

# WellmAPPs

USER MANUAL

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## **WellmAPPS**

WellmAPPS is a multi-platform, web-based application designed to display well production data and location on a digital map.

### **Description**

With WellmAPPS a user is able to load well production data and location to a digital map where it can easily be displayed. As a web-based application, WellmAPPS is designed to allow users to access the program from many different browsers, including Windows Explorer 10 and Google Chrome. The software is designed so that a user may have multiple maps displayed in the same well browser as well as granting the user the ability to sort organize wells into different layers. A sort function allows the arranging of well information based on parameters such as production levels, location, name, and owner.

### **Benefits and Value**

WellmAPPS was designed with the intent of providing a new and modern base for the eventual replacement of Petrodesk, a software which is becoming less user-friendly. The multi-platform capabilities enable users to interact with the software from remote locations, loading projects and creating new projects from almost anywhere.

### **Platform Requirements**

WellmAPPS is designed to operate in Internet Explorer 10 and Google Chrome.

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# 1. User Interface

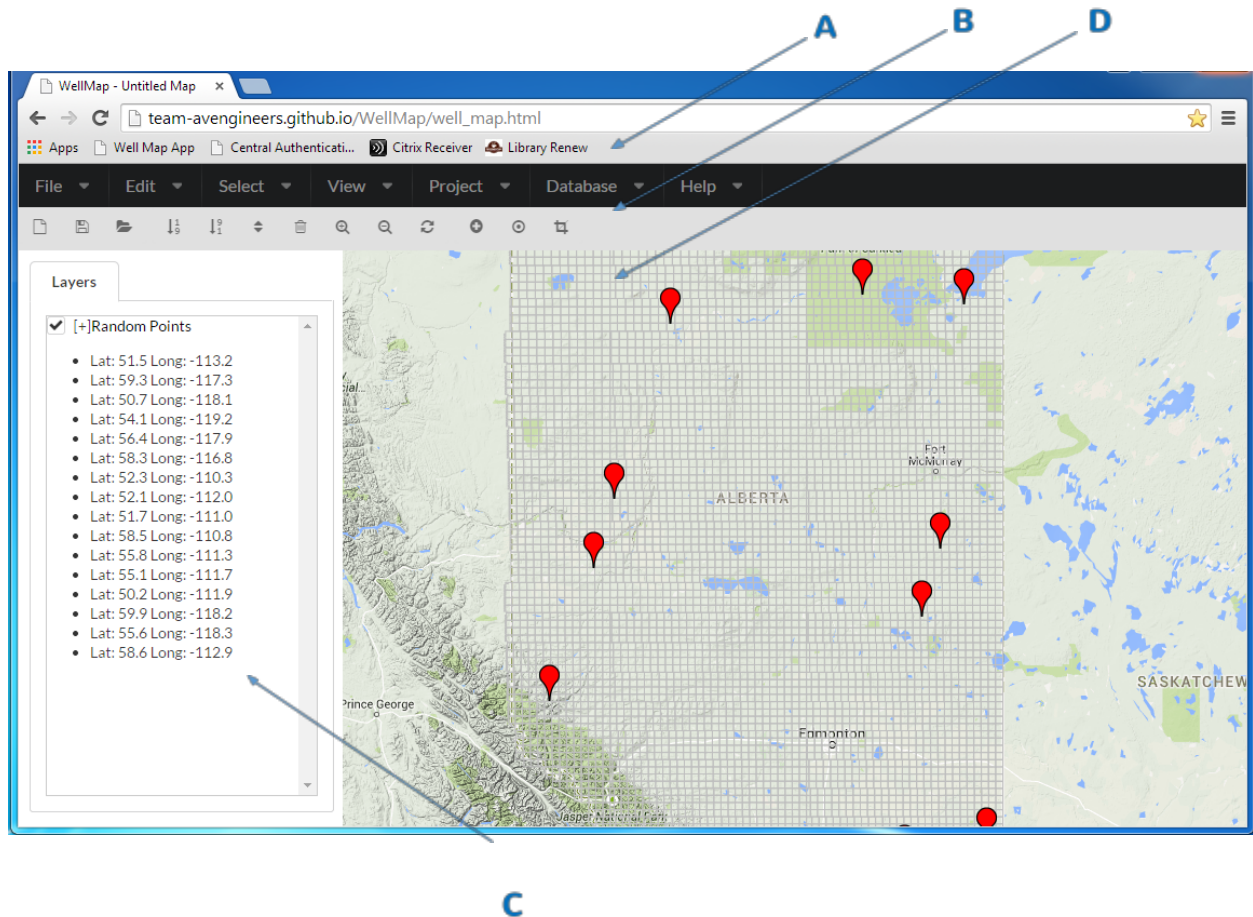


Figure 1.

The user interface is divided into three main sections (Figure 1.) The top section contains the menu bars, which consist of the drop-down menus (A) and project menu (B). To the left of the screen is the side bar (C) that contains layer information. The right side of the screen contains the map area (D) where the location of wells can be displayed.

## 1.1. Menu Bars

The menu bars, located at the top of the window, are divided into two different types, each with different functions: The drop-down menu icons, once selected, contain further options while the project menu contains buttons that allow for quick access to many function contained in the drop-down menu as well as selections useful for data manipulation and well selection.

### 1.1.1 Drop-Down Menu Bar

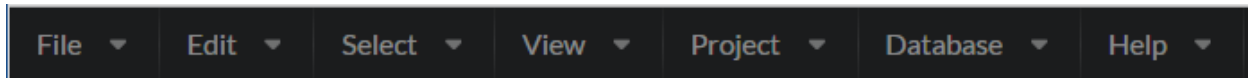


Figure 2.

The drop-down menu bar has seven sections (Figure 2.) These sections are **File**, **Edit**, **Select**, **View**, **Projects**, **Database**, and **Help**. The functions of these menus will be discussed in detail below.

#### 1.1.1.1 File

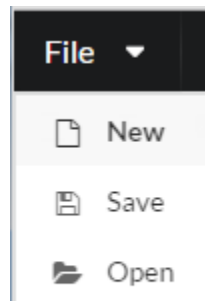


Figure 3.

File is divided into four sub-sections. These sections are **New**, **Save**, and **Open** (Figure 3.)

**New** creates a new map on a separate tab within the existing browser.

**Save** records data from the current tab into a text (.txt) file. This data is automatically downloaded into the default directory for browser downloads. Upon selecting Save a window opens that asks for a map name and map description. The map name will match the name of the .txt file. Description helps distinguish maps.

**Open** loads a .txt file that contains information related to a map. Opening a new map will erase all data associated with the current browser tab. A warning will warn users about this.

#### 1.1.1.2 Edit

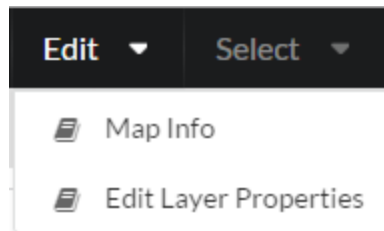


Figure 4.

Edit is divided into two sub-sections. These sections are **Map Info** and **Edit Layer Properties**. (Figure 4.)

**Map Info** allows the user to edit the current map name and description.

**Edit Layer Properties** allows the user to edit the name of the layer, the letter representing the icon on the map, the colour of the icons, and the colour of the text within icons. To change a layer's properties the layer must be selected on the sidebar (highlighted red) and then Edit Layer Properties selected.

#### 1.1.1.3 Select

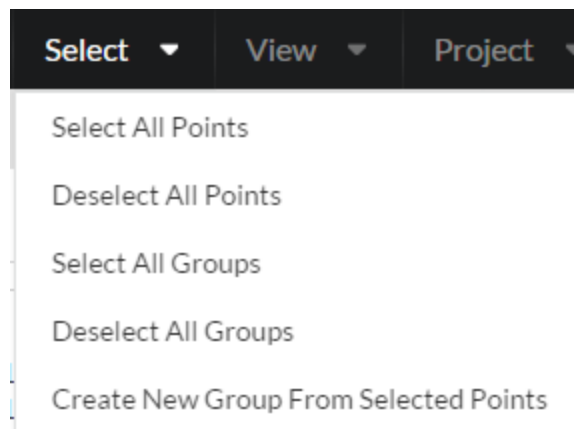


Figure 5.

Select is divided into five sub-sections. These sections are **Select All Points**, **Deselect All Points**, **Select all Groups**, **Deselect All Groups** and **Create New Group From Selected Points**. (Figure 5.)

**Select All Points** allows the user to select all unselected points on all layers. Selected wells are denoted by a star appearing on the top-right corner of the well icon.

**Deselect All Points** allows the user to unselect all selected points on all layers. Unselected wells revert to the default well icon, which does not have a star on them.

**Select all Groups** allows the user to select all wells and layers within a map. The name of selected layers appears red in the side bar.

**Deselect All Groups** allows the user to deselect all wells and layers within a map.

**Create New Group From Selected Points** allows user to assign selected wells to a new layer. When using this function the user will be asked to input a name for the new layer. All points selected in this manner and assigned to a new layer are removed from the previous layer they belonged to.

#### 1.1.1.4 View

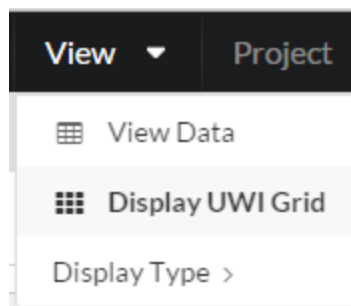


Figure 6.

View is divided into two sub-sections. These sections are **View Data**, **Display UWI Grid** and **Display Type>**. (Figure 6.)

**View Data** allows the user to see all the data associated with the wells from an active map in the Well Data window. Selecting view data will display the data for all wells on the map, regardless of visibility. The Well Data window appears below in Figure 7.



Well Data							Search: <input type="text"/>
Name	Owner	Group	Lat	Long	Output	Capacity	
Test Well A1	EMPTY	Test Group 2	55.7678	-115.674	65467	45678	
Test Well A2	EMPTY	Test Group 2	51.563	-111.435	5670	568	

Figure 7.

The Well Data window lists the well Name, Owner, Group, Latitude (Lat) and Longitude (Long), Output, and Capacity. The values in this table can be sorted by right-clicking on the column header.

The Search bar in the top right of the Well Data window allows the user to search for terms in all the columns that match a given search any of the terms in the search string.

**Display UWI Grid** toggles the visibility of the UWI grid on the map.

**Display Type**> There are four different display types to choose from.

- Satellite view, which gives a satellite view of the Earth
- Terrain view, which gives geographical features such as lakes, rivers, and park boundaries. This is the default view when a new map is loaded.
- Road view, which colours the roads on the map and makes them visible in Terrain view.
- Hybrid view, which combines the above three view elements.

#### 1.1.1.5 Project

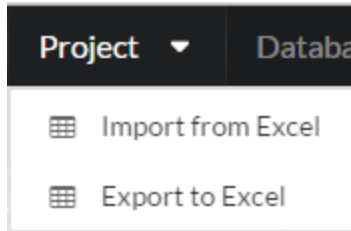


Figure 8.

Project is divided into two sub-sections. These sections are **Import from Excel** and **Export to Excel** (Figure 8.)

**Import from Excel** allows a user to import well data from a spreadsheet file of type xls and displays the data on the map. When prompted, the user may choose the location on their computer from which to import the file.

**Export to Excel** allows a user to export the well data from the current map to a spreadsheet in comma separated value (CSV) format. The files are exported into the default directory for browser downloads.

#### 1.1.1.6 Database

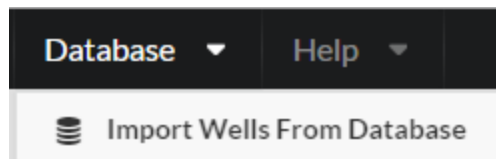


Figure 9.

Database contains **Import Wells From Database** (Figure 9.)

**Import Wells From Database** allows the user to import wells from a database to be displayed on the map. To do this the user must first select from the drop-down menu the database they wish to access. Once a database is selected they must accept the entry by right-clicking Load Well Group List button. Next, they must choose the well data they wish to access from the database. Once a well list is selected they must accept the entry by right-clicking the Load Wells From Selected Group button.

#### 1.1.1.7 Help

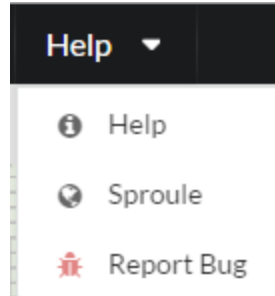


Figure 10.

Database is divided into three sub-sections. These sections are **Help**, **Sproule** and **Report Bug** (Figure 10.)

**Help** links the user to the User Manual

**Sproule** sends the user to the Sproule website

**Report Bug** is a placeholder that allows the user to report an issue with the program. When selected the user is given the option to enter a contact email at which they can be reached and a field to briefly describe the problem.

### 1.1.2 Project Menu Bar



Figure 11.

The project menu bar has thirteen sections (Figure 11.) These sections are **New Map**, **Save Map**, **Open Map**, **Delete Groups**, **Delete Wells**, **Zoom In**, **Zoom Out**, **Refresh**, **Add New List**, and **Select By Area**. The functions of these menus will be discussed in detail below.

#### 1.1.2.1 New, Save, and Open

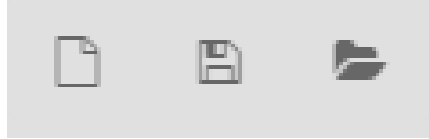


Figure 12.

The first three icons in the project menu bar are for **New Map**, **Save Map**, and **Open Map** (Figure 12.) These work in the same way as the New, Save, and Open options under File in the drop-down menu bar.

**New Map** creates a new map on a separate tab within the existing browser.

**Save Map** records data from the current tab into a text (.txt) file. This data is automatically downloaded into the default directory for browser downloads. Upon selecting Save a window opens that asks for a map name and map description. The map name will match the name of the .txt file. Description helps distinguish maps.

**Open Map** loads a .txt file that contains information related to a map. Opening a new map will erase all data associated with the current browser tab. A warning will warn users about this.

#### 1.1.2.2 Delete Group and Delete Wells



Figure 14.

The next two icons in the project menu bar are for **Delete Group** and **Delete Wells** (Figure 14.) The purpose of this icon is to delete wells from the layer list.

**Delete Group** allows the user to delete the selected layer. The layer must be active in the side bar. Once an active layer is selected, choosing Delete Group removes the layer from the side bar and all associated wells from the map.

**Delete Wells** allows the user to delete individual active wells from a layer. Delete Wells removes the wells from the associated layer and removes the wells from the map.

#### 1.1.2.3 Zoom In, Zoom Out, and Refresh



Figure 15.

The next three icons following Delete Group in the project menu bar are **Zoom In**, **Zoom Out**, and **Refresh** (Figure 15.)

**Zoom In** enlarges the map area in the viewport.

**Zoom Out** reduces the map area in the viewport.

**Refresh** reloads the current map.

#### 1.1.2.4 Add New List, and Select By Area



Figure 16.

The last three icons in the project menu bar are **Add New List**, and **Select By Area** (Figure 16.)

**Add New List** allows user to assign selected wells to a new layer. When using this function the user will be asked to input a name for the new layer. All points selected in this manner and assigned to a new layer are removed from the previous layer they belonged to.

**Select By Area** allows the user to select a group of wells from the map that area contained within a user-defined area. After choosing Select By Area the user can left-click the mouse anywhere on the map to initiate the creation of a box (Figure 17.) After the area has been

defined, left-clicking again selects all the wells that were contained within the region (Figure 18.)

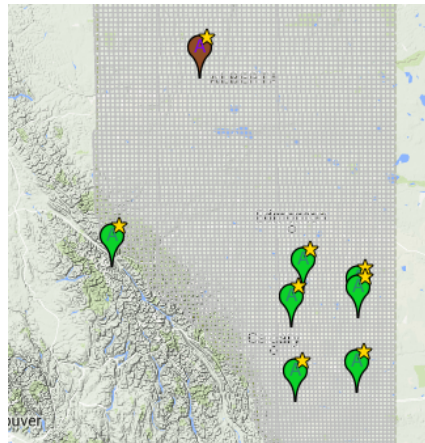


Figure 17.

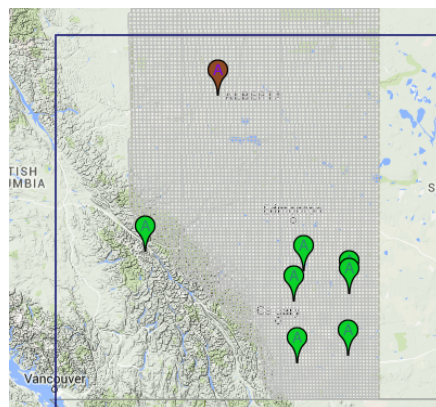


Figure 18.

## 1.2. Side Bar

The side bar, located on the left-hand side of the screen, contains all the information associated with layers, which includes layer names, layer colour, and well information. When a new group is created it is assigned to the layers tab. Layers are placed in the layer tab in order of creation, with the newest layers being placed in the bottom of the layer list (Figure 18.)

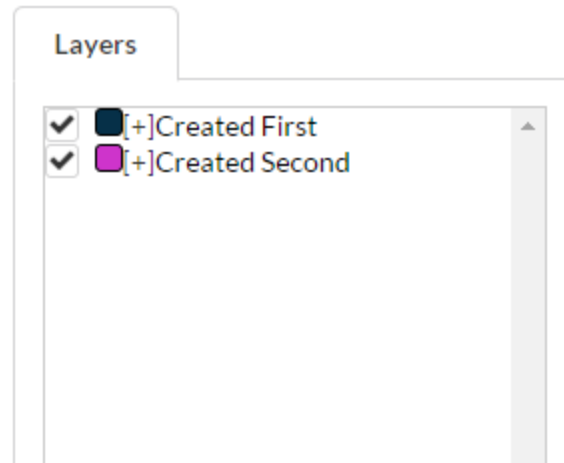


Figure 19.

By right-clicking on the [+] associated with a layer expands the information layer list allowing the user to view the wells contained within a layer as well as well data for each well within that layer (Figure 20.)

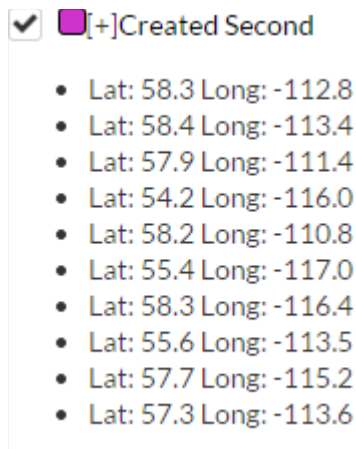


Figure 20.

By right-clicking on the check-box associated with a layer toggles the layer visibility. A checked box indicates that the layer is visible on the map while

unchecking the box makes the layer invisible to the map. The colour of each layer is next to the respective check-box for each one.

Left-clicking on a layer name allows the user to select the entire layer. A layer selected in this way is represented by its name in red (Figure 21.)

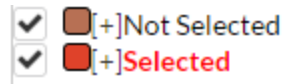


Figure 21.

### 1.3. Map Area

The Map Area is the main window of the application. The Map Area allows the user to see where wells lie geographically. The Map Area allows the user to easily select wells for further use, such as creation of new layers, while also allowing the user to view well information for individual wells. The Map Area also includes an overlay of the Alberta Township System.

#### 1.3.1. Moving on the Map

When the mouse cursor is on the map a hand icon appears. This hand icon is open-handed. When left-clicking the mouse the hand appears clenched. By left-clicking and holding the hand icon 'grabs' the map. By continuing to hold the left mouse button the user is able to drag the map within the map viewing area.

A user may also zoom in and out on the map using the mouse wheel. Wheeling up zooms the map in, centered on the location of the mouse icon. Wheeling down zooms the map out, centered on the location of the mouse icon.

Finally, by holding down the control button and left-clicking on the map the user may define an area that they wish to zoom into. Left-clicking a second time once an area is defined zooms to that location.

#### 1.3.2. Display Well Information

To view information for an individual well, hover the mouse over a well icon. After the mouse remains over an icon for one second the information for that well will be displayed in a text box near the well (Figure 22.)





Figure 22.

### 1.3.3. Selecting Wells on the Map

To select a well directly on the map place the mouse cursor over a well and left-click on the well. A selected well is indicated by a star in the top-right corner of the icon (Figure 23.) Multiple wells may be selected this way for use in further analysis.



Figure 23.

## **2. Technical Support**

### **Contact Us**

If you encounter any problems while using the software or would like to report any problems please contact Thomas Condon at [tconxi@gmail.com](mailto:tconxi@gmail.com). For all other issues please visit our sponsor website at [Sproule.com](http://Sproule.com).