

# Michigan Data Portal

## Overview

The Data Portal web application gives users access to oil and gas related data through a search and map based interface. This interface features simple and advanced search features, along with the ability to view data at multiple levels (bulk or detailed).

## Using Data Portal

### Layout

Data Portal is divided into three main frames consisting of unique functionality.

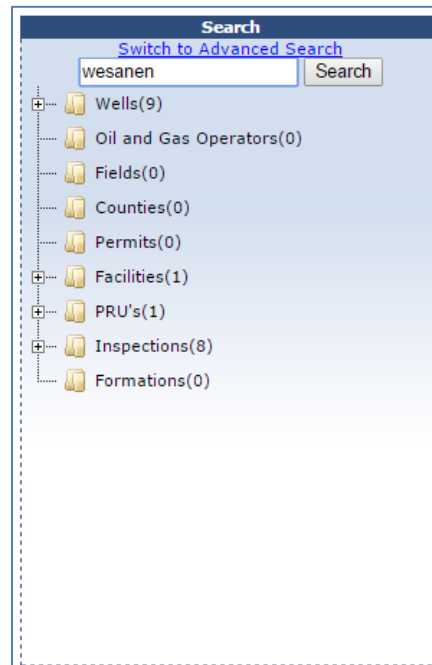
The screenshot displays the Michigan Oil and Gas Data Portal interface, which is divided into three main functional panes:

- Search Pane:** Located on the left, it features a search bar with the text "wesanen" and a "Search" button. Below the search bar is a tree view showing search results for various categories: Wells(9), Oil and Gas Operators(0), Fields(0), Counties(0), Permits(0), Facilities(1), PRU's(1), and Formations(0). A link "Switch to Advanced Search" is also present.
- Map Pane:** The central area displays a map of Michigan with numerous red dots representing oil and gas wells. The map includes a toolbar with navigation and map controls, and a "Show tooltip" button. The map is labeled with various locations such as Rogers City, Tower, Hawks, Canada Creek Ranch, Long Point, Alpena, Thunder Bay, Ossieneke, Curran, Comins, Lewiston, Atlanta, and Grayling.
- Details Pane:** Located at the bottom, it provides detailed information for a selected well. The "Well Information" section shows the Name "WESANEN 2-19", API Well # "21137605160000", Type "Oil Well", and Field "CHARLTON 19-30N-1W". Below this, there are tabs for "General", "Location", "Construction", "Dates", "Injection", "Production", and "Permit". The "General" tab is active, showing the Current Operator as "CORE ENERGY LLC", Bond? as "No", and Status as "Producing 06/30/2012".

The search frame houses the Simple Search, Advanced Search and Search Results (Folders & Records).

## Search Frame

A Simple Search is completed by entering your keyword or parameter in the box and selecting search.



Bulk results can be viewed by clicking on the folder. The Details Frame will allow you to view your results and export them, if desired.

The screenshot shows the 'Michigan Oil and Gas' application interface. It includes a search bar with 'wesanen', a map of Michigan with red markers, and a 'Details' pane showing a table of well information. Red callouts highlight the 'Click On Folder' button, the 'View Bulk Results in the Details Pane' button, and the 'Export Bulk Results to Desired Format' button.

**Multi Well Information**

| API #          | Name          | Type     | Status            | Status Date | State | Cnty   | Hole    | SideTrck | Completion | Operator                               |
|----------------|---------------|----------|-------------------|-------------|-------|--------|---------|----------|------------|--|
| 21137605160000 | WESANEN 2-19  | Oil Well | Producing         | 06/30/2012  | 21    | OTSEGO | 60516 0 | 0        |            | CORE ENERGY LLC                        |
| 21137385950000 | WESANEN 1-20  | Dry Hole | Plugging Approved | 11/07/1988  | 21    | OTSEGO | 38595 0 | 0        |            | MILLER BROTHERS                        |
| 21137418220000 | WESANEN D2-17 | Location | Terminated Permit | 01/19/1990  | 21    | OTSEGO | 41822 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE EN |
| 21137418230000 | WESANEN C2-17 | Location | Terminated Permit | 01/19/1990  | 21    | OTSEGO | 41823 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE EN |
| 21137456180000 | WESANEN C2-17 | Location | Terminated Permit | 11/10/1994  | 21    | OTSEGO | 45618 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE EN |
| 21137420610100 | WESANEN A1-20 | Location | Terminated Permit |             | 21    | OTSEGO | 42061 1 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE EN |
| 21137456190000 | WESANEN D3-17 | Location | Terminated Permit | 11/10/1994  | 21    | OTSEGO | 45619 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE EN |

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Detailed information can be accessed by clicking on an individual record after expanding the folder.

**Michigan Oil and Gas**

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[Restart Session Help](#)

**Search**  
[Switch to Advanced Search](#)  
wesanen Search

**Map**  
Wells X Show tooltip

**Well Information**  
Name: WESANEN 2-19 API Well #: 2113760516000 Type: Oil Well Field: CHARLTON 19-30N-1W  
General Location Construction Dates Injection Production Permit  
Current Operator: CORE ENERGY LLC Bond?: No Status: Producing Date Status: 06/30/2012

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Use the “Tabs” in the Detail Frame to view specifics on the selected record.

## Advanced Search

The Advanced Search offers a wide range of search capabilities, including dropdown lists for filter options such as field, county, and well status. To turn on the Advanced Search, select “Switch to Advanced Search” in the Search frame.

**Search**  
[Switch to Advanced Search](#)  
wesanen Search

Wells(9)  
Oil and Gas Operators(0)  
Fields(0)  
Counties(0)  
Permits(0)  
Facilities(1)

Advanced Search

**Advanced Search offers the following options:**

Search

[Switch to Simple Search](#)

Reset Filter

Field Name:

Select Some Opti

County Name:

Select Some Opti

Well Status:

Select Some Opti

Well type:

Select Some Opti

APINo:

Township:

Range:

Operator Number:

Permit Number:

Lease Name:

Operator Name:

Select Some Opti

Apply Filter

Enter search criteria in the right column.

The “Select Some Option” fields contain a drop-down list of options to choose from that appear when you select that field.

After entering the desired search requirements, scroll down and select the Apply Filter button.

You can select multiple items in a dropdown by clicking in the box again after making your selection; or by holding the Ctrl key while selecting choices in the dropdown

Search

[Switch to Simple Search](#)

Reset Filter

Field Name:

Select Some Opti

County Name:

= x

Well Status:

Well type:

APINo:

Township:

Range:

Operator Number:

Permit Number:

Lease Name:

Operator Name:

Select Some Opti

ALCONA x

ALGER x

HOUGHTON x

ALLEGAN

ALPENA

ANTRIM

ARENAC

BARAGA

BARRY

BAY

BENZIE

BERRIEN

BRANCH

Select Some Opti

Advanced Search results display in the same fashion as simple search, grouped by record category.

Clicking on folders will show a bulk display of records in the details frame, which users can export. Clicking on records will show that record's information in the details frame.

Using the Advanced search, users can input a wide array of criteria to focus the results in on a target information set. At this point in time, the Advanced search only applies to the "Wells" record category.

**Search** [Switch to Simple Search](#)

Well Status:  Select Some Opti

Well type:  Select Some Opti

APINo:

Township:

Range:

Operator Number:

Permit Number:

Lease Name:

Operator Name:  Select Some Opti

**Apply Filter**

Wells(993)

- 21001003199000 Kurrasch, H.A. 1
- 21001003819000 Killmaster and Ta
- 21001003829000 Killmaster and Ta
- 21001003839000 Harrisville 1
- 21001004539000 Campbell, John 1

## Hyperlinks

Hyperlinks can be picked out as blue and underlined text. Users will find hyperlinks scattered throughout the Data Portal interface (and in some exported files). Hyperlinks are used in the interface to allow users to quickly navigate to related records.

**Well Information**

Name: WESANEN 2-19 API Well #: 21137605160000 Type: Oil Well Field: CHARLTON 19-30N-1W


**General** Location Construction Dates Injection Production Permit

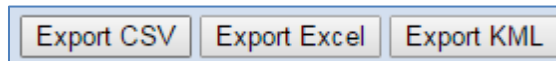
| Current Operator                | Bond? | Status    | Date Status |
|---------------------------------|-------|-----------|-------------|
| <a href="#">CORE ENERGY LLC</a> | No    | Producing | 06/06/2012  |

Hyperlink to information about this operator

If following hyperlinks, remember that there isn't always a "Back" button. However, the records users go to will often have links back to the original record users came from.

## Data Export

As noted before, when looking at bulk record sets (accomplished by clicking on ) , users have the option to export the data to three common data formats.



### CSV

Comma Separated Value files, or CSV, are a long-standing and commonly used file format that can be opened in text editors, spreadsheet programs (like Excel) and database programs. CSV files are simple and compact.

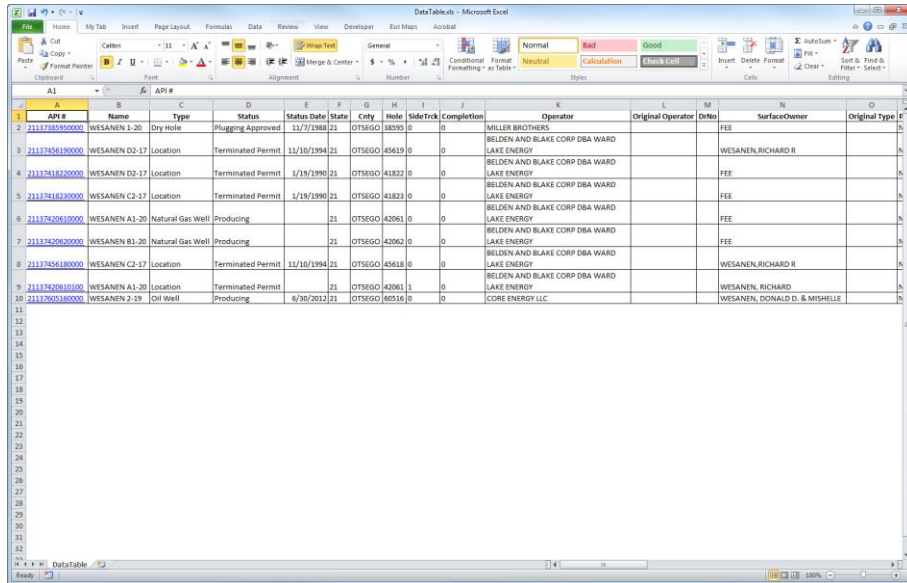
The image below shows a CSV file opened in Excel.

| API #       | Name                          | Type              | Status     | Status Date | State | Cnty   | Hole  | SideTrack | Completion | Operator                  | Original ODrNo  | SurfaceOriginal Tr Project | Basin | Frq_GOR | Sales_Cd | Actg_Grp | Mult_Latrl | Permi WellPerm Lease | W |
|-------------|-------------------------------|-------------------|------------|-------------|-------|--------|-------|-----------|------------|---------------------------|-----------------|----------------------------|-------|---------|----------|----------|------------|----------------------|---|
| 2.11E+13    | WESANEN Dry Hole              | Plugging          | 11/7/1988  |             | 21    | OTSEGO | 38595 | 0         | 0          | MILLER BROTHERS           | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 38595    | WESANEN  |            |                      |   |
| 2.11E+13    | WESANEN Location              | Terminate         | 11/10/1994 |             | 21    | OTSEGO | 45619 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 45619    | WESANEN  |            |                      |   |
| 4.2.11E+13  | WESANEN Location              | Terminate         | 1/19/1990  |             | 21    | OTSEGO | 41822 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 41822    | WESANEN  |            |                      |   |
| 5.2.11E+13  | WESANEN Location              | Terminate         | 1/19/1990  |             | 21    | OTSEGO | 41823 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 41823    | WESANEN  |            |                      |   |
| 6.2.11E+13  | WESANEN Natural Gas Producing |                   |            |             | 21    | OTSEGO | 42061 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 42061    | WESANEN  |            |                      |   |
| 7.2.11E+13  | WESANEN Natural Gas Producing |                   |            |             | 21    | OTSEGO | 42062 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 42062    | WESANEN  |            |                      |   |
| 8.2.11E+13  | WESANEN Location              | Terminate         | 11/10/1994 |             | 21    | OTSEGO | 45618 | 0         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 45618    | WESANEN  |            |                      |   |
| 9.2.11E+13  | WESANEN Location              | Terminated Permit |            |             | 21    | OTSEGO | 42061 | 1         | 0          | BELDEN AND BLAKE CORP DBA | FEE             | WESANEN-RICHARD            | NA    | FALSE   | 42061    | 42061    | WESANEN    |                      |   |
| 10.2.11E+13 | WESANEN Oil Well              | Producing         | 6/30/2012  |             | 21    | OTSEGO | 60516 | 0         | 0          | CORE ENERGY LLC           | WESANEN; DONALD | NA                         | FALSE | 60516   | WESANEN  |          |            |                      |   |



## Excel

The Microsoft Excel format comes with a few more features. The data contained are the same as the CSVfile; however, the XLS file is formatted differently and the API number is a hyperlink to that record in Data Portal

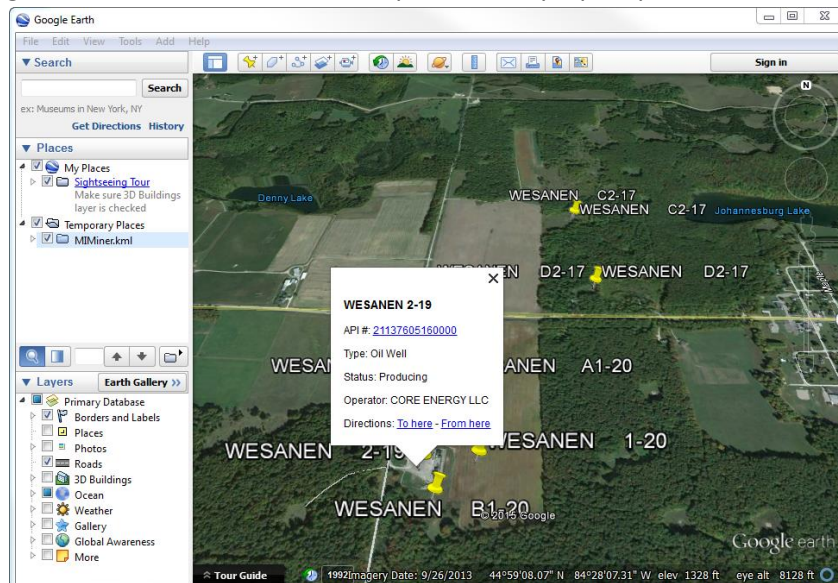


| API #          | Name          | Type             | Status            | Status Date | City | Hole   | SideTrck | Completion | Operator                                   | Original Operator | DeHo | SurfaceChemer                 | Original Type |
|----------------|---------------|------------------|-------------------|-------------|------|--------|----------|------------|--|-------------------|------|-------------------------------|---------------|
| 2113738950000  | WESANEN 1-20  | Dry Hole         | Plugging Approved | 11/7/1989   | 21   | OTSEGO | 3895     | 0          | MILLER BROTHERS                            |                   |      | FEE                           |               |
| 21137456190000 | WESANEN D2-17 | Location         | Terminated Permit | 11/10/1994  | 21   | OTSEGO | 45619    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | WESANEN, RICHARD B            |               |
| 21137418220000 | WESANEN D2-17 | Location         | Terminated Permit | 1/18/1990   | 21   | OTSEGO | 41822    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | FEE                           |               |
| 21137418220000 | WESANEN C2-17 | Location         | Terminated Permit | 1/18/1990   | 21   | OTSEGO | 41822    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | FEE                           |               |
| 21137420610000 | WESANEN A1-20 | Natural Gas Well | Producing         |             | 21   | OTSEGO | 42061    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | FEE                           |               |
| 21137420620000 | WESANEN B1-20 | Natural Gas Well | Producing         |             | 21   | OTSEGO | 42062    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | FEE                           |               |
| 21137456180000 | WESANEN C2-17 | Location         | Terminated Permit | 11/10/1994  | 21   | OTSEGO | 45618    | 0          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | WESANEN, RICHARD B            |               |
| 21137420610000 | WESANEN A1-20 | Location         | Terminated Permit |             | 21   | OTSEGO | 42061    | 1          | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |                   |      | WESANEN, RICHARD              |               |
| 21137605160000 | WESANEN 2-19  | Oil Well         | Producing         | 6/30/2012   | 21   | OTSEGO | 60516    | 0          | CORE ENERGY LLC                            |                   |      | WESANEN, DONALD D. & MISHELLE |               |

Excel File Export 1

## KML

KML stands for Keyhole Markup Language. It is a file popularized by Google and their product Google Earth. If you have Google Earth or one of several other GIS information viewer applications you may be able to open the KML. This file provides that data you downloaded placed on a map (**for Well Data Only**). In Google Earth, the locations will be represented by a pushpin.



Users can click on the pushpin in Google Earth to get a pop-up that has basic information relating to that item. Located in that pop-up is a hyperlink that can take users to the selected record in the Data Portal web application.

## Using the Map

While Data Portal's most powerful features are related to its ability to query and display data, the map is a useful tool for geographical searches and selections.

At its simplest form, users can navigate the map to browse where wells are. Users will discover that hovering over a well location displays a tooltip (see Getting Well Information below). Currently, Data Portal is only able to display well locations.

### Map Menu Legend



**Recenter Map** – Use to push and pull around the map using the cursor. Double-clicking on a location centers the map on that location.



**Zoom to Full Extent** – Zooms all the way out so users can see all of the mapped well features in Michigan.



**Center by X, Y or Latitude, Longitude** – Allows users to type in coordinates on which they want the map to center.



**Select by Point** – Select one feature at a time and have that features information display in the Details Frame.



**Select by Rectangle** – Draw a box around an area of interest and have all of the well features in that box populate in the Details Frame.



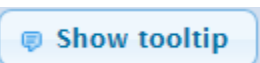
**Buffer Selection** – Draw a radius around all selected features and select all of the features within that radius. These features will then be listed in the Details Frame.



**Clear Map Selection** – Removes the selection from the currently selected features.



**Print Map** – Provides a dialogue that allows users to create printed maps based on their current map view.



**Show Tooltip** – Toggles whether tooltips are displayed or not when a user hovers over a feature.



## Getting Well Information

Users can carefully move their cursor over the tooltip and click on the hyperlink to view more information about that well in the Details Frame.

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**Search**  
Switch to Advanced Search  
wesanen Search

**Map**  
Wells X Show tooltip

**Multi Well Information**  
Wells

| API #          | Name                              | Type     | Status            | Status Date | State | Cnty   | Hole    | SideTrck | Completion | Operator                 | Original |
|----------------|-----------------------------------|----------|-------------------|-------------|-------|--------|---------|----------|------------|--------------------------|----------|
| 21137290670000 | <a href="#">BOROWIAK 1-6</a>      | Oil Well | Plugging Approved | 05/16/1989  | 21    | OTSEGO | 29067 0 | 0        |            | SWEPI LP                 |          |
| 21137290670100 | <a href="#">BOROWIAK 1-6 HD-1</a> | Location | Terminated Permit |             | 21    | OTSEGO | 29067 1 | 0        |            | DON YOHE ENTERPRISES INC |          |

Development support provided by: the [U.S. Department of Energy](#), the [Ground Water Protection Council](#), [BROMS](#)


javascript>window.parent.parent.FilledOnly('PKEY','2113729067','Integer','MultiWellDetails.xml','ctrl00\_PageBody\_WebPartManager1\_gwpPanelDetails\_DetailsFrame');

Show tooltip

Tooltips are OFF

Show tooltip

Tooltips are ON


Because the tooltip is only active when hovering over a well, users may find it difficult to select the hyperlink from the tooltip. If this is the case, go to the toolbar at the top and click on the  (Select by Point Button). This will allow users to simply click on a well location and that location's information will display in the Details Frame.

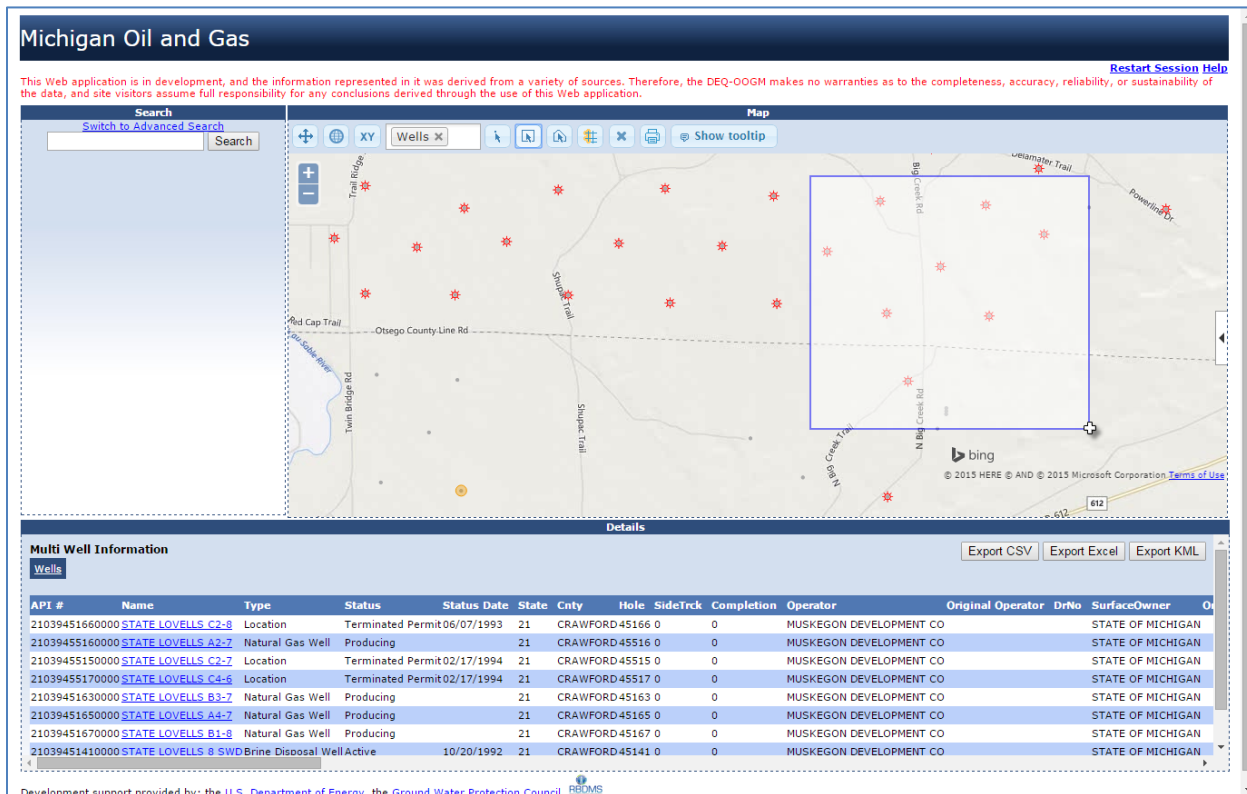
If users find tooltips difficult to use and want to turn them off, tooltips may be toggled by clicking on the

Show tooltip button.

## Select by Rectangle

The select by rectangle feature allows users to select multiple wells and see their information in the Details Frame.

Users can select by rectangle by clicking on the  button and then clicking and holding the left mouse button while dragging. Once a user has create a box that encompasses the desired wells, releasing the box will create the selection.



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**Search** [Switch to Advanced Search](#)

**Map**

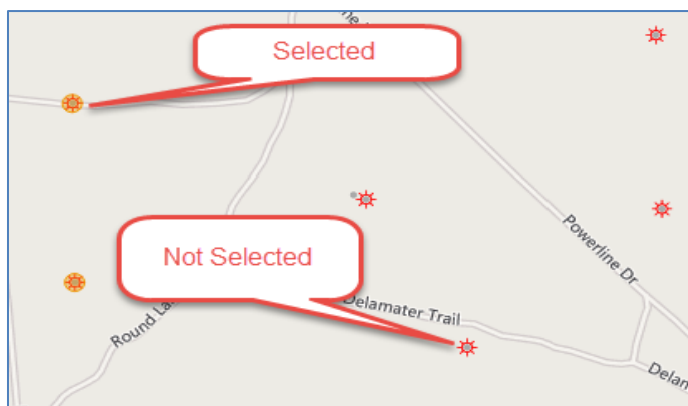
**Details**

| API #          | Name                                | Type                | Status            | Status Date | State | Cnty     | Hole  | SideTrck | Completion | Operator                | Original Operator       | DrNo | SurfaceOwner      | On |
|----------------|-------------------------------------|---------------------|-------------------|-------------|-------|----------|-------|----------|------------|-------------------------|-------------------------|------|-------------------|----|
| 21039451660000 | <a href="#">STATE LOVELLS C2-8</a>  | Location            | Terminated Permit | 06/07/1993  | 21    | CRAWFORD | 45166 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039455160000 | <a href="#">STATE LOVELLS A2-7</a>  | Natural Gas Well    | Producing         |             | 21    | CRAWFORD | 45516 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039455150000 | <a href="#">STATE LOVELLS C2-7</a>  | Location            | Terminated Permit | 02/17/1994  | 21    | CRAWFORD | 45515 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039455170000 | <a href="#">STATE LOVELLS C4-6</a>  | Location            | Terminated Permit | 02/17/1994  | 21    | CRAWFORD | 45517 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039451630000 | <a href="#">STATE LOVELLS B3-7</a>  | Natural Gas Well    | Producing         |             | 21    | CRAWFORD | 45163 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039451650000 | <a href="#">STATE LOVELLS A4-7</a>  | Natural Gas Well    | Producing         |             | 21    | CRAWFORD | 45165 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039451670000 | <a href="#">STATE LOVELLS B1-8</a>  | Natural Gas Well    | Producing         |             | 21    | CRAWFORD | 45167 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |
| 21039451410000 | <a href="#">STATE LOVELLS 8 SWD</a> | Brine Disposal Well | Active            | 10/20/1992  | 21    | CRAWFORD | 45141 | 0        | 0          | MUSKEGON DEVELOPMENT CO | MUSKEGON DEVELOPMENT CO |      | STATE OF MICHIGAN |    |

Development support provided by: the U.S. Department of Energy, the Ground Water Protection Council, RBOMS

Selected wells will be highlighted (though Internet Explorer sometimes only flashes the highlight after first selecting).

Wells selected on the map will then show up in the list in the Details Frame. This function can be used to export well information for groups of wells a user may be interested in.



## Buffer Selection

The buffer selection tool allows users to select all well features within a given radius of the selected feature. To use this tool a user must first use the Select by Point or Rectangle tool to make a selection. After making a selection simply click the >> button. Then the 'Buffer Selection' prompt will be displayed.

**Buffer Selection**

Select the features from the **active** layers in the Table of Contents

That are within  ft ▼

of the currently selected features.

Users can then choose a radius and select "Buffer". The map will now have an expanded selection and show the buffered area.

## Michigan Oil and Gas

[Restart Session](#) [Help](#)

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**Search**  
[Switch to Advanced Search](#)

**Map**  
Wells x

**Multi Well Information**  
[Wells](#)

| API #          | Name                                   | Type                | Status    | Status Date | State | Cnty   | Hole    | SideTrck | Completion | Operator                                   | Original Op |
|----------------|--|---------------------|-----------|-------------|-------|--------|---------|----------|------------|--|-------------|
| 21137440450000 | <a href="#">GIERSON D3-35</a>          | Natural Gas Well    | Producing |             | 21    | OTSEGO | 44045 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |             |
| 21137440410000 | <a href="#">HAGLUND C2-35</a>          | Natural Gas Well    | Producing |             | 21    | OTSEGO | 44041 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |             |
| 21137440440000 | <a href="#">LOBSINGER D1-35</a>        | Natural Gas Well    | Producing |             | 21    | OTSEGO | 44044 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |             |
| 21137440420000 | <a href="#">ROOD C3-35</a>             | Natural Gas Well    | Producing |             | 21    | OTSEGO | 44042 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |             |
| 21137440460000 | <a href="#">MEYER D4-35</a>            | Natural Gas Well    | Producing |             | 21    | OTSEGO | 44046 0 | 0        |            | BELDEN AND BLAKE CORP DBA WARD LAKE ENERGY |             |
| 21137422090000 | <a href="#">STATE CHARLTON 1-3 SWD</a> | Brine Disposal Well | Active    | 04/14/1999  | 21    | OTSEGO | 42209 0 | 0        |            | TERRA ENERGY CO LLC                        | TERRA ENI   |
| 21137421220000 | <a href="#">STATE CHARLTON 8-3</a>     | Natural Gas Well    | Producing |             | 21    | OTSEGO | 42122 0 | 0        |            | TERRA ENERGY CO LLC                        | TERRA ENI   |
| 21137421250000 | <a href="#">STATE CHARLTON 5-3</a>     | Natural Gas Well    | Producing |             | 21    | OTSEGO | 42125 0 | 0        |            | TERRA ENERGY CO LLC                        | TERRA ENI   |

Development support provided by: the [U.S. Department of Energy](#), the [Ground Water Protection Council](#),



