

WebDriller Tips

General Tips

- WebDriller was designed to work in Internet Explorer, but WebDriller also should work with other browsers including Google Chrome, Mozilla Firefox, and Safari. If you experience any issues with other browsers, please contact us so that we may be aware of any problems.
- For Internet Explorer 10 or later, enable the “Compatibility view.” Select “Compatibility view” from the menu bar “Tools” or “Add this website” using “state.pa.us” under “Compatibility View settings.”
- WebDriller uses popup windows. For any browser, always allow popups from the WebDriller site: *state.pa.us. If popups are not allowed, it probably will interfere with your ability to view and print reports.
- For tab Help tips inside WebDriller, click on the “[+] Show Help” at the top right. This provides formatting information and general guidance.
- The map tool can be used to automatically enter location information in your report. This will include latitude, longitude, county, municipality, quadrangle, and possibly the site address (if available). The address may be approximate so correct information should be entered. When editing reports, it will ask you if you want to change the information before overwriting existing locational data.
- If a data-entry tab doesn’t apply to your well, it should not be filled out. For example, if a screen is not installed in a well, then ignore the Screen/Slot tab.
- For all tabs except the Location Tab and the Summary Tab, the “Add Entry” button must be clicked after typing the entries in the form boxes. Once “Add Entry” is clicked, it will appear below the “Add Entry” and “Clear Fields” boxes. It can be deleted, if desired, by clicking on the “Delete” option. Entries can be edited by selecting the “Edit” link, changing the entries, and selecting “Update.”
- For length and yield entries, values can be entered in tenths (for example, 1.5 GPM).
- Do not exit a report before clicking the "Save Progress" or "Validate" button, or data may be lost. The "Save Progress" button can be used to save your progress. A well-report can be saved as a draft as long as the following information (at a minimum) is entered: county, driller well ID, type of activity, date drilled, drilling method, and owner last name. Use the "Save Progress" button if you cannot continue because of data errors. Otherwise, use the "Validate" button and then edit the report later, if editing is needed.

Intent to Drill

The Water Well Drillers License Act requires drillers to submit an “Intent to Drill” report before drilling a well. It requires an anticipated drill date, owner name, address of well (if available), county, and municipality. Once entered, this information will be transferred automatically into a new well report by selecting it under “My Intent to Drill” reports or “My Current Well Reports.” All information entered under the “Intent to Drill” form can be edited later. Unfinished or never completed “Intent to Drill” reports can be deleted.

Mapping tool – Zoom in using the map controls or zoom control on your mouse. Click on the map to automatically populate the location fields. You must be zoomed in completely before it will insert the location information into the form based on a mouse click. You can also type in a street address and zip code and view map to zoom in.

My Current Well Reports

This list is a tally of all reports. From this list you can select reports to edit, print, or delete. Duplicates of reports already finalized (printed for owner) can be re-printed.

Enter New Well Completion Report

The Tabs

There are nine tabs used in WebDriller for the New Well Completion Report. At a minimum, data must be entered for the first three tabs. The following table summarizes the tabs; then each tab is explained in more detail below the table.

Summary table of tabs in New Well Completion Report:

| Location | Driller's Log | Borehole | Casing | Screen/ Slot | Well Liner | Packer | Water Bearing Zone | Summary |
|--|---|---------------------------------|--|--|---|---|---|---|
| Basic information about the well including location and driller ID number. | Depths and description of geologic material that the driller encountered down the hole. | Depth and diameter of the hole. | Depths, diameter, material, seal, and amount of casing used in the well. | If installed, screen depths, diameter, slot size, material, type, and packing of screen. | If used, depths, diameter, and type of liner. | If used, interval of the packer used in the well. | Estimates of the depth and yield rate of water bearing zones. | Save progress or validate the data entered in the report. Validated data completes the report and prepares it for printing. |

Location Tab

On this tab there are 11 required fields indicated by a red asterisk (*). In addition, as much information as is known should be included. The fields include the following:

- County – the county in which the well is located. Select from the dropdown menu or use the map tool to automatically assign the information.
- Driller Well ID – a unique identification number assigned by the driller. It can be any unique combination up to 15 characters long. Once the report is saved or validated, this number cannot be changed.
- Local Permit # – enter if applicable. Typically a county or local municipality issues this number.
- Type of Activity – the subject of the driller's report. "New Well" is the default activity. Click on the dropdown menu to select something other than "New Well." When another type of activity is chosen such as "Cleanout," "Other," or "Yield Enhancement," a new box also opens up: "Original Well By." Select the appropriate button (either "Current Driller" or "Another Driller"). If "Another Driller"

is selected, an additional box appears asking for the name of the “Original Driller.” If the original driller is not known, indicate “unknown.” For “Well Abandonment” use the separate report form from the main menu.

- Date Drilled – click the date on the calendar or enter it manually in the format of “01/31/2014” for month, day, year.
- Drilling Method – select from the dropdown menu.
- Owner – this can be a business, government, person, etc.
- Address and Zip Code – these are for the well location. If there is not an address for the well site, indicate the road or development. The map tool also will assign an address for some locations. This address is typically approximate, and can be edited further.
- Municipality – the municipality in which the well is located. Select from the dropdown menu, or use the map tool to automatically assign the information.
- Coordinate Method – the method of determining the well’s location coordinates in decimal degrees. Choose from the dropdown menu. When using a hand-held GPS for determining the coordinates, choose “GPS – Global Positioning System.” If you use the Mapping function, “Commercial Street Atlas Program” will be selected for you.
- Latitude and Longitude – coordinates of the well location in decimal degrees. They must be in decimal degree format. Use the map tool to automatically assign the coordinates for the well location in the proper format (decimal degrees).

If using a GPS, set your GPS units to “decimal degrees,” and your datum to North American Datum (NAD) 1983. Latitude and longitude must be reported in decimal degrees in this format: xx.xxxxx for latitude and (negative) -xx.xxxxx for longitude.

To convert “degrees and decimal minutes” to “decimal degrees,” divide the minutes by 60 and add this number to the degrees. (There are 60 minutes in a degree and 60 seconds in a minute. There are 3,600 seconds in a degree.)

The following web page can be used for converting between different formats of coordinates: <http://maps2.nris.mt.gov/topofinder1/LatLong.asp>. Although this web site is from Montana, you can enter your type of coordinates in Pennsylvania and click “Calculate.” A response will be given like this:

| Format | Latitude | Longitude |
|---------------------------|-----------------|------------------|
| Decimal Degrees | 40.72361 | -76.92028 |
| Degrees, Decimal Minutes | 40, 43.4167 | -76, 55.2167 |
| Degrees, Minutes, Seconds | 40, 43, 25.0 | -76, 55, 13.0 |

For WebDriller, you will want to use the first row of information (Decimal Degrees).

If converting the coordinates, you should be sure of your format. Note format examples above. For input into WebDriller, use the first row of information that is returned in decimal degrees. You can check your coordinates by entering them in their respective boxes and clicking “View Map of this Location” in the WebDriller map, or any web-based mapping tool like Google maps or Bing maps. For online

maps, enter the coordinates in the search window in the following format: latitude, longitude (for example, 40.22746, -76.72255).

Other latitude-longitude conversion sites include:

<http://www.fcc.gov/mb/audio/bickel/DDMMSS-decimal.html>

Additional Fields

- Well Depth – the total depth of the well in feet below the ground surface. The final well depth could be less than the borehole depth if the borehole was filled or sealed off at the bottom; however, the well depth cannot be greater than the borehole depth.
- Well Finish – select from the dropdown menu.
- Depth to Bedrock – the total depth in feet from the ground surface to where bedrock was encountered. Check the box “Did Not Encounter Bedrock” on the right if bedrock was not encountered in the borehole.
- Well Yield – enter the number in gallons per minute (GPM).
- Yield Measure Method – select from the dropdown menu.
- Static Water Level – indicate the depth to water in feet below the ground surface. This measurement should be taken after approximate equilibrium is restored from drilling, surging, or pumping.
- Water level after yield test – indicate the depth to water in feet below the ground surface immediately after the yield test is completed. This value is not the amount of drawdown.
- Length of Yield Test – enter the duration of the yield test in minutes.
- Saltwater Zone – indicate the depth in feet below the ground surface where saltwater was encountered.
- Use of Well – select from the dropdown menu.
- Use of Water – select from the dropdown menu.
- Description of Well Location and Other Notes – list any other details that you would like to add to the report; for example, lot number, site observations, etc.

Driller’s Log Tab

This is a required tab. For each driller’s log unit, enter “Unit Top,” “Unit Bottom,” and “Description of Units Penetrated” and select “Add Entry.” The log should describe the geologic materials that are encountered by the driller as the hole is drilled.

An example of a log with three entries:

| Unit Top | Unit Bottom | Description | | |
|----------|-------------|----------------------------|------|--------|
| 0 | 5.5 | weathered red shale | Edit | Delete |
| 5.5 | 25 | fine grained red sandstone | Edit | Delete |
| 25 | 74 | red silty shale | Edit | Delete |

Mistakes in the log can be corrected by editing units (click on “Edit” and re-enter the corrected values, then click on “Update; or click “Cancel” to not save an edit). Entries also can be deleted by clicking on “Delete.”

For field guidance on well logs, see the Pennsylvania Geological Survey’s web page “[Completing Accurate Well Logs](#)” (link from the main menu of WebDriller).

Borehole Tab

This is a required tab. The Borehole tab is for the depths in feet and dimensions in inches of the borehole. If different diameters were used for sections of the borehole, then indicate by using multiple entries under this tab.

Casing Tab

The Casing tab is for listing the amount and type of casing used in the well. This is most often an entry of the steel or PVC casing that extends to bedrock. More than one casing entry can be made for telescoped casings. In addition, a monitoring well or other well in unconsolidated material will use a riser pipe that is connected to a screen. The riser pipe portion can be entered as “casing” along with any seal if included for that part of the well. If there is protective casing around the riser pipe, both “casings” can be entered with their respective diameters.

For example, a monitoring well is drilled to 20 feet. Five feet of 6-inch steel protective casing is installed in the hole. Four-inch diameter PVC screen is installed from 10 to 20 feet with a gravel pack. The PVC riser pipe above the screen is grouted to the top. In this example you have two overlapping entries for the casing. Five feet of 6-inch protective casing is entered from 0 to 5 feet, and then 10 feet of riser pipe is entered as casing from 0 to 10. The type of seal is indicated for each. The first casing entry could be: Casing Top, 0; Casing Bottom, 5; Diameter, 6; Casing Material, steel; Seal (Grout) Top, 0; Seal (Grout) Bottom, 5, Seal (Grout) Type, concrete grout. The second entry would be: Casing Top, 0; Casing Bottom, 10; Diameter, 4; Casing Material, PVC or other plastic; Seal (Grout) Top, 0; Seal (Grout) Bottom, 10, Seal (Grout) Type, bentonite slurry.

The screen information is added under the Screen/Slot tab. See below.

Casing that extends above ground is indicated by a negative number. For example, a 7-foot section of casing with a 2.5-foot stickup would have a “Casing Top” of -2.5 and a “Casing Bottom” of 4.5.

For closed-loop geothermal holes, the casing and any outside grout should be separately entered from the internal borehole seal information. For example, for an open-hole borehole drilled 300 feet with 30 feet of grouted protective casing, the first casing entry could be: Casing Top, 0; Casing Bottom, 30; Diameter, 6; Casing Material, steel; Seal (Grout) Top, 0; Seal (Grout) Bottom, 30, Seal (Grout) Type, concrete grout (for example). Then a second seal for the borehole and piping should be entered without any casing information: Seal (Grout) Top, 0; Seal (Grout) Bottom, 300, Seal (Grout) Type, bentonite slurry (or “other”).

Screen/Slot Tab

The Screen/Slot tab is used when a screen is installed in the well. Screens are typically used in unconsolidated lithologies like sand and gravel. A packing material such as sand is typically added around the screen. In the example given under “Casing Tab” above, the Screen/Slot entry might be: Top, 10; Bottom, 20; Diameter, 4; Slot Size, 0.010; Type, screen; Material, plastic; and Packing, gravel.

Well Liner Tab

A PVC well liner is sometimes used in water wells to protect the well from contamination or corrosion of an outer steel casing. Indicate the “Top” and “Bottom” depths, “Diameter,” and “PVC Type” (using the dropdown menu) of a well liner.

Packer Tab

A packer is sometimes used in water wells to partition off part of the well. Indicate the “Top” and “Bottom” depths of the packer and if there is a sealant in the packer interval. For example, a packer may seal off an interval from 40.5 to 50.5 feet. The entries would be Top, 40.5; Bottom, 50.5; and the “Sealant in Interval” box would be checked accordingly.

Water Bearing Zone Tab

The encounter of a water bearing zone should be noted by the driller. The “Top” and “Bottom” fields under this tab represent the depths of the water bearing zone in feet. These entries can have the same footage. If a yield is not known, the yield box can be left blank.

Summary Tab

If you need to pause data entry, select "Save Progress." This will save your progress without validation of the data. A report can be saved as a draft as long as the following minimum information is entered: county, driller well ID, type of activity, date drilled, drilling method, and owner last name.

If you select "Validate" and there are no errors, your report will be completed and you will get the following message: "Your report has been validated and prepared for printing. Use the menu on the left to navigate to your next destination. To finalize the well record and submit it to DCNR as required, it must be Printed for Owner. In addition, a printed copy of the report must be delivered to the well owner."

If there are errors, you must fix the error that WebDriller has found. Read the error message and return to the tab with the error by clicking the appropriate tab at the top or the adjacent "GO" arrow button on the right.

Upon return to the Summary tab, you must click the "Validate" button again to finish the process. If you cannot fix the errors right away, click on the "Save Progress " button to save your progress. If you exit WebDriller, when you return you can find this record under "My Current Well Completion Reports."

After a new report has been completed, if you plan to enter several records that are similar, such as monitoring wells or closed-loop geothermal boreholes, use the "Duplicate This Well Report" button to begin a duplicate Well Report. The Driller Well ID, Date Drilled, and Coordinate fields will be cleared. You will need to add these for the new report. Make all other necessary changes to the duplicated information then save progress or validate the new report. The duplicate option is available only for new reports.

Enter New Well Abandonment Report

The Tabs

| Location | Borehole | Casing/Seal | Summary |
|---|--------------------------------------|--|--|
| Basic information about the abandoned well, including location. | Depths and diameter of the borehole. | Depths, diameter, material, seal, and amount of casing pulled from the well. | Save progress or validate the data entered in the report. Validated data completes the report and it is then ready for printing. |

Location Tab

The location tab is similar to the new well location tab. The type of activity is already selected as “Well Abandonment.” The “Reason for Abandonment” should be selected from the dropdown menu.

Borehole Tab

The Borehole tab is for the depths in feet and dimensions in inches of the hole that was abandoned. If different diameters were used for sections of the borehole, then indicate with multiple entries under this tab.

Casing/Seal Tab

The Casing/Seal tab is for listing the amount and type of casing pulled from the well, and the material used to seal the well.

Indicate how much casing is pulled, if any. Casing removed above ground is indicated by a negative number. For example, a two-foot stickup of casing that goes 10 feet below the surface would be indicated by -2 (FT) for Pulled Casing Top, and 10 (FT) for Pulled Casing Bottom. If casing cannot be pulled, please enter that information in the comments box on the Location Tab.

Enter the interval and type of seal under Seal (Grout) Top, Bottom, and Type. Multiple interval and types of “grout” may be entered.

The two parts (Casing and Seal) are independent of each other. You can enter one without entering the other.

Summary Tab

The Summary tab is similar to the new well Summary tab.

Printing

When printing for review or for owner, use the printer icon just above the report. (Click on the down arrow to the right of the printer icon for more options). Do not use the “File Print” command from the menu bar.

Printer icon:



Note: Once the Owner's copy is printed, you will no longer be able to edit the report. When you are ready to print a report, it is recommended that you first select the "Review" button and review the report before printing the Owner copy. If you determine that you made an error after you have printed for owner, please contact us.

Print for owner is done once. After a record is printed for owner, additional owner copies can be printed by selecting "Duplicate" under Print Current Well Completion Reports.

If you cannot get the report to display at the Print function, you may have not shut off your popup blocker. See "General Tips."

Additional Help

For additional help using WebDriller, use the links in WebDriller under the "Contact the Survey" box, or contact us by email at webdriller@state.pa.us, or call the Pennsylvania Geological Survey at 717-702-2017.