How to Get Started

- Log into NorthSTAR using Microsoft Edge, Google Chrome, or Firefox. URL: https://northstar.dmr.nd.gov

To begin a sundry for the intent to plug & abandon a well:

- Select [Forms] and [Online Forms] from the options at the top of the page.
- Select [Well Completion or Plugging Report].
- Select your organization from the Organization list.
- Select [Plugging] for both Form Type and Type of Completion.
- Select the [API Number] for the well that was plugged. Check to make sure the well name & file no. that populate are correct.
Form Information

Please enter information below.

Form Name
Well Completion or Plugging Report

Organization *
SMITH & SONS, LLC

Form Type *
Plugging

Type of Completion *
Plugging

API *

Well Name
WELL NAME

File No.
XXXX

Enter the well information in the following format: Township – Range – Section – Well Name and Number – Type of Well (Example: 156 – 097 – 02 – Smith 1– Oil & Gas).*

159 - 96 -13  WELL NAME  - Oil & Gas
**Operator Information**

Contacts added to the form will be alerted by email when the status of the form changes.

Users may add a contact by selecting [Actions] and [Add Contact].

- To add a contact that is already in the NorthSTAR system, find their Contact Role and name in the drop down menus.
- To add a contact that is not in the NorthSTAR system, uncheck the box titled [*Is this contact already in NorthSTAR?*] and fill out all required fields.
## Add Contact

* Indicates Required Field

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this contact already in NorthSTAR?</td>
<td>Yes/No, checked/unchecked</td>
</tr>
<tr>
<td>Contact Role</td>
<td>A role for the contact</td>
</tr>
<tr>
<td>Find Person</td>
<td>A search for a related person</td>
</tr>
<tr>
<td>Contact Name</td>
<td>The name of the contact</td>
</tr>
<tr>
<td>Phone Number</td>
<td>The phone number of the contact</td>
</tr>
<tr>
<td>Email</td>
<td>The email address of the contact</td>
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</table>

### Advanced Filtering

<table>
<thead>
<tr>
<th>Role</th>
<th>Actions</th>
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<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

### Submitter

<table>
<thead>
<tr>
<th>Submitter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Cancel** | **Save**
Well Information

Users must fill out all applicable fields.

- If the well is currently part of a unitized field, select the Unit from the list.
- Select the Field from the list.
- Select the ‘active’ production / injection pool for the well from the list.
- For a plugged well, the Operator Reported Status will be [Shut In].
- The Spud / Start Date is the date the plug & abandon work began.
- The Date Completed is the date the plug & abandon work was completed.
- The KB Elevation (Ft Above SL) is the reference elevation above sea level used for logging.
**Wellhead Location**

<table>
<thead>
<tr>
<th>Surface Owner</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Footages From Nearest Section Line**

<table>
<thead>
<tr>
<th>Footage 1: 810</th>
<th>Feet From</th>
<th>N</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footage 2: 1980</td>
<td>Feet From</td>
<td>E</td>
<td>Line</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qtr/Qt</th>
<th>or Lot:</th>
<th>Section:</th>
<th>Township:</th>
<th>Range:</th>
<th>County:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW NE</td>
<td>13</td>
<td>159 N</td>
<td>96 W</td>
<td></td>
<td>Williams</td>
</tr>
</tbody>
</table>

**Latitude of Well Head (NAD 83):**

| AXXX |

**Longitude of Well Head (NAD 83):**

| AXXX |

**Ground Elevation (Ft above SL):**

| N/A |

**Graded Pad Elevation (Ft above SL):**

**Operator Reported Well Status**: Shut In

**Spud/Start Date**: 12/16/2019

**Driller Total Depth**: 8084

**Disposition of Gas**

**Date Completed**: 12/22/2019

**KB Elevation (Ft above SL)**

2303

**Operator Reported Producing Method**

- An oil well shall be considered completed when the first oil is produced through wellhead equipment into tanks from the ultimate producing interval after casing has been run.
- A gas well shall be considered complete when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after casing has been run.
- For EOR or SWD wells, please report the date the well is capable of injection through tubing and packer into the permitted injection zone. Also, please report the packer type and depth and the tubing size, depth, and type. The packer and tubing type may be included in the “Additional Information” portion of the report.
Geological Information

Users must select all logs that were run on the well prior to or during plugging & abandon operations.

- **Deepest Formation Penetrated** is the deepest formation reached **while drilling** the well. This may not be related to the deepest casing string or the current production interval.
- Select the logs from the table provided near the top of the screen by marking the check box in the left-hand column.
- Press the [˅] button to move the log types that were marked into the table below.
- To add additional logs of the same type (e.g. two separate cement bond logs), repeat the instructions above for that specific log type until the correct number show up in the table below.
- If a log was mistakenly added to the list, select the log using the checkbox and press the [˄] to remove it from the list.
- Specify any other logs that were not found in the list under the **Other Logs** section.
**Plugging**

Users must fill out all applicable fields on this form.

- **Weight of Fluid Between Plugs** is, in general, the weight of fluid that was circulated in the wellbore prior to cementing. This field must contain a single numeric value. If different fluids were circulated in the wellbore during P&A operations, note the first weight in this field and all subsequent weights under *Comments* below.
- **Date Well Plugged** is the date P&A operations were completed.
- **Number of DSTs** is the total number of drill stem tests run on the well (during initial drilling or recompletion).
- **Directional Survey Run?** indicates whether there are one or more sets of surveys for the well (e.g. MWD, GYRO, etc).
- **Was Completion Attempted?** indicates whether a well was fully or partially completed (e.g. hydraulic fracturing, formation acid treatment, etc).
- **Was the Well Cored?** Indicates whether core samples were taken from the well.
- **Was Casing Pulled?** Indicates whether one or more casing strings have been completely or partially pulled throughout the lifespan of the well.
- **Depth of Interval(s) Cored (Top-Bottom)** are the depths at which core samples were retrieved. Type [N/A] if no coring was done. Type each interval starting with the depth of the top of core, and separate core sample intervals with a comma (e.g. 7600-7645ft, 8235-8280ft), the core section on the geology information section will also need to be filled out.
- **Name of Inspector Present During Plugging** is the name of the ND DMR or BLM field inspector that witnessed cement work during P&A operations.
- List all pertinent **Plugging Contractors**. At a minimum include the workover company, cement company, and wireline company.
- Any additional information can be added to the comment box. Features in the wellbore, cement plug information, and procedures will be added in subsequent sections.
### Plugging Information

<table>
<thead>
<tr>
<th>Weight of Fluid Between Plugs (lbs/gal)</th>
<th>Date Well Plugged</th>
<th>Number of DSTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>12/22/2019</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Directional Survey Run?**
  - Yes
  - No

- **Was Well Cored?**
  - Yes
  - No

- **Was Completion Attempted?**
  - Yes
  - No

- **Was Casing Pulled?**
  - Yes
  - No

- **Depth of Interval(s) Cored (Top-Bottom)**
  - N/A

- **Name of Field Inspector Present During Plugging**
  - Jon Rumppe

**Comments**

<table>
<thead>
<tr>
<th>Comments</th>
</tr>
</thead>
</table>
Features & Cement – The Basics

Some information about the wellbore will already be populated in the tables. If a piece of information appears to be inaccurate, please review the well file prior to making any changes. If changes are made to an item, all required fields must be completed.

Table Descriptions:

- **Wellbore Information** lists the openhole record of the wellbore. Missing or inaccurate records will require additional paperwork to update.
- **Wellbore Construction Feature** itemizes the objects inside the wellbore. **Features** may also be proposed on the sundry. Missing **Features** may be added here.
- **Cement Segment** is a description of the cement inside and behind casing. **Cement segments** may also be proposed on the sundry. **Cement Segments** must have an **Associated Feature**. Missing **Cement Segments** may be added here.
- **Cement Class** is a description of the cement from the **Cement Segments** table. The cement class must have an associated **Cement Segment**. Missing **Cement Class** information may be added here.

The tables may be formatted to a better size using the [Hide Form Navigation] button.

Information may be added to each table by clicking on [Actions] at the top of the table and selecting [Add New].

Information regarding a **Feature, Cement Segment, Cement Class, Completion Interval, or Completion Open Hole or Perforations** may be edited by clicking [Actions] for the specific item and [Edit Record].

Items added by the user on this sundry will have a **New Record Status**. These items may also be deleted by the user by clicking on [Actions] for the specific item and selecting [Delete Record].

**IF THE FEATURES FOR THE P&A WERE ALREADY PROPOSED IN NORTHSTAR, SKIP TO SECTION B.**

**IF THE FEATURES FOR THE P&A ARE NOT IN NORTHSTAR, FOLLOW THE INSTRUCTIONS IN SECTION A.**
SECTION A (Example)
Features & Cement – Adding a Cement Squeeze for Existing Perforations

In this example, a cement retainer was set above a fish in the wellbore. A cement squeeze was performed on the production perforations below the fish.

Features for a cement squeeze may include: Cast Iron Bridge Plug, Perforations, Cement Squeeze, Cement Retainer.

In order to add a cement squeeze, select [Actions] and [Add Feature]:

- Add [Fish], [Cement Retainer], and [Cement Squeeze] Features.
- Construction Status will be [Installed].
- Wellbore Start and Wellbore End will be [VerticalHole1] if the item is inside the vertical section of the wellbore below the SurfaceHole1 depth.
- Feature Bottom MD (ft) will be bottom of tool for the Cement Retainer and lowest perforation depth for the Cement Squeeze.
- Feature Top MD (ft) will be the proposed top of tool for the Cement Retainer and top of cement for the Cement Squeeze. 10sks cement left 86ft of cement on top of the Cement Retainer.
- Install Date is the date the tool was set or cement work was completed.
- Formation Isolated is the formation that was isolated by the cement squeeze.
Wellbore Construction Feature

**Fish**
- Feature: Fish
- Construction Status: Installed
- Record Status: New

**Feature**
- Feature: Cement Retainer
- Construction Status: Installed
- Record Status: New

**Wellbore Start**
- VERTICALHOLE 1

**Wellbore End**
- VERTICALHOLE 1

**Feature Top MD (ft)**
- Feature Top MD: 7703

**Feature Bottom MD (ft)**
- Feature Bottom MD: 7873

**Outside Diameter (decimal inches)**
- Outside Diameter: 2.375

**Inside Diameter (decimal inches)**
- Inside Diameter: 1.955

**Weight (lbs)**
- Weight: 

**Grade/Type**
- Grade/Type: 

**Burst Pressure (psi)**
- Burst Pressure: 

**Feature Condition**
- Feature Condition: 

**Install Date**
- Install Date: 12/18/2019

**Remove Date**
- Remove Date: 

**Pulled**
- Pulled: 

**Connection Type**
- Connection Type: Madison Group

**Description**
- Description: 2 3/8in tubing above a WEATHERFORD AS-1X packer.

- CICR set @ 7656 for Madison production isolation
SECTION A (Example)

Features & Cement – Adding a Cast Iron Bridge Plug and Balanced Plug

In this example, a cast iron bridge plug was set, and a cement balanced plug was pumped on top of the plug.

Features for balanced plugs may include: Cast Iron Bridge Plug, Cement Retainer & Balanced Plug.

In order to add the balanced plug features, for each feature select [Actions] and [Add Feature]:

- Construction Status will be [Installed].
- Wellbore Start and Wellbore End will be [VerticalHole1] if the item is inside the vertical section of the wellbore below the SurfaceHole1 depth.
- Feature Bottom MD (ft) will be:
  - The depth of the bottom of tool for the Cast Iron Bridge Plug.
  - The end of tubing for the Balanced Plug.
- Feature Top MD (ft) will be:
  - The top of tool for the Cast Iron Bridge Plug
  - The calculated cement top for the Balanced Plug. If the height of the Balanced Plug was verified (e.g. by tagging), the top of the plug is the depth that was verified.
- Install Date is the date the tool was set or cement work was completed.
- Formation Isolated is the formation isolated by the balanced plug.
Cast Iron Bridge Plug

Wellbore Start: VERTICALHOLE 1

Wellbore End: VERTICALHOLE 1

Feature Top MD: 6356 ft

Feature Bottom MD: 6357 ft

Outside Diameter: (decimal inches)

Inside Diameter: (decimal inches)

Weight (lbs)

Grade/Type

Burst Pressure (psi)

Feature Condition

Install Date: 12/19/2019

Remove Date

Pulled

Connection Type

Formation Isolated: Spearfish Fm.

Description: CIBP set @ 6356ft on installed

Balanced Cement Plug

Wellbore Start: VERTICALHOLE 1

Wellbore End: VERTICALHOLE 1

Feature Top MD: 6091 ft

Feature Bottom MD: 6356 ft

Outside Diameter: (decimal inches)

Inside Diameter: (decimal inches)

Weight (lbs)

Grade/Type

Burst Pressure (psi)

Feature Condition

Install Date: 12/19/2019

Remove Date

Pulled

Connection Type

Formation Isolated: Spearfish Fm.

Description: 30sk (265ft) G cement balanced plug on top of CIBP @ 6356ft
<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Install Status</th>
<th>Record Status</th>
<th>Feature Top MD (ft)</th>
<th>Feature Bottom MD (ft)</th>
<th>Outside Diameter (inch)</th>
<th>Formation Isolated</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Iron Bridge Plug 2</td>
<td>Installed</td>
<td>New</td>
<td>4590</td>
<td>4561</td>
<td></td>
<td>Dakota Group</td>
<td>Actions+</td>
</tr>
<tr>
<td>Cement Squeeze 1</td>
<td>Installed</td>
<td>Current</td>
<td>5120</td>
<td>5150</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Balanced Cement Plug 1</td>
<td>Installed</td>
<td>New</td>
<td>6091</td>
<td>6356</td>
<td></td>
<td>Spearfish Fm.</td>
<td>Actions+</td>
</tr>
<tr>
<td>Cast Iron Bridge Plug 1</td>
<td>Installed</td>
<td>New</td>
<td>6356</td>
<td>6357</td>
<td></td>
<td>Spearfish Fm.</td>
<td>Actions+</td>
</tr>
<tr>
<td>Cement Retainer 1</td>
<td>Installed</td>
<td>New</td>
<td>7696</td>
<td>7696</td>
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<td>Madison Group</td>
<td>Actions+</td>
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<td>Installed</td>
<td>New</td>
<td>7609</td>
<td>8055</td>
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<td>Madison Group</td>
<td>Actions+</td>
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<td>Production Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>8074</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
</tbody>
</table>
**SECTION A (Example)**

**Features & Cement – Adding a Failed Cement Squeeze Attempt**

In this example, the cement squeeze was unable to be performed. A cast iron bridge plug was set, the casing was perforated, a cement retainer was set, and a cement balanced plug was placed on top of the cement retainer.

Features for cement squeezes may include: Cast Iron Bridge Plug, Cement Retainer, Cement Squeeze, and Perforations. A

In order to add cement squeeze and balanced plug features, for each feature select [Actions] for the table and [Add Feature]:

- **Add [Cast Iron Bridge Plug], [Perforations], [Cement Retainer], and [Balanced Plug] Features.**
- **Wellbore Start** and **Wellbore End** will be [VerticalHole1] if the item is inside the vertical section of the wellbore below the SurfaceHole1 depth.
- **Feature Bottom MD (ft)** will be:
  - The depth of the bottom of tools for the *Cast Iron Bridge Plug & Cement Retainer*
  - The bottom of the perforated interval for *Perforations*
  - The end of tubing for the *Balanced Plug.*
- **Feature Top MD (ft)** will be:
  - The top of tool for the *Cast Iron Bridge Plug & Cement Retainer*
  - The top of the perforated interval for *Perforations*
  - The calculated cement top for the *Balanced Plug.* If the height of the *Balanced Plug* was verified (e.g. by tagging), the top of the plug is the depth that was verified.
- **Install Date** is the date the tool was set or cement work was completed.
- **Formation Isolated** is the formation isolated by the balanced plug.

![Wellbore Construction Feature Table]
### Wellbore Construction Feature

<table>
<thead>
<tr>
<th>Feature *</th>
<th>Construction Status *</th>
<th>Record Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Iron Bridge Plug</td>
<td>Installed</td>
<td>New</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wellbore Start *</th>
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</thead>
<tbody>
<tr>
<td>VERTICALHOLE 1</td>
<td>VERTICALHOLE 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature Top MD (ft) *</th>
<th>Feature Bottom MD (ft) *</th>
<th>Outside Diameter (decimal inches)</th>
<th>Inside Diameter (decimal inches)</th>
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<tbody>
<tr>
<td>4560</td>
<td>4561</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Grade/Type</th>
<th>Burst Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature Condition</th>
<th>Install Date</th>
<th>Remove Date</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>12/20/2019</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pulled</th>
<th>Connection Type</th>
<th>Formation Isolated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dakota Group</td>
</tr>
</tbody>
</table>

**Description**

CIBP set @ 4560ft on wireline

---

### Wellbore Construction Feature

<table>
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<tr>
<th>Feature *</th>
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<th>Record Status</th>
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</table>

<table>
<thead>
<tr>
<th>Wellbore Start *</th>
<th>Wellbore End *</th>
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</thead>
<tbody>
<tr>
<td>VERTICALHOLE 1</td>
<td>VERTICALHOLE 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature Top MD (ft) *</th>
<th>Feature Bottom MD (ft) *</th>
<th>Outside Diameter (decimal inches)</th>
<th>Inside Diameter (decimal inches)</th>
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<tbody>
<tr>
<td>4487</td>
<td>4488</td>
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</table>

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Grade/Type</th>
<th>Burst Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature Condition</th>
<th>Install Date</th>
<th>Remove Date</th>
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<td></td>
<td>02/20/2020</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dakota Group</td>
</tr>
</tbody>
</table>

**Description**

Perforated prod casing @ 4487ft with 4spf for Dakota Mowry cement squeeze
### Wellbore Construction Feature

**Feature**
- Cement Retainer

**Wellbore Start**
- VERTICALHOLE 1

**Wellbore End**
- VERTICALHOLE 1

**Feature Top MD (ft)**
- 4437

**Feature Bottom MD (ft)**
- 4438

**Outside Diameter (decimal inches)**

**Inside Diameter (decimal inches)**

**Weight (lbs)**

**Grade/Type**

**Burst Pressure (psi)**

**Feature Condition**

**Install Date**
- 12/20/2019

**Remove Date**

**Pulled**

**Connection Type**

**Formation Isolated**
- Dakota Group

**Description**
- CICR set @ 4437ft for Dakota Mowry isolation

---

### Wellbore Construction Feature

**Feature**
- Balanced Cement Plug

**Wellbore Start**
- VERTICALHOLE 1

**Wellbore End**
- VERTICALHOLE 1

**Feature Top MD (ft)**
- 4172

**Feature Bottom MD (ft)**
- 4437

**Outside Diameter (decimal inches)**

**Inside Diameter (decimal inches)**

**Weight (lbs)**

**Grade/Type**

**Burst Pressure (psi)**

**Feature Condition**

**Install Date**
- 12/20/2019

**Remove Date**

**Pulled**

**Connection Type**

**Formation Isolated**
- Dakota Group

**Description**
- 30sk G cement balanced plug on top of CICR @ 4437ft. Unable to squeeze below CICR

---
<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Install Status</th>
<th>Record Status</th>
<th>Feature Top MD (ft)</th>
<th>Feature Bottom MD (ft)</th>
<th>Outside Diameter (decimal inches)</th>
<th>Formation Isolated</th>
<th>Actions</th>
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</thead>
<tbody>
<tr>
<td>Perforation 2</td>
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<td>1900</td>
<td>1901</td>
<td>Fox Hills Fm.</td>
<td>Actions</td>
<td></td>
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<tr>
<td>Cast Iron Bridge Plug 3</td>
<td>Installed</td>
<td>New</td>
<td>1956</td>
<td>1957</td>
<td>Fox Hills Fm.</td>
<td>Actions</td>
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</tr>
<tr>
<td>Balanced Cement Plug 2</td>
<td>Installed</td>
<td>New</td>
<td>4172</td>
<td>4437</td>
<td>Dakota Group</td>
<td>Actions</td>
<td></td>
</tr>
<tr>
<td>Cement Retainer 2</td>
<td>Installed</td>
<td>New</td>
<td>4437</td>
<td>4438</td>
<td>Dakota Group</td>
<td>Actions</td>
<td></td>
</tr>
<tr>
<td>Perforation 1</td>
<td>Installed</td>
<td>New</td>
<td>4487</td>
<td>4488</td>
<td>Dakota Group</td>
<td>Actions</td>
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<td>Cast Iron Bridge Plug 2</td>
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<td>4561</td>
<td>Dakota Group</td>
<td>Actions</td>
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<tr>
<td>Cement Squeeze 1</td>
<td>Installed</td>
<td>Current</td>
<td>5120</td>
<td>5150</td>
<td></td>
<td>Actions</td>
<td></td>
</tr>
<tr>
<td>Balanced Cement Plug 1</td>
<td>Installed</td>
<td>New</td>
<td>6091</td>
<td>6356</td>
<td>Spearfish Fm.</td>
<td>Actions</td>
<td></td>
</tr>
</tbody>
</table>
SECTION A (Example)

Features & Cement – Adding a Cement Squeeze Performed Due to Insufficient Top of Cement

In this example a cement squeeze is performed below the surface shoe. A cast iron bridge plug was set, the casing was perforated, a cement retainer was set, and a cement squeeze was performed.

Features for cement squeezes may include: Cast Iron Bridge Plug, Cement Retainer, Cement Squeeze, and Perforations.

In order to add proposed cement squeeze features, for each feature select [Actions] for the table and [Add Feature]:

- Add [Cast Iron Bridge Plug], [Perforations], [Cement Retainer], and [Cement Squeeze] Features.
- Construction Status will be [Not Installed].
- Wellbore Start and Wellbore End will be [VerticalHole1] or [SurfaceHole1] depending on whether the Feature starts or ends above or below the SurfaceHole1 depth.
- Feature Bottom MD (ft) and Feature Top MD (ft) will be the proposed bottom and top of the Feature.
- Install Date is the date the tool was set or cement work was completed.
- Formation Isolated is the formation isolated by the balanced plug.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Construction Status</th>
<th>Record Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perforation</td>
<td>Not Installed</td>
<td>New</td>
</tr>
<tr>
<td>VERTICALHOLE 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feature Top MD (ft)</td>
<td>Feature Bottom MD (ft)</td>
<td>Outside Diameter (decimal inches)</td>
</tr>
<tr>
<td>672</td>
<td>673</td>
<td></td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>Grade/Type</td>
<td>Burst Pressure (psi)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feature Condition</td>
<td>Install Date</td>
<td>Remove Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulled</td>
<td>Connection Type</td>
<td>Formation Isolated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4spf perforations 50ft below surface shoe for cement squeeze</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature</th>
<th>Construction Status</th>
<th>Record Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Retainer</td>
<td>Not Installed</td>
<td>New</td>
</tr>
<tr>
<td>SURFACEHOLE 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feature Top MD (ft)</td>
<td>Feature Bottom MD (ft)</td>
<td>Outside Diameter (decimal inches)</td>
</tr>
<tr>
<td>572</td>
<td>573</td>
<td></td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>Grade/Type</td>
<td>Burst Pressure (psi)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feature Condition</td>
<td>Install Date</td>
<td>Remove Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulled</td>
<td>Connection Type</td>
<td>Formation Isolated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement retainer for base of surface casing squeeze. 100ft above perforations and 50ft above surface shoe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Feature: Cement Squeeze
Wellbore Start: SURFACEHOLE 1
Wellbore End: VERTICALHOLE 1
Feature Top MD (ft): 516
Feature Bottom MD (ft): 672
Outside Diameter (decimal inches)
Inside Diameter (decimal inches)
Weight (lbs)
Grade/Type
Burst Pressure (psi)
Feature Condition
Install Date
Remove Date
Pulled
Connection Type
Description:
100sks G cement. 90sks below CICR @ 572ft & 10sks on top to isolate across surface shoe.

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Install Status</th>
<th>Record Status</th>
<th>Feature Top MD (ft)</th>
<th>Feature Bottom MD (ft)</th>
<th>Outside Diameter (decimal inches)</th>
<th>Formation Isolated</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>8262</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Surface Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>622</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Cement Squeeze 3</td>
<td>Not Installed</td>
<td>New</td>
<td>516</td>
<td>672</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Cement Retainer 2</td>
<td>Not Installed</td>
<td>New</td>
<td>572</td>
<td>573</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Perforation 1</td>
<td>Not Installed</td>
<td>New</td>
<td>672</td>
<td>673</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
<tr>
<td>Cement Squeeze 1</td>
<td>Installed</td>
<td>Current</td>
<td>3659</td>
<td>3990</td>
<td></td>
<td>Dakota Group</td>
<td>Actions+</td>
</tr>
<tr>
<td>Balanced Cement Plug 2</td>
<td>Not Installed</td>
<td>New</td>
<td>4163</td>
<td>4423</td>
<td></td>
<td></td>
<td>Actions+</td>
</tr>
</tbody>
</table>
SECTION A (Example)

Features & Cement – Adding a Surface Plug

Features for surface plugs may include: Perforation, Cut, Cut and Pull, and Surface Plug.

In order to add the surface plug features, for each Feature select [Actions] and [Add Feature]:

- Construction Status will be [Installed].
- Wellbore Start and Wellbore End will be [SurfaceHole1] because the items are above the SurfaceHole1 depth.
- Feature Bottom MD (ft) and Feature Top MD (ft) will be the proposed bottom and top of the Feature.

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Install Status</th>
<th>Record Status</th>
<th>Feature Top MD (ft)</th>
<th>Feature Bottom MD (ft)</th>
<th>Outside Diameter (decimal inches)</th>
<th>Formation Isolated</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>3262</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>622</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement Squeeze 1</td>
<td>Installed</td>
<td>Current</td>
<td>3999</td>
<td>3990</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement Retainer 1</td>
<td>Installed</td>
<td>Current</td>
<td>8050</td>
<td>8051</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Wellbore Construction Feature

**Feature**
- Perforation

**Construction Status**
- Installed

**Wellbore Start**
- SURFACEHOLE 1

**Wellbore End**
- SURFACEHOLE 1

**Feature Top MD** (ft)
- 50

**Feature Bottom MD** (ft)
- 51

**Outside Diameter (decimal inches)**

**Inside Diameter (decimal inches)**

**Weight (lbs)**

**Grade/Type**

**Burst Pressure (psi)**

**Feature Condition**

**Install Date**
- 12/20/2019

**Remove Date**

**Pulled**

**Connection Type**

**Formation Isolated**

**Description**
- Perforations @ 50ft with 2xglf for surface plug

---

Wellbore Construction Feature

**Feature**
- Surface Plug

**Construction Status**
- Installed

**Wellbore Start**
- SURFACEHOLE 1

**Wellbore End**
- SURFACEHOLE 1

**Feature Top MD** (ft)
- 0

**Feature Bottom MD** (ft)
- 50

**Outside Diameter (decimal inches)**

**Inside Diameter (decimal inches)**

**Weight (lbs)**

**Grade/Type**

**Burst Pressure (psi)**

**Feature Condition**

**Install Date**
- 12/22/2019

**Remove Date**

**Pulled**

**Connection Type**

**Formation Isolated**

**Description**
- Date & cement surface plug thru perforations @ 50ft
<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Install Status</th>
<th>Record Status</th>
<th>Feature Top MD (ft)</th>
<th>Feature Bottom MD (ft)</th>
<th>Outside Diameter (decl. inches)</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>8074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Casing 1</td>
<td>Installed</td>
<td>Current</td>
<td>0</td>
<td>620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Plug 1</td>
<td>Installed</td>
<td>New</td>
<td>0</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perforation 1</td>
<td>Installed</td>
<td>New</td>
<td>50</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement Squeeze 1</td>
<td>Installed</td>
<td>Current</td>
<td>5120</td>
<td>5150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION A (Example)

Features & Cement – Adding Cement Segments

Cement Segments must have an associated Feature from the Wellbore Construction Feature table.

To add Cement Segments, for each Segment select [Actions] and [Add Cement Segment]:

- For cement squeezes on production / injection intervals or balanced plugs, select [Inside] for Inside / Outside Casing?
- For cement squeezes due to inadequate casing cement (where cement was squeezed inside and behind casing), select [N/A] for Inside / Outside Casing?
- The Top and Bottom of the Cement Segment will be the same depths as the Associated Features.
- Details about a multi-stage cement job can be accounted for in the Cement Classes section.
### Cement Segment

<table>
<thead>
<tr>
<th>Associated Feature *</th>
<th>Inside/Outside Casing? *</th>
<th>Construction Status *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced Cement Plug 1</td>
<td>Inside</td>
<td>Installed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Record Status</th>
<th>Top MD (ft)</th>
<th>Bottom MD (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>6091</td>
<td>6356</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verify Method</th>
<th>Cementing Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEXTIER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Install Date</th>
<th>Remove Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/19/2019</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

30sk (265ft) balanced plug on top of CIBP @ 6356ft & across Spearfish formation.

---

### Cement Segment

<table>
<thead>
<tr>
<th>Associated Feature *</th>
<th>Inside/Outside Casing? *</th>
<th>Construction Status *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced Cement Plug 2</td>
<td>Inside</td>
<td>Installed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Record Status</th>
<th>Top MD (ft)</th>
<th>Bottom MD (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>4172</td>
<td>4437</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verify Method</th>
<th>Cementing Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEXTIER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Install Date</th>
<th>Remove Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/20/2019</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

30sk (265ft) balanced plug on top of CIBP @ 4437ft & across Dakota Mowry formation.
<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cement Segment</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Associated Feature</strong></td>
<td>Surface Plug 1</td>
</tr>
<tr>
<td><strong>Inside/Outside Casing?</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Construction Status</strong></td>
<td>Installed</td>
</tr>
<tr>
<td><strong>Record Status</strong></td>
<td>New</td>
</tr>
<tr>
<td><strong>Top MD (ft)</strong></td>
<td>484</td>
</tr>
<tr>
<td><strong>Bottom MD (ft)</strong></td>
<td>676</td>
</tr>
<tr>
<td><strong>Verify Method</strong></td>
<td>Visual - To Surface</td>
</tr>
<tr>
<td><strong>Install Date</strong></td>
<td>12/22/2019</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>45lb cement surface plug thru perforations @ 500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cement Segment</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Associated Feature</strong></td>
<td>Cement Squeeze 3</td>
</tr>
<tr>
<td><strong>Inside/Outside Casing?</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Construction Status</strong></td>
<td>Installed</td>
</tr>
<tr>
<td><strong>Record Status</strong></td>
<td>New</td>
</tr>
<tr>
<td><strong>Top MD (ft)</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Bottom MD (ft)</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>Verify Method</strong></td>
<td>Visual - To Surface</td>
</tr>
<tr>
<td><strong>Install Date</strong></td>
<td>12/20/2019</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>100lb neat G cement squeeze to isolate surface shoe. CICR @ 570ft w/ 10sks on top.</td>
</tr>
</tbody>
</table>
SECTION A (Example)

Features & Cement – Adding Cement Classes

*Cement Classes* must have an associated *Cement Segment* from the *Cement Segment* table.

To add *Cement Classes* select [Actions] and [Add Cement Segment]:

- Select the [Associated Cement Segment] from the list.
- Select the [Cement Type] from the list.
- Add all other pertinent information about the *Cement Segment* in the spaces provided.
- Multiple *Cement Classes* (e.g. stages) can be associated with a single *Cement Segment*. An example of this is choosing a lead and tail *Cement Class* for a single *Cement Segment*.
Cement Class

Associated Cement Segment*: C2
Cement Type*: Class G Cement
Construction Status*: Installed

Record Status: New
Compressive Strength (psi): 
Weight (lbs/gal): 15.8
Slurry Consistency (Bu): 

Lead/Tail: Single
Volume (Sacks): 30
Yield (cu ft per sack): 1.15

Description: 30sk balanced plug across Spearfish top

Cement Class

Associated Cement Segment*: C3
Cement Type*: Class G Cement
Construction Status*: Installed

Record Status: New
Compressive Strength (psi): 
Weight (lbs/gal): 15.8
Slurry Consistency (Bu): 

Lead/Tail: Single
Volume (Sacks): 30
Yield (cu ft per sack): 1.15

Description: 30sk balanced plug across Dakota Mowry top
### Cement Class

**Associated Cement Segment**: C4

**Cement Type**: Class G Cement

**Construction Status**: Installed

**Record Status**: New

**Compressive Strength (psi)**: 

**Weight (lbs/gal)**: 15.8

**Slurry Consistency (Bu)**: 

**Lead/Tail**: Single

**Volume (Sacks)**: 100

**Yield (cu ft per sack)**: 1.15

**Description**: 1000# G cement w/2% CACI squeeze to cover surface shoe @ 620 ft

---

**Associated Cement Segment**: C5

**Cement Type**: Class G Cement

**Construction Status**: Installed

**Record Status**: New

**Compressive Strength (psi)**: 

**Weight (lbs/gal)**: 15.8

**Slurry Consistency (Bu)**: 

**Lead/Tail**: Single

**Volume (Sacks)**: 40

**Yield (cu ft per sack)**: 1.15

**Description**: 400# G cement w/2% CACI surface plug thru perforations @ 500 ft

---

* Indicates Required Field
SECTION B

Editing Proposed Wellbore Features, Cement Segments, and Cement Classes

If all of the Features, Cement Segments, and Cement Classes were proposed on the sundry for the intent to plug & abandon the wellbore, the information will be populated in the plugging report.

Items may be added by selecting [Actions] and [Add...] from the appropriate table.

To edit an existing item, select [Actions] and [Edit...] for the item.

- All Construction Statuses for items that were installed need to changed to [Installed].
- All Construction Statuses for items that were not installed should remain as [Not Installed].
- Any wellbore features added or discovered while conducting work should be added. These may include: fish, collapsed casing, fill, hole, internal casing patch, milled casing, other damage, oval damage, parted casing, split casing, and tight spot in casing.

Use the examples in Section A to fill out all required items and information.

Lists from the following dropdowns are provided in the Appendix (these options may be subject to change):

- Wellbore Information: Wellbore Type
- Wellbore Construction Feature: Feature
- Cement Class: Cement Type

Data being entered in NorthSTAR has a similar layout to the Form 7 – Plugging Reports.
**Sundry Data – Adding a P&A Procedure**

P&A procedures may be entered into the *Sundry Description* area. *Sundry Descriptions* are limited to 2000 characters. P&A procedures may also be attached as a document (explained in the next section).

- Procedures may be typed into the *Sundry Description* area.
- Procedures may be copied from another document and pasted into the *Sundry Description* area.

**Document Upload**

Documents related to the sundry should be uploaded here. Documents will be available for download by any users that have permission to review the sundry.

Typical documents to include are a P&A procedure and current wellbore schematic (both required under NDAC 43-02-03-33).
To upload a document, select [Actions] and [Add New]:

- Select the Type of document from the dropdown menu ([Diagram], [Plugging Procedure], or [Sundry Attachment]).
- The Relevant Date in this case is the date the document is uploaded.
- Enter a brief Description of the document (e.g. ‘Current Wellbore Diagram’, ‘Proposed P&A Diagram’, ‘P&A Procedure’, etc).

Documents uploaded by the user may also be deleted by selecting [Actions] and [Remove Document].
Form Submit – Comments, Acknowledgement, and Final Review

Users may add comments to the sundry and read reviewers’ comments in the Comments section.

Users must eSign the sundry by clicking on the checkbox under the Acknowledgement subform.
Users may review the entire sundry by clicking on the [Preview Submission Summary] button.

By clicking on the [Next] button from this page, the user will submit the sundry. The user will not be able to file a sundry that has missing information in required fields.
Acknowledgement

Submitter
Steve Fredrickson

Submitter Title *
Regulatory Subsurface Advisor

Date Received
01/23/2020

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

Form Submit Preview

Click the button below to preview your submission summary.

Preview Submission Summary