NorthSTAR User Manual

Completion Report

Sample data in this manual represents a typical horizontal well as entered into NorthSTAR.
Sample well is NDIC File No. 35640
Completed on December 10, 2019.

Accessing the Completion Report

You can access a completion report if you have the below permissions:

Security Permissions

Access to submit a completion report is only available to those with the below security permissions.

- **NorthSTAR Admin** – Ability to Create, Read, Update, and Delete
- **Well Manager** – Ability to Create, Read, Update, and Delete
- **Well Submitter** – Ability to Create, Read, Update
- **Well Read Only** – Ability to Read

The NorthSTAR Admin is the only person who can view or edit security permissions.
To view Security Permissions:

- *Click on My Organization*
- *Click on Associated People*
- *Click on the hyperlinked name of the person you would like to review*
- *Click on Summary*
- *Click on Security*
- *Check permissions that apply and click Save*

TIP: Users with security permissions for a specific NorthSTAR form will be able to - at a minimum - read all forms in progress or submitted of that specific form type if they are affiliated with the Organization the form is being submitted under.

Open a Completion Report Form:

To access the completion form for submission you can:

1. *Select "Forms"*
2. *Select "Online Forms"*
3. *Select "Well Completion or Plugging Report"*

OR

1. *Enter the NDIC File Number in the search field located in the top right corner of the NorthSTAR navigation pane.*
2. *Click on the file number to open the Well Details page.*
3. *Select "Actions"*
4. *Select "Submit Completion or Plugging Report"*

Step 1: Form Information

Fields and Functions:

Form Name: Will default to the form you have selected in NorthSTAR.

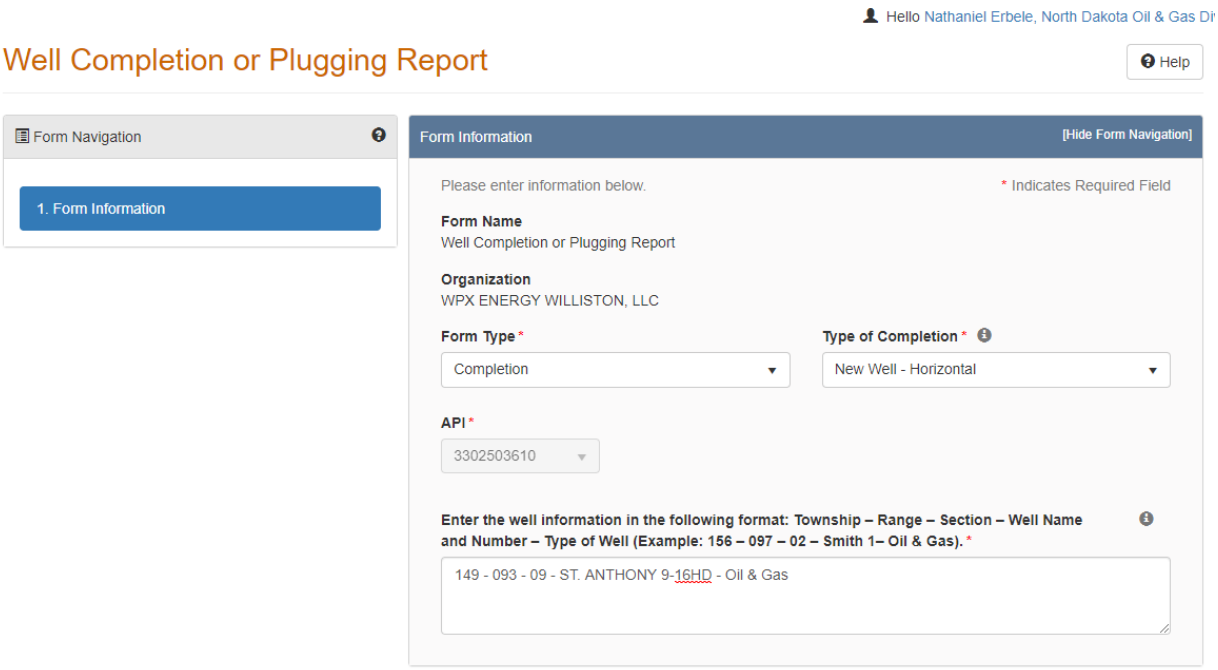
Organization: Select the name of the organization the sundry applies to if it does not default to the correct organization.

Form Type: When filling out a completion report choose "Completion" or "Preliminary Completion"

Type of Completion:

API: Select the API of the well you are filing the completion report for if it does not default to the correct API.

Well Information: Complete in the format listed. This box is used to indicate that a Completion (or Plugging Report) is being filed.

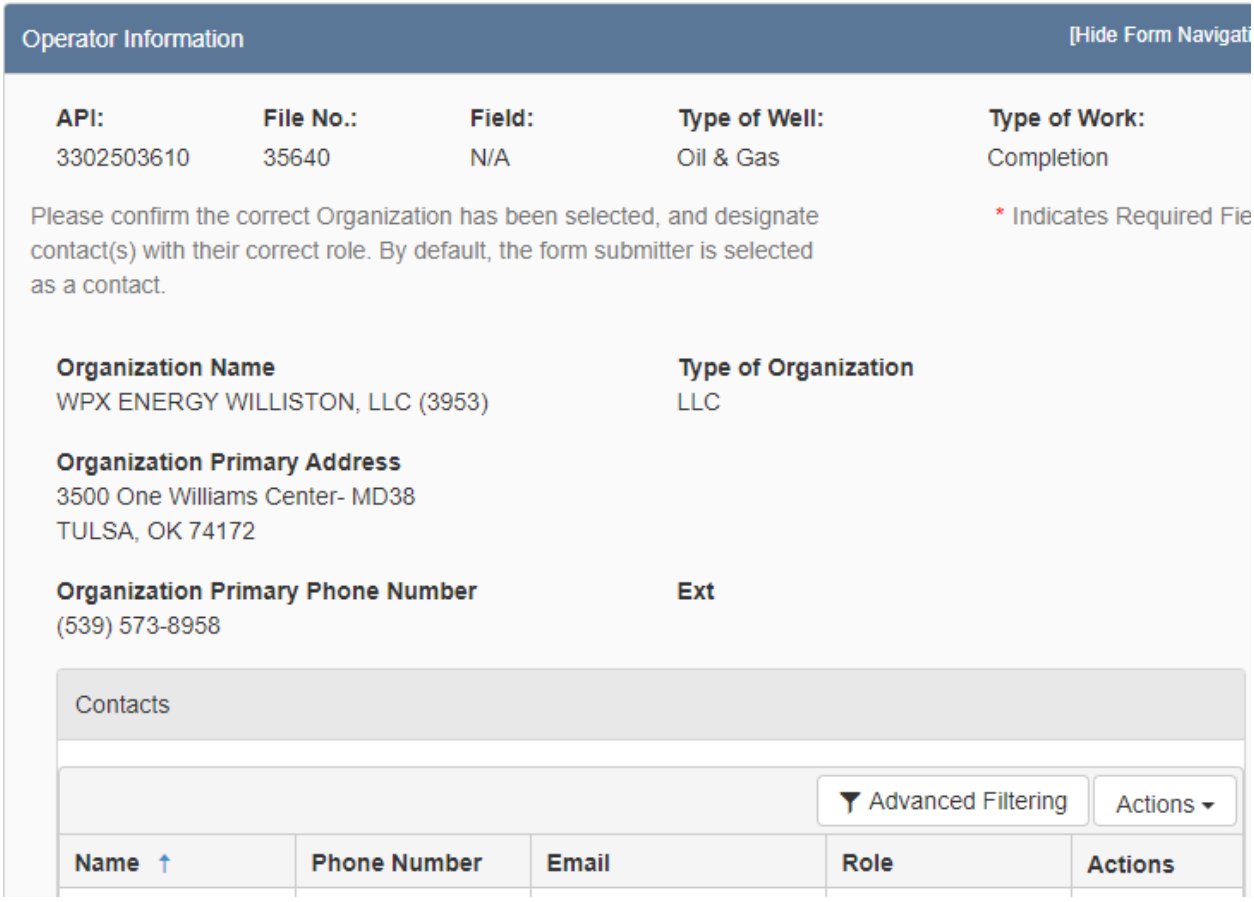


Step 2: Operator Information

The Operator Information page is used to designate contacts for the filing.

By default, the person who is logged in and summiting the completion report will be displayed in the "Contacts" grid. By clicking the "Actions" button and selecting "Add Contact", additional contacts can be associated with the completion report. If the individual is already in NorthSTAR, check the box next to the statement "Is this contact already in NorthSTAR?" and complete the "Contact Role" and "Find Person" fields. Then, click "Save".

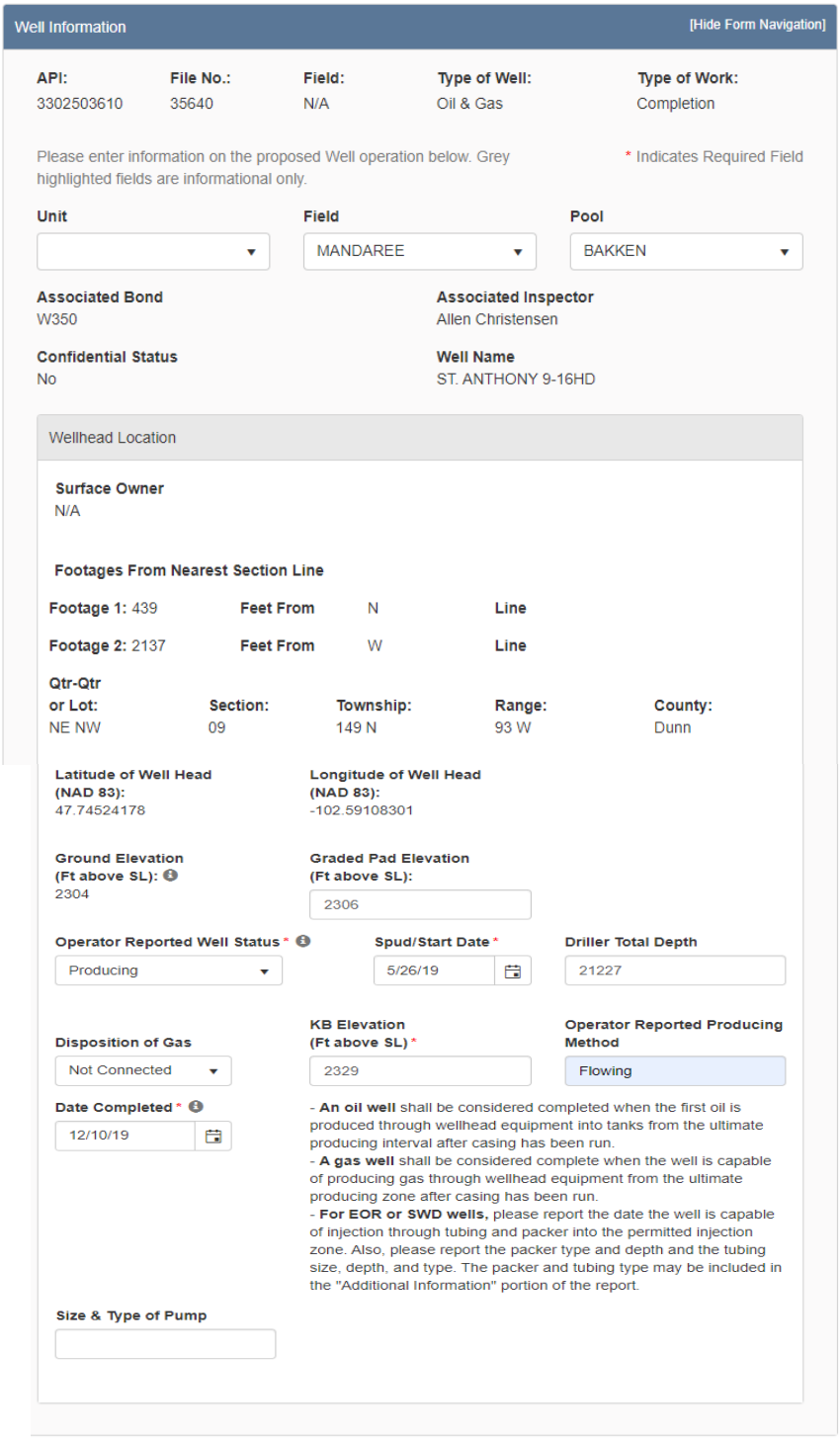
Review the operator information displayed at the top of the form to ensure the correct organization has been selected.



Step 3: Well Information

The Well Information step is used to give more information about the well completed.

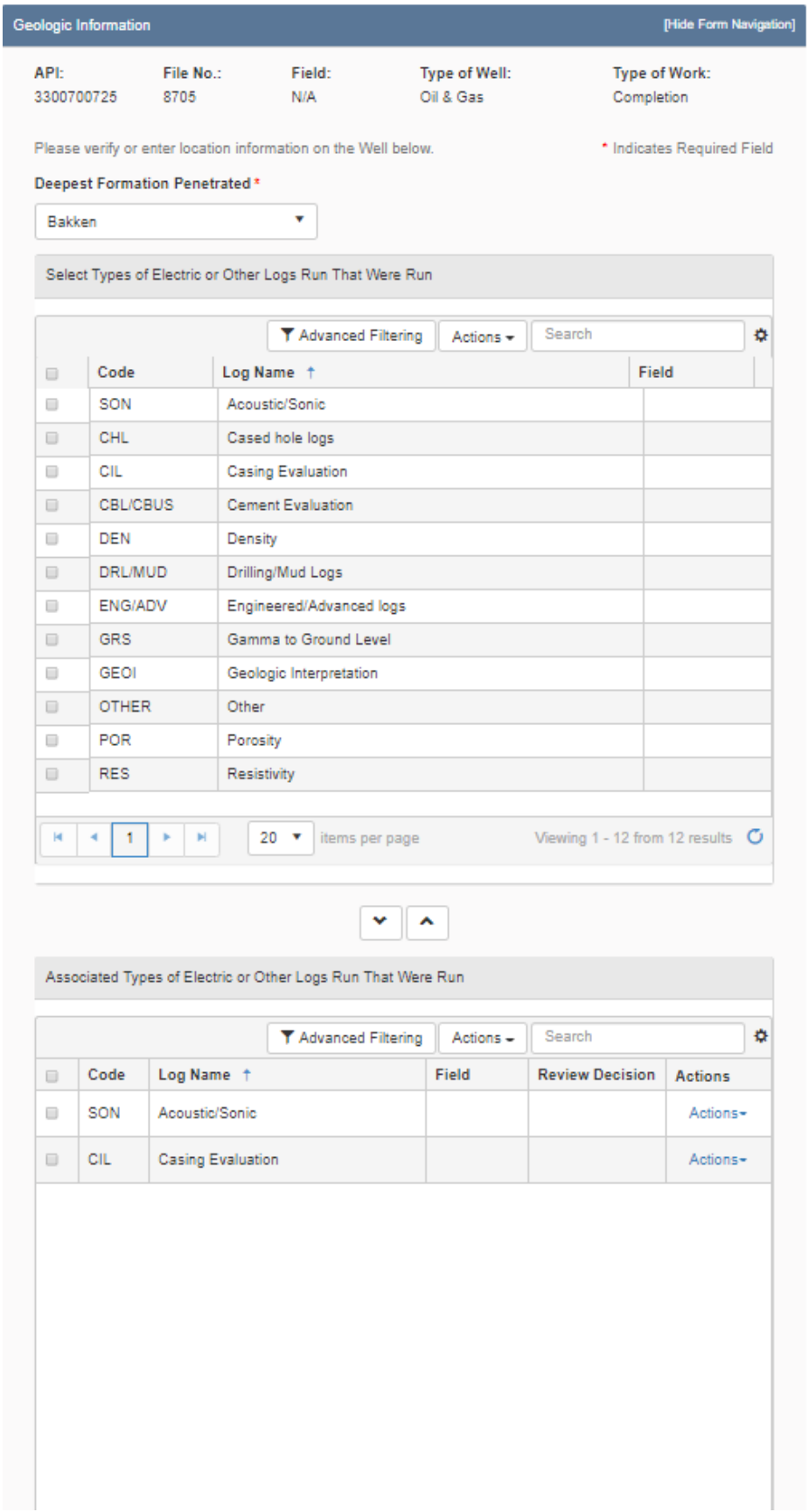
- *Verify the information appears correct.*
- *Add the information in the boxes and the bottom of the form then click "Save" to continue.*



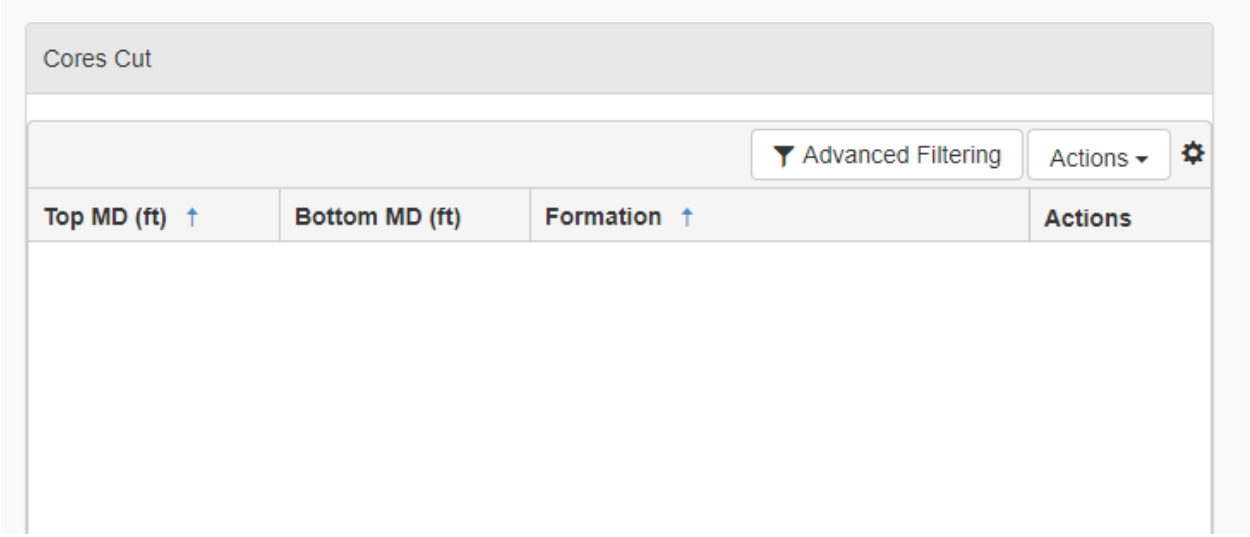
Step 4: Geologic Information

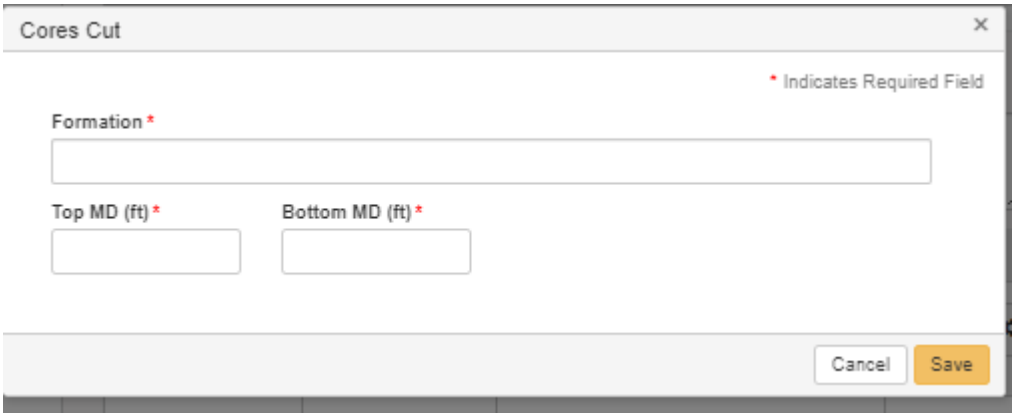
This section is used to provide information on types of electric or other logs that were run.

Check the box to the right of the logs that were run, then click the down arrow to move the selected logs into the box below.



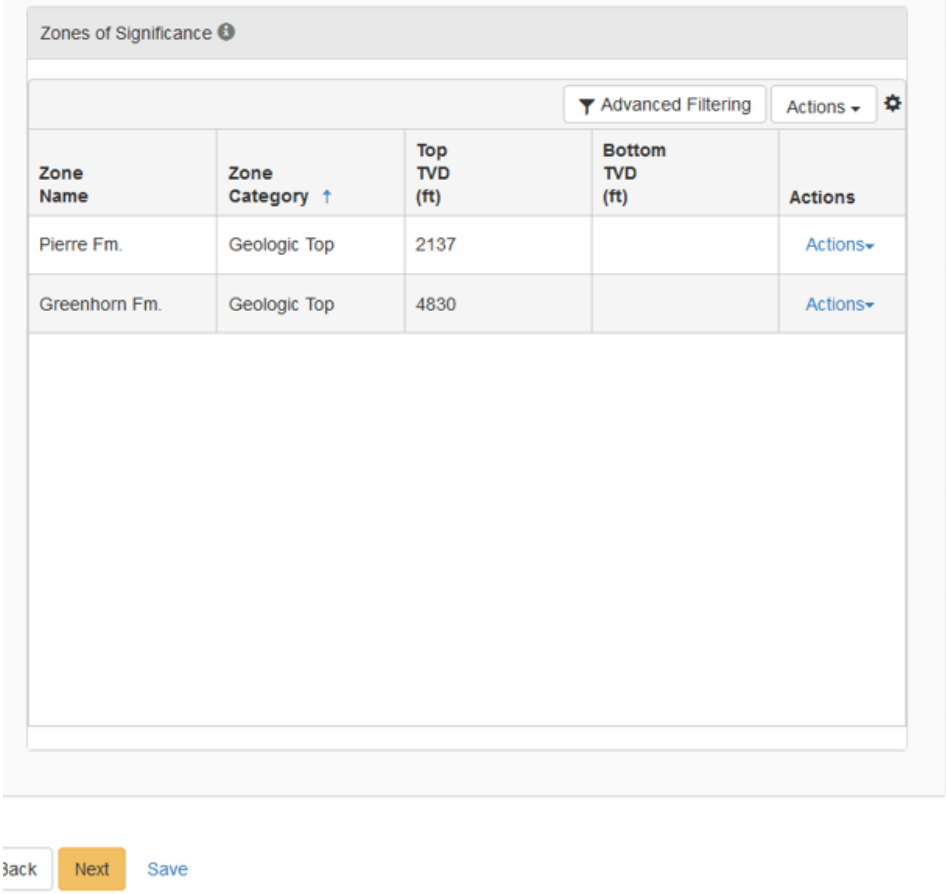
If the cores were cut enter the pertinent details by clicking on "Actions" and "Add Core"





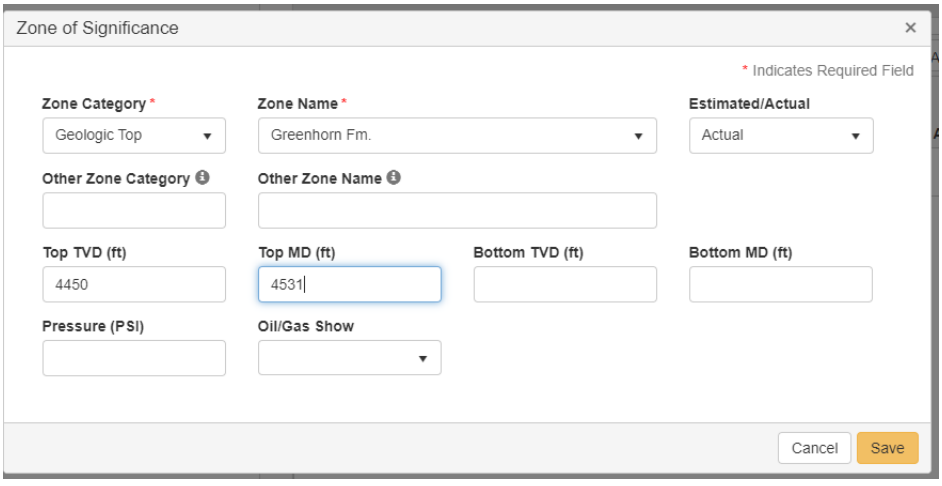
If the permit was approved in NorthSTAR zones of significance will be populated with the geologic prognosis:

1. *Click on "Actions" at the right of each zone and edit*
2. *Update the record from "Estimated" to "Actual"*
3. *Change the estimated depth to the actual depth*



If the permit was issued prior to NorthSTAR and converted over there will be no zones:

1. *Click on "Actions" to add zones at this time*
2. *Enter <u>all</u> zones of significance*

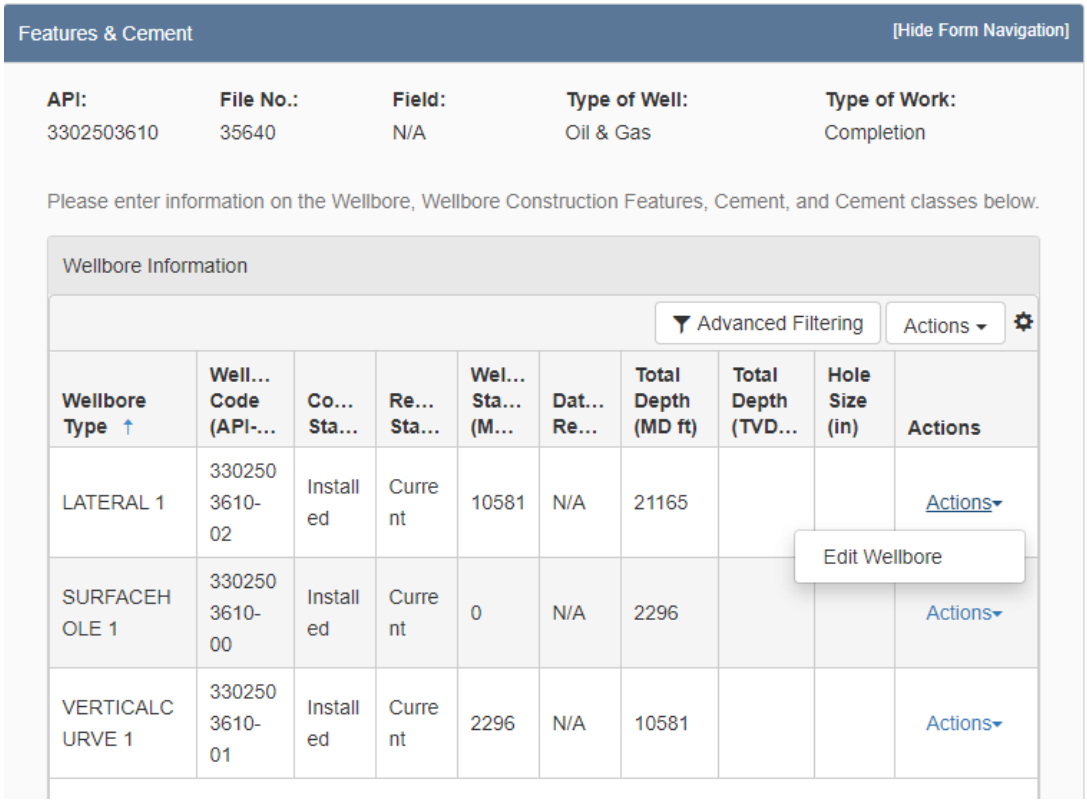


Step 5, 6, and 7: Not applicable to oil and gas completions.

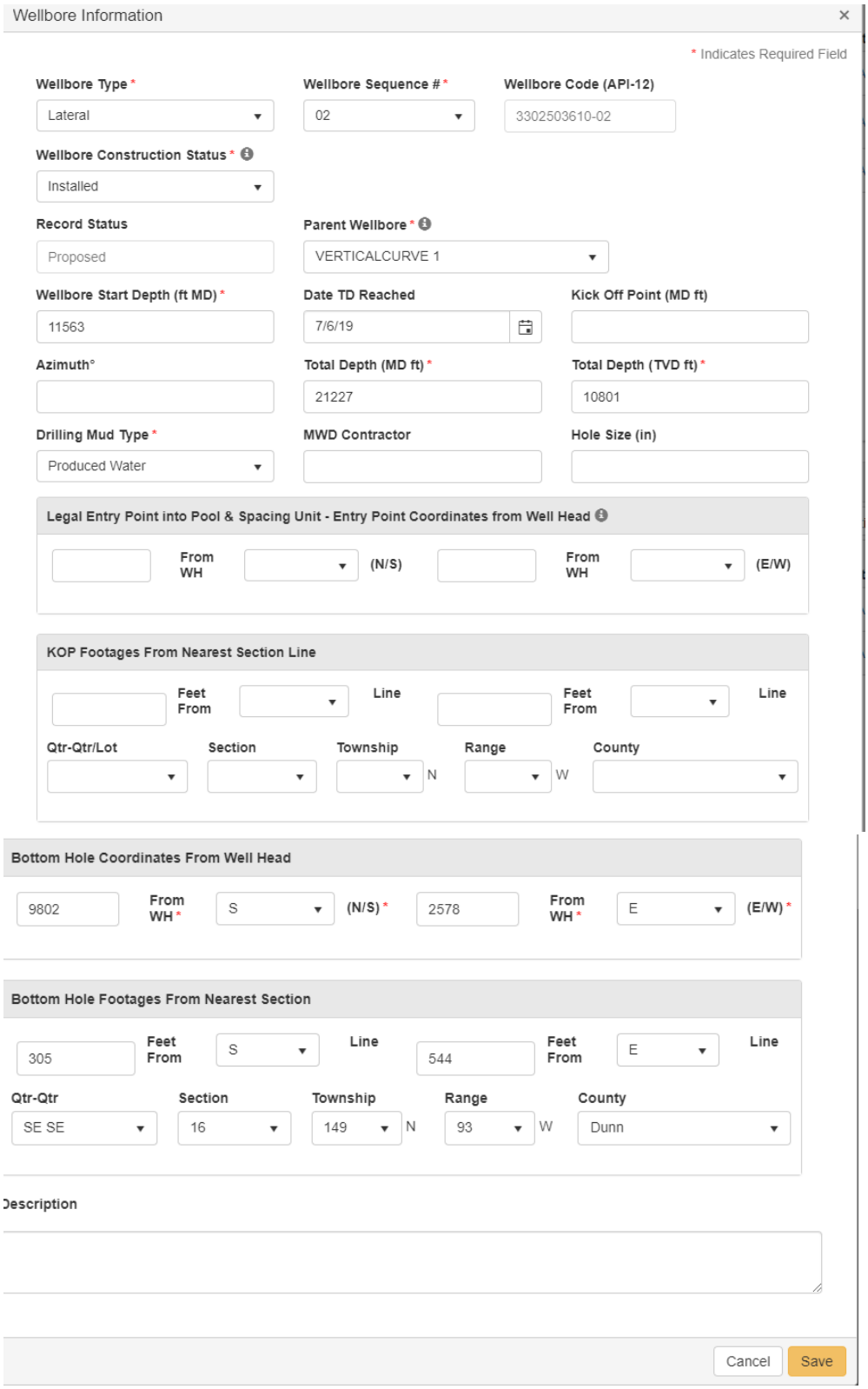
Step 8: Features and Cement

Under Features & Cement, the wellbores will appear as they were permitted. The status is "Current", because that is the information currently in our system.

For each wellbore, you will need to select "Actions" – "Edit Wellbore", in order to update the information from the permitted values to the actual values.

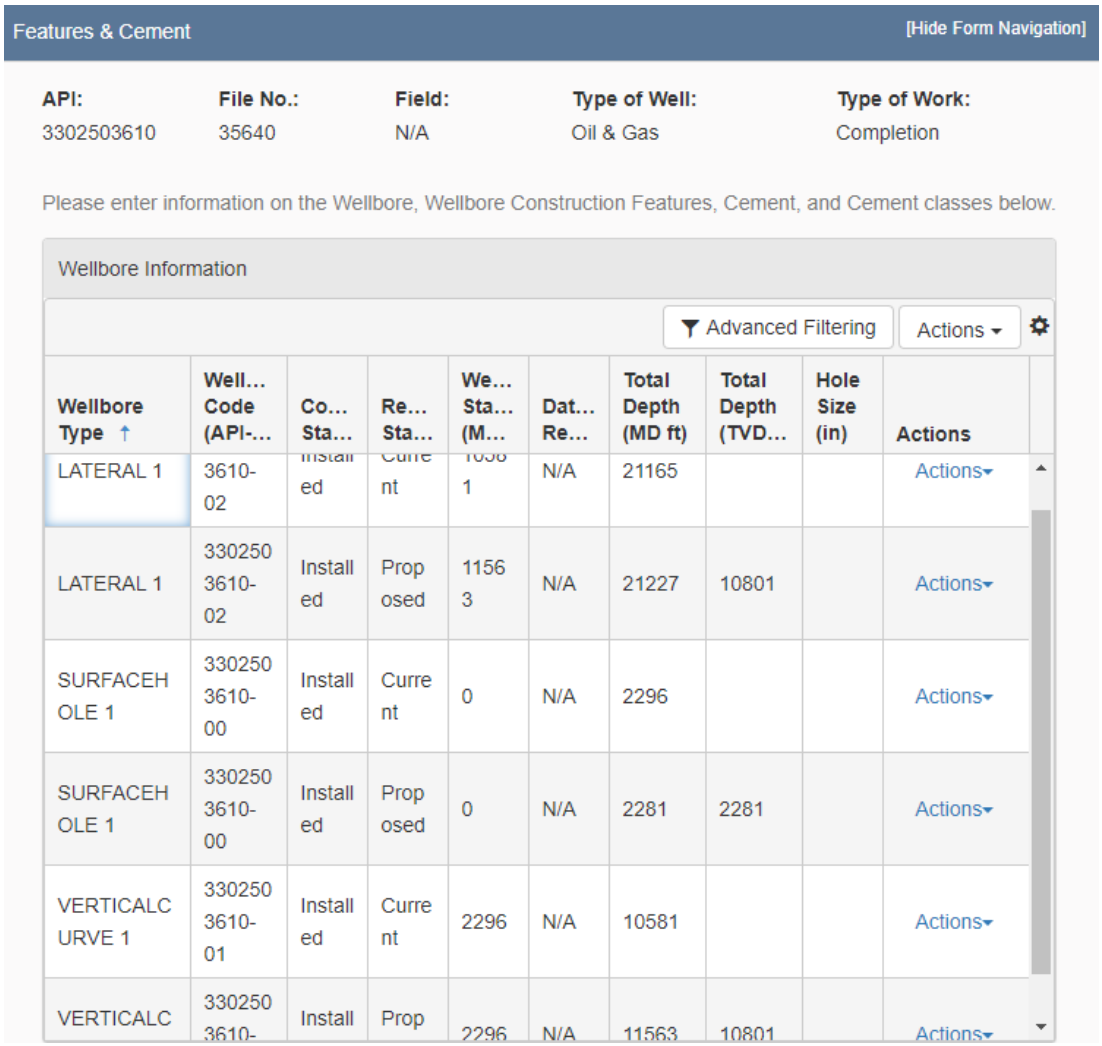


Wellbore Information



After you have edited a wellbore, two records will be displayed.

- *The updated record will have a status of "Proposed", because the as-drilled information just entered is proposed to be added to the Oil and Gas Division database.*
- *After the completion report has been accepted by the Oil and Gas Division the Well Details will show the new completion details.*



You will follow the same procedure with the casing strings.

Wellbore Construction Feature

Advanced Filtering | Actions

Feature ID	Install Status	Record Status	Feature Top MD (ft)	Feature Bottom MD (ft)	Outside Diam... (deci... inches)	Form... Isolat...	Actions
Liner 1	Installed	Current	0	21227			Actions
Production Casing 1	Installed	Current	0	11580			Actions
Surface Casing 1	Installed	Current	0	2296			Actions

After selecting "Actions" and "Edit Feature", you will be able to enter the actual values for each casing string.

Wellbore Construction Feature

Advanced Filtering | Actions

Feature ID	Install Status	Record Status	Feature Top MD (ft)	Feature Bottom MD (ft)	Outside Diam... (deci... inches)	Form... Isolat...	Actions
Liner 1	Installed	Current	0	21227			Actions
Liner 1	Installed	Proposed	10570	21207	4.5		Actions
Production Casing 1	Installed	Current	0	11580			Actions
Production Casing 1	Installed	Proposed	0	11563	7		Actions
Surface Casing 1	Installed	Current	0	2296			Actions
Surface Casing 1	Installed	Proposed	0	2281	9.625		Actions

Updated values will again have a "Proposed" status until approved.

Cement Segments will be updated in the same way.

Cement Segment

Advanced Filtering | Actions

Segment ID	Associated Feature	Install Status	Record Status	Top MD (ft)	Bottom … (ft)	Actions
C2	Production Casing 1	Installed	Current	2300	11580	Actions
C1	Surface Casing 1	Installed	Current	0	2296	Actions

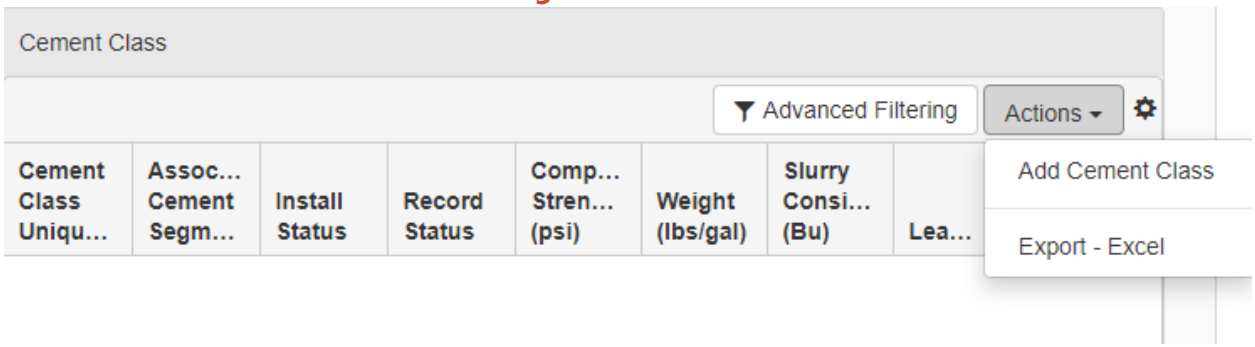
In this case, a liner needed to be added.

Cement Segment

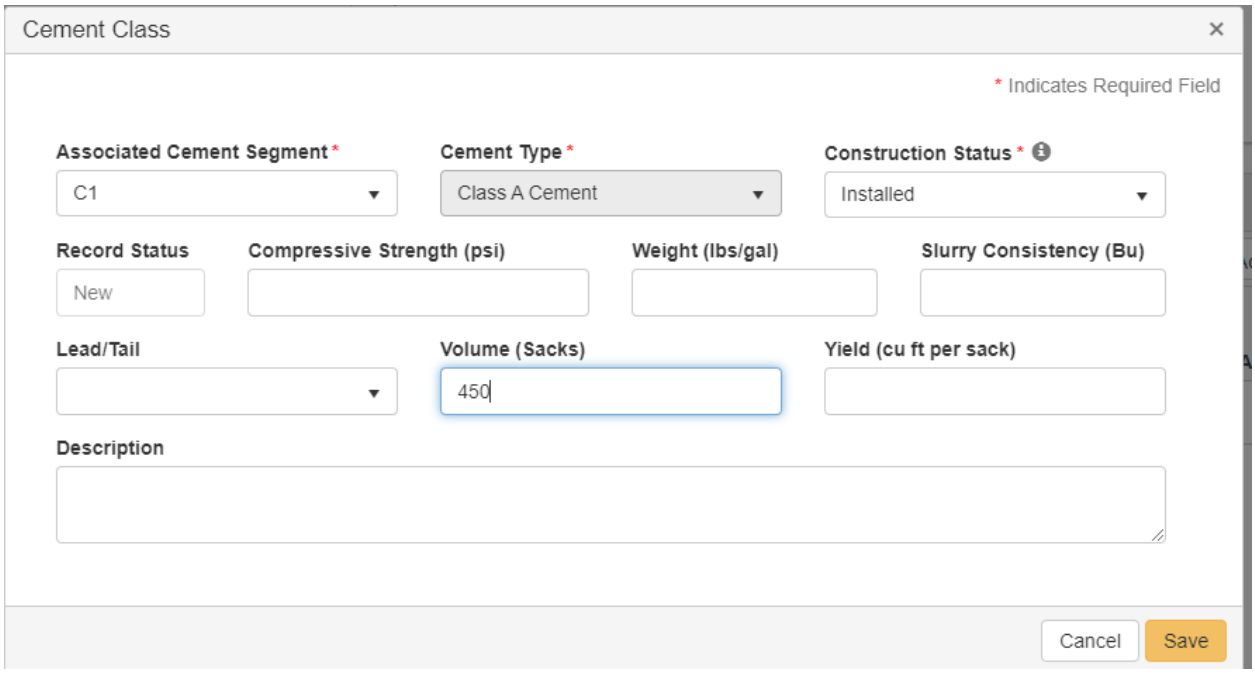
Advanced Filtering | Actions

Segment ID	Associated Feature	Install Status	Record Status	Top MD (ft)	Bottom … (ft)	Actions
C3	Liner 1	Not Installed	New	11574	21056	Actions
C2	Production Casing 1	Installed	Current	2300	11580	Actions
C2	Production Casing 1	Installed	Proposed	4500	11563	Actions
C1	Surface Casing 1	Installed	Current	0	2296	Actions
C1	Surface Casing 1	Installed	Proposed	0	2281	Actions

Add a cement class for each cement segment. Select "Actions" – "Add Cement Class"



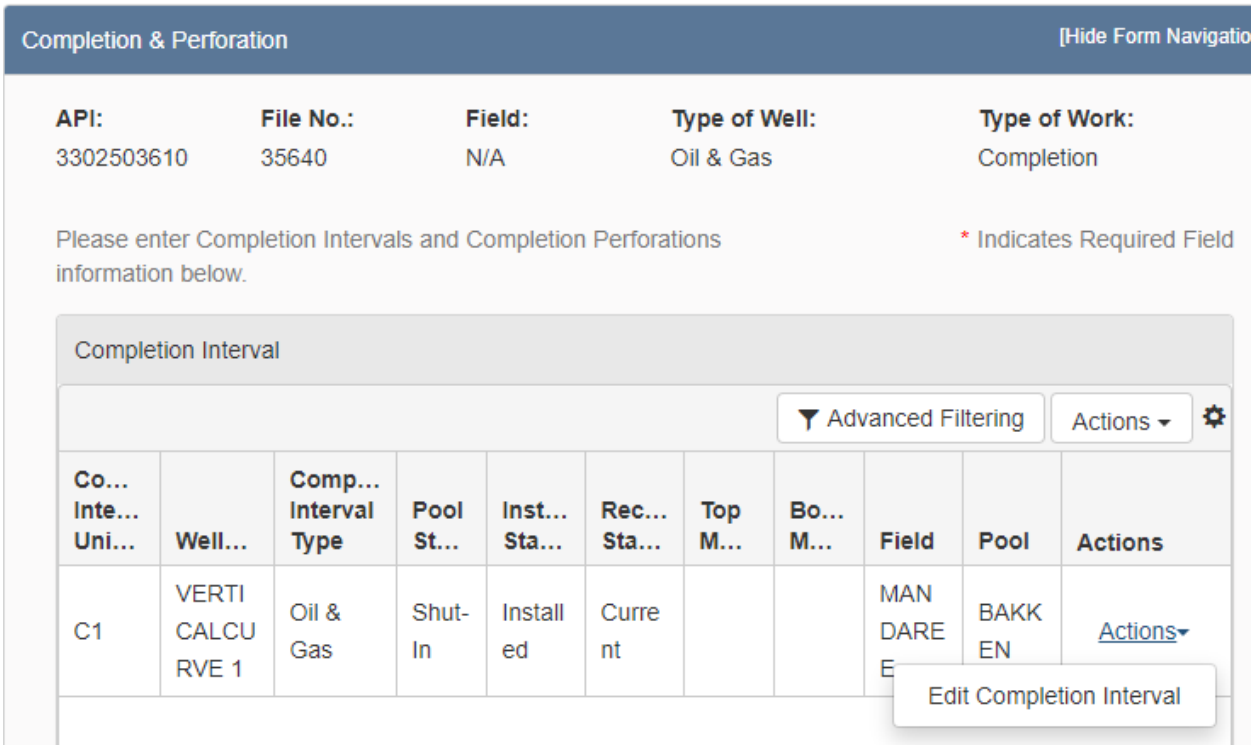
Enter the information and click "Save"



Step 9: Completion & Perforation

The completion interval needs to be updated in the same way as the Features and Cement.

For the Completion Interval "C1", select "Actions" – "Edit Completion Interval", in order to update the information.



Completion Interval

* Indicates Required Field

Wellbore * LATERAL 1

Completion Interval Type * Oil & Gas

Pool Status Producing by Flowing

Pool Status Date 12/15/19

Pool Completion Date 12/10/19

Interval Construction Status * Installed

Record Status Proposed

Top MD (ft) * 11574

Top TVD (ft) 10801

Bottom MD (ft) * 21056

Bottom TVD (ft) 10802

Top Coordinates (ft): *

152 From WH S N/S

2555 From WH E E/W

Bottom Coordinates (ft): *

9802 From WH S N/S

2578 From WH E E/W

Longstring Casing Point

Footages:

Feet From Line

Feet From Line

Coordinates (ft):

From WH N/S

From WH E/W

Qtr-Qtr **Section** **Township** N **Range** W **County**

Enhanced Recovery Unit

Field MANDAREE

Pool BAKKEN

Spacing/Drilling Unit Type N/A

Permit Classification Development

Acres in Unit 1280

Industrial Commission Order 28991

Legal Description of the Spacing/Drilling Unit

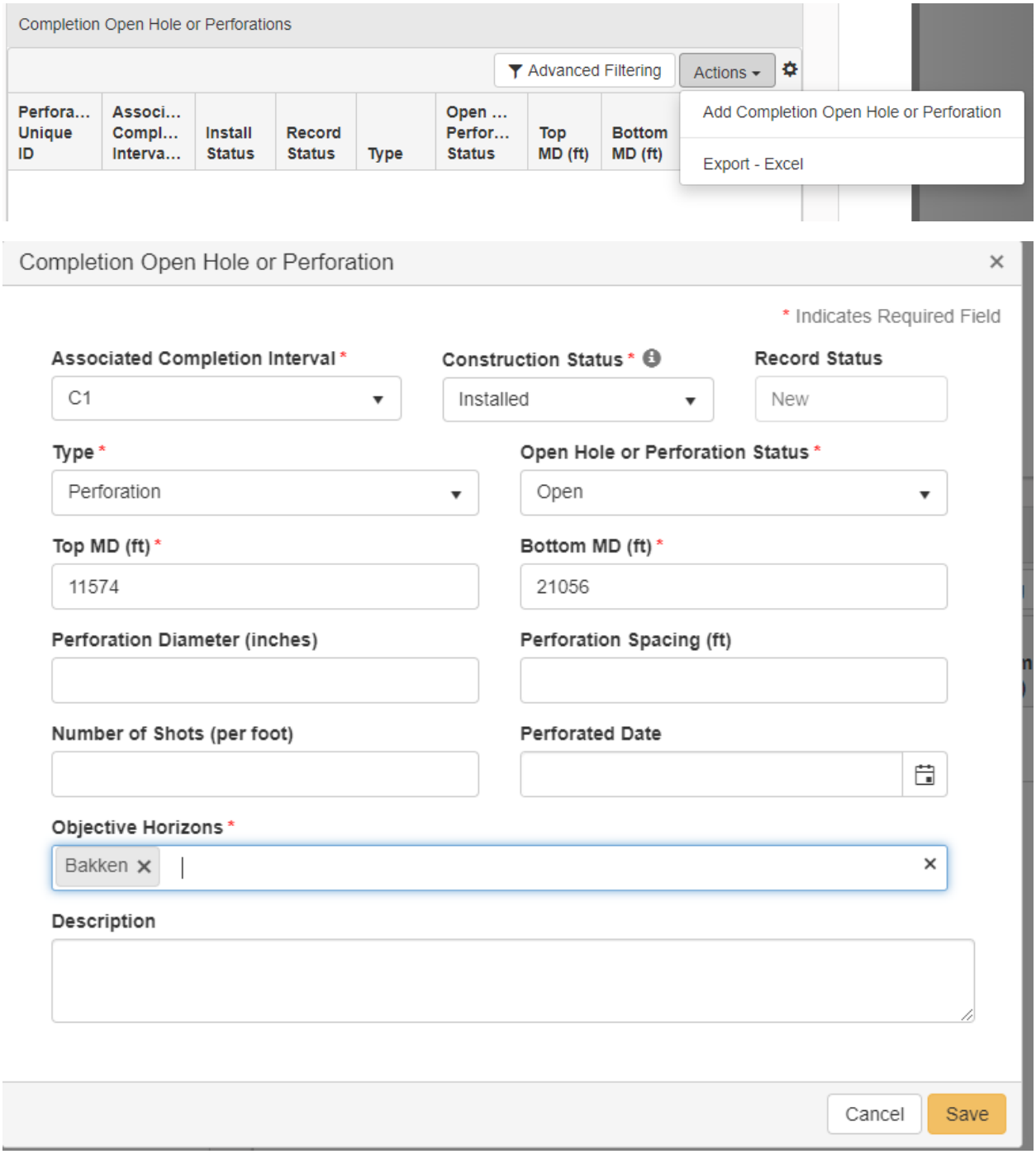
Sections 9 & 16 T149N-R93W

Reservation Surface Boundary Intersected by Spacing/Drilling Unit

Fort Berthold Reservation

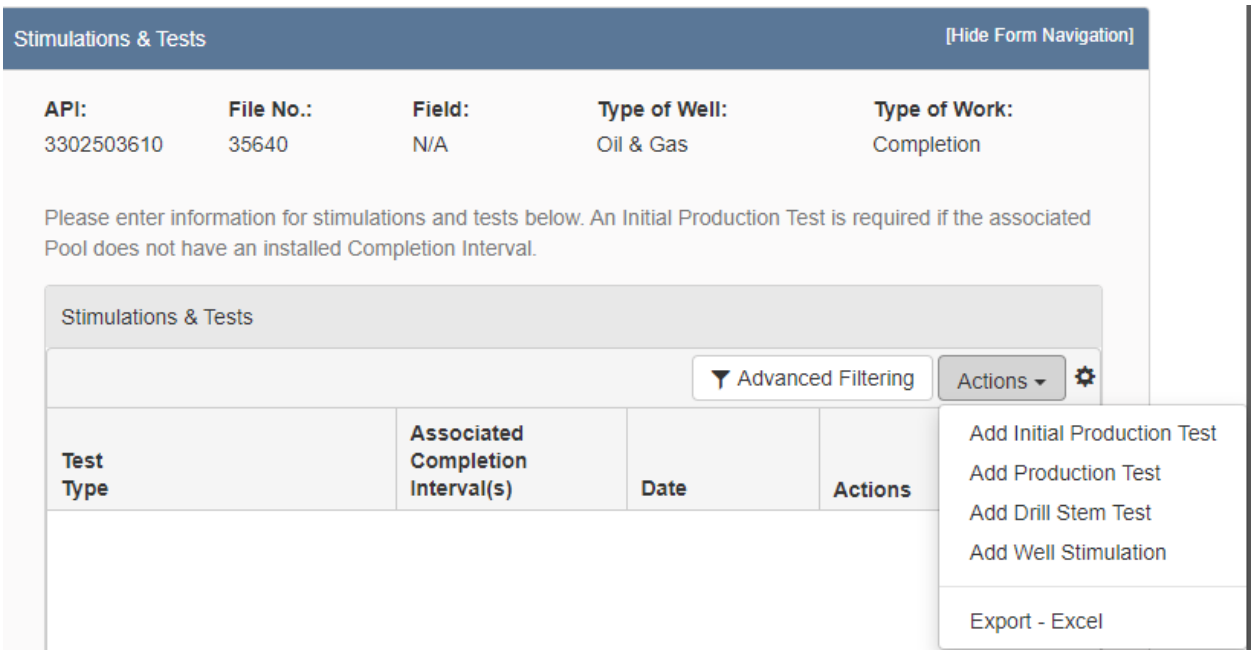
Add perforation information in the next section.

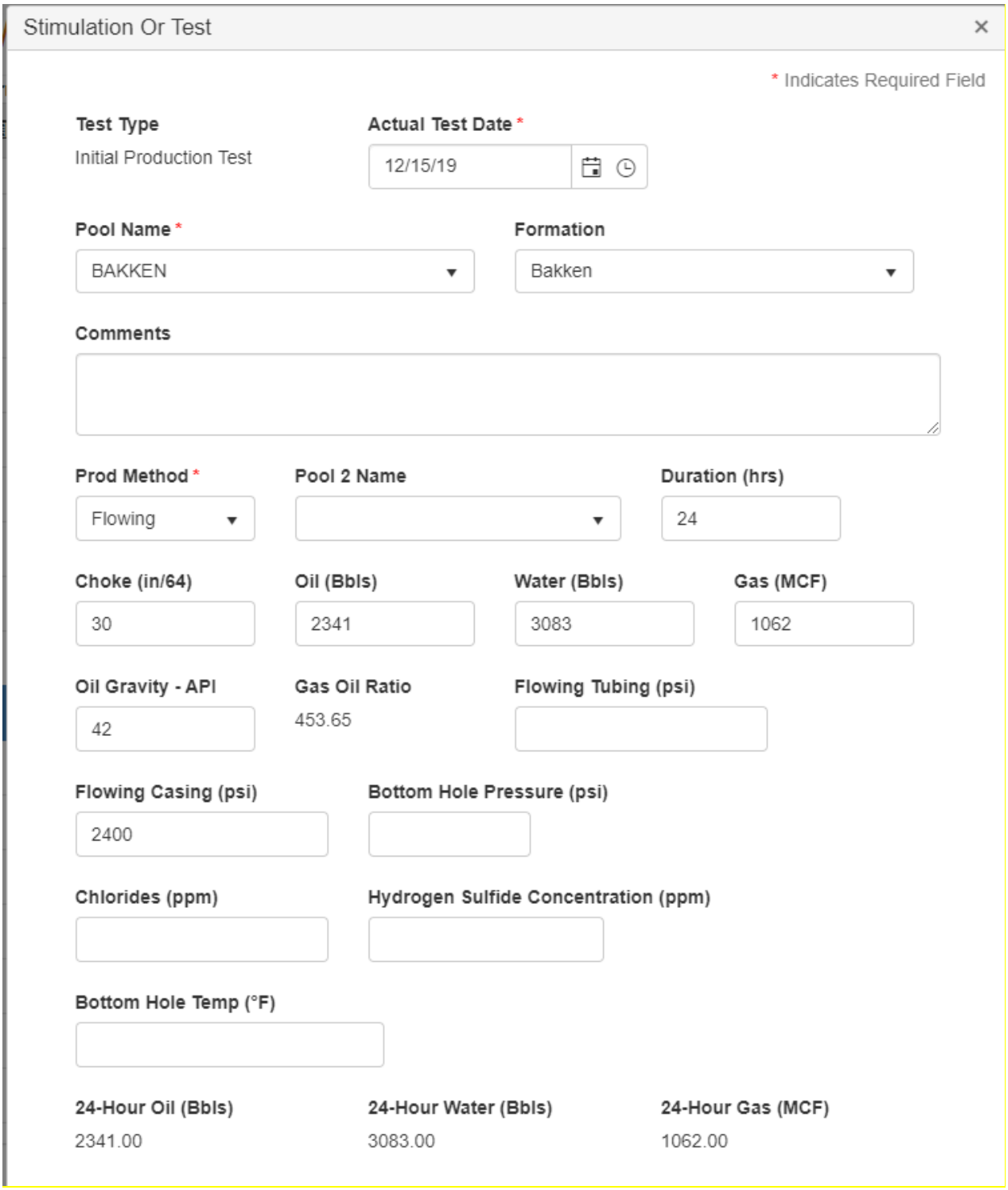
Include as much information as you are able.

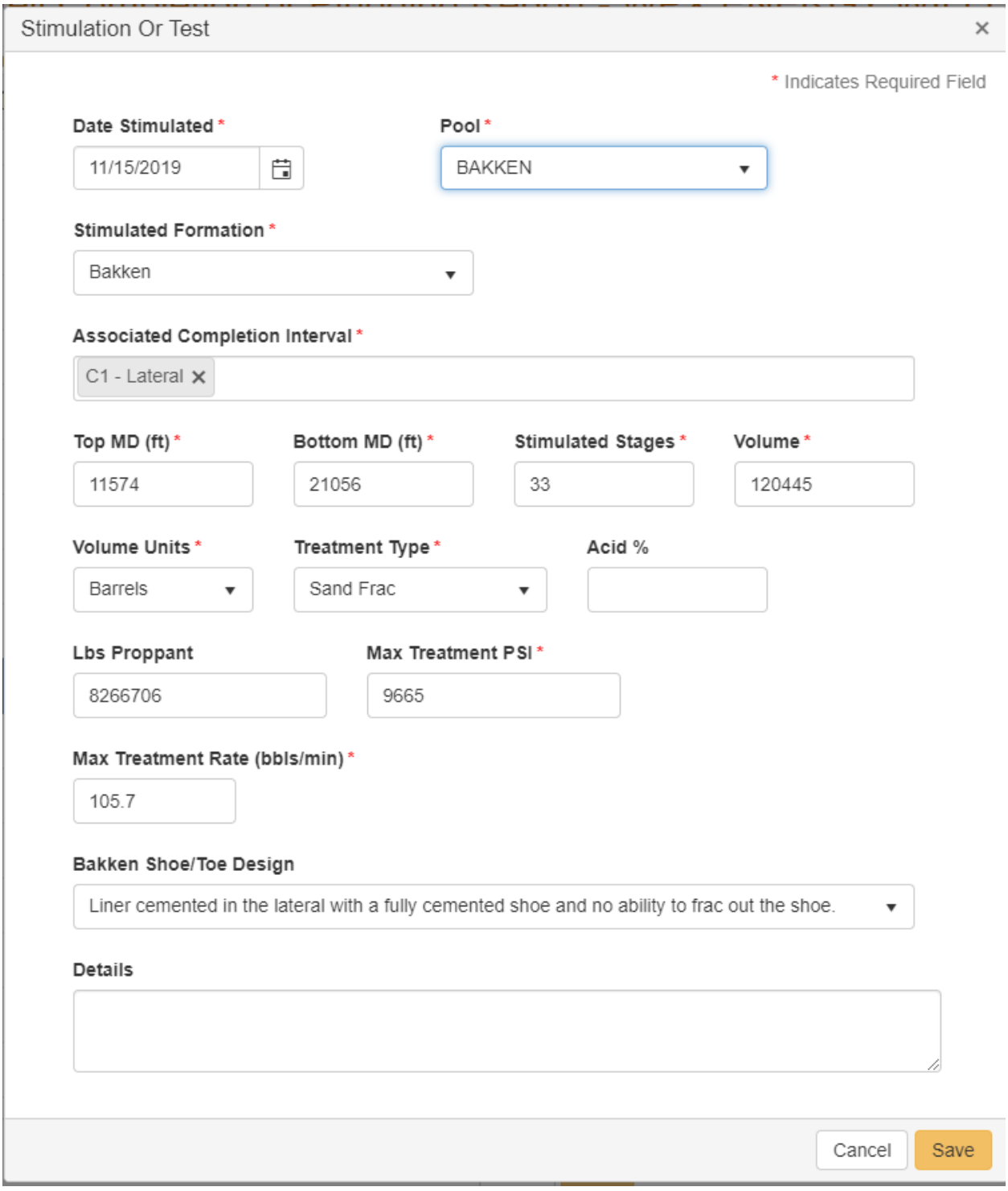


Step 10: Stimulations & Tests

In Stimulations & Tests, you will need to add and initial production test and well stimulation.




Stimulation Or Test
* Indicates Required Field
Test Type
Initial Production Test
Actual Test Date *
12/15/19
Pool Name *
BAKKEN
Formation
Bakken
Comments
Prod Method *
Flowing
Pool 2 Name
Duration (hrs)
24
Choke (in/64)
30
Oil (Bbls)
2341
Water (Bbls)
3083
Gas (MCF)
1062
Oil Gravity - API
42
Gas Oil Ratio
453.65
Flowing Tubing (psi)
Flowing Casing (psi)
2400
Bottom Hole Pressure (psi)
Chlorides (ppm)
Hydrogen Sulfide Concentration (ppm)
Bottom Hole Temp (°F)
24-Hour Oil (Bbls)
2341.00
24-Hour Water (Bbls)
3083.00
24-Hour Gas (MCF)
1062.00

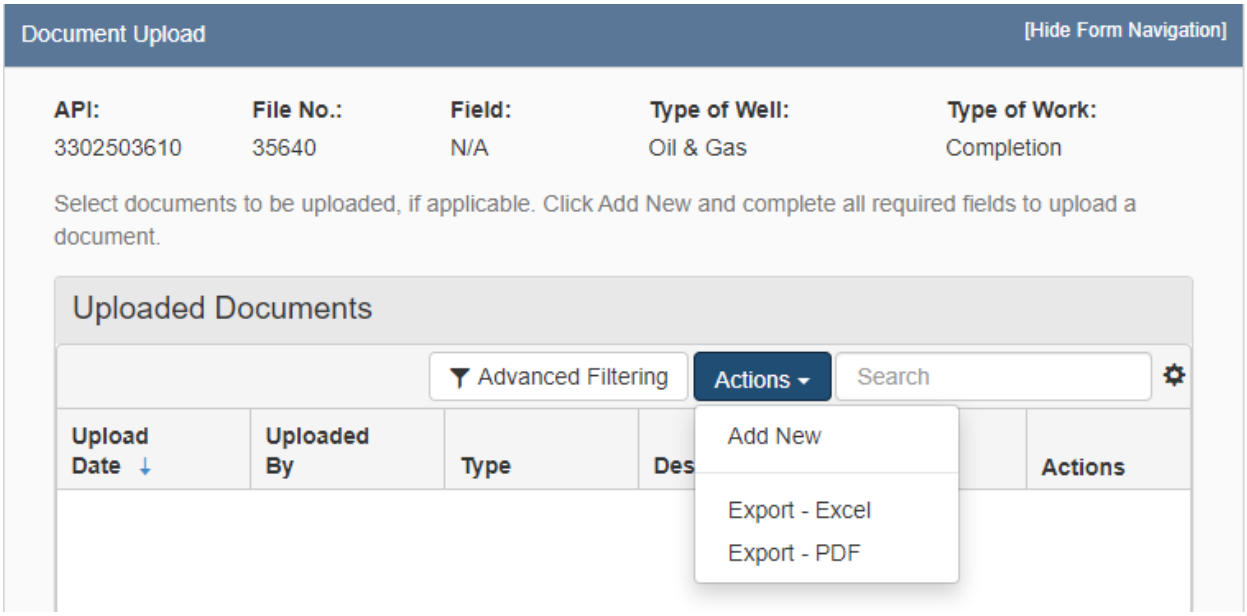

Stimulation Or Test
* Indicates Required Field
Date Stimulated *
11/15/2019
Pool *
BAKKEN
Stimulated Formation *
Bakken
Associated Completion Interval *
C1 - Lateral
Top MD (ft) *
11574
Bottom MD (ft) *
21056
Stimulated Stages *
33
Volume *
120445
Volume Units *
Barrels
Treatment Type *
Sand Frac
Acid %
Lbs Proppant
8266706
Max Treatment PSI *
9665
Max Treatment Rate (bbls/min) *
105.7
Bakken Shoe/Toe Design
Liner cemented in the lateral with a fully cemented shoe and no ability to frac out the shoe.
Details
Cancel
Save

Step 11: Completed Work

Add comments about the completion.

Step 12: Document Upload

BAKKEN PETROLEUM SYSTEM (I.E.: Bakken, Bakken/Three Forks, Sanish) WELLS: In Document Upload, attach a wellbore completion schematic.



Step 13: Form Submit

Add Comments and submit the Form.