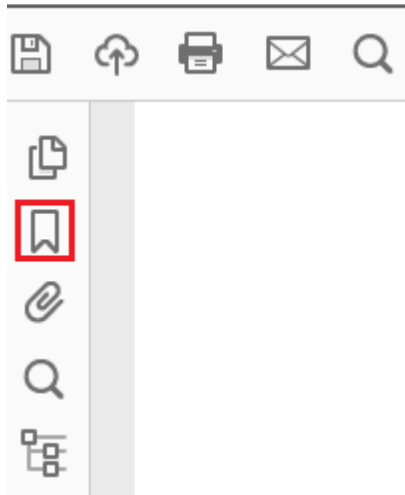


[Help / About](#)

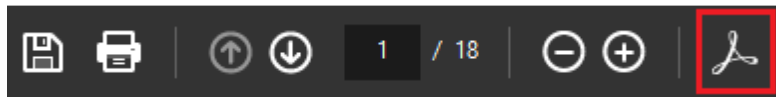
Welcome to the WOGCC Data Explorer system

System Overview

Thank you for utilizing the WOGCC Data Explorer system. To view the contents of the help manual, reference the Table of Contents, or enable the Bookmark pane by clicking on the Bookmark icon, then clicking the sub-topic you wish to view.



Depending on how you opened the manual, you may first need to display your PDF-reader application toolbar; in Adobe Acrobat Reader DC.



The Data Explorer system is best viewed in Chrome, Firefox, Edge, or Safari.

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Getting Started

The Data Explorer system home page contains the following page-level tools:



WOGCC Home: opens the agency's website in a new tab



Search: clears all current selections and reloads the webpage




Alerts: displays alerts related to the Data Explorer system



Help: opens the Data Explorer system Help file in a new tab



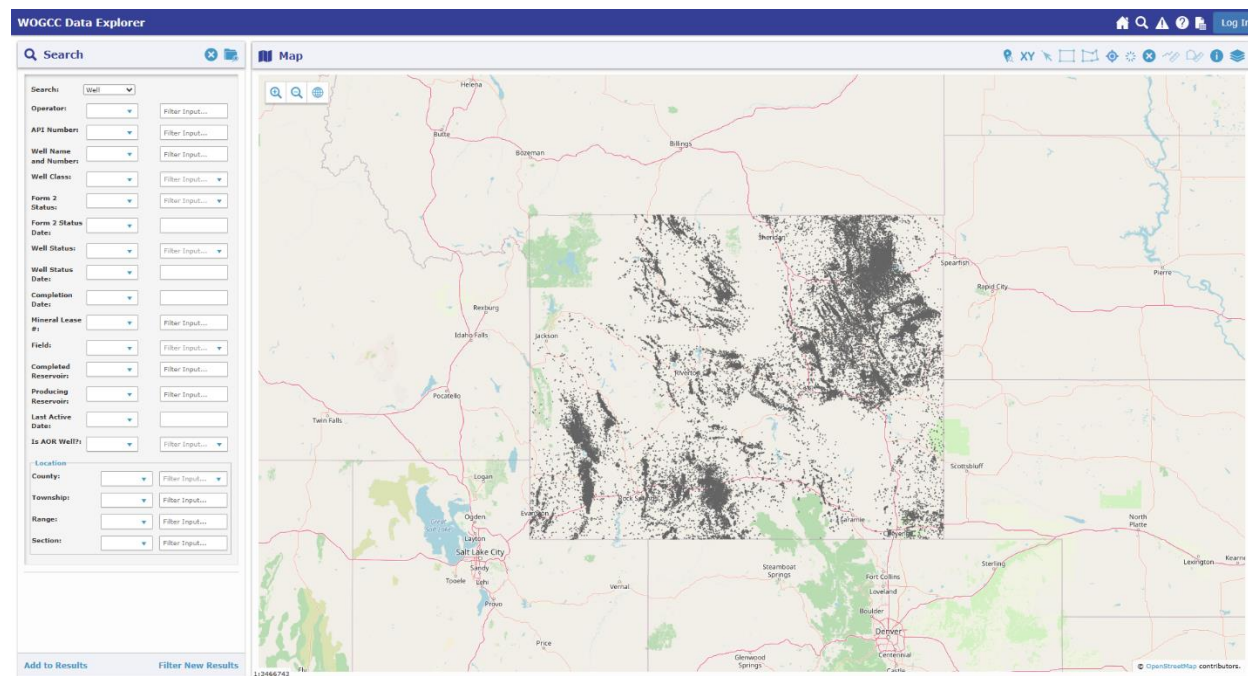
Reporting: opens the Data Explorer Reporting menu; click the  icon for instructions on running a report



For agency-users only; non-agency users will not login to view records

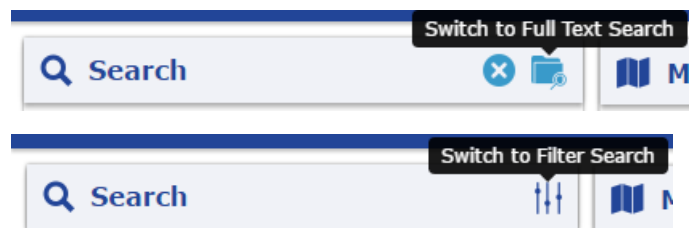
Page Layout

Upon accessing the Data Explorer system, you are presented with two panes: a Search pane and an interactive Map (GIS) pane. From the search pane, users can open a List Results pane that displays a summary list of the search results and a Details pane, which displays detailed information for selected records.



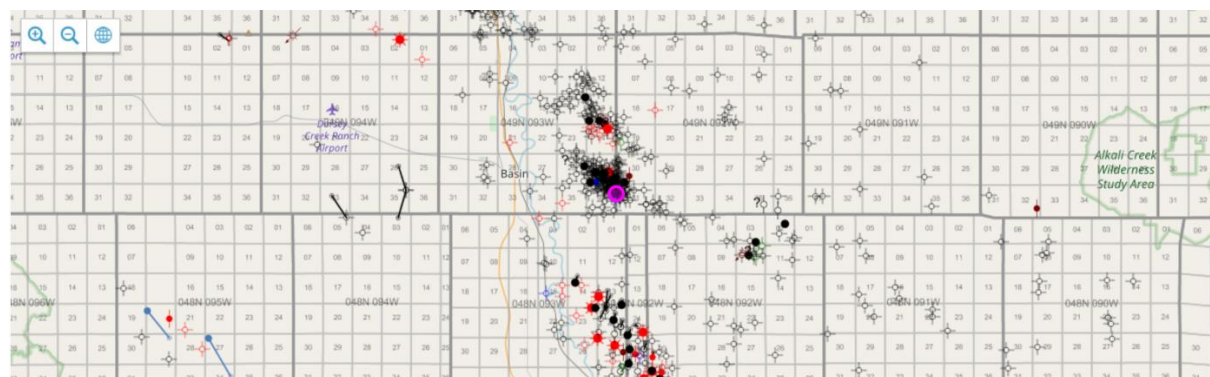
Search Pane

The search pane is comprised of a search engine with a filter search or full text search option. Upon successful return of records, the search pane will be populated with a list, organized in a tree view structure, of all records that met the search criteria.




Map Pane

The interactive map pane displays a map of data layers, such as wells and their associated tracks, APDs, and sample locations. With the various tools, a user can zoom in and out of the map, select and identify features, control which data layers are displayed, and more. Additionally, when a record is selected in the tree view, the corresponding feature is also selected in the map and the map automatically zooms to that feature.



List Results Pane

The list results pane displays a summary list of the search results.

When a Show In List  icon is selected in the search pane, all records returned for that search grouping are opened in a new browser tab, which can then be exported as a CSV file. Clicking a record's link from within the list results pane opens that record's details pane in a new browser tab.

List Results														SamplingPlan Information		
Sampling Pt	Plan Type	APD Receive	Orig. Form	Well View	API Number	Well Name and Number	Operator View	Operator	Field	Reservoir	SHL SEC TWP RGE	SHL Footage	Confidential?	Plan Min Du	Plan Max Du	Type of App
View	Single Well Plan	11/03/2017		View	49-009-34809-00	BREARHEAD 3975-2318-004	View	TITAN EXPLORATION LLC	WC	FRONTIER	Sec 22 T39N R75W	400 FSL 447' N				
View	Single Well Plan	09/15/2017		View	49-019-30727-00	BUCK FED 4176-6-9-13 19H	View	TITAN EXPLORATION LLC	WC	KOCHBARRA	Sec 6 T42N R76W	140 FSL 906' N				
View	Single Well Plan	06/07/2017		View	49-009-30516-00	BREARHEAD 4076-2833-002	View	TITAN EXPLORATION LLC	WC	SUSSEX	Sec 28 T40N R76W	676 FSL 205' N				
View	Single Well Plan	04/06/2017		View	49-005-64328-00	T-Chair 4376-14-23-292H	View	TITAN EXPLORATION LLC	WC	KOCHBARRA	Sec 14 T42N R76W	232 FSL 215' N				

Details Pane

The details pane lists detailed information about selected individual records.

When a specific record is selected in the search or map pane, the details of that record are displayed in the details pane in a new browser tab. Clicking another record's link from within the details pane opens that records details within the same browser tab.

- Click the various tab titles to scroll through the information in the details pane
- Tabs formatted as a grid can be exported as a CSV file

The screenshot shows the 'WOGCC Data Explorer' interface. The 'Details' pane is active, displaying a table with columns: API Number, Well Name and Number, Operator, Well Status, Well Status Date, Well File, and Show In Map. Below this, there are tabs for General, Location, APDs (1), Sidetracks (0), Sampling Plans (0), Sample Reports (0), and Operator History (6). A red box highlights the 'CSV Export' button in the top right corner of the details pane.

Searching the Data Explorer System

The Data Explorer system enables users to search for data related to wells, entities, sampling plans, sample reports, and sample locations using two primary methods: a filter search option in which users can filter data using specific search criteria and a full text search in which users can search for records using any combination of search terms.

Filter Search

With the filter search, you can select specific database table fields, such as well class, well status, and/or operator name, by which to search and filter data. If searching by API Number, you must search without dashes – E.g. search for “4900941531”, instead of “49-009-41531”.

By default, the filter search option presents well-related filters. You can change the dataset to search by selecting another option in the Search dropdown box.

The screenshot shows the 'Search' dropdown menu. The 'Search:' dropdown is set to 'Well'. Below it, there are several filter input fields for 'Operator', 'API Number', 'Well Name and Number', 'Well Class', 'Well Status', and 'Well Status'. A red arrow points to the 'Well' dropdown menu.

To run a filter search:

- If applicable, click the Switch to Filter Search icon to open the filter search

The screenshot shows the 'Search' and 'Map' buttons. A tooltip labeled 'Switch to Filter Search' is positioned over the 'Search' button, indicating the action to take to open the filter search.

- In the dropdown box next to the chosen field, select the comparison method (e.g. contains, equals, greater than, etc.)
- In the text box, enter or select the value for your filter
- If the filter is a dropdown, you can add multiple values to your filter set by clicking back into the field and selecting an additional value
 - When you filter for multiple values for the same filter, the filters are ran using an OR clause, not an AND clause. For example, if you run a search using the following filters, the Data Explorer system will return wells whose Well Class is Gas Well OR Gas Storage.

- If multiple filters of different types are applied, the search will be ran using an AND clause. For example, if you run a search using the following filters, the Data Explorer system will return wells in the whose Well Status is Producing Oil Well AND that's located in the County of Big Horn.

- To clear a specific filter, click the field's "x" button
- To clear all filters, click the Reset Filters icon at the top of the pane

- Once all criteria is entered, click the Filter New Results button
 - The search pane will display a tree view of your results below the filters. You may have to vertically scroll down to see the results.

The screenshot shows a 'Search' window with a search bar and a list of filter criteria. The criteria are organized into two main sections: 'Well' and 'Location'. Each criterion has a dropdown menu for selection and a 'Filter Input...' button. The 'Well' section includes 'Well Class', 'Well Status', 'Well Status Date', 'Mineral Lease #', 'Field', and 'Reservoir'. The 'Location' section includes 'County', 'Township', 'Range', and 'Section'. The 'Well Status' dropdown is currently set to 'Producing Oil Well', and the 'County' dropdown is set to 'BIG HORN'. Below the filter criteria, there is a summary bar showing 'Wells (361)' with icons for a folder, a map, and a table. At the bottom of the window, there are two buttons: 'Add to Results' and 'Filter New Results'.

- To run another search and add the results to the previous filter results, apply the applicable filters and click the Add to Results button; this allows users to compile records using multiple filter sets in order to combine them into a single list results.

Search

API Number: [Dropdown] Filter Input...

Well Name and Number: [Dropdown] Filter Input...

Well Class: [=] [X] [Dropdown] Injection Well [X] [Dropdown]

Well Status: [Dropdown] Filter Input...

Well Status Date: [Dropdown] [Text Box]

Mineral Lease #: [Dropdown] Filter Input...

Field: [Dropdown] Filter Input...

Reservoir: [Dropdown] Filter Input...

Location

County: [=] [X] [Dropdown] BIG HORN [X] [Dropdown]

Township: [Dropdown] Filter Input...

Range: [Dropdown] Filter Input...

Section: [Dropdown] Filter Input...

Wells (361+118) [Folder Icon] [Table Icon]

Add to Results ← Filter New Results

- To run a new search and replace the previous results; apply the applicable filters and click the Filter New Results button

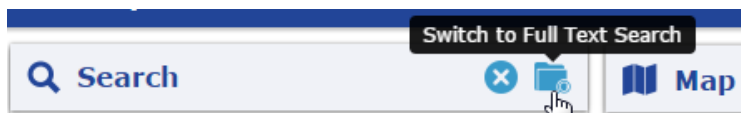
Full Text Search


With a full text search, you can enter any of the following terms or combination of terms in the search text box to search the Data Explorer system.

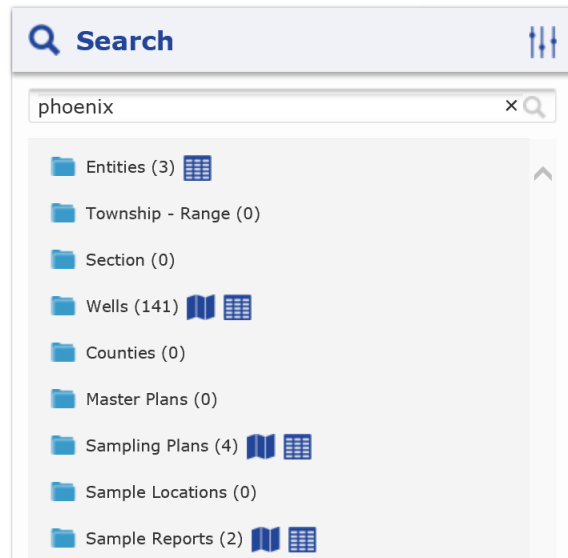
- API Number (with or without dashes)
- Well Name and Number
- Operator Name
- Operator Number
- AWSID

To run a full text search:

- If applicable, click the Switch to Full Text Search icon to switch to a full text search



- Enter a search term or phrase into the text box and click the <Enter> key or Search icon 

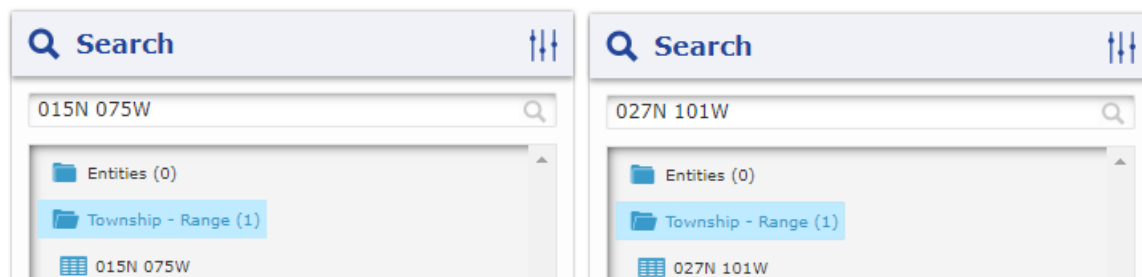


Location Searches

Data Explorer also includes the following location searches. These additional location searches return a list of wells within that geographical area.

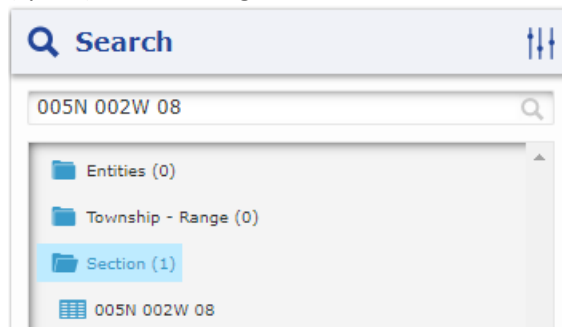
- **Counties** (search format: County name – E.g. “Big Horn”)
- **Township / Range** (search format: both Township and Range require 3 numeric characters along with their corresponding directional abbreviation – E.g. search for “005N 002W” instead of “5N 2W”)
 - Filter Text search format: TRS filters can be individually applied or combined – E.g.

- Full Text search format: Township and Range cannot be individually applied; must search by Township with Direction (space) Range with Direction – E.g. “015N 075W”





- **Section** (search format: either 2 numeric characters or 1 – E.g. search for “08” or “8”)
- E.g. search for “005N 002W 08” or “005N 002W 8” instead of “5N 2W 8”
 - Filter Text search format: TRS filters can be individually applied or combined – E.g.

- Full Text search format: Section cannot be individually searched and requires 2-character input; must search by Township with Direction (space) Range with Direction (space) Section – E.g. “005N 002W 08”



Understanding the Tree View

When a search is executed the results are returned in a tree view. The total number of records returned for each branch will be displayed at the end of the branch’s label.

- Clicking a branch expands the node to display the search result records. Clicking the branch again collapses the node.
- Clicking the Show In List icon  opens a summary list of the search results for that branch in a new browser tab, which can then be exported as a CSV file.
- Clicking the Show In Map icon  highlights the search results for that branch in the map pane.

To view a specific record’s details, either expand the branch to choose a specific record, or click the record’s link in the list results pane to open the record’s details pane in a new browser tab.

Expand Branch

Once a search is executed and the tree view is populated:


- Click the folder icon next to any branch to expand it (click the folder icon next to any expanded branch to collapse it).


A list of available records will be displayed below the branch in the search pane.

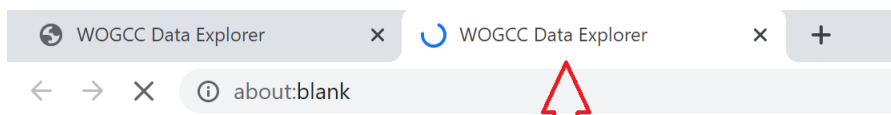
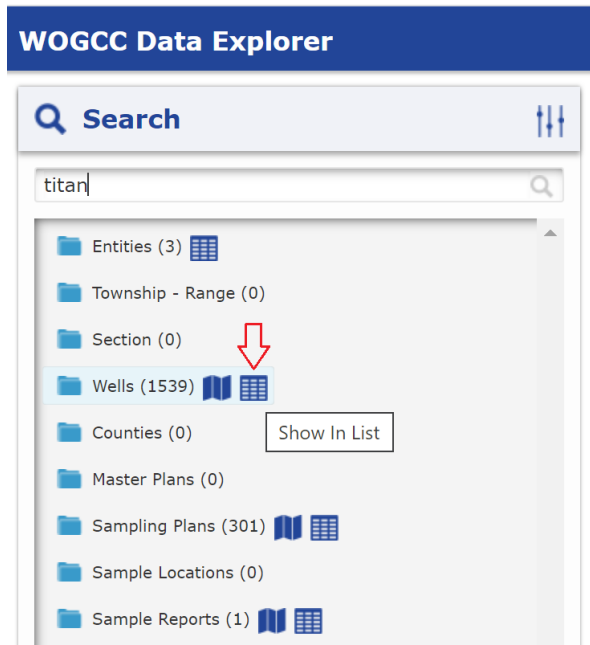
WOGCC Data Explorer

The screenshot shows the WOGCC Data Explorer interface. On the left, the 'Search' tab is active, displaying a search bar with the text 'titan'. Below the search bar, a list of search results is shown, including 'Entities (3)', 'Township - Range (0)', 'Section (0)', and 'Wells (1539)'. The 'Wells (1539)' entry is highlighted with a red box. Below this, a list of well records is displayed, each with a grid icon and a book icon. A red arrow points from the 'Wells (1539)' entry to the map on the right. The map shows a geographical area with a red line and a blue area. The 'Map' tab is also visible on the right side of the interface.

View/Export List Results

- Click the Show In List  icon next to applicable branches to open the search result's list results pane in a new browser tab.


This list can be exported as a CSV file by clicking the CSV Export icon  .



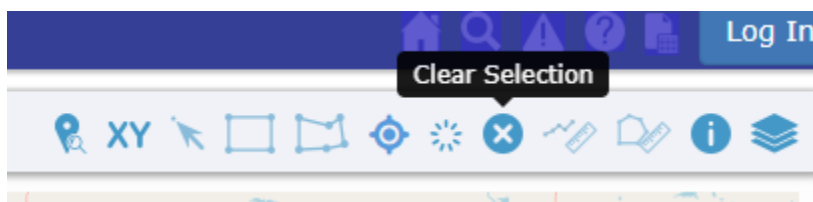
Loading data, please wait...

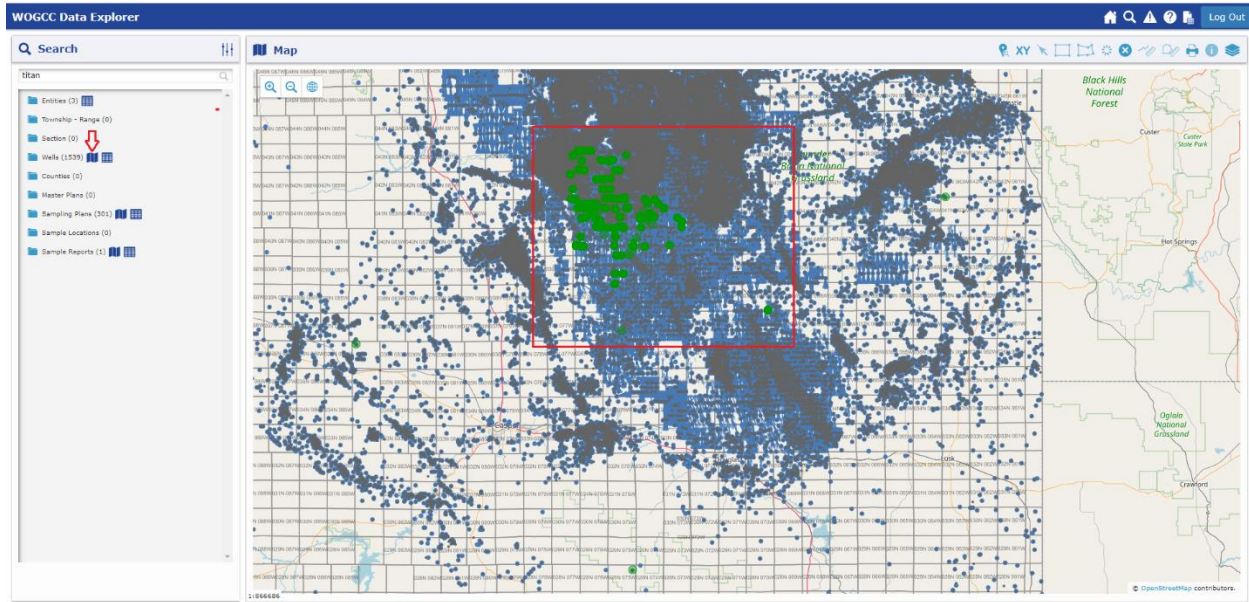
List Results											Well Information
Well View	API Number	Well Name and Number	Well Class	Operator View	Operator	Confidential?	Well Status	Well Status Date	County	Mineral Lease #	Field
View	49-001-55537	Well for CC to WD 1980	Oil Well	View	TITAN EXPLORATION LLC	N	Withdrawn	03/18/2020	ALBANY	46	ABO DITCH
View	49-005-25522	SARA ARMSTRONG 2	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Oil Well	01/31/1981	CAMPBELL	WYW068895	POWELL
View	49-005-25563	SARA ARMSTRONG 1	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Oil Well	09/19/1985	CAMPBELL	WYW068895	POWELL
View	49-005-25684	MOORE 1-21	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Oil Well	09/14/1981	CAMPBELL	FEE	POWELL
View	49-005-27358	POWELL W-60414 2-26	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Oil Well	10/12/2015	CAMPBELL	WYW060414	POWELL
View	49-005-30136	SARA ARMSTRONG 2-23	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Gas Well	05/06/1996	CAMPBELL	WYW068896	POWELL
View	49-005-62567	BUSTER FED 4176-12-24TH	Oil Well	View	TITAN EXPLORATION LLC	N	Producing Oil Well	10/10/2015	CAMPBELL	WYW150759	WC

Highlight Records in Map

- Click the Show In Map  icon next to applicable branches to highlight the search results in the map pane.

This highlight can be cleared by clicking the Clear Selection icon in the map toolbar.





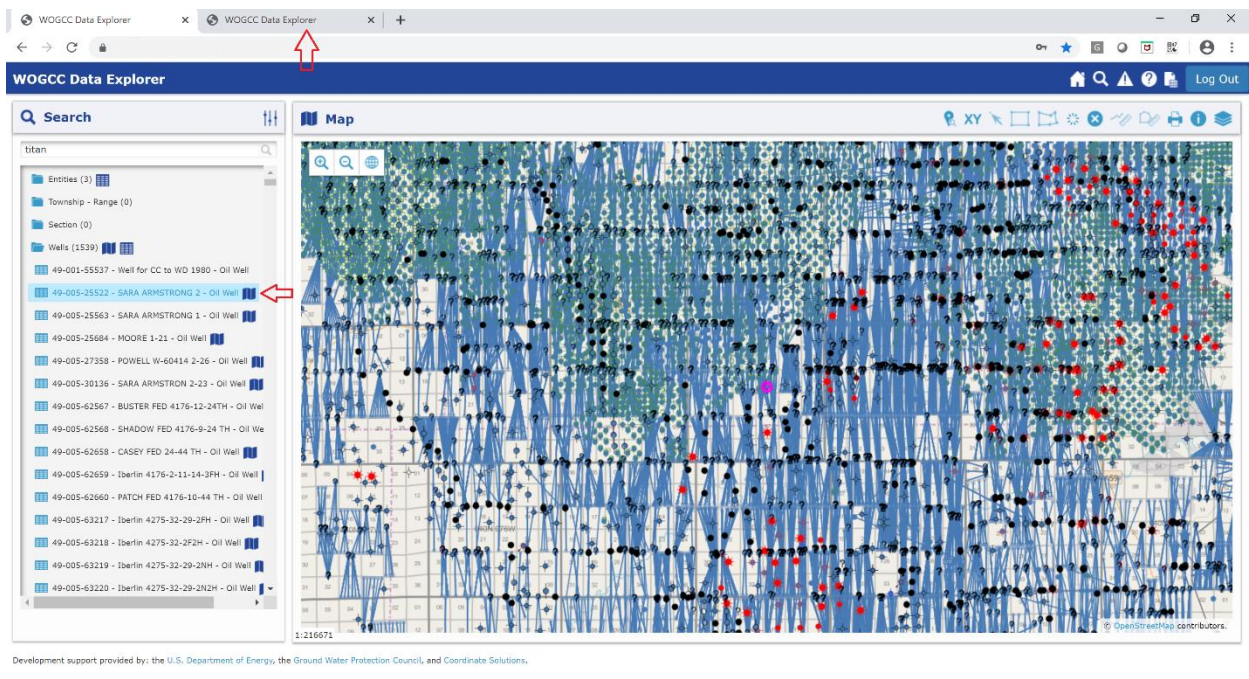
Development support provided by the U.S. Department of Energy, the Ground Water Protection Council, and Coordinate Solutions.

Select Record & View Details

To view detailed information about a record:

- Expand a branch in the tree view
- Single click a record

The details pane for the selected record will open in a new browser tab and will be populated with detailed information about the selected item and, if applicable, the map will zoom into the feature representing the selected item. (The selected item will also be highlighted in the map.)



Development support provided by the U.S. Department of Energy, the Ground Water Protection Council, and Coordinate Solutions.

WOGCC Data Explorer

Log In

Details

Well Information

API Number49-005-25563Well Name and NumberSARA ARMSTRONG 1OperatorTITAN EXPLORATION LLCWell StatusProducing Oil WellWell Status Date08/18/1982

Confidential?NSpud Date12/05/1980Completion Date11/03/1983Well FileViewShow In MapShow

GeneralLocationAPDs (13)Sidetracks (0)Sampling Plans (0)Sample Reports (0)Operator History (5)

Well ClassOil WellDeviationNatural DriftUnit Name - Unit Number

CountyCAMPBELLReservoirPROUTERFieldPOWELL

Mineral and Surface OwnershipMineral: FEO / Surface: FEEMineral Lease #011005855Spacing Docket #

Depth13124Elevation0

View/Export Grid Results

- Click the CSV Export icon  next to applicable tabs to export the grid as a CSV file.

Working with the Interactive Map (GIS)

The interactive map component, known as a Geographic Information System (GIS), enables you to visualize and analyze geographic data pertaining to regulatory activities. With the GIS, you can zoom in and out of the map, select features, and obtain information (attribute values) about features.

GIS Overview

A GIS, short for Geographic Information System, is a collection of hardware, software, and geographic and non-spatial data with which individuals interact to integrate, visualize, and analyze geographic data.

A GIS organizes data into layers. A layer is a visual representation of geographic data in a digital map environment. Typically, a single layer is defined by some sort of aggregation of features that share some type of attribute. For instance, all features representing roads may be aggregated into a single layer, while all features representing oil wells may be aggregated together in another layer. As such, a layer is roughly analogous to a legend item in a traditional paper map. However, a GIS enables users to control which layers are displayed at any particular time. Through the process of toggling layers on and off, a user may be able to discover geographic associations that were not otherwise readily apparent.

The true power of a GIS, though, lies in its ability to do analysis. All geographic features in a GIS are linked to a database by a unique identifier. By selecting a feature, a user can bring up detailed information about each geographic dataset. Additionally, through the process of spatial queries and/or visualization, a user can begin to find specific patterns in their geographic data. For instance, one can determine whether there is a specific geological formation in which a particular type of well regularly occurs or whether certain oil and gas activity occurs in the vicinity of environmentally sensitive areas.

Toolbar

The GIS consists of a number of tools which enable you to better interact with the map. The following tools are on the GIS toolbar:



Zoom In / Zoom Out



Zoom Full Extent



Search by Address



Center by X, Y or Latitude, Longitude



Select Wells by Click



Select Wells by Rectangle



Select Wells by Polygon



Select Wells by Lat and Long



Buffer Selection



Clear Selection



Measure Distance



Measure Area



Show/Hide Tooltip (default enabled)



Layers

The specific functionality and how to use each is discussed in turn in the proceeding sections.


Navigating the Map

Unlike a paper map, a GIS enables a user to change the scale of display in the map, as well as change the area of focus. The following tools are designed for navigation purposes:


To move the map:

- Single click in the map, hold the left mouse button down, and drag the map to the area in which you wish to view
- Release the mouse button


To zoom in:

- Scroll up using the mouse scroll-wheel or
- Select the Zoom In tool 
- The map will zoom to the selected area.


To zoom out:

- Scroll down using the mouse scroll-wheel or
- Click the Zoom Out tool 
- The map will automatically zoom out.

To zoom to the full extent of the data (original extent):

- Click the Zoom Full Extent icon 
- The map will return to the full extent (original extent) of the data.

To zoom to specific X,Y coordinates (e.g. latitude and longitude):

- Click the Center by X,Y or Latitude, Longitude icon 
- In the dialog box, select a coordinate system to use
- Enter the coordinates in the text boxes
- Click the Go button
- The map will re-center based on the specified coordinates.


To box zoom:

- If necessary, disable selection or measurement tools
- Hold down the <Shift> key and holding the left mouse button down, drag a box around the features you wish to zoom to
- Release the mouse button


Select and Query Features

There are three primary methods to find out information about features.


To select a single feature:

- If necessary, zoom into an area of the map
- Select the Select Wells by Click (view details) tool 
- Click on a designated feature in the map
- Add to your selection set by holding down the <Ctrl> key and clicking on an additional feature

To select multiple features:

- If necessary, zoom into an area of the map
- Select the Select Wells by Rectangle tool 
- Holding the left mouse button down, drag a box around the features you wish to select
- Release the mouse button
- Add to your selection set by holding down the <Ctrl> key and dragging another box around the features you wish to add

Or

- If necessary, zoom into an area of the map
- Select the Select Wells by Polygon tool 


- Add vertices around the features you wish to select by single-clicking the left mouse button
- Double-click the left mouse button to end your drawing
- Add to your selection set by holding down the <Ctrl> key and dragging another box around the features you wish to add

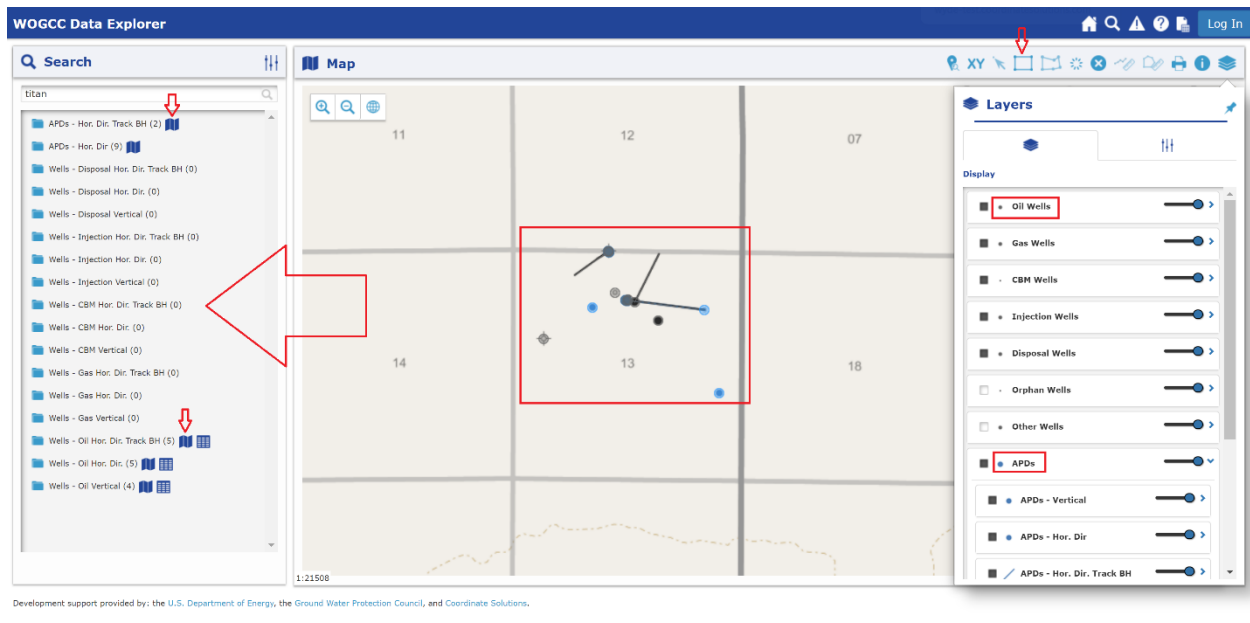
Or



- Click the Select Wells by Lat and Long icon
- In the dialog box, select a coordinate system to use
- Enter the coordinates in the text boxes
- Enter the distance, buffer parameters
- Click the Go button
- The map will re-center based on the specified coordinates and select all Wells within a radius determined by the buffer parameters

Features selected in the map are added to the tree view in the search pane.

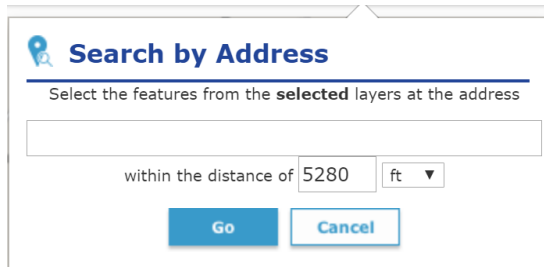
Selections from the map populate the search pane with GIS branches correlating to the enabled selectable layers. The Data Explorer system caps the number of records selected from the map to 2,000 records. The Show in Map icon  is available for the GIS result branches and each branch's highlight color correlates to the associated layer's coloration.



To query features by an address:



- Click the Search by Address icon
- An address settings window will open, allowing you to set and run your search parameters





Search by Address

Select the features from the **selected** layers at the address


within the distance of

The features will be selected in the map and added to the **tree view** in the **search** pane.

- Click the folder icon next to any branch to expand it
- Click the Show In Map icon  to highlight the search results for that branch in the **map** pane
- Click the Show In List icon  to open the search result's **list results** pane in a new browser tab


To view a specific record's details, either expand the branch to choose a specific record, or click the record's link in the **list results** pane to open the record's **details** pane in a new browser tab.

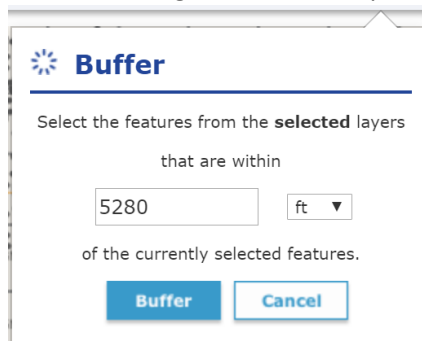
To show details about a feature:

- If necessary, zoom into an area of the map
- If necessary, select the Show/Hide Tooltip icon  to enable the tool
- Hover your mouse over a designated feature in the map to display a link to the feature's **details** pane
- Click the link

The **details** pane for the selected feature will open in a new browser tab and will be populated with detailed information about the selected item, but the feature will not be added to the **tree view** (i.e. feature will not be considered selected).

To buffer a selection:

- Click the Buffer Selection icon 
- A buffer settings window will open, allowing you to set and run your buffer parameters



Buffer

Select the features from the **selected** layers



that are within

of the currently selected features.



To clear a selection:

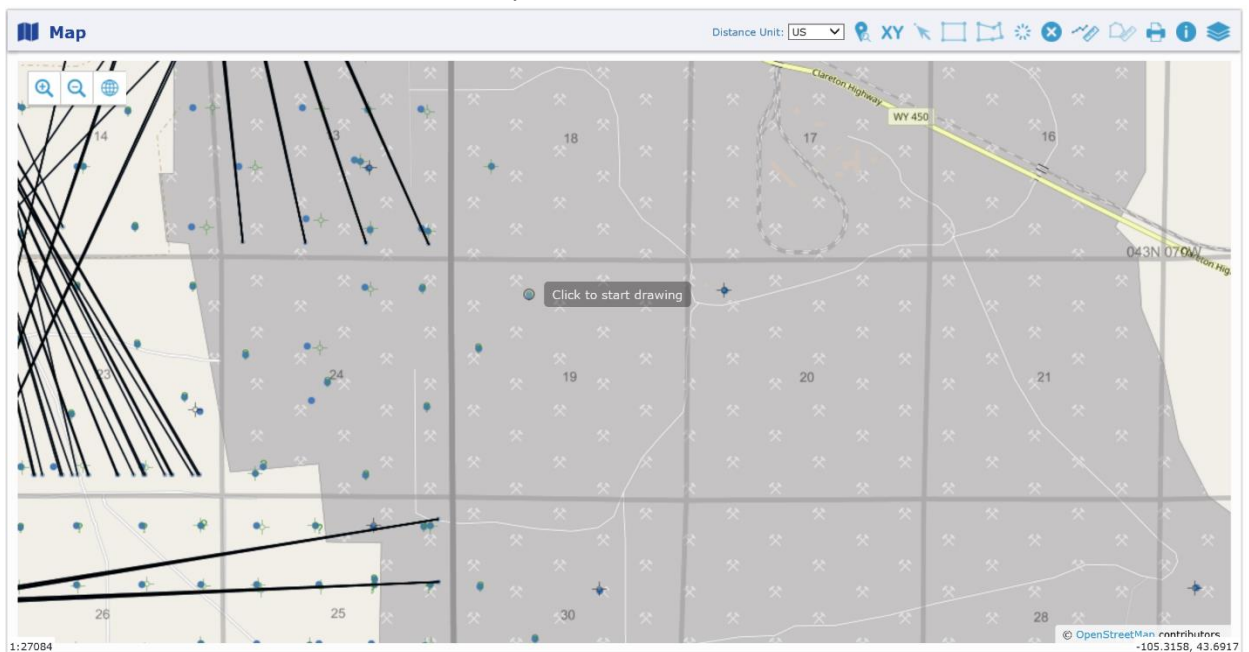
- Click the Clear Selection icon 

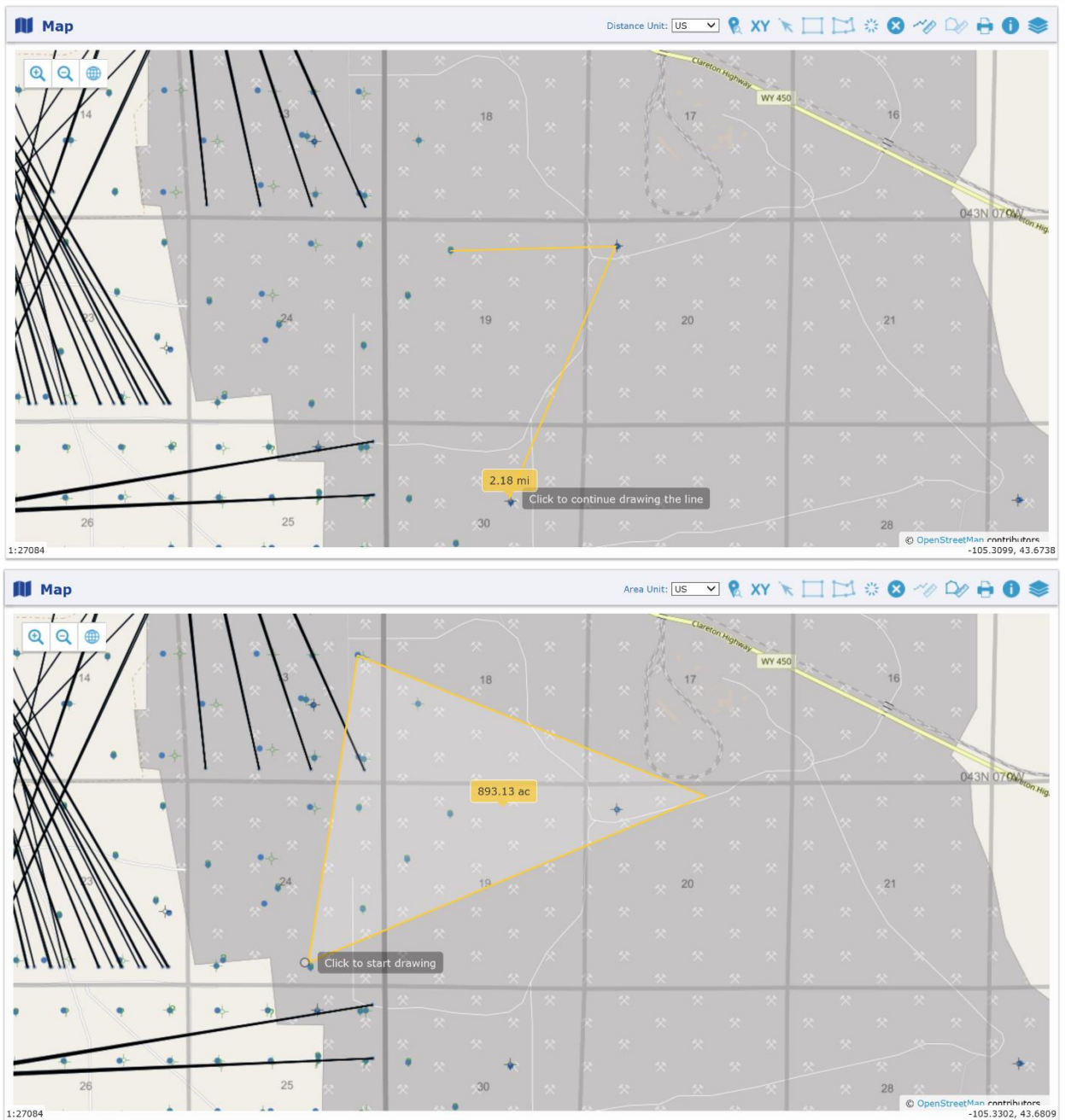
To measure a distance or area:

- Click the Measure Distance icon  or Measure Area icon 
- If necessary, change the Distance Unit by



- If necessary, zoom into an area of the map
- Select the appropriate measurement tool  
- Click the area in the map you want to start your measurement from
- Drag your mouse to the point you want to measure the distance to
- Add to your measurement by single-clicking the areas you wish to add
- Double-click the left mouse button to end your measurement







Layer Controls

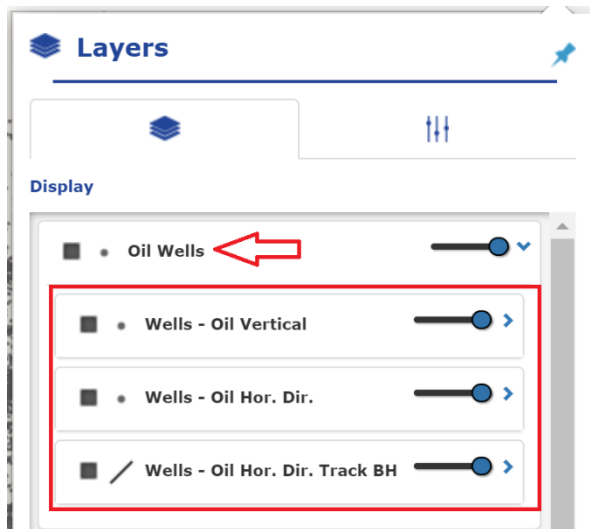
The GIS includes tools for displaying the layer legends, applying visible layers, and applying selectable layers.

To view the layer legends and apply a visible layer:

- Click the Layers icon 
 - To toggle the Layers menu's continual visibility, click the Pin/Unpin icon 

- Click on the Visible tab 
- Click the appropriate checkbox to toggle the layer's visibility

Visible indicates whether or not the layer is currently displayed in the map. For each non-base map layer, there is a parent checkbox that controls the visibility for all layers for that grouping. Users also have the ability to toggle on and off the visibility for each child-layer.



To apply a selectable layer:

- Click the Layers icon 
- Click on the Selectable tab 
- Click the appropriate checkbox to toggle the layer's selectability

Selectable indicates whether or not features in the layer can be selected in the map. For each non-base map layer, there is a parent checkbox that controls the selectability for all layers for that grouping. Users also have the ability to toggle on and off the selectability for each child-layer.

