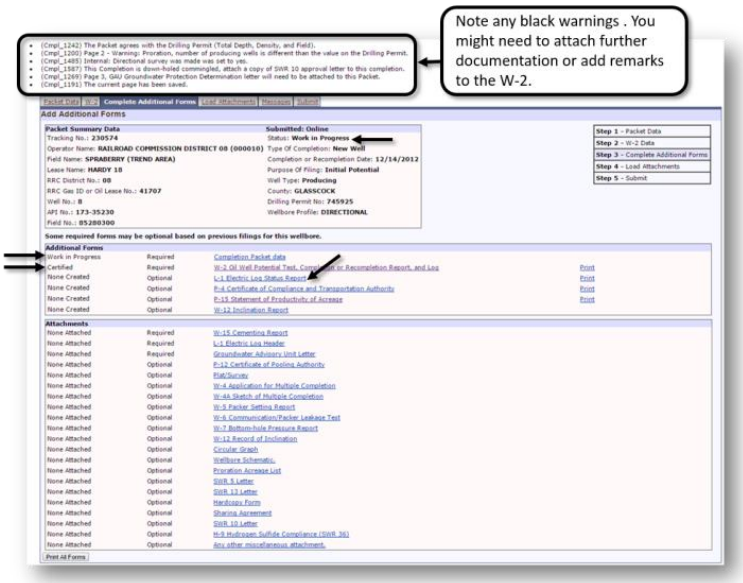
Page 6 (Certification)



63

- Please review all questions on this page and answer appropriately:
  - *Do the producing intervals of this well produce H2S with a concentration in excess of 100 ppm? (SWR-36):*
    - If YES, operator will be required to file H-9 if first well on the lease.
    - If adding well to an existing lease, H-9 already be on file.
    - If NO, H-9 is not required.
  - *Is this completion being down-hole commingled (SWR-10)?*
    If this question is marked 'No" and there are no remarks indicating otherwise, the well may be processed incorrectly and the permit closed out.
  - *Is this lease part of a pooled unit?*
    If this question is marked 'Yes', a P-12 and lease plat are required.
- Click ●Yes to accept the certification before you hit the Certify button.
  - Notice that because this is the last page of the W-2/G-1 your *Save* button has switched to a *Certify* button.
- Falsification of a completion report will be referred to Legal Enforcement:
  Texas Natural Resources Code
  Sec. 91.143
  False Applications, Reports, and Documents and Tampering With Gauges
  (a) A person may not…
  (3) knowingly simulate or falsely or fraudulently execute or sign such an application, report, or other document;
- Once you hit the certify button you will be brought to the *Complete Additional Forms* tab.

Complete Additional Forms



64

- Note any black warnings at the top of the screen that might require you to attach further documentation or add remarks to the W-2/G-1.
- Also notice that the *Completion Packet Data* is still a work in progress (matches the status). It will remain so until the time the tracking number is submitted.
- The W-2/G-1 should by now reflect *Certified*. Click on the form you would like to fill out next.

L-1 (Electric Log Status Report)

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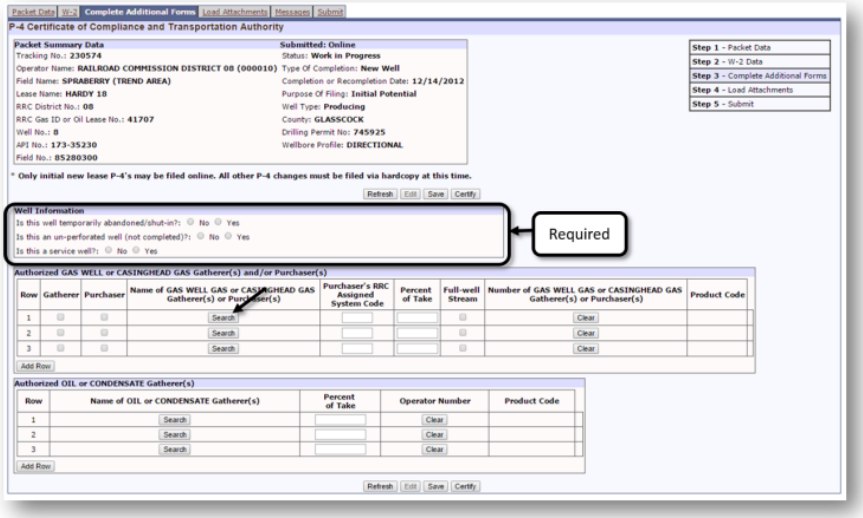
- If confidentiality is selected the L-1 Header will need to be attached to this completion packet.
- If you select Log Attached the log will need to be mailed to Austin as soon as possible or uploaded to the *Digital Well Log Submission* system.

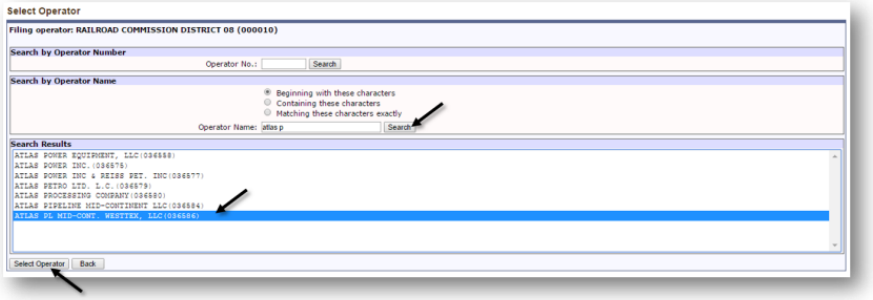
P-4 (Cert. of Compliance & Trans. Authority)



66

- The Online fillable P-4 isn't required for this filing because a lease number already exists but for demonstration, we will walk through completing the new lease P-4.
- Operators are required to answer the three questions at the top before the gatherer's & purchasers can be added.
  You will then add your purchasers & gatherer's by selecting the *Search* button.
- For UIC, answer "Yes" for "Is this a service well?"
- For UIC, typically leave purchasers & gatherers blank.

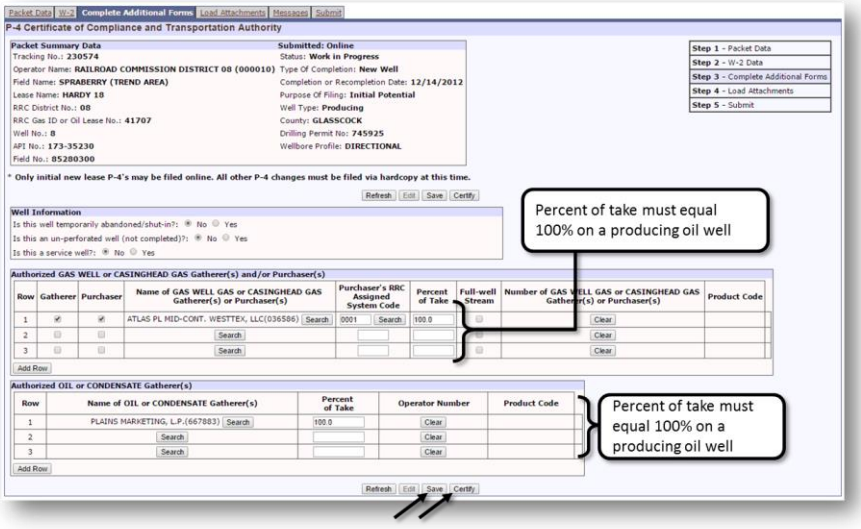
P-4 (Searching for Gatherer's & Purchasers)



67

- In this example we didn't know what the gatherer/purchaser's operator number was, but we knew their name, so we typed the beginning of the name and hit *Search*. Doing so will then display a list of gatherer/purchaser's that match the information keyed.
- You must select the gatherer/purchaser's you wish to use and then hit the *Select Operator* button.

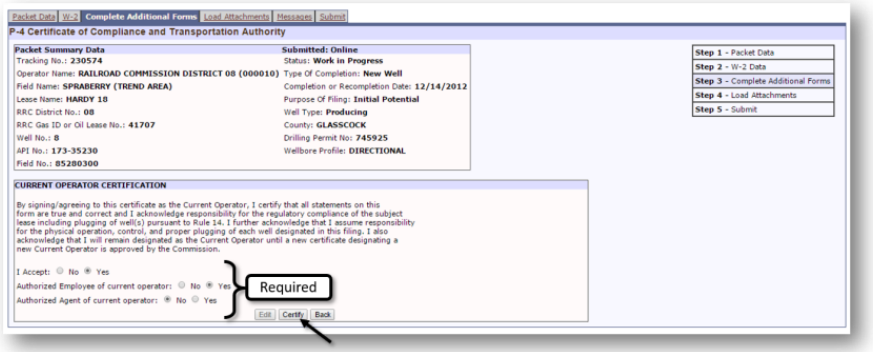
Certifying & Saving the P-4



68

- Repeat this process for the oil gatherer and remember that on a producing oil well you must at lease list one valid oil gatherer.
- If you list a casinghead gas gatherer you must also select a purchaser.
- If the oil well isn't producing casinghead gas, then no casinghead gas gatherer or purchaser is required.
- Click *Save* & then click the *Certify* button to be brought to the certification page for the P-4.

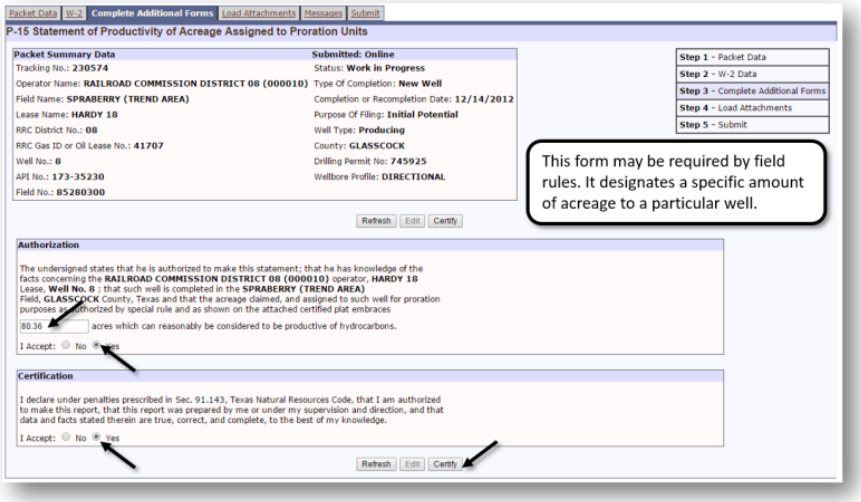
P-4 (Certification Page)



69

- You must answer all three questions and then hit certify for the P-4 to be certified.
- You should only be selecting authorized agent if you are listed on the P-5.

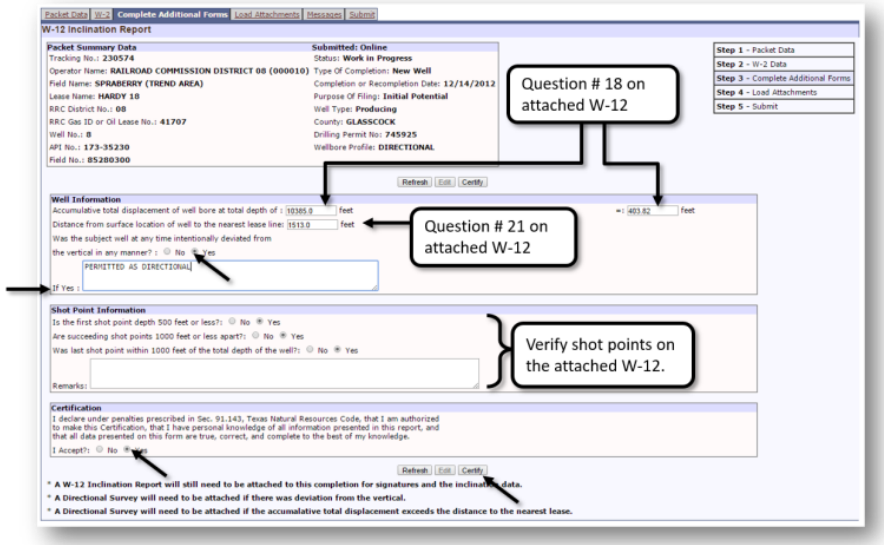
P-15 (Statement of Productivity of Acreage)



70

A P-15 is not required if the form P-16 is filed with the completion.

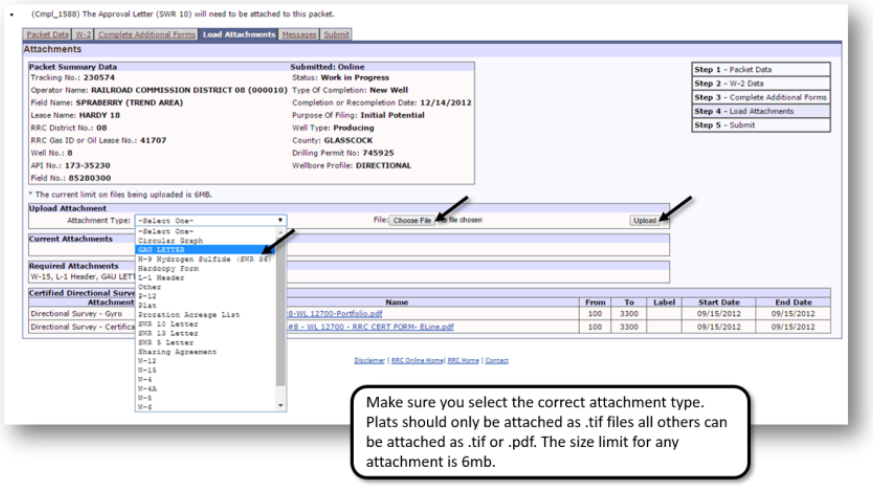
Online Fillable W-12 (Inclination Report)



71

- Answering the deviation question will require that you leave remarks and prompt engineering approval on the W-12.
- For UIC, the only exemption offered to SWR-11 is that the W-12 is waived for enhanced recovery wells that are re-entries of plugged wells.

Load Attachments



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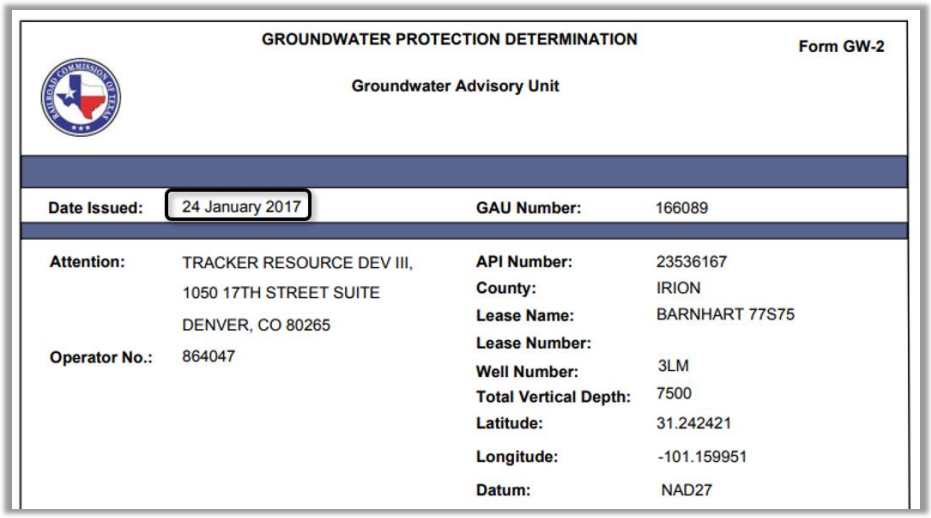
- Select the attachment type and then select the *Choose File* to browse for the file you would like to attach.
- Once the file path has been selected select the *Upload* button.
- Valid types are .tif and .pdf

GAU Letter (Date Issued)



GROUNDWATER PROTECTION DETERMINATION — **Form GW-2**

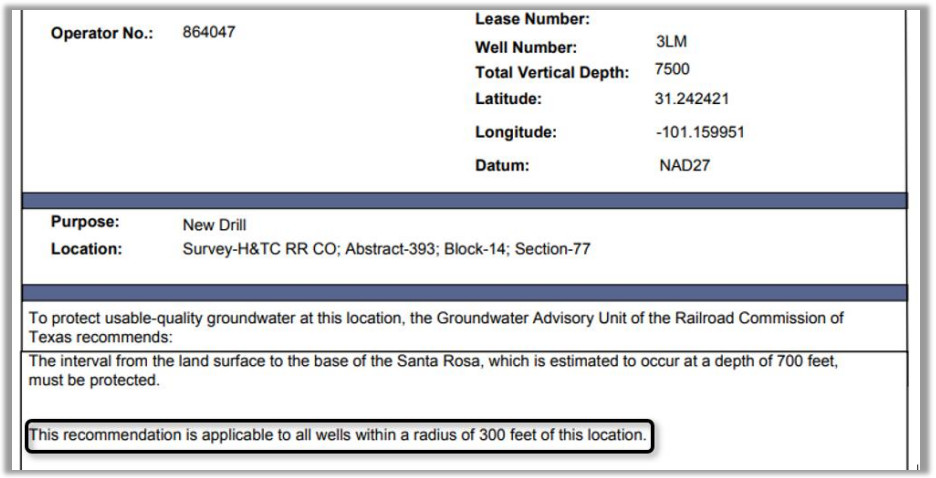
Groundwater Advisory Unit

Date Issued:	24 January 2017	**GAU Number:**	166089
Attention:	TRACKER RESOURCE DEV III, 1050 17TH STREET SUITE DENVER, CO 80265	**API Number:**	23536167
		County:	IRION
		Lease Name:	BARNHART 77S75
		Lease Number:	
Operator No.:	864047	**Well Number:**	3LM
		Total Vertical Depth:	7500
		Latitude:	31.242421
		Longitude:	-101.159951
		Datum:	NAD27

73

GAU Letter older than five years **requires** a new one be filed regardless of the *Purpose of Filing*.

GAU Letter (Applicable Radius)



Operator No.:	864047	**Lease Number:**	
		Well Number:	3LM
		Total Vertical Depth:	7500
		Latitude:	31.242421
		Longitude:	-101.159951
		Datum:	NAD27

Purpose: New Drill

Location: Survey-H&TC RR CO; Abstract-393; Block-14; Section-77

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The interval from the land surface to the base of the Santa Rosa, which is estimated to occur at a depth of 700 feet, must be protected.

This recommendation is applicable to all wells within a radius of 300 feet of this location.

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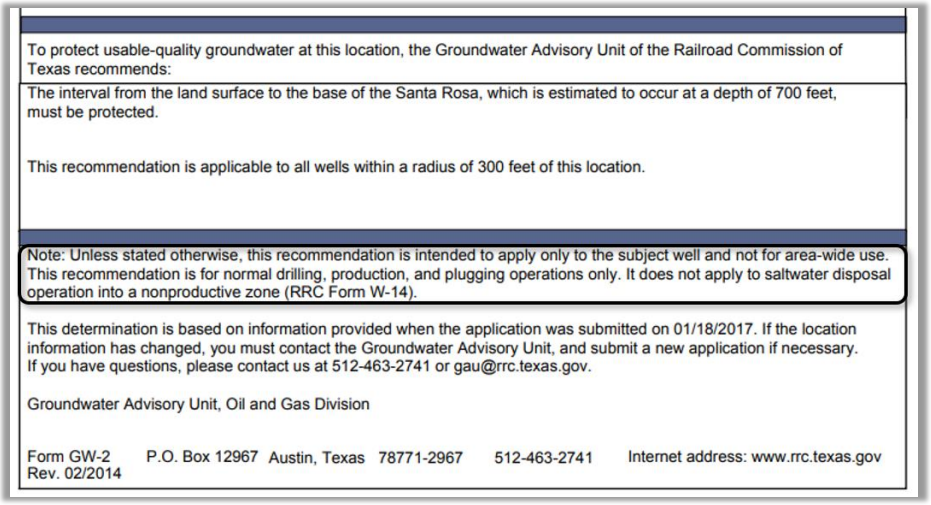
- District does check for extended recommendations applicable to lease only, API only, section-section, half-section or quarter-section and radius:
  - 300 ft. = 0.12 mile
    - Using Radius Tool on RRC Public GIS Viewer.
  - Some recommendations are very specific…for example, *protection to a well's total depth* or *all wells drilled in this 537 ACRE LEASE*.
- District will query if well outside of GAU recommendation.

Helpful Hint…

- At times, radius is not as generous due to location of well; choose a happy middle, recommendation *might* extend its umbrella.
  - For example: Operator had group of wells to be Plugged & Abandoned and thought elevations would be the same, so last well in lease was selected as the filing well. Unfortunately, last well next to ravine. Verify well locations with your geologist.

GAU Letter (Subject Well Only)



To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The interval from the land surface to the base of the Santa Rosa, which is estimated to occur at a depth of 700 feet, must be protected.

This recommendation is applicable to all wells within a radius of 300 feet of this location.

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 01/18/2017. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

Groundwater Advisory Unit, Oil and Gas Division

Form GW-2 Rev. 02/2014 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: www.rrc.texas.gov

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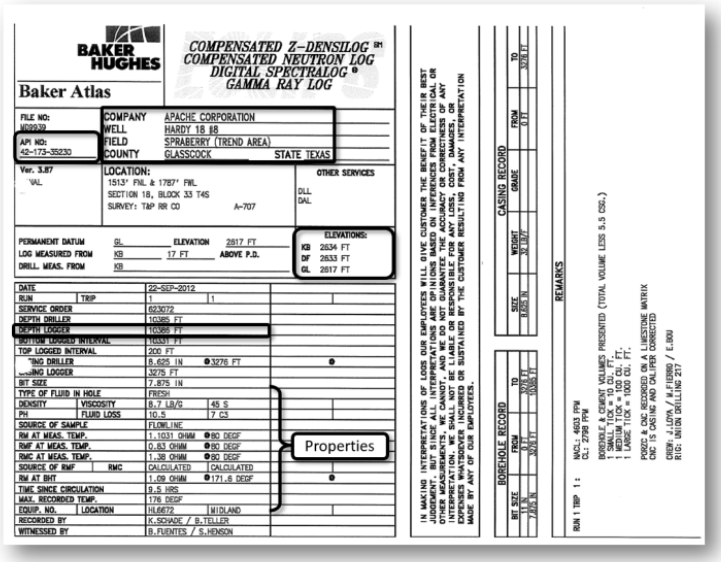
Please **Note** verbiage:

- "UNLESS STATED OTHERWISE, this recommendation is intended to apply **only** to the subject well and not for area-wide use".
- District will not accept determination if recommendation is not extended to specific lease, section or radius.

L-1 Header



BAKER HUGHES

Baker Atlas

COMPENSATED Z-DENSILOG
COMPENSATED NEUTRON LOG
DIGITAL SPECTRALOG
GAMMA RAY LOG

FILE NO:	MD9939
API NO:	42-173-35230
Ver. 3.87	
COMPANY	APACHE CORPORATION
WELL	HARDY 1B 88
FIELD	SPRABERRY (TREND AREA)
COUNTY	GLASSCOCK STATE TEXAS
LOCATION:	1513' FNL & 1787' FWL SECTION 1B, BLOCK 33 T4S SURVEY: T&P RR CO A-707
OTHER SERVICES	DLL DAL

PERMANENT DATUM	GL	ELEVATION 2817 FT	ELEVATIONS:
LOG MEASURED FROM	KB	17 FT ABOVE P.D.	KB 2834 FT
DRILL. MEAS. FROM	KB		DF 2833 FT
			GL 2817 FT

DATE		22-SEP-2012	
RUN	TRIP	1	1
SERVICE ORDER		623072	
DEPTH DRILLER		10385 FT	
DEPTH LOGGER		10389 FT	
BOTTOM LOGGED INTERVAL		10331 FT	
TOP LOGGED INTERVAL		200 FT	
[illegible]ING DRILLER		8.625 IN @3276 FT	@
[illegible]ING LOGGER		3275 FT	
BIT SIZE		7.875 IN	
TYPE OF FLUID IN HOLE		FRESH	
DENSITY	VISCOSITY	8.7 LB/G	45 S
PH	FLUID LOSS	10.5	7 C3
SOURCE OF SAMPLE		FLOWLINE	
RM AT MEAS. TEMP.		1.1031 OHM @80 DEGF	
RMF AT MEAS. TEMP.		0.83 OHM @80 DEGF	
RMC AT MEAS. TEMP.		1.38 OHM @80 DEGF	
SOURCE OF RMF	RMC	CALCULATED	CALCULATED
RM AT BHT		1.09 OHM @171.6 DEGF	@
TIME SINCE CIRCULATION		9.5 HRS	
MAX. RECORDED TEMP.		176 DEGF	
EQUIP. NO.	LOCATION	HL6672	MIDLAND
RECORDED BY		K.SCHADE / B.TELLER	
WITNESSED BY		B.FUENTES / S.HENSON	

Properties

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGMENT, BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION, AND WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
8.625 IN	32 LB/F		0 FT	3276 FT

BOREHOLE RECORD

BIT SIZE	FROM	TO
11 IN	0 FT	3276 FT
7.875 IN	3276 FT	10389 FT

REMARKS

RUN 1 TRIP 1 : MCL: 4603 PPM
CL: 2798 PPM

BOREHOLE & CEMENT VOLUMES PRESENTED (TOTAL VOLUME LESS 5.5 CSG.)
1 SMALL TICK = 10 CU. FT.
1 MEDIUM TICK = 100 CU. FT.
1 LARGE TICK = 1000 CU. FT.

PDSC & DNC RECORDED ON A LIMESTONE MATRIX
DNC IS CASING AND CALIPER CORRECTED

DRLR: J.LOYA / M.FIERRO / E.ROJ
RIG: UNION DRILLING 217

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A log header is required if confidentiality was requested on the L-1.

Log & Log Header Requirements

- Company Name
- Lease Name
- Well Number
- Field
- API number
- Elevations
- Fluid/Mud Properties
- Logger depth must cover the producing interval
- Log header must be legible for audit and scanning
- Log must be continuous

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Please ensure that all of these items are listed on the log header prior to attaching it to the completion.

Plat

Proration Plat Example

Lease Plat Example

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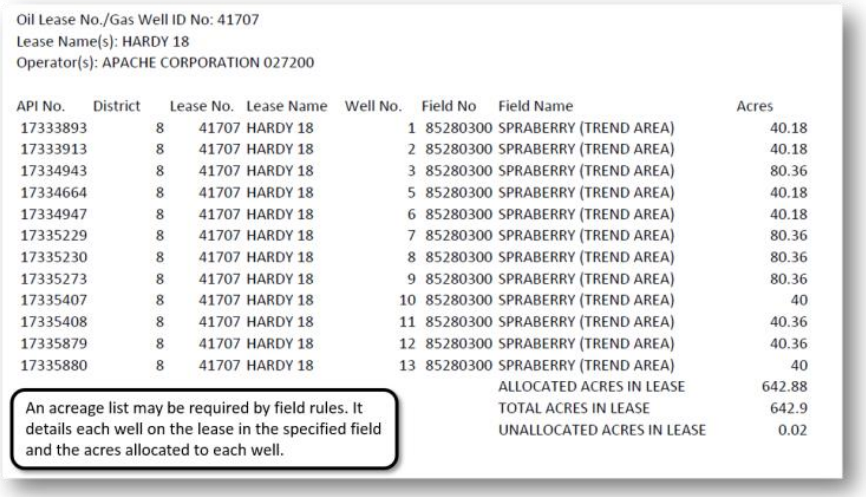
- Proration Plat: Please make sure the proration unit is clearly drawn around your well & the proration Acres are clearly labeled.
- Lease Plat: Please make sure the total lease acreage is clearly labeled and the lease line is easy to interpret.
- All Plats should have a north arrow, certification and scale.

Proration Acreage List



Oil Lease No./Gas Well ID No: 41707
Lease Name(s): HARDY 18
Operator(s): APACHE CORPORATION 027200

API No.	District	Lease No.	Lease Name	Well No.	Field No	Field Name	Acres
17333893	8	41707	HARDY 18	1	85280300	SPRABERRY (TREND AREA)	40.18
17333913	8	41707	HARDY 18	2	85280300	SPRABERRY (TREND AREA)	40.18
17334943	8	41707	HARDY 18	3	85280300	SPRABERRY (TREND AREA)	80.36
17334664	8	41707	HARDY 18	5	85280300	SPRABERRY (TREND AREA)	40.18
17334947	8	41707	HARDY 18	6	85280300	SPRABERRY (TREND AREA)	40.18
17335229	8	41707	HARDY 18	7	85280300	SPRABERRY (TREND AREA)	80.36
17335230	8	41707	HARDY 18	8	85280300	SPRABERRY (TREND AREA)	80.36
17335273	8	41707	HARDY 18	9	85280300	SPRABERRY (TREND AREA)	80.36
17335407	8	41707	HARDY 18	10	85280300	SPRABERRY (TREND AREA)	40
17335408	8	41707	HARDY 18	11	85280300	SPRABERRY (TREND AREA)	40.36
17335879	8	41707	HARDY 18	12	85280300	SPRABERRY (TREND AREA)	40.36
17335880	8	41707	HARDY 18	13	85280300	SPRABERRY (TREND AREA)	40
						ALLOCATED ACRES IN LEASE	642.88
						TOTAL ACRES IN LEASE	642.9
						UNALLOCATED ACRES IN LEASE	0.02

An acreage list may be required by field rules. It details each well on the lease in the specified field and the acres allocated to each well.

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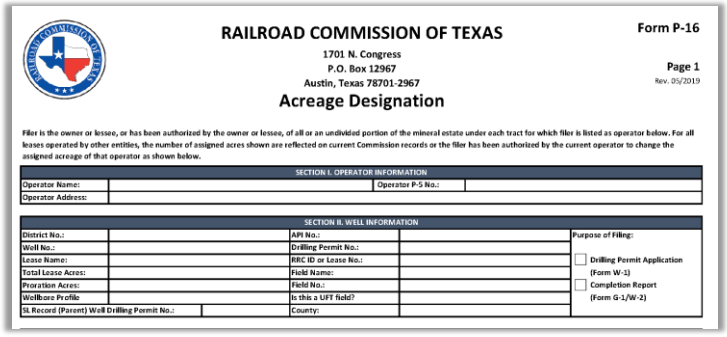
- Your proration acreage list should reflect the lease name & number along with a comprehensive list of the wells producing on schedule at the time of completion as well as the acreage being assigned to those wells.
- You will also need to list the total lease acreage and any unallocated acreage.
- Please remember a P-16 can be filed in lieu of the P-15 and Acreage List.

P-16 (Acreage Designation Section I & II)



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form P-16

Page 1
Rev. 05/2019

Acreage Designation

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION I. OPERATOR INFORMATION			
Operator Name:		Operator P-5 No.:	
Operator Address:			

SECTION II. WELL INFORMATION				
District No.:		API No.:		Purpose of Filing:
Well No.:		Drilling Permit No.:		
Lease Name:		RRC ID or Lease No.:		☐ Drilling Permit Application (Form W-1)
Total Lease Acres:		Field Name:		☐ Completion Report (Form G-1/W-2)
Proration Acres:		Field No.:		
Wellbore Profile		Is this a UFT field?		
SL Record (Parent) Well Drilling Permit No.:		County:		

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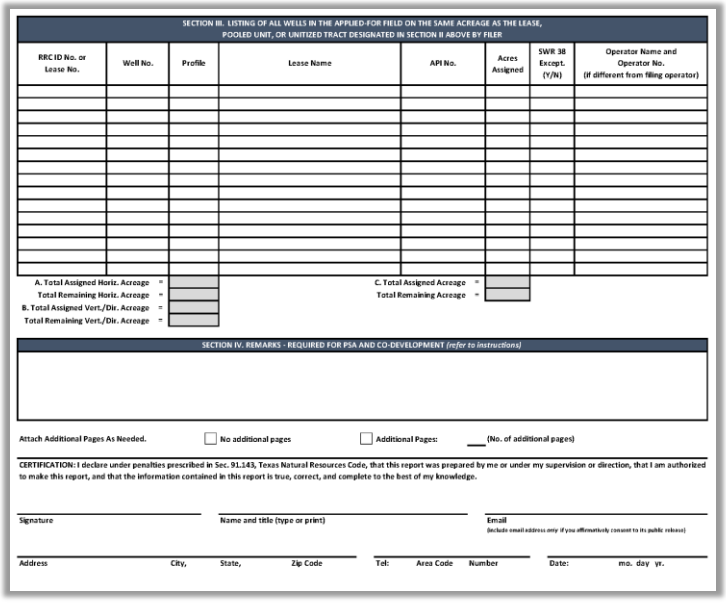
Example of a P-16 filed in lieu of a P-15 and Acreage List (continued on next slide).

P-16 (Acreage Designation Section III & IV)



SECTION III. LISTING OF ALL WELLS IN THE APPLIED-FOR FIELD ON THE SAME ACREAGE AS THE LEASE, POOLED UNIT, OR UNITIZED TRACT DESIGNATED IN SECTION II ABOVE BY FILER

RRC ID No. or Lease No.	Well No.	Profile	Lease Name	API No.	Acres Assigned	SWR 38 Except. (Y/N)	Operator Name and Operator No. (if different from filing operator)

A. Total Assigned Horiz. Acreage =
Total Remaining Horiz. Acreage =
B. Total Assigned Vert./Dir. Acreage =
Total Remaining Vert./Dir. Acreage =

C. Total Assigned Acreage =
Total Remaining Acreage =

SECTION IV. REMARKS - REQUIRED FOR PSA AND CO-DEVELOPMENT *(refer to instructions)*

Attach Additional Pages As Needed. ☐ No additional pages ☐ Additional Pages: ___ (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Signature | Name and title (type or print) | Email (include email address only if you affirmatively consent to its public release)

Address | City, | State, | Zip Code | Tel: Area Code Number | Date: mo. day yr.

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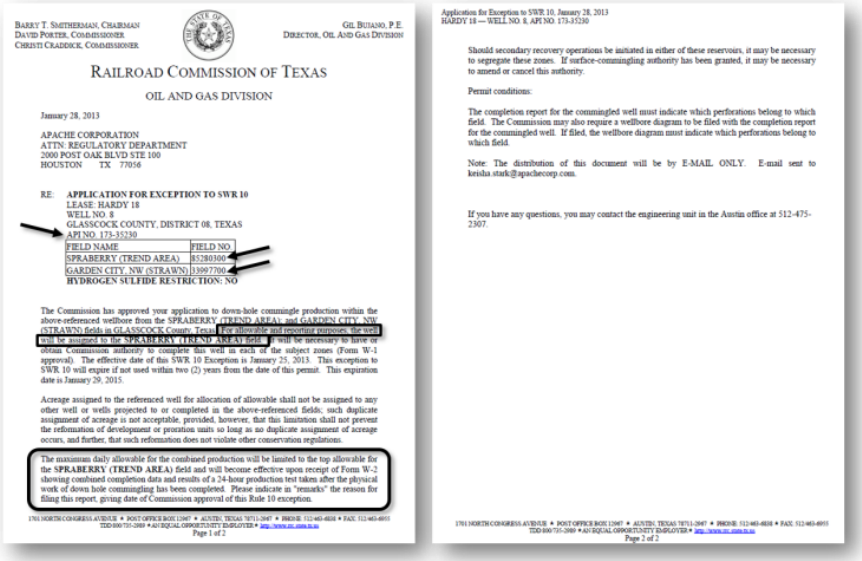
- Section III needs to reflect any producing wells on this acreage in this field during the time this well was completed. Make sure you leave remarks in Section IV about what the P-16 was filled out for and sign the form.
- Part A & B of Section III are only required in fields with an exception to SWR-40.

SWR-10 Letter (Downhole Commingling)



BARRY T. SMITHERMAN, CHAIRMAN
DAVID PORTER, COMMISSIONER
CHRISTI CRADDICK, COMMISSIONER

GIL BUJANO, P.E.
DIRECTOR, OIL AND GAS DIVISION

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

January 28, 2013

APACHE CORPORATION
ATTN: REGULATORY DEPARTMENT
2000 POST OAK BLVD STE 100
HOUSTON TX 77056

RE: **APPLICATION FOR EXCEPTION TO SWR 10**
LEASE: HARDY 18
WELL NO. 8
GLASSCOCK COUNTY, DISTRICT 08, TEXAS
API NO. 173-35230

FIELD NAME	FIELD NO.
SPRABERRY (TREND AREA)	85280300
GARDEN CITY, NW (STRAWN)	33997700

HYDROGEN SULFIDE RESTRICTION: NO

The Commission has approved your application to down-hole commingle production within the above-referenced wellbore from the SPRABERRY (TREND AREA) and GARDEN CITY, NW (STRAWN) fields in GLASSCOCK County, Texas. For allowable and reporting purposes, the well will be assigned to the **SPRABERRY (TREND AREA)** field. It will be necessary to have or obtain Commission authority to complete this well in each of the subject zones (Form W-1 approval). The effective date of this SWR 10 Exception is January 25, 2013. This exception to SWR 10 will expire if not used within two (2) years from the date of this permit. This expiration date is January 29, 2015.

Acreage assigned to the referenced well for allocation of allowable shall not be assigned to any other well or wells projected to or completed in the above-referenced fields; such duplicate assignment of acreage is not acceptable, provided, however, that this limitation shall not prevent the reformation of development or proration units so long as no duplicate assignment of acreage occurs, and further, that such reformation does not violate other conservation regulations.

The maximum daily allowable for the combined production will be limited to the top allowable for the **SPRABERRY (TREND AREA)** field and will become effective upon receipt of Form W-2 showing combined completion data and results of a 24-hour production test taken after the physical work of down hole commingling has been completed. Please indicate in "remarks" the reason for filing this report, giving date of Commission approval of this Rule 10 exception.

1701 NORTH CONGRESS AVENUE ♦ POST OFFICE BOX 12967 ♦ AUSTIN, TEXAS 78711-2967 ♦ PHONE: 512-463-6838 ♦ FAX: 512-463-6955
TDD 800/735-2989 ♦ AN EQUAL OPPORTUNITY EMPLOYER ♦ http://www.rrc.state.tx.us
Page 1 of 2

Application for Exception to SWR 10, January 28, 2013
HARDY 18 — WELL NO. 8, API NO. 173-35230

Should secondary recovery operations be initiated in either of these reservoirs, it may be necessary to segregate these zones. If surface-commingling authority has been granted, it may be necessary to amend or cancel this authority.

Permit conditions:

The completion report for the commingled well must indicate which perforations belong to which field. The Commission may also require a wellbore diagram to be filed with the completion report for the commingled well. If filed, the wellbore diagram must indicate which perforations belong to which field.

Note: The distribution of this document will be by E-MAIL ONLY. E-mail sent to keisha.stark@apachecorp.com.

If you have any questions, you may contact the engineering unit in the Austin office at 512-475-2307.

1701 NORTH CONGRESS AVENUE ♦ POST OFFICE BOX 12967 ♦ AUSTIN, TEXAS 78711-2967 ♦ PHONE: 512-463-6838 ♦ FAX: 512-463-6955
TDD 800/735-2989 ♦ AN EQUAL OPPORTUNITY EMPLOYER ♦ http://www.rrc.state.tx.us
Page 2 of 2

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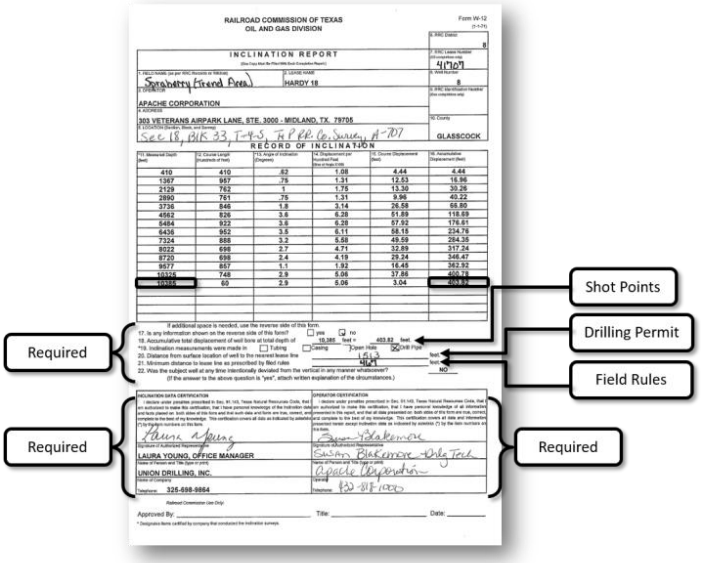
- Example of a SWR-10 approval letter.
- Please read the letter carefully before filing your W-2/G-1.
- The Well Compliance, District Office & the Engineering department verify the SWR-10 letter against the page 5 Formation Record.
    - If perforated in zones other than permitted ones, district will query, and operator may be required to amend SWR-10 Application.

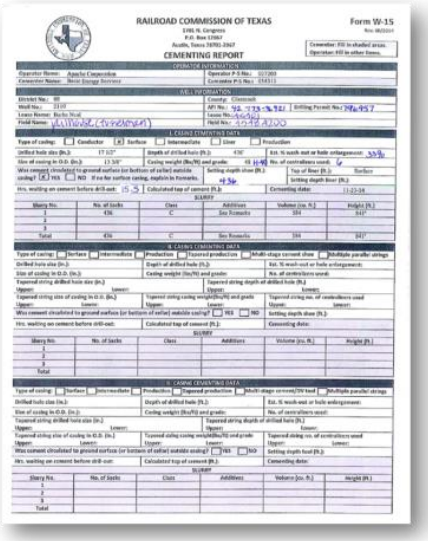
W-12 (Inclination Report)



83

- Example of an Inclination Report (W-12).
- Please make sure that items 17-22 are answered and the W-12 is certified by both the inclination company as well as the operator.

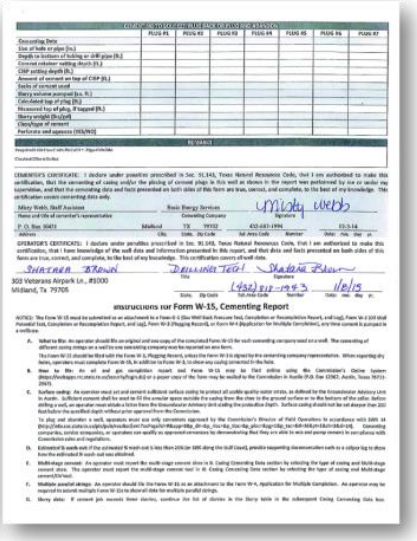
W-15 (Cementing Report)



RAILROAD COMMISSION OF TEXAS

Form W-15

CEMENTING REPORT



Instructions for Form W-15, Cementing Report

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Instructions, front page top right corner, designate:

Cementer: Fill in shaded areas.

Operator: Fill in other items.

- Purpose of W-15
  - Any time cement is pumped in a wellbore there should be a W-15 attached certifying work:
    - cementing casing in a new drill
    - squeezing perfs
    - setting two sacks cement on top of CIBP for Plug Back
    - Temporarily Abandoning
    - casing repair
    - sidetracking maybe something got stuck in the hole
    - anything else changing wellbore structure,
- All information on W-15 **must correspond** with W-2/G-1 Completion Tab
  - Casing Record on page 4 and/or
  - Acid, Shot, Fracture, Cement Squeeze, Etc. on page 5.
- Electronic Form W-15 is now available!
  - Form can be uploaded as .pdf once completed.
  - Option to use fillable format still acceptable.

W-15 (Important Notes)

- Full and complete signatures from both operator and cementer are required.
  - Digital signatures are acceptable
  - Initials are not acceptable

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Jeremy Croxton/Cementer Josephute Kelno/Cementer	Crest Pumping Technologies	Jeremy Croxton	
Name and title of cementer's representative	Cementing Company	Signature	
P.O. Box 117 Jacksboro, TX 76458		940-567-3392	08/04/2018
Address City, State, Zip Code		Tel: Area Code Number	Date: mo. day yr.

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Jeremy Croxton/Cementer Enrique Vallejo/Cementer	Crest Pumping Technologies		
Name and title of cementer's representative	Cementing Company	Signature	
P.O. Box 117 Jacksboro, TX 76458		940-567-3392	08/15/2018
Address City, State, Zip Code		Tel: Area Code Number	Date: mo. day yr.

85

- Example shows two different signature styles for same representative.
- If Cementer's administrative staff has signature authorization for field representative, signature line must reflect both names:
  - Jane Doe
  - (for) John Smith
- Please Note: Same statute, Sec. 91.143 Texas Natural Resources Code, governing W-2/G-1 also applies to W-15.

W-15 (Changes)

Operator is not authorized to alter cementing information without Cementer's approval.

- If change was made, will need both Cementer and Operator representative's name authorizing change and date on W-15.
- If change was made without Cementer's approval, operator will be required to request/submit a new cementing report.

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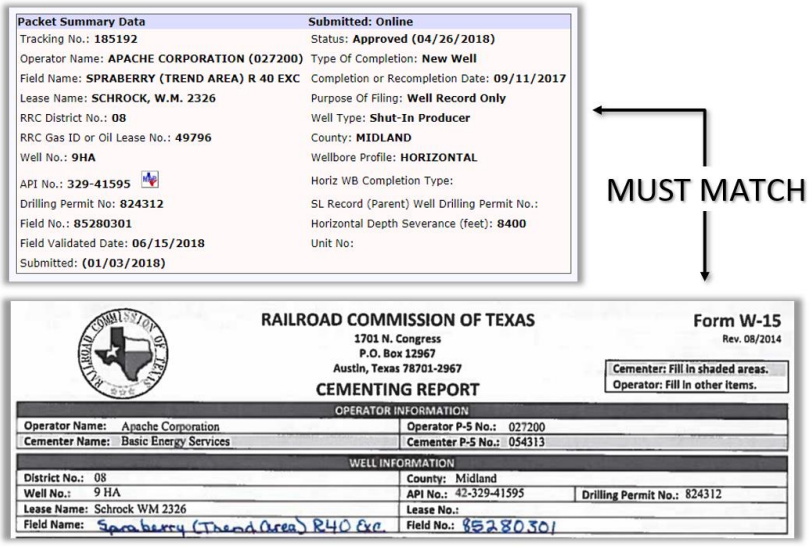
- On hard copy scanned image, white-out strip is very visible; we will be asking by who & when was change authorized.
- RRC does exercise the privilege to call the cementer.

W-15 (Well Information)



Packet Summary Data	Submitted: Online
Tracking No.: **185192**	Status: **Approved (04/26/2018)**
Operator Name: **APACHE CORPORATION (027200)**	Type Of Completion: **New Well**
Field Name: **SPRABERRY (TREND AREA) R 40 EXC**	Completion or Recompletion Date: **09/11/2017**
Lease Name: **SCHROCK, W.M. 2326**	Purpose Of Filing: **Well Record Only**
RRC District No.: **08**	Well Type: **Shut-In Producer**
RRC Gas ID or Oil Lease No.: **49796**	County: **MIDLAND**
Well No.: **9HA**	Wellbore Profile: **HORIZONTAL**
API No.: **329-41595**	Horiz WB Completion Type:
Drilling Permit No: **824312**	SL Record (Parent) Well Drilling Permit No.:
Field No.: **85280301**	Horizontal Depth Severance (feet): **8400**
Field Validated Date: **06/15/2018**	Unit No:
Submitted: **(01/03/2018)**	

MUST MATCH

RAILROAD COMMISSION OF TEXAS
1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15
Rev. 08/2014

Cementer: Fill in shaded areas.
Operator: Fill in other items.

CEMENTING REPORT

OPERATOR INFORMATION		
Operator Name: Apache Corporation	Operator P-5 No.: 027200	
Cementer Name: Basic Energy Services	Cementer P-5 No.: 054313	
WELL INFORMATION		
District No.: 08	County: Midland	
Well No.: 9 HA	API No.: 42-329-41595	Drilling Permit No.: 824312
Lease Name: Schrock WM 2326	Lease No.:	
Field Name: Spraberry (Trend Area) R40 Exc.	Field No.: 85280301	

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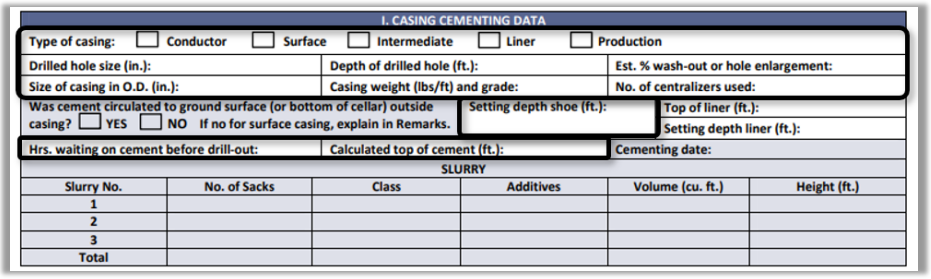
- **Packet Summary Data** on completion packet is compared and must match **Well Information** header on W-15.
- Concrete identifier such as API# or DP# help verify correct W-15 has been uploaded to completion packet.
- District also verifies Lease Name and Well Number.

W-15 (Sec. I for Operator)

Casing Cementing Data -
Conductor, Surface, Intermediate, Liner & Production



I. CASING CEMENTING DATA					
Type of casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ Production					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.):		Top of liner (ft.): / Setting depth liner (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date:	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

88

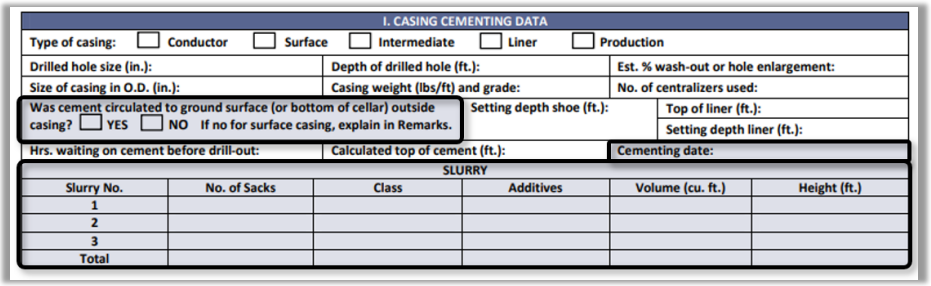
Operator identifies:

- Identify *Type of Casing*
- *Depth of drilled hole* not to be confused with *Setting depth shoe*.
- *Est. % wash-out or hole enlargement* baseline:
  - 20% across most of the state
  - 30% in coastal counties
  - If TOC was determined by TS or CBL, **not** calculation, note should be entered in washout factor box and/or comments section on Form W-15 and TOC Determined By column on page 4.
- SWR-13 requires *No. of centralizers used* thru all usable-quality waters; primarily surface casing.
- *Hrs. waiting on cement before drill-out* primarily on surface and intermediate casings.
- It is the Operator's responsibility to fill in CALCULATED TOP OF CEMENT on W-15.

W-15 (Sec. I for Cementer)

RRC Approved Cementer fills out Shaded Areas:

Conductor, Surface, Intermediate, Liner & Production



I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.):	Top of liner (ft.): / Setting depth liner (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

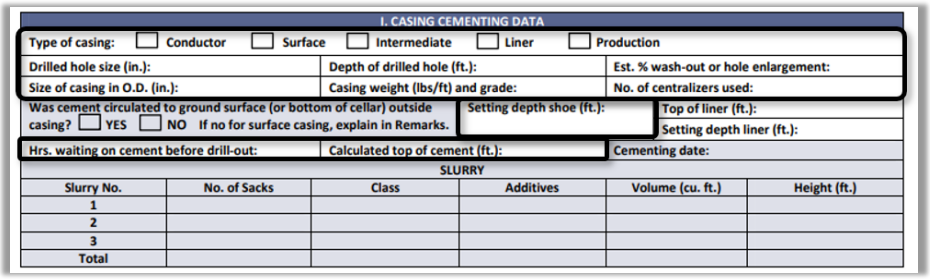
89

SHADED AREA is Cementer's responsibility:

- Cementer must certify question *Was cement circulated to ground surface (or bottom of cellar) outside casing?*
  - If question left unanswered, operator must request corrected W-15 from Cementer.
- If answered NO, district will verify it was notified and representative received topout instructions.
  - Include number of sacks used for top out in total cement sacks used.
- Discrepancy between operator and cementer answers (***i.e.*** W-15 shows cement **did not** circulate to surface and operator shows cement **did** circulate) will generate RRC query.
- On **New Wells**, D.O. uses W-15 cementing dates as a guide when verifying drilling commence/end dates on page 2 of completion.

W-15 (Data for Sec. I)

Sec. I Casing Cementing Data - Intermediate or Production



I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ Production		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.):	Top of liner (ft.): / Setting depth liner (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

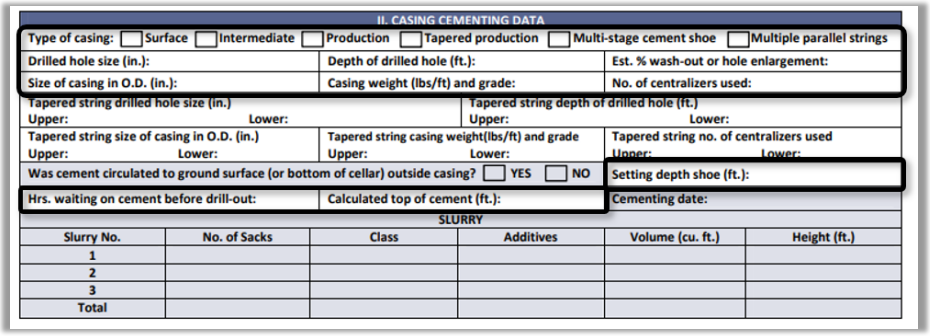
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

90

- Operator has option to fill out Intermediate or Production Casing information on either Sec. I or II Casing Cementing Data of W-15. [Example shows Sec. I]
- No. of Centralizers used –
  - SWR-13 requires centralizers thru all usable-quality waters especially if using 2nd string to protect deeper strata.
  - If GAU determination shows secondary depth, District will verify protection of freshwater strata.

W-15 (Data for Sec. II)

Sec. II Casing Cementing Data - Intermediate or Production



II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight(lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO		Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

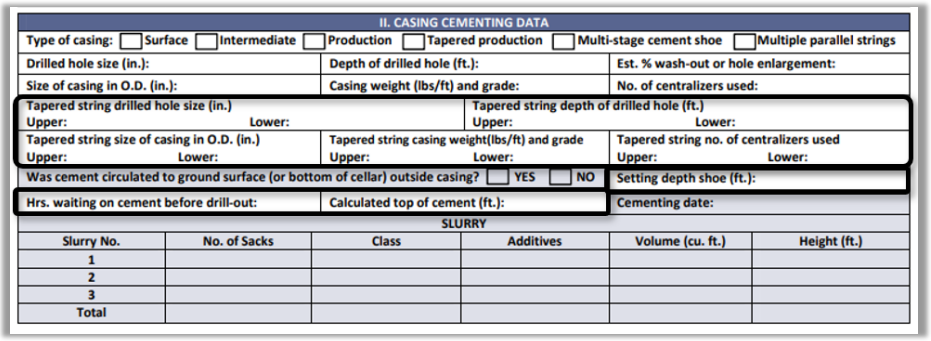
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

91

- Operator has option to fill out Intermediate or Production Casing information on either Sec. I or II Casing Cementing Data of W-15. [Example Sec. II]
- No. of Centralizers used –
  - SWR-13 requires centralizers thru all usable-quality waters especially if using 2nd string to protect deeper strata.
  - If GAU determination shows secondary depth, District will verify protection of freshwater strata.

W-15 (Data for Tapered Hole or String)

Sec. II or III Casing Cementing Data - Tapered Hole or Tapered String



II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight(lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO		Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

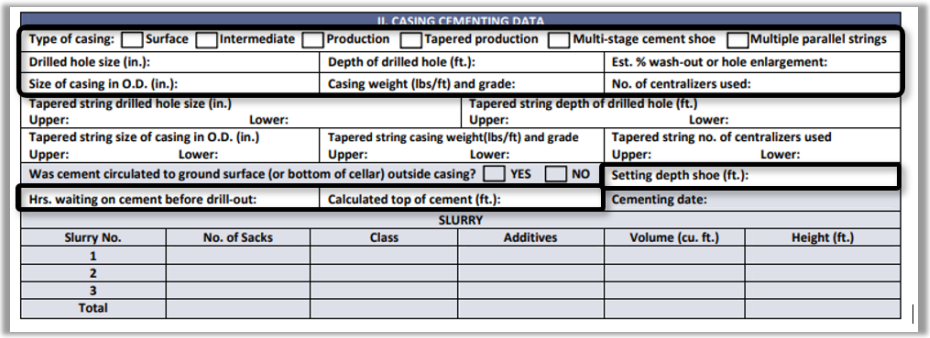
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

92

- If cementing tapered string, select Tapered Production under Type of Casing on page 4 from drop down and include cross over depth.
  - Please separate Tapered Casing into two lines.
- Tapered hole size is not offered on drop down selection on page 4.
  - W-15 will reflect two different hole sizes and page 4 Remarks will show depth hole size tapered.

W-15 (Multi-Stage Data for Sec. II)

Sec. II Casing Cementing Data - Multi-Stage Cement Shoe



II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight(lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO		Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

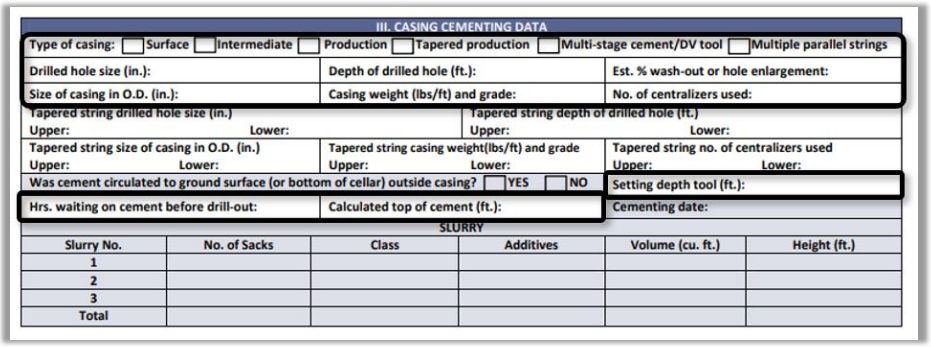
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

93

- If cement circulated from shoe, show Tool setting depth as Calculated Top Of Cement.
  - If TOC is listed way higher than tool depth, might give impression tool did not open; District will verify.
- District is actively looking for no-cement gaps; Top of Cement is necessary to determine if there is void requiring remedial cementing work.

W-15 (Multi-Stage Data for Sec. III)

Sec. III Casing Cementing Data - Multi-Stage Cement/DV Tool



III. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement/DV tool ☐ Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight(lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO		Setting depth tool (ft.):
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

94

- If DVT did not open, important to show from where remedial (P&S) cementing began to Top Of Cement; add Remark DVT did not open to both page 4 W-2/G-1 and W-15.
- District is actively looking for no-cement gaps; Top of Cement is necessary to determine if there is void requiring remedial cementing work.
    - If cement did not circulate and productive formation does not look isolated, District will ask to verify either TOC or top of formation.

W-15 (Plugs on Back of W-15)

Cementing to

- Squeeze
- Plug Back
- Plug And Abandon

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

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Cementer: Fill in shaded areas.
Operator: Fill in other items.

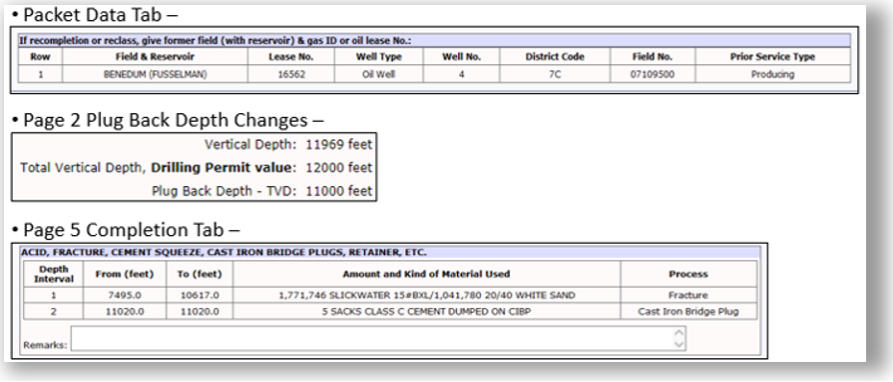
- Both Operator or Cementer may include Remark to clarify cementing process.
  - *i.e.* Fish was lost in the hole requiring sidetrack.
- Operator must distinguish if squeeze job or plug was set.
  - If plug was set, **operator's responsibility to fill in if plug was tagged**.
- Some of the referenced remedial jobs are done during the completion timeline while others are done after the well has been completed.
  - Reasons for setting a cement plug:
    - Sidetrack
    - Directional drilling (whip stock plug as well)
    - Plug back zone
    - Lost circulation
    - Abandonment
    - Test Anchor
  - Reasons for a squeeze:
    - Primary Cement job repair
    - Unwanted Water Production
    - High Gas-Oil Ratio (GOR)
    - Casing Repair
    - Nonproductive/Depleted Zones
    - Alter injection profiles
    - Sustained casing pressure
    - Repair liner tops
    - Lost circulation zones
    - Microcannulas repair

- Raise cement top

W-15 (Cement Squeeze)

If squeeze or plug back, recompletion information will appear under several completion tabs:

- W-15 is **required** to be attached for well to be removed from schedule.



• Packet Data Tab –

If recompletion or reclass, give former field (with reservoir) & gas ID or oil lease No.:

Row	Field & Reservoir	Lease No.	Well Type	Well No.	District Code	Field No.	Prior Service Type
1	BENEDUM (FUSSELMAN)	16562	Oil Well	4	7C	07109500	Producing

• Page 2 Plug Back Depth Changes –

Vertical Depth: 11969 feet
Total Vertical Depth, **Drilling Permit value**: 12000 feet
Plug Back Depth - TVD: 11000 feet

• Page 5 Completion Tab –

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUGS, RETAINER, ETC.

Depth Interval	From (feet)	To (feet)	Amount and Kind of Material Used	Process
1	7495.0	10617.0	1,771,746 SLICKWATER 15#BXL/1,041,780 20/40 WHITE SAND	Fracture
2	11020.0	11020.0	5 SACKS CLASS C CEMENT DUMPED ON CIBP	Cast Iron Bridge Plug

Remarks:

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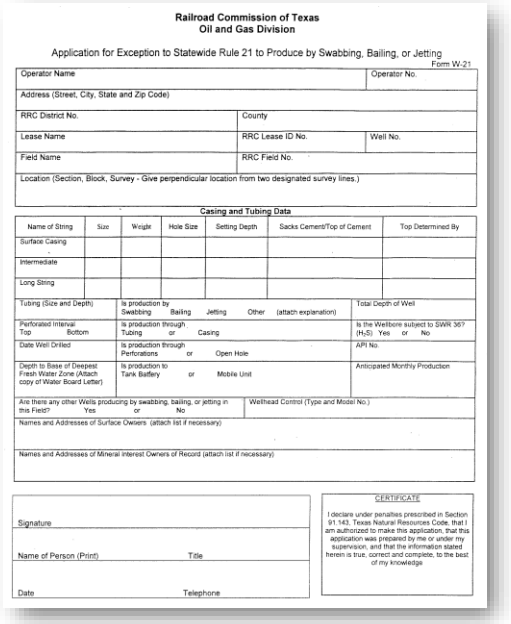
Supplemental Information:

- **Packet Data** Tab…let the system do the search for you…it will auto-fill!
- **Page 2 Completion Tab…**Plug Back Depth changes.
- **Page 5 Completion Tab**…show previous producing zone plus NEW producing interval.
  - In example, previous perfs 11772-11821 isolated by CIBP @ 11020 w/20' cement with new PB @ 11000
  - With new producing interval from 7495-10617
- District will add comment for Compliance to *REMOVE* well from schedule.
  - W-15 must be attached! Requirement for SWR-14 Compliance.
- Question: Is there a "rule of thumb" for "enough cement" used to squeeze perfs to be considered permanent isolation?
  - Answer: In several sections, SWR-13 mentions pressure testing requirements verifying effectiveness of squeeze. If pressure does not hold (250 psi @ 30mins), more likely cement is not there.

W-21 (Application for Exc. to SWR-21)



Railroad Commission of Texas
Oil and Gas Division

Application for Exception to Statewide Rule 21 to Produce by Swabbing, Bailing, or Jetting

Form W-21

Operator Name	Operator No.
Address (Street, City, State and Zip Code)	
RRC District No.	County
Lease Name	RRC Lease ID No. / Well No.
Field Name	RRC Field No.
Location (Section, Block, Survey - Give perpendicular location from two designated survey lines.)	

Casing and Tubing Data

Name of String	Size	Weight	Hole Size	Setting Depth	Sacks Cement/Top of Cement	Top Determined By
Surface Casing						
Intermediate						
Long String						

Tubing (Size and Depth)	Is production by Swabbing Bailing Jetting Other (attach explanation)	Total Depth of Well
Perforated Interval: Top Bottom	Is production through Tubing or Casing	Is the Wellbore subject to SWR 36? (H_2S) Yes or No
Date Well Drilled	Is production through Perforations or Open Hole	API No.
Depth to Base of Deepest Fresh Water Zone (Attach copy of Water Board Letter)	Is production to Tank Battery or Mobile Unit	Anticipated Monthly Production
Are there any other Wells producing by swabbing, bailing, or jetting in this Field? Yes or No	Wellhead Control (Type and Model No.)	
Names and Addresses of Surface Owners (attach list if necessary)		
Names and Addresses of Mineral Interest Owners of Record (attach list if necessary)		

Signature

Name of Person (Print) Title

Date Telephone

CERTIFICATE

I declare under penalties prescribed in Section 91.143, Texas Natural Resources Code, that I am authorized to make this application, that this application was prepared by me or under my supervision, and that the information stated herein is true, correct and complete, to the best of my knowledge

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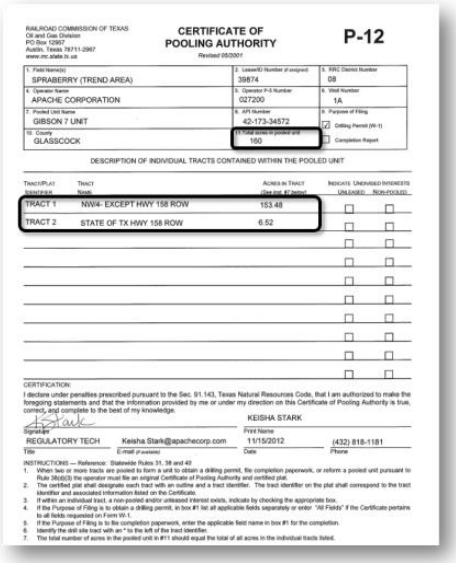
Form W-21 Application to Exception to SWR-21 to Produce by Swabbing, Bailing, or Jetting

P-12 (Certificate of Pooling Authority)



RAILROAD COMMISSION OF TEXAS
Oil and Gas Division
PO Box 12967
Austin, Texas 78711-2967
www.rrc.state.tx.us

CERTIFICATE OF POOLING AUTHORITY **P-12**

Revised 05/2001

1. Field Name(s)	2. Lease/ID Number (if assigned)	3. RRC District Number
SPRABERRY (TREND AREA)	39874	08
4. Operator Name	5. Operator P-5 Number	6. Well Number
APACHE CORPORATION	027200	1A
7. Pooled Unit Name	8. API Number	9. Purpose of Filing
GIBSON 7 UNIT	42-173-34572	☑ Drilling Permit (W-1)
10. County	11. Total acres in pooled unit	☐ Completion Report
GLASSCOCK	160	

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

Tract/Plat Identifier	Tract Name	Acres in Tract (See inst. #7 below)	Indicate Unleased Interests Unleased	Non-Pooled
TRACT 1	NW/4- EXCEPT HWY 158 ROW	153.48	☐	☐
TRACT 2	STATE OF TX HWY 158 ROW	6.52	☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

CERTIFICATION:

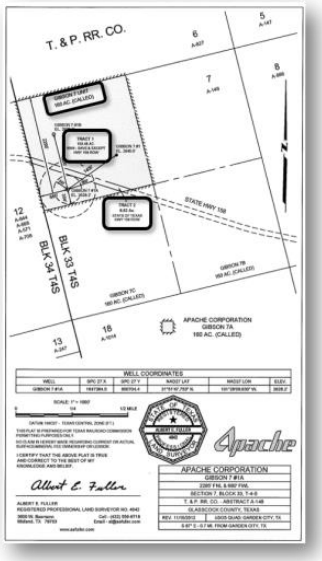
I declare under penalties prescribed pursuant to the Sec. 91.143, Texas Natural Resources Code, that I am authorized to make the foregoing statements and that the information provided by me or under my direction on this Certificate of Pooling Authority is true, correct, and complete to the best of my knowledge.

KEISHA STARK
Signature — Print Name

REGULATORY TECH — Keisha.Stark@apachecorp.com — 11/15/2012 — (432) 818-1181
Title — E-mail (if available) — Date — Phone

INSTRUCTIONS — References: Statewide Rules 31, 38 and 40

1. When two or more tracts are pooled to form a unit to obtain a drilling permit, file completion paperwork, or reform a pooled unit pursuant to Rule 38(d)(3) the operator must file an original Certificate of Pooling Authority and certified plat.
2. The certified plat shall designate each tract with an outline and a tract identifier. The tract identifier on the plat shall correspond to the tract identifier and associated information listed on the Certificate.
3. If within an individual tract, a non-pooled and/or unleased interest exists, indicate by checking the appropriate box.
4. If the Purpose of Filing is to obtain a drilling permit, in box #1 list all applicable fields separately or enter "All Fields" if the Certificate pertains to all fields requested on Form W-1.
5. If the Purpose of Filing is to file completion paperwork, enter the applicable field name in box #1 for the completion.
6. Identify the drill site tract with an "*" to the left of the tract identifier.
7. The total number of acres in the pooled unit in #11 should equal the total of all acres in the individual tracts listed.



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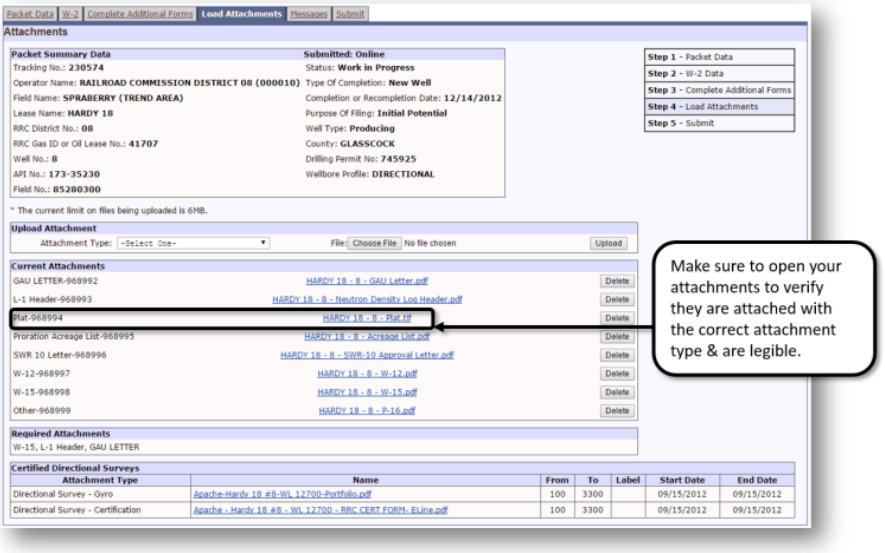
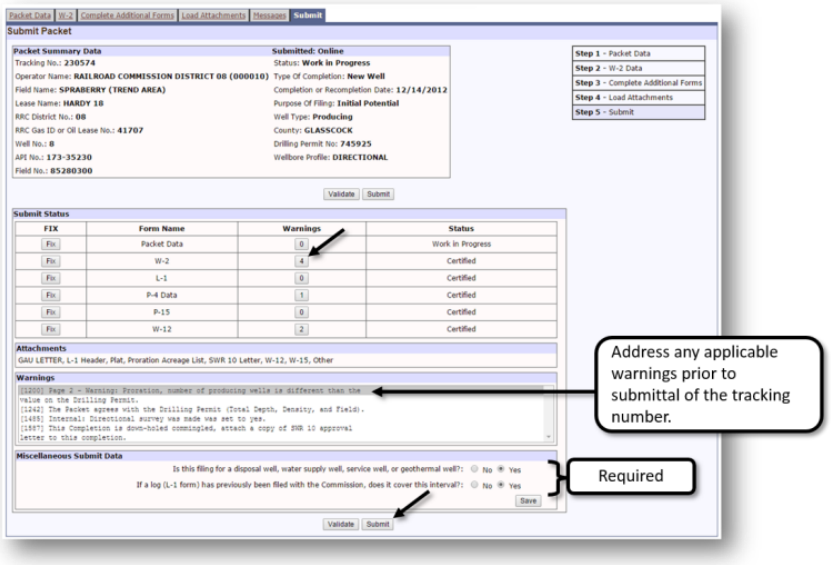
- Only required if the acreage or configuration of the pooled unit changed from the time of permitting the wellbore.
- The total lease acreage on the P-12 should match page 2 of the W-2/G-1 and the tracts with corresponding acreage should match the supporting plat.

Verify Attachments



- Open each of your documents once they have been attached to verify that they display properly, were attached with the correct attachment type and the name is applicable to what the document is.
- Plats can only be attached in .tif format. If you had to attach your plat as “Other” it is most likely because the plat is in .pdf format and the system won’t accept it that way. We can’t approve the plat in that format.

Submittal Page



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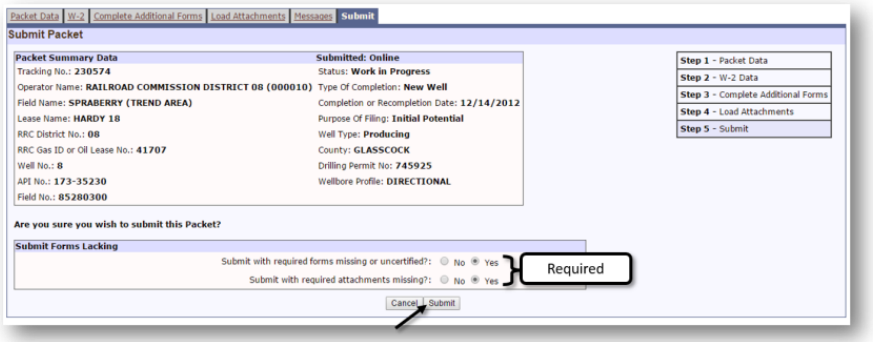
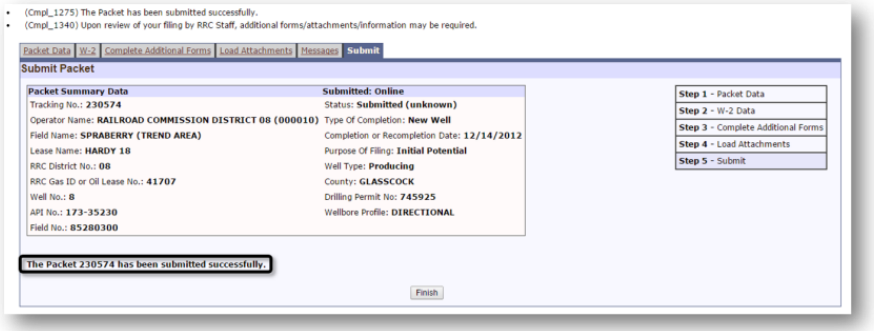
- Review the warnings prior to submitting the W-2/G-1.
- Please remember that these are just warnings if you know something isn't required then you should be able to submit the packet lacking that document.
- It is a good idea to leave a remark on page 5 of the W-2/G-1 for any applicable warnings.

Submit Forms Lacking



Answer both questions and hit submit!

Finished



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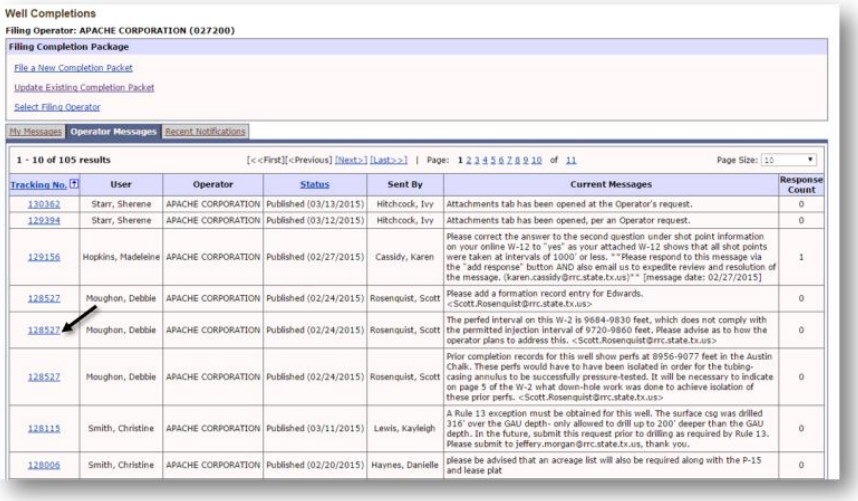
You will get the submitted successfully message if your packet has been Submitted.

Message Review



Well Completions

Filing Operator: APACHE CORPORATION (027200)

Filing Completion Package

File a New Completion Packet

Update Existing Completion Packet

Select Filing Operator

My Messages | Operator Messages | Recent Notifications

1 - 10 of 105 results [<<First][<Previous] [Next>] [Last>>] | Page: 1 2 3 4 5 6 7 8 9 10 of 11 Page Size: 10

Tracking No.	User	Operator	Status	Sent By	Current Messages	Response Count
130362	Starr, Sherene	APACHE CORPORATION	Published (03/13/2015)	Hitchcock, Ivy	Attachments tab has been opened at the Operator's request.	0
129394	Starr, Sherene	APACHE CORPORATION	Published (03/12/2015)	Hitchcock, Ivy	Attachments tab has been opened, per an Operator request.	0
129156	Hopkins, Madeleine	APACHE CORPORATION	Published (02/27/2015)	Cassidy, Karen	Please correct the answer to the second question under shot point information on your online W-12 to "yes" as your attached W-12 shows that all shot points were taken at intervals of 1000' or less. ""Please respond to this message via the "add response" button AND also email us to expedite review and resolution of the message. (karen.cassidy@rrc.state.tx.us)"" [message date: 02/27/2015]	1
128527	Moughon, Debbie	APACHE CORPORATION	Published (02/24/2015)	Rosenquist, Scott	Please add a formation record entry for Edwards. <Scott.Rosenquist@rrc.state.tx.us>	0
128527	Moughon, Debbie	APACHE CORPORATION	Published (02/24/2015)	Rosenquist, Scott	The perfed interval on this W-2 is 9684-9830 feet, which does not comply with the permitted injection interval of 9720-9860 feet. Please advise as to how the operator plans to address this. <Scott.Rosenquist@rrc.state.tx.us>	0
128527	Moughon, Debbie	APACHE CORPORATION	Published (02/24/2015)	Rosenquist, Scott	Prior completion records for this well show perfs at 8956-9077 feet in the Austin Chalk. These perfs would have to have been isolated in order for the tubing-casing annulus to be successfully pressure-tested. It will be necessary to indicate on page 5 of the W-2 what down-hole work was done to achieve isolation of these prior perfs. <Scott.Rosenquist@rrc.state.tx.us>	0
128115	Smith, Christine	APACHE CORPORATION	Published (03/11/2015)	Lewis, Kayleigh	A Rule 13 exception must be obtained for this well. The surface csg was drilled 316' over the GAU depth- only allowed to drill up to 200' deeper than the GAU depth. In the future, submit this request prior to drilling as required by Rule 13. Please submit to Jeffery.morgan@rrc.state.tx.us, thank you.	0
128006	Smith, Christine	APACHE CORPORATION	Published (02/20/2015)	Haynes, Danielle	please be advised that an acreage list will also be required along with the P-15 and lease plat	0

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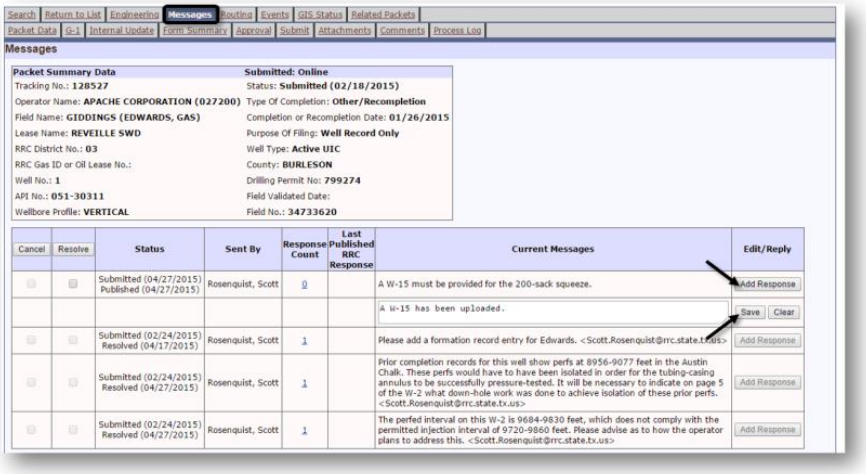
- Click on the tracking number that you want to correct.
- E-mail notifications are generated nightly after 5 p.m. and will be sent to the email address associated with your login.

Adding Responses



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After you make your corrections make sure to switch to the messages tab and respond to the message by clicking the *Add Response* button, typing your response and selecting *Save*.

New SWR Changes

Recent changes were made to create avenues for horizontal development.

In the past this took place via hearings on a field level but these changes are now standard statewide.

3.5, 3.31, 3.38, 3.40, 3.45, 3.51, 3.52, 3.86

How Changes Affect Compliance

- Stacked Lateral Rules (now statewide)
  - No field rule hearing needed
- Stacked laterals
  - All associated wellbores require a survey (G-10/ W-10) to be filed
- P-16 is now considered a form not a data sheet
- P-16 must be filed for all horizontal wells

How Changes Affect Compliance (cont.)

- A P-12 is **not** required upon completion if information has not changed from time of permit approval
- SWR-51
  - Filing of a potential test has increased from 10 days to 30 (a 30-day rule exception)
- SWR-52
  - Operator may request overproduction be cancelled administratively if there is no protest from all other operators within the field

UFT Fields

Field #	Field Name	O/G	District
02252500	AMARILLO, NORTH (CANYON LIME)	O	10
02870300	ANGIE (JAMES LIME)	O&G	06
06476300	BEAR GRASS (COTTON VALLEY CONS)	G	05
06648500	BECKVILLE (COTTON VALLEY)	G	06
07527722	BETHANY (TRAVIS PEAK CONS.)	O&G	06
12018200	BRISCOE RANCH (EAGLEFORD)	O&G	01
13147285	BUFFALO WALLOW (GRANITE WASH)	O&G	10
16032174	CARTHAGE (COTTON VALLEY)	O&G	06
16032300	CARTHAGE (HAYNESVILLE SHALE)	G	06
16032928	CARTHAGE (TRAVIS PEAK 6400)	O&G	06
16039300	CARTHAGE, SE (CV)	G	06
18600250	CLARK MARTIN (GRANITE WASH)	O&G	10
28899166	EMMA (DEVONIAN)	O&G	08
31913800	FORD, WEST (WOLFCAMP)	O&G	08
33151200	FRYE RANCH (CONSOLIDATED)	O&G	10
33998500	GARDEN CITY, S. (WOLFCAMP)	O&G	08
34204200	GATES RANCH (EAGLE FORD SHALE)	G	04
34733600	GIDDINGS (BUDA)	O&G	03
34733610	GIDDINGS (EAGLEFORD)	O&G	03
34943300	GILMER (COTTON VALLEY SANDS)	O&G	06
35415300	GLENWOOD (COTTON VALLEY)	G	06
40311100	HEMPHILL (DOUGLAS)	O&G	10
40311200	HEMPHILL (GRANITE WASH.)	O&G	10
40356200	HENDERSON, E. (COTTON VALLEY)	G	06
41911500	HOEFS T-K (WOLFCAMP)	O	08
42341300	HOLT RANCH (CONSOLIDATED)	O&G	7C
43305666	HUGH FITZSIMMONS (SAN MIGUEL)	O&G	01
44510500	INDIO TANKS (PEARSALL)	O&G	01

Field #	Field Name	O/G	District
52019750	LARD RANCH (GRANITE WASH -C-)	O&G	10
53869270	LIPSCOMB (CLEVELAND)	O&G	10
53878250	LIPSCOMB, S.E. (CLEVELAND)	O&G	10
56599500	MADISONVILLE, W. (WOODBINE -A-)	O	03
58257300	MATHERS RANCH (GRANITE WASH)	G	10
60265500	MEG (GRANITE WASH)	G	10
60462500	MENDOTA, NW. (GRANITE WASH)	O&G	10
61691235	MILLS RANCH (GRANITE WASH CONS.)	O&G	10
61792111	MINDEN (COTTON VALLEY CONS.)	O&G	06
65280200	NEWARK, EAST (BARNETT SHALE)	O&G	09
66461275	OAK HILL (COTTON VALLEY)	O&G	06
67849150	OVERTON (COTTON VALLEY SAND)	O&G	06
67998500	OZONA, NE. (CANYON 7520)	O&G	7C
68735120	PAN PETRO (CLEVELAND)	O&G	10
70247666	PEERY (MARMATON)	O&G	10
71052900	PHANTOM (WOLFCAMP)	O&G	08
80544500	SANDBAR (BONE SPRING)	O&G	08
85280300	SPRABERRY (TREND AREA)	O&G	08
85279200	SPRABERRY (TREND AREA)	O&G	7C
85280301	SPRABERRY (TREND AREA) R 40 EXC	O&G	08
85279201	SPRABERRY (TREND AREA) R 40 EXC	O&G	7C
86125250	STILES RANCH (GRANITE WASH CONS)	G	10
95369160	WASKOM (COTTON VALLEY)	O&G	06
96537275	WEST PARK (GRANITE WASH)	G	10
96785300	WHEELER N.E. (GRANITE WASH)	O&G	10
96969150	WHITE OAK (COTTON VALLEY SAND)	G	06
98359800	WOLFBONE (TREND AREA)	O&G	08
98563083	WOODLAWN (COTTON VALLEY)	O&G	06

There are 56 known Unconventional Fracture Treated Fields as of 06/01/2018

UFT Field Definition

Unconventional Fracture Treated Field – is a field in which horizontal drilling and hydraulic fracturing must be used in order to recover resources from all or part of a field and which is developed using either vertical or horizontal techniques.

Important Note:

Special Field rules still override Statewide Rules.

UFT Field Key Points

- No maximum diagonal limit
- Daily allowable shall be 100 bbl. per acre, 600 mcf
- Proration plats are not required for UFT fields
- P-16 must be filed with completion
- Independent acreage assignment between horizontal and vertical wells

These changes were implemented to ease burden of SWR-40 issues

Contact Well Compliance

For immediate assistance please call the Well Compliance for producing or shut-in wells.

Phone: 512-463-6975

Fax: 512-463-6955

Email: prorationunit@rrc.texas.gov

Website: https://www.rrc.texas.gov/

Address: P.O. Box 12967, Austin, Texas 78711-2967

Contact Underground Injection Control

For immediate assistance please call the UIC main phone number regarding injection or disposal wells.

Phone: 512-463-6792

Fax: 512-463-6780

Email: uic@rrc.texas.gov

Website: https://www.rrc.texas.gov/

Address: P.O. Box 12967, Austin, Texas 78711-2967

Contact the District Office

District: 01 & 02 112 E. Pecan Street, Suite 705 San Antonio, TX 78205 Phone: (210) 227-1313 Fax: (210) 227-4822	**District: 03** 1919 N Loop West, Suite 620 Houston, TX 77008 Phone: (713) 869-5001 Fax: (713) 869-9621
District: 04 10320 I-37 Corpus Christi, TX 78410 Phone: (361) 242-3113 Fax: (361) 242-9613	**District: 05 & 06** 2005 North State Highway 42 Kilgore, TX 75662 Phone: (903) 984-3026 Fax: (903) 983-3413
District: 7B 3444 North First St, Suite 600 Abilene, TX 79603 Phone: 325) 677-3545 Fax: (325) 677-7122	**District: 7C** 622 South Oakes St, Suite J San Angelo, TX 76903 Phone: (325) 657-7450 Fax: (325) 657-7455
District: 08 10 Desta Dr, Suite 500 E Midland, TX 79705 Phone: (432) 684-5581 Fax: (432) 684-6005	**District: 8A** 6302 Iola Avenue, Suite 600 Lubbock, TX 79424 Phone: (806) 698-6509 Fax: (806) 698-6532
District: 09 5800 Kell Blvd, Suite 300 Wichita Falls, TX 76310 Phone: (940) 723-2153 Fax: (940) 723-5088	**District: 10** 200 West Foster, Room 300 Pampa, TX 79065 Phone: (806) 665-1653 Fax: (806) 665-4217