

NorthSTAR User Manual Application for Permit

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NorthSTAR Basic Functionality

This section reviews basic functionality of all forms and tools available in NorthSTAR. Each manual includes this information to encourage proper understanding of all basic functions.

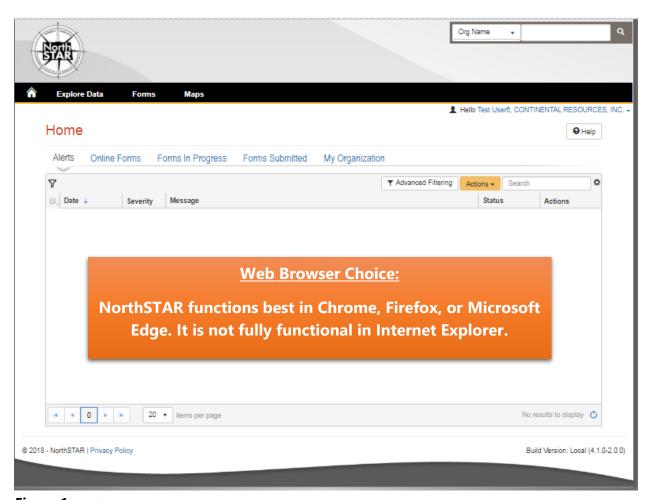


Figure 1: NorthSTAR Homepage

Tour of Home Screen Navigation – Once logged in; every operator will see the home screen (Figure 1) when logged into NorthSTAR:

Search - A quick search bar is available on your homepage in the upper right-hand corner. This search will apply to which ever selection was made in the dropdown menu to include: Organization Name, API, File Number, Bond Number, Last Name or First Name.

Home – Selecting the home image resets your browser window to the homepage; which will always open to Alerts.

Explore Data – Allows you to view data and information that you have entered or submitted through NorthSTAR. You can only view information under the organization that you are logged into.

Forms – Selecting "Forms" and then "Online Forms" will populate a grid listing all forms that you have security permissions to submit.

Maps – This will navigate over to the North Dakota Oil and Gas Division's GIS Map Server.

Alerts – Alerts will show here for any actions that have been taken related to a form you have submitted or someone in your workgroup has submitted noting that the form has been approved, declined, or returned to you with edits needed.

Online Forms – This will show a listing of all forms that are available for you to submit based on your security permissions.

Forms in Progress – This page will show all forms in progress under your organization that you have security permissions to view. Forms in this section are still available to edit or duplicate as they have not been submitted to the ND Oil and Gas Division yet. Note that forms in progress may have a default filter set to only view "Drafts" – Should you be looking for a form with a status of "Returned" or "Declined" you will need to clear/reset the filter to see all forms.

Forms Submitted – This page will show all forms that have been submitted to the ND Oil and Gas Division for review or decision. Forms in this section will not be available to edit or duplicate unless you request it to be returned. Check the advanced filters to ensure no default filter has been set in place if you are unable to find a specific form. You will only be able to view forms that you or your workgroup have submitted.

My Organization – This page will take you to the Organization Detail page for the organization you are currently logged in under. If you submit data for multiple entities you will need to log out, and log in again selecting the organization that you plan to submit data for.

User Profile – The User Profile line displays the current user logged in and the corresponding company associated with the user.

Required Information – Will be denoted by a red asterisk (*). The applicant is encouraged however to complete as many fields as possible. If there are sections you believe should be required or are unsure of what to enter contact the North Dakota Oil and Gas Division (701-328-8020). **Fields in orange show required entry.**

Greyed Out Fields/Dropdown
Not Functioning – Fields that
are greyed out or where the
dropdown does not function
are for portions of the form
that the North Dakota Oil and
Gas Division staff will populate
once the form is submitted. In
the case of Transfers, it is
because another entity will
need to log in and populate
that information.

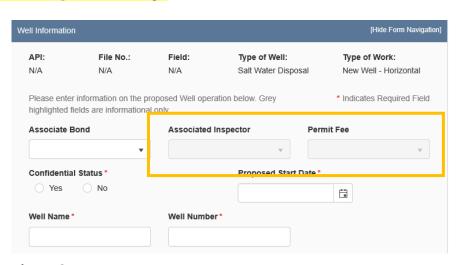


Figure 2: Image of Greyed out fields outlined in yellow.

Error Messages – You will receive an error message at the top of the page if information was missed or entered incorrectly. These messages are hyperlinked and will take you directly to the portion of the page once clicked. You may also receive an error message in the form of a red

letter "X" next to the step you have completed under "Form Navigation". This indicates information was entered incorrectly or information is missing from this section. Go back and correct the information to clear the error. You will not be able to submit the form until all mandatory sections and fields are completed adequately.

Completed Sections - When all fields and sections have been completed adequately, a green check mark " will appear by each section under the "Form Navigation" banner. This will indicate that you may submit the application. Note that you *must* click the "Submit" button in order to properly complete a form.

Information Tool Tip – As shown in Figure 3 on the right, clicking on a tool tip will provide you with more information, entry tips, or other guidance on what is required for the selected field.



Figure 3: Information tool tip outlined in yellow.

Picker Grids – Some forms require that you select wells from a grid and associate them with the form as shown in Figure 4 on the right. You can do this by searching for the well in the top grid (Step 1.). Select the wells you would like to include (Step 2.). Use the down arrow to drop selected wells into the form (Step 3.). Reverse these steps if you have selected the incorrect well to remove the well from the form.

Advanced Filtering – The advanced filtering feature (Figure 4 - Step 1.) will show up in many locations in NorthSTAR such as forms in progress, finding wells, filtering wellbore information and anywhere else there is a table with the advanced filtering option.

TIP: Always open and select "Advanced Filtering" to see if any filters have been set as a default - specifically when viewing "Forms in Progress" or "Forms Submitted".

Once open, any column can be filtered by typing all or portions of text into the filter box. Select the filter

icon " "to choose whether you would like the filter to be: equal to, not equal to, starts with, contains, does not contain, ends with, is null, it not null, is empty, is not empty, has no value, or has value.



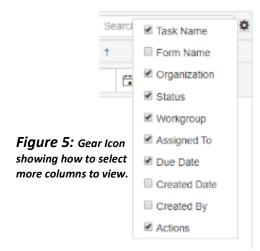
Figure 4: Picker Grid Guide showing advanced filtering (1), selection of wells (2), and selection arrows (3).

Gear Icon - The gear icon is located at the top of each grid. This icon allows the user to select/deselect the visible columns in the specific grid as shown in Figure 5.

TIP: The table text does not shrink to fit, the more

columns chosen the more difficult it may be to read.

If needed, use the export function to see the full information details of all the columns.



Grid Action – The "Actions" dropdown menu is located on the top of each grid (Figure 6 - Step 1). Actions selected will affect all information in the grid below. Typical actions available would be; edit, add a person, export to excel, export to pdf, and many other options depending on the grid. If exporting to excel or pdf: all information possible will be exported and you will need to re-filter the information once in excel.

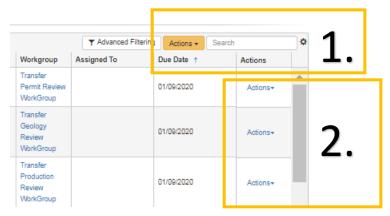


Figure 6: Sample of what Grid Action vs Row Action looks like.

Row Action – Row actions allow the user to modify information in a specific row without impacting the entire grid. Once you have added a line of information into the grid and need to edit or take action, select "Actions" next to the desired row as shown above in Figure 6 (Step 2).

Accordion Screen Function – If you see a small arrow on any heading bar (Figure 7) this will allow you to open and close sections of the form to streamline the visible information. Click the arrow to open or close the section.

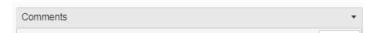


Figure 7: Image of Accordion Screen Function

Column Sort - Each colum in a grid can be sorted in alphabetical order, A-Z or Z-A, or can be sorted in ascending to descending order by clicking on the column header.

Application for Permit: Global Fields and Functions

This section outlines the functions and usage of the pages that are common in all application for permit types regardless of work type, along with data input sections that are common in multiple work types.

Security Permissions

Access to submit an Application for Permit is only available to those with at least one of the following security permissions.

- **NorthSTAR Admin** Ability to Create, Read, Update, and Delete *all forms available* in NorthSTAR for your organization.
- 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 corresponding Organization.

Step 1: Form Information

The Form Information page is used to choose an organization, work type, well type, and to provide a brief description of what the permit is being submitted for.

Fields and Functions:

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

Organization: From the dropdown menu, select the name of the organization that is submitting the permit from the dropdown menu.

Type of Work: From the dropdown menu, type of permit is being submitted.

Conversion

New Well - Directional

New Well - Horizontal

New Well - Vertical

Permit Modification

Recompletion - Directional/Horizontal

Recompletion - Vertical

Re-Entry - Directional

Re-Entry - Horizontal

Re-Entry - Vertical

Type of Well: From the dropdown menu, type of well the permit is being submitted.

Acid Gas Disposal

Air Injection

CO₂ Injection

CO2 Storage

Coal Bed Methane

Dry Gas

Dump Flood Injector/Producer

Gas Condensate

Gas Injection

Gas Storage

Injectivity Test

Monitoring – Oil and Gas

Monitoring – UIC

Nitrogen Gas

Non-Jurisdictional

Oil and Gas

Saltwater Disposal

Slurry Fracture Injection

Stratigraphic Test Water Injection Water Source

Enter the well information in the following format: Enter the well info in the format provided as it will allow more search options for the user and the Oil & Gas Division.

Review the information, then click "Save & Continue" at the bottom of the page.

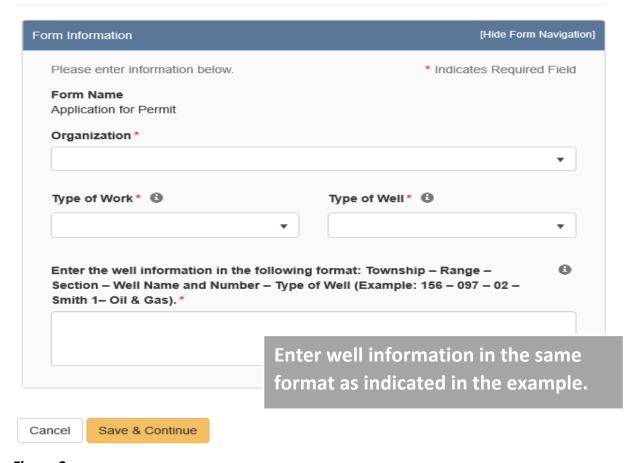


Figure 8: Form Information page

Step 2: Operator Information

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

By default, the person who is logged in and summiting the application will be displayed in the "Contacts" grid. By clicking the "Actions" button and selecting "Add Contact", additional contacts can be associated with the application in the pop-up window that appears. 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.

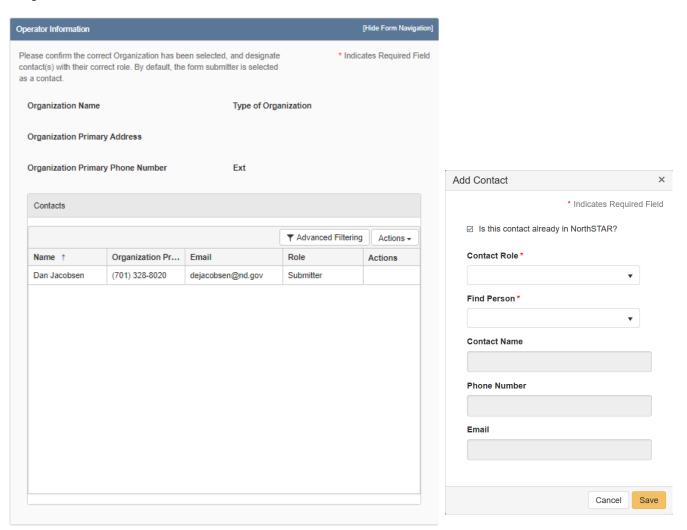


Figure 9: Operator Information Section (left) & Add Contact pop-up window (right)

Step 3: Well Information

This section is used to give more information about the permit, allowing the submitter to choose a bond to attach with the well, choose confidential status, and a well name. This section also has two sub-sections, "Wellhead Location" and "Surface Owner/Tenant".

Fields and Functions:

Associate Bond: Select the bond from the dropdown menu.

Confidential Status: Click either the "Yes" or "No" circle to indicate if Confidential Status is desired.

Proposed Start Date: Click the calendar icon to the right of the field to navigate the calendar and choose a proposed start date.

Well Name: Click inside the field and input the well name. **Well Number:** Click inside the field and input the well number.

Review the information, then click "Save" to continue.

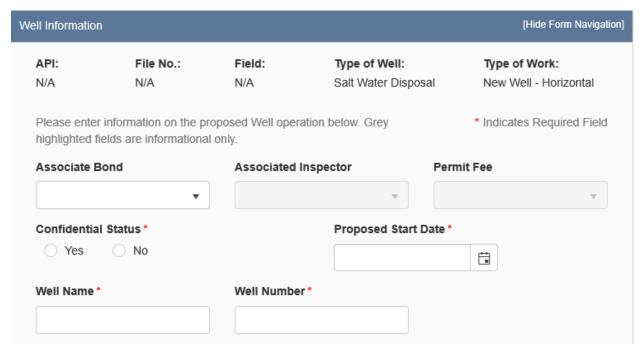


Figure 10: Well Information page

Wellhead Location

This section is used to give additional information about the location of the proposed well.

Fields and Functions:

Footages From Nearest Section Line: Input the distances (in feet) for both the "**Footage 1**" and "**Footage 2**" fields (e.g. "Footage 1" 420 "Feet From" N "Line"). **Magnetic Declination**

Qtr-Qtr or Lot, Section, Township, Range, and County: Choose all the pertinent information for each field from their respective dropdown menu.

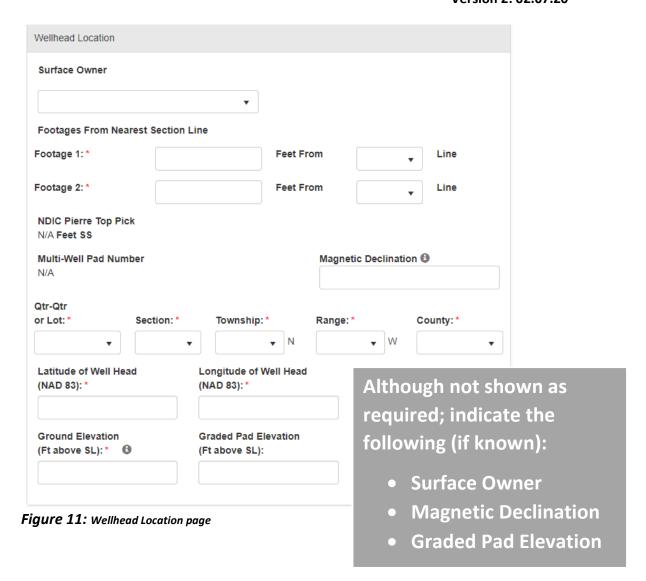
Latitude of Well Head: Must be in Decimal Degrees and in NAD 83. Must have 2 whole numbers that are followed by 8 numbers to the right of the decimal place. (e.g. 48.57186300)

Longitude of Well Head: Must be in Decimal Degrees and in NAD 83. Must have a negative sign (-), 3 whole numbers, and then 8 numbers to the right of the decimal place. (e.g. -098.79502000)

Ground Elevation (FT above SL)

Graded Pad Elevation (FT above SL)

Review the information, then click "Save" to continue.



Surface Owner/Tenant

This section allows the submitter to provide the surface owner/tenant information for future needs should contact be required.

Complete each field ("Name", "Address", "City", "State", and "Zip code") accordingly and provide detailed descriptions for "Surface Comments" and "Spill Prevention and Monitoring Controls".

Review the information, then click "Save" at the bottom of the page.

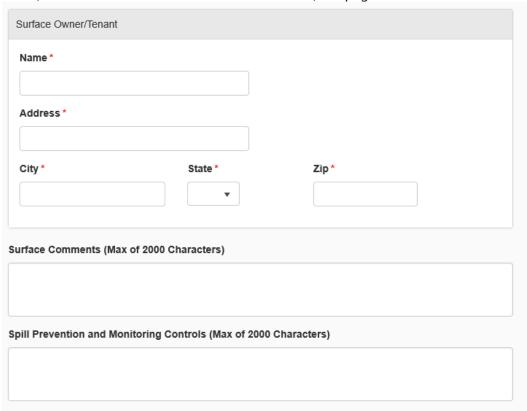


Figure 12: Surface Owner/Tenant page

Although not shown as required; indicate the following (if known):

Spill Prevention and Monitoring Controls options:

- Copy & paste entire plan in this space,
- Indicate whether the NDIC OGD has a plan on file,
- Indicate if you will upload document as an attachment with application
- Indicate "Available upon request"

Step 4: Geologic Information

This section is used to provide geological information for the proposed well, allowing the submitter to choose the deepest formation the proposed well will penetrate by selecting it from the dropdown menu.

This section also has three sub-sections: Geologic Information; Proposed Logs; and Zones of Significance.

Fields and Functions:

Deepest Formation to Penetrate: From the dropdown menu, select the deepest formation that will be penetrated.

Review the information, then click "Save" at the bottom of the page.



Figure 13: Geologic Information page

Proposed Logs

This section is used to show what types of initial logs the applicant intends to run, not run, or request a waiver. Click the circle for "Yes", "No", or "Request Waiver" for each item to indicate which logs the applicant has included, not included, or is requesting a waiver for that log.

Fields and Functions:
Acoustic/Sonic
Cased Hole
Casing Evaluation
Cement Evaluation (Required Type)
Density/Porosity (Required Type)
Drilling/Mud
Engineered/Advanced
Gamma to Ground Level (Required Type)
Geologic Interpretation
Other
Resistivity (Required Type)

Proposed Logs * Request Yes No Waiver Logs Acoustic/Sonic Cased Hole Casing Evaluation Although not shown as Cement Evaluation (Required Type) required; indicate the Density/Porosity (Required Type) following (if known): Drilling/Mud Engineered/Advanced Other Proposed Logs, Gamma to Ground Level (Required Type) Cores or Tests (You may Geologic Interpretation use this space to indicate Other if a PILOT HOLE will be Resistivity (Required Type) drilled)

Figure 14: Proposed Logs page

Zones of Significance

This section is used to indicate each geological stratum that will be encountered during the drilling process by selecting "Actions" then "Add Zone" (Top of picker grid, Figure 16). Repeat the "Add Zone" step for each zone. Identify stratum that have environmental significance and identify the formations that will be drilled for mineral extraction. Add each identified zone to the picker grid by clicking "save" at the bottom of the "Add Zone" pop-up window (Figure 15). Review all zones on picker grid (Figure 16), then click "save".

Fields and Functions (Figure 15)

Zone Category: Select the appropriate zone category. **Zone Name:** Select the appropriate zone name.

Estimated/Actual

Other Zone Category

Other Zone Name

Top TVD (ft)

Top MD (ft)

Bottom TVD (ft)

Bottom MD (ft)

Pressure (PSI)

Oil/Gas Show

*The info should reflect the operator's (standard) geologic prognosis.

Although not shown as required; indicate the following (if known):

Operator must indicate all tops as noted in their geologic prognosis and include:

- Estimated/Actual
- Top TVD of the Zone of Significance (unless it's the Base of the Lase Salt)

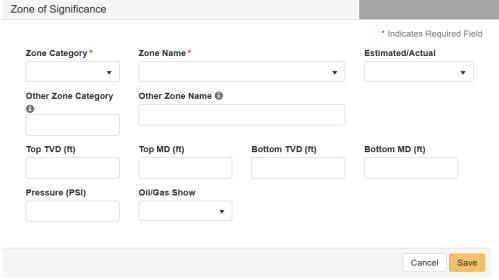


Figure 15: "Add Zone" Pop-up window – Click save to add zone to picker grid

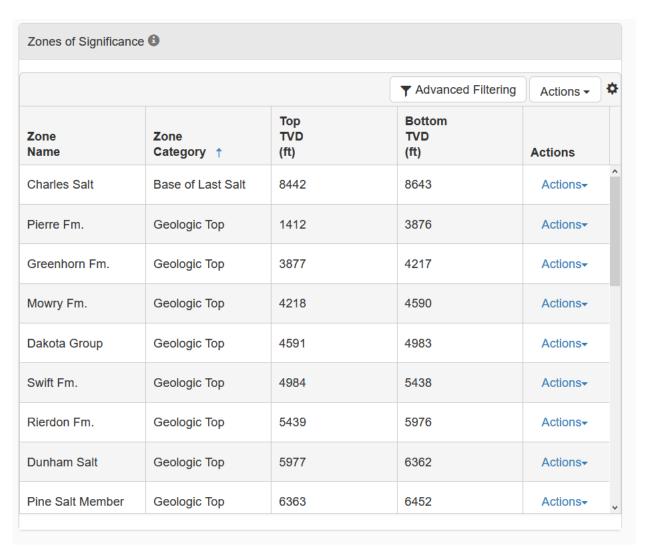


Figure 16: Zones of Significance page – Example of fully populated grid

Step 5: UIC

Note: Step 5 (UIC) and Step 6 (Area of Review) are not applicable when submitting an Oil and Gas application.

This section is used to provide underground injection control (UIC) information for a proposed injection well.

Fields and Functions (Figure 17)

UIC Number: This number is unique to each UIC permit and will be assigned at permit approval.

Class: This field indicates the UIC class type for the application.

Order: This field indicates the Order authorizing permitting of the UIC application.

Case: This is the case number associated with the application.

UIC Status: This is the UIC status of the application which will be assigned prior to approval.

UIC Permit Types: This field indicates if the application falls under an area permit (Area) or if the application will require a hearing (Well).

UIC Modification: This field is used to modify an existing UIC permit and will indicate if the modification is considered major or minor.

Required MIT Pressure: The required MIT pressure will be set prior to approval.

New or Existing: Indicates if the UIC application is associated with a new drill well or if it is part of a conversion on an existing well.

Field, Pool and Enhanced Recovery Unit: These fields indicate the field and pool that the application is for or the enhanced recovery unit that the application falls under.

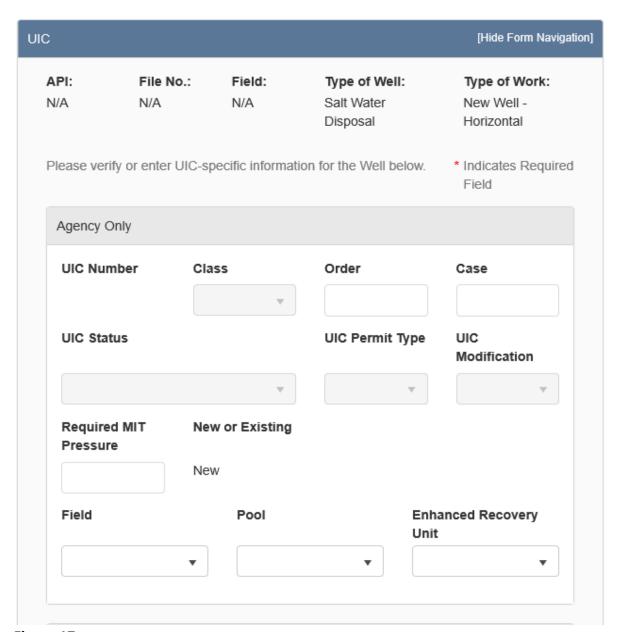


Figure 17: UIC page

UIC Information

This section is used to provide additional UIC information. Complete each field accordingly.

Fields and Functions (Figure 18)

Injection Zone Name:

Annulus Fluid Type:

Will oil be skimmed?:

Will this be a commercial Salt Water Disposal?:

Land Owner Notification Date:

Fracture Gradient of Top Confining Zone (psi/ft):

Bottom Hole Fracture Pressure of the Top Confining Zone (psi):

Specific Gravity of Injection Fluid (Deg. API):

Injection Fluid:

Pressure Gradient of Injection Fluid (psi/ft):

Est. Average Injection Rage:

Est. Average Injection Pressure (psi):

Maximum Injection Rate:

Maximum Allowable Injection Pressure (psi):

Injection Zone Name*		Annulus Fluid Type ▼		
_	ommercial			
Yes No	Yes No			
Land Owner Notificatio	n Date 🚯			
ä				
Fracture Gradient of To Zone (psi/ft)	p Confining		Fracture Pressure of ining Zone (psi)	
Specific Gravity of Injection FI Injection Fluid (Deg. API)		id	Pressure Gradient of Injection Fluid (psi/ft)	
		•		
Est. Average Injection Rate		Est. Average	Injection Pressure (psi)	
	•			
	Maximum Injection Rate		Maximum Allowable Injection Pressure (psi)	

Figure 18: UIC Information page

Facility Information

This section is used to provide information about the injection facility. Complete each field accordingly.

Fields and Functions

Is the injection facility on the same pad as the well?: Select "Yes" or "No". **Transport method of injection fluid:** Select from the dropdown.

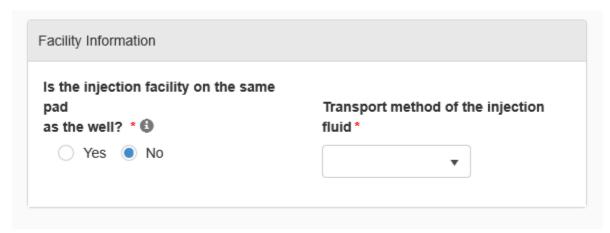


Figure 19: Facility Information page

Tanks

This section is used to provide information on proposed tanks to be built at the injection facility. Click "Actions" and select "Add Tank", a pop-up window will appear. Complete each applicable field accordingly and click "Save" at the bottom of the pop-up window. The tank will appear in the picker grid (Figure 20).

Fields and Functions

Tank Type
Tank Volume
Tank Purpose

Tank Construction Material

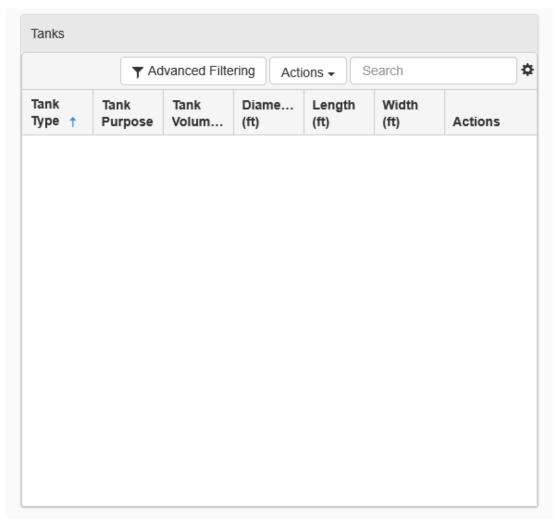


Figure 20: Tanks grid

Tank Dike Information

This section is used to provide information about the tank dike proposed to be built at the facility site. Complete each field accordingly. Total Tank Displacement is automatically calculated based off the tank information populated in the Tank Section.

Fields and Functions
Tank Dike Construction Material
Tank Dike Height
Tank Dike Capacity Considering Displacement
Total Tank Dike Capacity

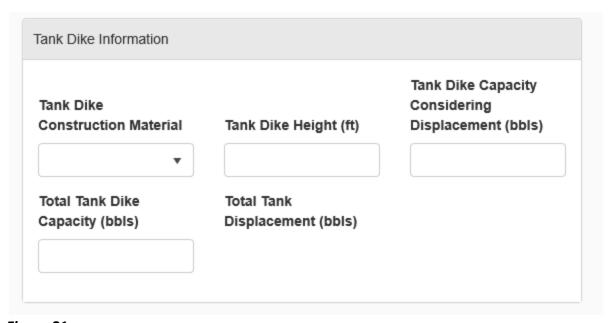


Figure 21: Tank Dike Information page

Perimeter Bern Information

This section is used to enter information about the perimeter berm proposed at the site. Complete each applicable field accordingly and click "Save" at the bottom of the page.

Fields and Functions
Perimeter Berm Construction Material
Perimeter Berm Height
Estimated Perimeter Berm Capacity

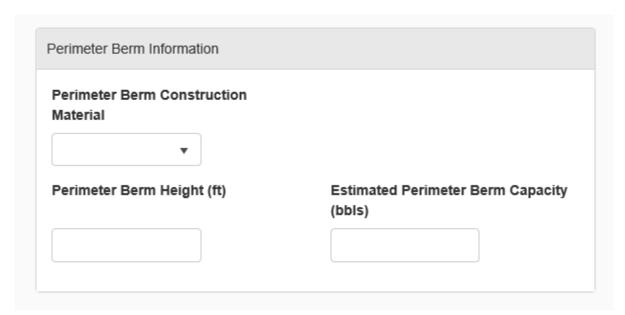


Figure 22: Perimeter Bern Information page

Step 6: Area of Review

Note: Step 5 (UIC) and Step 6 (Area of Review) are not applicable when submitting an Oil and Gas application.

This section allows the submitter to choose wells in the UIC application area of review (AOR) and to enter information for each well within the AOR.

Wells that are selected in the upper grid must be moved to the lower grid by clicking the down arrow. Once a well is in the lower grid the submitter can select a "Row Action" if needed. On the desired row, select "Actions" on the far right of the row, then "Edit Corrective Action" to explain any corrective action required for a well within the AOR.

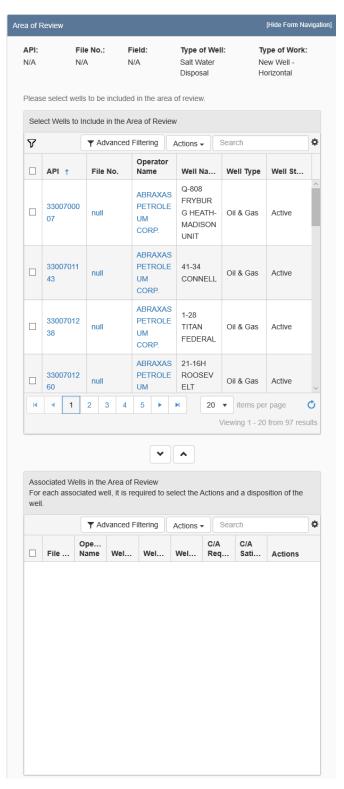


Figure 23: Area of Review page

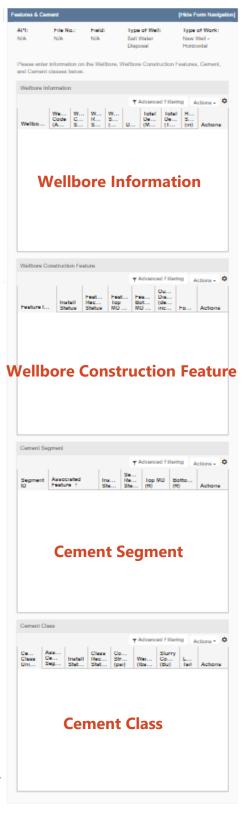
Step 7: Features and Cement

This section is used to provide details in four consecutive segments: "Wellbore Information", "Wellbore Construction Feature", "Cement Segment", and "Cement Class".

TIP: You must complete each section for each wellbore in order. (e.g. For Wellbore 1, complete the wellbore information, wellbore construction feature, cement segment, and cement class; then move to wellbore 2)

Click "Save" at the bottom of the picker grid (Figure 24) once <u>all strings</u> for <u>all wellbores</u> have been added.

Figure 24: Features & Cement page



Wellbore Information

This section is used to add wellbore information. Click the "Actions" dropdown menu and choose "Add Wellbore". A pop-up window will appear (Figure 25, next page).

Note: Repeat these steps for each string in the wellbore (e.g. Surface Hole, Vertical & Curve, and Lateral).

Fields and Functions

Wellbore Type: Choose the type of wellbore from the dropdown menu. Note: do these steps again for each string in the wellbore (e.g. Surface Hole, Vertical & Curve, and Lateral). Wellbore Sequence #: Choose a "Wellbore Sequence #" for each wellbore from the shallowest depth (i.e. 00) to the deepest depth (e.g. Surface Hole would be "00", while "Vertical & Curve" would be "01", and Lateral would be "02").

Wellbore Code (API-12):

Wellbore Construction Status: Choose "Not drilled" for new wells and choose "Drilled" for existing wells that are being proposed to be re-entered from the dropdown menu.

Parent Wellbore: Choose the appropriate wellbore accordingly (e.g. Surface Hole would be the parent wellbore of Vertical & Curve).

Wellbore Start Depth (ft MD): Indicate the wellbore start depth (MD -Measured Depth). For example, a surface hole's start depth would be "0".

Total Depth (MD ft): Input the total depth. Input the total depth (e.g. A surface holes total depth could be "2100").

Total Depth (TVD ft): Input the total vertical depth (TVD). (i.e. A surface hole's TVD would be coincident with its MD)

Drilling Mud Type: Choose the appropriate mud type from the dropdown menu.

Legal Entry Point & Spacing Unit – Entry Point Coordinates from Well Head: Complete the all fields as they are in relation to the Well Head location in order to demonstrate the legal entry point of the borehole into the pool and spacing unit.

KOP Footages from Nearest Section Line: Choose all pertinent information for each field (i.e. Qtr-Qtr or Lot, Section, Township, Range, and County) from their respective dropdown menu.

Bottom Hole Coordinates from Well Head: Choose all pertinent information for each field [i.e. From WH, (N/S), From WH, and (E/W)] from their respective dropdown menu. **Description:** Enter a detailed description of each string in the wellbore.

Click "Save" at the bottom of the pop-up window, then repeat steps for each string in the wellbore.

Wellbore Start Depth (ft MD) * Ki Azimuth° To	arent Wellbore * 🔾			
Record Status Pa New Wellbore Start Depth (ft MD) * Azimuth* To Drilling Mud Type * Legal Entry Point into Pool & Spacing Uni From WH KOP Footages From Nearest Section Line Feet From	arent Wellbore * 🖜			
Wellbore Start Depth (ft MD) * Ki Azimuth° To Drilling Mud Type * Mf Legal Entry Point into Pool & Spacing Uni From WH KOP Footages From Nearest Section Line Feet From	arent Wellbore * 🖜			
Wellbore Start Depth (ft MD) * Ki Azimuth° To Drilling Mud Type * MI Legal Entry Point into Pool & Spacing Uni From WH KOP Footages From Nearest Section Line Feet From				
Wellbore Start Depth (ft MD) * Ki Azimuth° To Drilling Mud Type * MI Legal Entry Point into Pool & Spacing Uni From WH KOP Footages From Nearest Section Line Feet From		*		
Drilling Mud Type * Mi Legal Entry Point into Pool & Spacing Uni From WH KOP Footages From Nearest Section Line Feet From	ick Off Point (MD ft)			
Legal Entry Point into Pool & Spacing Unit From WH KOP Footages From Nearest Section Line Feet From	otal Depth (MD ft) *	Total	Depth (TVD ft) *	
Legal Entry Point into Pool & Spacing Unit From WH KOP Footages From Nearest Section Line Feet From				
From WH KOP Footages From Nearest Section Line Feet From	WD Contractor	Hole	Size (in)	
KOP Footages From Nearest Section Line Feet From	it - Entry Point Coordina	tes from Well Head ()	
Feet From	▼ (N/S)	From WH	•	(E/W)
•	Township R ▼ N	ange Ce ▼ W	punty	•
Bottom Hole Coordinates From Well Head	i			
From WH *	▼ (N/S) *	From WH*	•	(E/W) *
Bottom Hole Footages From Nearest Sect	tion			
Feet From	Line	Feet From	•	Line
Qtr-Qtr Section			ounty	
•	▼ N	▼ W		•
Description				

Figure 25: Wellbore Information page

Wellbore Construction Feature

This section is used to add wellbore construction feature information. Click the "Actions" dropdown menu and choose "Add Feature". A pop-up window will appear (Figure 26).

Note: Repeat these steps for each string in the wellbore.

Fields and Functions

Feature: Choose a feature from the dropdown menu (e.g. Surface Casing 1) that was created from the previous "Wellbore Information" step.

Wellbore Start: Choose a wellbore start from the dropdown menu (e.g. Surface Casing 1) that was created from the selection from the "Feature" dropdown menu.

Wellbore End: Choose a wellbore end from the dropdown menu (e.g. Surface Casing 1) that was created from the selection from the "Wellbore Start" dropdown menu.

Construction Status: Choose "Not drilled" for new wells or choose "Drilled" for existing wells that are being proposed to be re-entered from the dropdown menu.

Feature Top MD (ft): Input the top depth (i.e. "0" for Surface Casing 1)
Feature Bottom MD (ft): Input the bottom depth (i.e. "0" for Surface Casing 1).

Click "Save" at the bottom of the pop-up window, then repeat steps for each string in the wellbore.

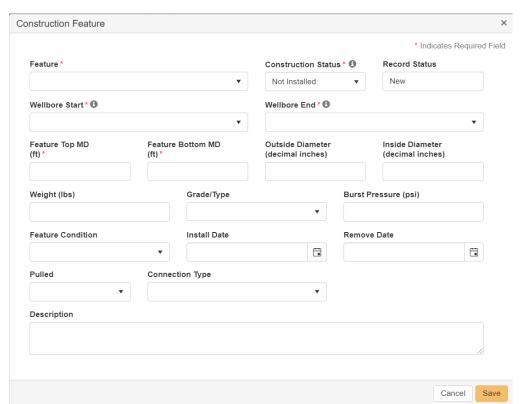


Figure 26: Construction Feature page

Cement Segment

This section is used to add cement segment information. Click the "Actions" dropdown menu and choose "Add Cement Segment". A pop-up window will appear (Figure 27).

Note: Repeat these steps for each string in the wellbore.

Fields and Functions

Associated Feature: Choose an associated feature from the dropdown menu (e.g. Surface Casing 1).

Inside/Outside Casing?: Dependent upon which wellbore was chosen in the previous step, select "Inside", "N/A", or "Outside".

Construction Status: Choose "Not drilled" for new wells or choose "Drilled" for existing wells that are being proposed to be re-entered from the dropdown menu.

Click "Save" at the bottom of the pop-up window, then repeat steps for each string in the wellbore.

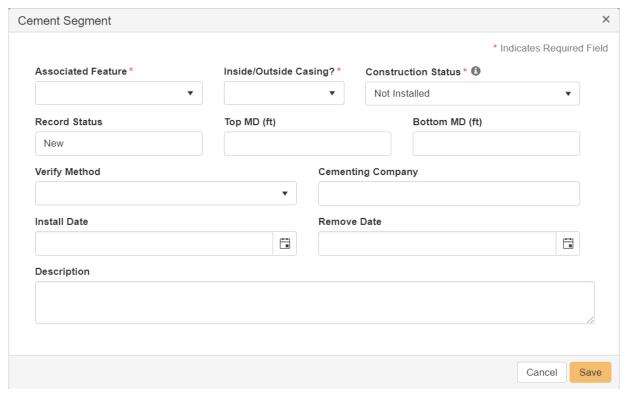


Figure 27: Cement Segment pop-up window

Cement Class

This section is used to add cement class information. Click the "Actions" dropdown menu and choose "Add Cement Class". A pop-up window will appear (Figure 28).

Note: Repeat these steps for each string in the wellbore.

Fields and Functions

Associated Cement Segment: Choose an associated cement segment that was created in the "Cement Segment" step from the dropdown menu (e.g. C2).

Cement Type: Choose the appropriate cement type from the dropdown menu.

Construction Status: Choose "Not drilled" for new wells or choose "Drilled" for existing wells that are being proposed to be re-entered from the dropdown menu.

Click "Save" at the bottom of the picker grid (Figure 24) once <u>all strings</u> for <u>all wellbores</u> have been added.

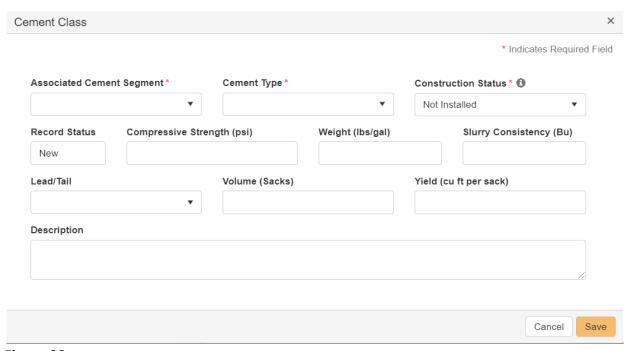


Figure 28: Cement Class pop-up window

Step 8: Completion & Perforation

This section allows the applicant to provide the details in two segments: "Completion Interval" and "Completion Open Hole or Perforations".

Please disclose as much information as known for the completion of the wellbore.

TIP: Select "Action" in the grid to add features to each completion interval. Select "Action" in the row to edit a specific feature that has been previously added.

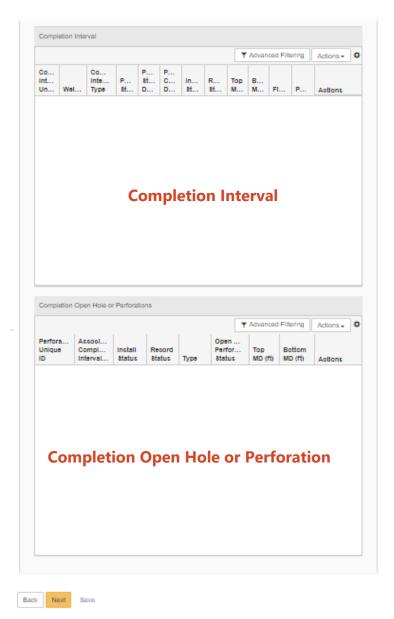


Figure 29: Completion & Perforation page

Completion Interval

This section is used to add completion interval information. Click the "Actions" dropdown menu and choose "Add Completion Interval". A pop-up window will appear (Figure 30, next page).

Fields and Functions

Wellbore: Choose a wellbore from the list (e.g. Surface Hole 1)

Completion Interval Type: Select the appropriate type (e.g. Oil & Gas, Salt Water Disposal, Coal Bed Methane etc.).

Pool Status: Select the appropriate status (e.g. Permitted to Drill, Permit to Re-Complete, Permit to Re-Entry, Salt Water Disposal etc.).

Interval Construction Status:

Record Status:

Top MD (ft): Input the appropriate depth (i.e. '0' for Surface hole 1)

Top TVD (ft):

Bottom MD (ft): Input the appropriate depth (i.e. '2100' for Surface Hole 1).

Bottom TVD (ft):

Top Coordinates (ft):

Bottom Coordinates (ft):

Longstring Casing Point: Choose all the pertinent information for each field (i.e. Qtr-Qtr or Lot, Section, Township, Range, and County) from their respective dropdown menu and be sure to include footages.

Click "Save" at the bottom of the pop-up window.

Note - An example of "Longstring" on a typical Bakken well is seven-inch casing set into the pool and across the hard lines.

Wellbore *	Completion Interval Type *	Pool Status	
•	•	▼	
Interval Construction Status * 1	Record Status		
Not Installed	▼ New		
Top MD (ft) *	Top TVD (ft)	Bottom MD (ft) *	Bottom TVD (ft)
Top Coordinates (ft): *		Bottom Coordinates (ft): *	
From WH	▼ N/S	From WH	▼ N/S
From WH	▼ E/W	From WH	▼ E/W
Longstring Casing Point			
Footages:		Coordinates (ft):	
Feet From	▼ Line	From WH	▼ N/S
Feet From	▼ Line	From WH	▼ E/W
Qtr-Qtr Section	Township	Range	County
•	▼ N	▼ W	•
Enhanced Recovery Unit	Field	Pool	
	•	▼]	▼
Spacing/Drilling Unit Type	Permit Classification	Acres in Unit	Industrial Commission Order
•	•	,	
Large Deceription of the Specipe	/Drilling Unit A		
Legal Description of the Spacing	/Drining Onit		
Reservation Surface Boundary In	ntersected by Spacing/Prilling	Unit A	
Reservation outland Boundary II	w Spacing/Dinning	onit •	
Description			

Figure 30: Completion Interval pop-up window

Completion Open Hole or Perforation

To add completion open hole or perforations information, click the "Actions" dropdown menu and choose "Add Completion Open Hole or Perforation". A pop-up window will appear (Figure 31).

Fields and Functions

Associated Completion Interval: Choose the appropriate wellbore (e.g. C3 which is for Lateral 1).

Construction Status: Choose "Not drilled" for new wells or "Drilled" for existing wells that are being proposed to be re-entered from the dropdown menu.

Type: Choose the appropriate type for completion (e.g. Sliding Sleeve)

Open Hole or Perforation Status: For new wells, choose "proposed". Otherwise, choose the appropriate type.

Top MD (ft): Input the appropriate depth for the start of the process.

Bottom MD (ft): Input the appropriate depth for the end or bottom of the process.

Objective Horizons

Click "Save" at the bottom of the pop-up window, then click "Save" at the bottom of the picker grid (Figure 29).

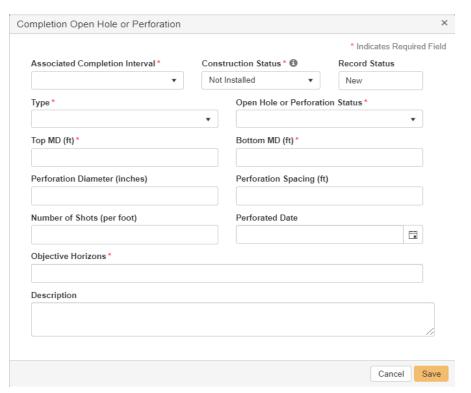


Figure 31: Completion Open Hole or Perforation pop-up window

Step 9: Proposed Work

This section allows the applicant to provide additional information they feel is warranted in the review process by the Oil & Gas Division, not included within the uploaded documents. This is not a required field. Click "Save" at the bottom of the page to continue.

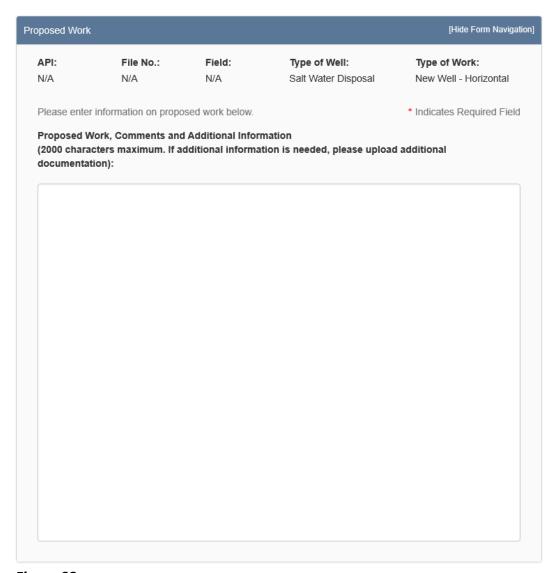


Figure 32: Proposed Work page

Step 10: Document Upload

This section is used to upload documents applicable to the work being done, documents to support a request for waiver, etc. Document Types Accepted: PDFs, TIFFs, JPEGs, GIFs, PNGs, etc.

*We prefer no .zip files and all documents be submitted in .pdf format.

Attaching a New Document (Figure 33):

**As a general guideline <u>separate</u> documents and upload them individually for easer navigation post submittal.

- 1. At the top of the grid, click the "Actions" button and select "Add New".
- 2. Click the circle by the "Upload New Document" statement for new attachments.
- 3. Choose to either have the attachments marked "Internal Only" or "Request Confidentiality" or both by clicking the box next to either statement.
- 4. **Type:** From the dropdown menu, you may choose from an assortment of document types listed below:
 - Affidavit of Mailing Land Owner Notification
 - o Affidavit of Mailing Operator Notification
 - Anti-Collision Report
 - AOR Map
 - AOR Well Review
 - AOR: Land Ownership Legal Description
 - APD- Attachments
 - APD- UIC Attachments
 - Approach Permit or Statement
 - Best management practices letter
 - Casing and Cement Detail
 - Class 6 Attachment
 - Completion Procedure
 - Completion Schematic
 - Conversion Procedure
 - Corrective Action Statement
 - Drilling Procedure
 - Existing Wellbore Schematic
 - Facility Diagram
 - Freshwater well Sample Analysis
 - Gas Capture Plan
 - Gas Storage Attachment
 - Geologic Prognosis
 - Geo-Technical Report

- H2S Stress Cracking Analysis
- Injection Fluid Source List
- Injection Plan
- Internal NDIC Documentation
- Land Owner Notification Letter
- NDIC Permit Policy Compliance Documentation
- Operator Notification Letter
- Plats
- Plugging Procedure
- Procedure
- Proposed Survey Plot and Plan
- Proposed Wellbore Schematic
- Representative Injection Fluid Sample Analysis
- Requested/Required Affidavit
- o Shoe Detail Schematic
- Site Schematic
- Slurry Fracture Injection Attachment
- Sundry Attachment
- Traffic Flow Diagram
- 5. **Relevant Date:** Input the date of the submittal of the application.
- 6. **Description:** Input any additional description for the attachment.
- 7. Filename (Attaches the document to application):
 - o First, click the "Browse" in order to navigate to the desired attachment.
 - Next, click the desired attachment inside the pop-up window.
 - Then, click the "Open" button.
 - Wait for the attachment to download.
 - o Lastly, click the "Upload" button in the "Document Upload" pop-up window.
- 8. Once all attachments are uploaded, click "Save" at the bottom of the page (Figure 35).

Attaching a document Existing in NorthSTAR (Figure 34):

- 1. Click the circle by "Associate Existing NorthSTAR Document" in order to utilize attachments that have been stored in NorthSTAR.
- 2. **Document ID:** From the dropdown menu, choose the appropriate attachment to upload.
- 3. Click "Upload".
- 4. Once all attachments are uploaded, click "Save" at the bottom of the page (Figure 35).

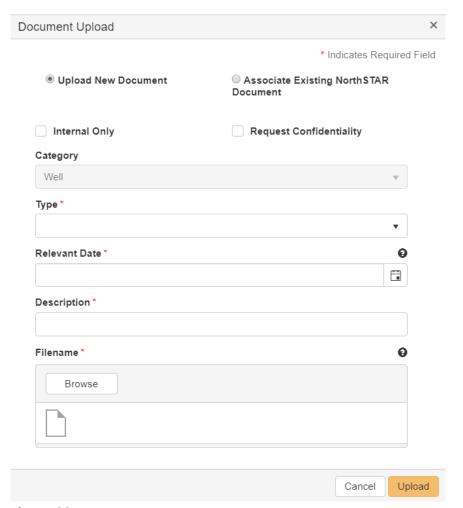


Figure 33: Upload New Document

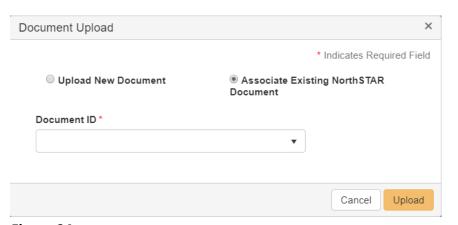


Figure 34: Associate Existing Document

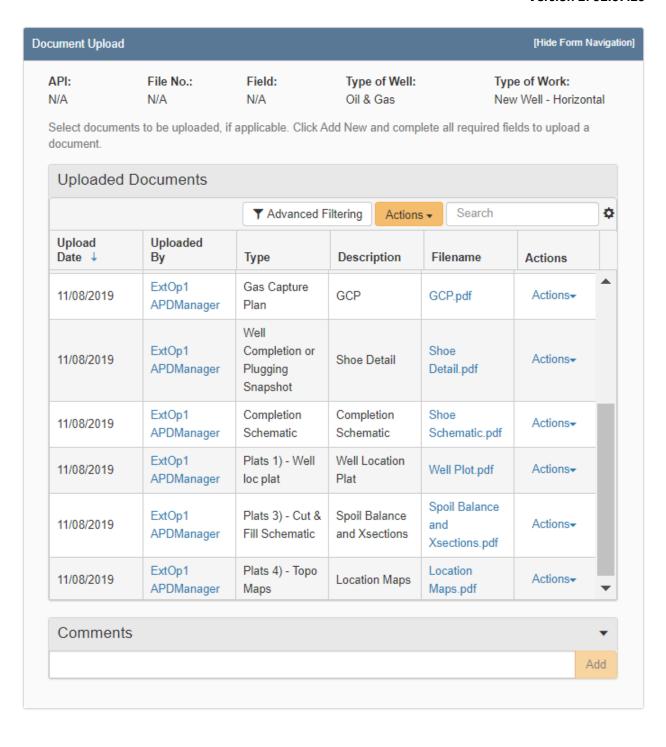


Figure 35: Document Upload page - Example of populated picker grid

Back

Next

Save

Step 11: Operator Assertions

This section requires the applicant to indicate if they have reviewed and understand the Oil and Gas Division's permit policies applicable to the application (i.e. NDIC-PP 1.01 thru 1.07 and NDIC-PP 2.01 thru 2.04). The Oil and Gas Division will use these assertions to determine additional review. Click the circle for either the "Yes", "No", or "N/A" for all assertions within the table.

Note: Every assertion needs to be addressed with either a "Yes", "No", or "N/A"; if an assertion is skipped or missed you will receive and error message and not be able to submit your Application for Permit.

If Water Appropriation Number does not apply enter NA.

Operator Assertions * Assertions Yes N/A No Are the well and production facility on the same pad? Do you acknowledge that you will provide prior written notice, up to ten days and not less that seven business days, to any operator of a well completed in the same pool, if publicly available information indicates or if the operator is made aware, if the completion intervals are within one thousand three hundred twenty (1,320) feet or (402.34 meters) of one another as applicable? Does the operator acknowledge they will contact the NDIC Field Inspector to seek proper plug back procedures in the event of a sidetrack? Does the operator understand that effective June 1, 2014 a covered leak-proof container (with placard) for filter sock disposal must be maintained on the well site beginning when the well is soud and must remain on-site during clean-out, completion, and flow-back whenever filtration operations are conducted? Does the well pad block any drainages? Has the operator confirmed with the NDIC Oil & Gas Division the method of payment to be used for any fees associated with the processing of this application? Has the operator provided notice to the owner of any permanently occupied dwelling located within 1320 feet of the proposed oil or gas Has the operator reviewed any wells within 500' of the proposed wellbore and addressed anti-collision concerns? If the well is within 1000 feet of an occupied dwelling: Are the proposed production facilities located at a greater distance from the occupied dwelling than the wellbore? Is the pad between 2,640 feet and 10,000 feet from the end of a public use airport runway? Is the well located off-spacing and if so, has a surface use agreement been executed with the landowner? Is the well or production facility closer than 500' to an occupied dwelling? Is the well pad located on an aquifer? Is the well pad located on/adjacent to unstable soils or areas with a high potential for soil instability (mapped or unmapped)? Is the well pad located on/near surface coal, sand or gravel deposit? Is the well pad located within 33 feet of a section line? Is the well pad located within a city's extra territorial boundary? Is the well pad located within a county, state or fed designated historic site, recreation area or wildlife management area? Is the well pad within 2,640 feet from the end of a public use airport runway (If yes, there is a 45-day comment period required)? Is the well pad within 200 feet of the centerline of a state or federal highway on flat land or 400 feet in rough topography? Is the well pad within a 100-year (or less) floodplain? Is the well pad within a well head protection area? Is the well within a planned bypass route that has been proposed in an approved ten year, or less, county, state, or federal road master plan? Is this well or completion interval located within the external boundaries Is this well within 1,320 feet of a military facility? Is this well within an area of interest as it relates to public lands pursuant to NDIC PP 2.01 (If yes, a 10-day comment period required)? Pursuant to the NDIC 43-02-03-31 (Well Log, Completion, and Workover Reports), the operator understands and will run porosity and resistivity logs on this well unless otherwise approved by the Director.

Figure 36: Operator Assertions page

Step 12: Form Submit

This page allows the applicant to submit the application.

If needed, comments can be added by typing in the textbox below the grid, then click the yellow "Add" button on the right. All comments associated with the application will be displayed.

"Submitter" is filled in automatically with the current user's information. The current date is automatically entered for "Date Received".

Click the checkbox next to the statement "I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete."

Click "Preview Submission Summary" to review the form, and then click "Submit" at the bottom of the page.

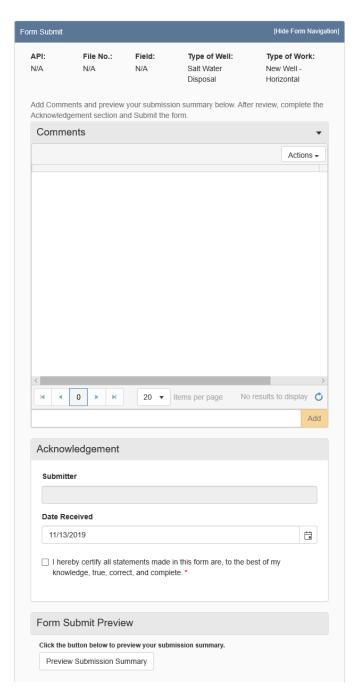


Figure 37: Form Submit page

Step 13: Confirmation

After submission, the "Confirmation" page will indicate if the form was successfully submitted or if there was an error with the submission. A unique Form ID will be shown once you draft a form and also shown in **BOLD** text upon successful completion.

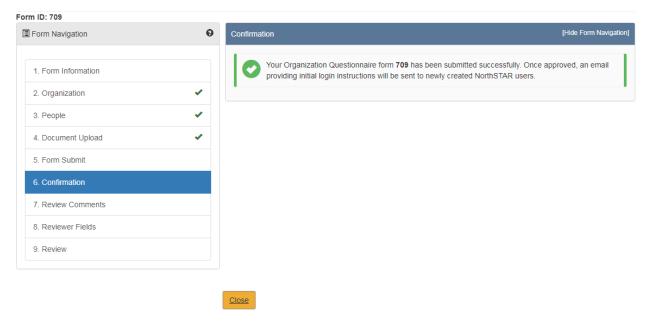


Figure 38: Confirmation page

Step 14: Plan View

This information is to be completed by internal Oil & Gas Division Staff.

Step 15: Stipulations

This information is to be completed by internal Oil & Gas Division Staff.

Step 16: Review Checklist

This information is to be completed by internal Oil & Gas Division Staff.

Step 17: Review Comments

This information is to be completed by internal Oil & Gas Division Staff.

Step 18: Review

This information is to be completed by internal Oil & Gas Division Staff.