

GIS VIEWER MAP NAVIGATION DOCUMENT

Map navigation using mouse and keyboard:

- Drag to pan
- SHIFT + Click to recenter
- SHIFT + Drag to zoom in
- SHIFT + CTRL + Drag to zoom out
- Mouse Scroll Forward to zoom in
- Mouse Scroll Backward to zoom out
- Use Arrow keys to pan
- + key to zoom in a level
- - key to zoom out a level
- Double Click to Center and Zoom in

- **You have not selected any land yet.**

- Select one of the options above to add coordinates. You may add multiple land parcels to your application.

- 60km
- 30mi
- Help x
-

- **How to Define the Area**

- The area of a mineral-rights application can be a single polygon or can consist of several disconnected parts. Even if the application has one continuous area, this area might be defined by specifying several adjacent parts (e.g. farm portions).
- The interface therefore allows the user to repeatedly use the Upload Coordinates and the 'Select a Farm' tools to accumulate the definitions of the various parts of the area. When all is ready the user should then use the My Selected Area tool to validate and save the area. The flowchart in Figure 1 summarises the process.

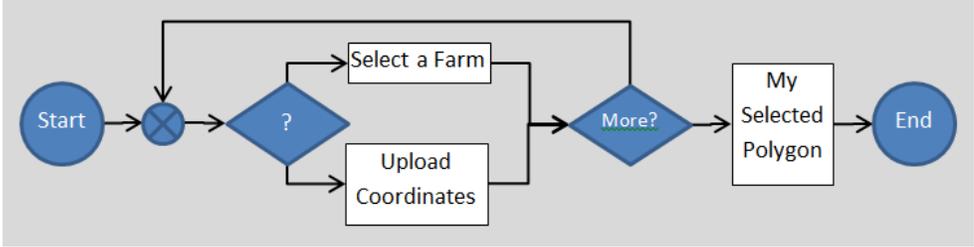


Figure 1: The process of defining and saving the area

- Please consult the help topics for Upload Coordinates, 'Select a Farm' and My Selected Polygon for the details of the procedure.



- Department of Mineral Resources
- Commodity Application
- [Help](#)

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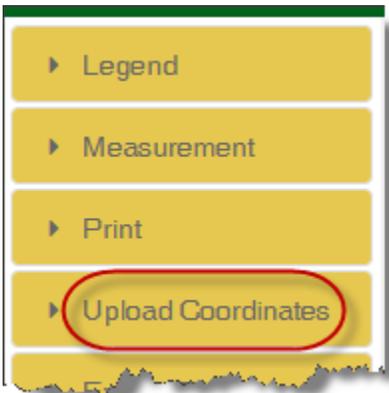


Figure 1: The Upload Coordinates tool

- **Upload Coordinates**
- The Upload Coordinates tool serves to define an area asked for a mineral-rights application or a part thereof. The tool provides for uploading a file or entering

coordinates on the interface. See the topic 'How to Define the Area' for an overview of the process.

- **Finding the Tool**

- The Upload Coordinates tool is found on a sidebar to the left of the map. This sidebar shows a succession of clickable tiles in a column. You will find the title of the Upload Coordinates tool on the fourth tile from the top (Figure 1). The sidebar might be hidden and needs in this case to be expanded by clicking the arrow in the middle of the left margin.

- When you have found the tool, click its tile to open the interface on the pane below it. You will see an empty table and some buttons.

- **The Structure of the Coordinate File**

- **Rings**

- A ring is a succession of points that starts and ends with the same point location.

- **Plain Polygons**

- Plain polygons and plain parts of multipart polygons have only one ring, which is the outer ring that goes around the polygon. This ring must turn clockwise. The ring needs to be closed. However, for plain polygons, the system will automatically add a last point with the same coordinates as the first one, should it have been omitted.

- **Doughnut Polygons**

- Polygons can have holes. A polygon with one hole is called a doughnut polygon. Whereas plain polygons are defined by a single ring, a doughnut polygon will start with a clockwise outer ring and will then continue with an anticlockwise inner ring, which defines the hole. Other rings can be added to define more holes.

- **Coordinate Input**

- The areas of mineral-rights applications can be defined by loading coordinates from file or by entering them on the interface using the keyboard. The two methods could even be mixed by loading some parts of a multipart polygon from file and inputting others by typing on the keyboard. The keyboard can also be used to edit coordinates that were loaded from file.

- **Load from File**

- The file must be of the type 'comma separated values' (CSV). The file can have any extension. CSV files are text files. The file must be organised into records. Each record

carries several values separated by commas. All records must have the same number of values. These values form fields. The CSV file used for the coordinate input can have either 2 or 3 fields.

- The main content of the file consists of values of latitude and the longitude in decimal degrees. The geodesic datum of these geographic coordinates must be Hartbeesthoek94 or WGS84.
- The latitude and the longitude can be the only fields of the file, or they can be accompanied by a third field, which holds codes or numbers identifying the points of the polygon.

```
ID,Lat,Long
1,-25.3852316,28.3125350
2,-25.3890387,28.3591724
3,-25.5061082,28.3467992
4,-25.5023011,28.2982582
5,-25.3852316,28.3125350
```

Figure 2: A simple coordinate file

- The first record of the file (Figure 2) contains labels that indicate in which order the fields appear in the records of the file. This is done using names or abbreviations for the identifier field, the latitude field and the longitude field. The identifier field is referred to as Id, Nr, or UniqueID. The latitude field is referred to as Latitude, Lat or Y. The longitude is referred to as Longitude, Long, Lon or X.
- To upload a file click the Upload Coordinate File button (Figure 3), browse to the file and select it. The content will be loaded into the table that occupies the centre of the dialogue.

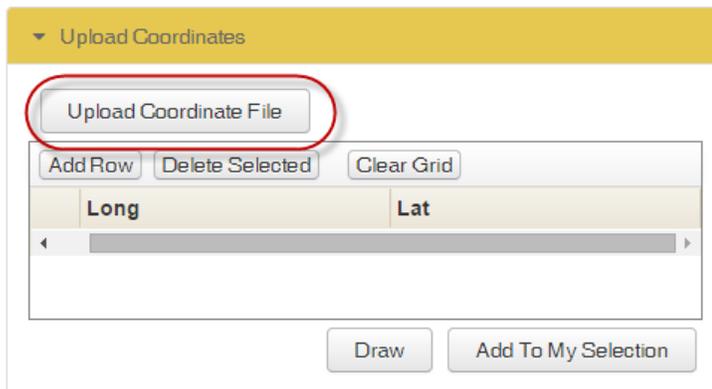


Figure 3: The Upload Coordinate dialogue

- The headers of the table on the interface will always read Id, Long and Lat, irrespective of the labels chosen in the first record of the file. The values in the file will be arranged in this order.
- **Keyboard Input**
- When typing the coordinates in using the keyboard, they will be entered row by row. Click the button Add Row (Figure 4). This will add an empty row to the table. Then click into each of the fields of the row and enter the value. Continue by adding more rows. Do not forget to close each ring by repeating the point with which it started.

Figure 4: Keyboard input

- **Drawing**



Figure 5: Drawing

- When the file has finished loading, or has been entered entirely, click the Draw button found under the table. The polygon will be drawn on the map and the map will zoom in to the drawing. The lines of the drawing will appear in black (Figure 5).
- **Selecting**

- Inspect the drawing. When all is fine, click the button Add To My Selection. The colour of the drawing will change to red, indicating that it is selected. The table is cleared and ready for the input of the next part, should there be one.
- Please, define other parts of the multipart polygon, using the Upload Coordinates tool or the 'Select a Farm' tool, or proceed to the My Selected Polygons tool when the last or only part has been captured.



Department of Mineral Resources

Commodity Application

[Help](#)

You have not selected any land yet.

Select one of the options above to add coordinates. You may add multiple land parcels to your application.

60km

30mi

Help x



Figure 1: The 'Select a Farm' tool

Select a Farm

The 'Select a Farm' tool serves to define an area for a mineral-rights application or a part thereof by selecting farms or farm portions. See the topic 'How to Define the Area' for an overview of the process.

Finding the Tool

The 'Select a Farm' tool is found on a sidebar to the left of the map. This sidebar shows a succession of clickable tiles in a column. You will find the title of the 'Select a Farm' tool on the seventh tile from the top (Figure 1). The sidebar might be hidden and needs, in this case, to be expanded by clicking the arrow in the middle of the left margin.

When you have found the tool, click its tile to open the interface on the pane below it. You will see an empty table and some buttons.

Adding Farms

At the top of the dialogue are three buttons. Each activates a map tool (Figure 2). These buttons are called:

- Point,
- Polygon, and
- Rectangle.

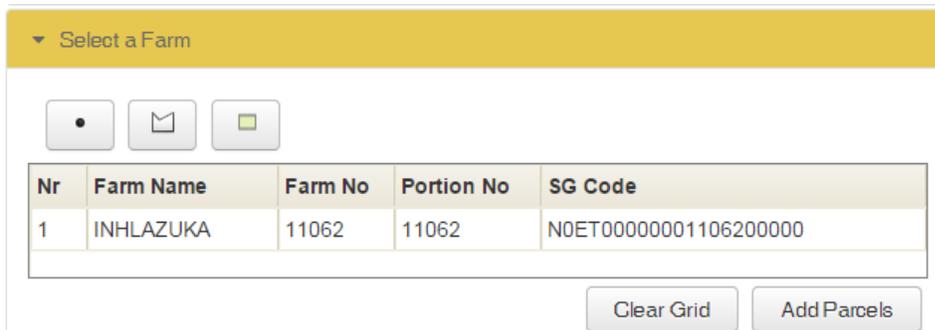


Figure 2: The 'Select a Farm' dialogue

Use any of the three map tools to select a farm or farm portion. It will be marked by a thick blue border on the map and its name, number and SG code will appear in a row on the table. Repeat the process to add other farms if needed. When the last farm or farm portion is added, click the Add Parcels button to add the farms or portions to the selection.



Figure 3 A selected farm

Please, define other parts of the multipart polygon, using the Upload Coordinates tool or the 'Select a Farm' tool, or proceed to the My Selected Polygons tool when the last or only part has been captured.



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60km

30mi

Help x



Figure 1: The Interrogate Application tool

Interrogate Application

The Interrogate Application tool serves to provide information about applications that the user selects on the map.

Finding the Tool

The Interrogate Applications tool is found on a sidebar to the left of the map. This sidebar shows a succession of clickable tiles in a column. You will find the title of the Interrogate Application tool on the eighth tile from the top (Figure 1). The sidebar might be hidden and needs in this case to be expanded by clicking the arrow in the middle of the left margin.

When you have found the tool, click its tile to open the pane below it. The dialogue you will see is very simple consisting only of three buttons (Figure 2).

Selecting the Application

The left button is labelled Select Application. It activates a map tool that allows you to select applications by clicking on the map. The middle button is labelled Select Temp Application. It selects temporary applications. When looking for such an application, you might want to switch the Application layer off using the Legend tool so that the temporary applications stand out on the map. The third button is labelled Clear. It empties the results table, which will be discussed below.

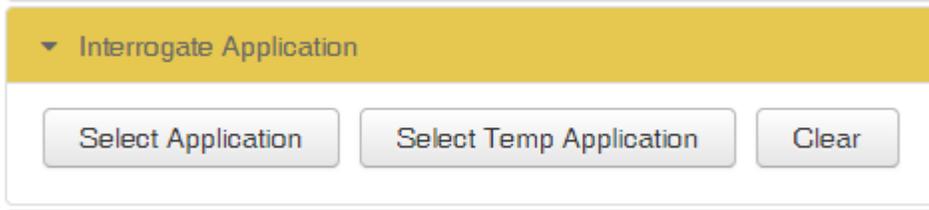


Figure 2: The Interrogate Application dialogue

Click on the first or in the second button and then on an application of the corresponding type on the map. Sometimes it might be necessary to click more than once to obtain a result. It may be that several applications overlap each other at the click location. The applications found are therefore listed in a table that will appear under the mentioned buttons on the pane. This will be the case even if only one application is found (Figure 3).



Figure 3: The Interrogate Application result



Figure 4: The selected application on the map

The first or only mineral-rights application on the results table will be selected automatically. It will be marked on the map by surrounding it with a thick blue border (Figure 4) and the map will zoom in to it.

Detailed information for the selected application will appear in a panel that opens automatically along the lower margin of the map (Figure 4).

The display area carries 7 tabs, which contains the following information:

- Interrogate Application
- Underlying Farms
- Application Conflicts
- Application Information
- Application History
- Application Coordinates
- Reporting

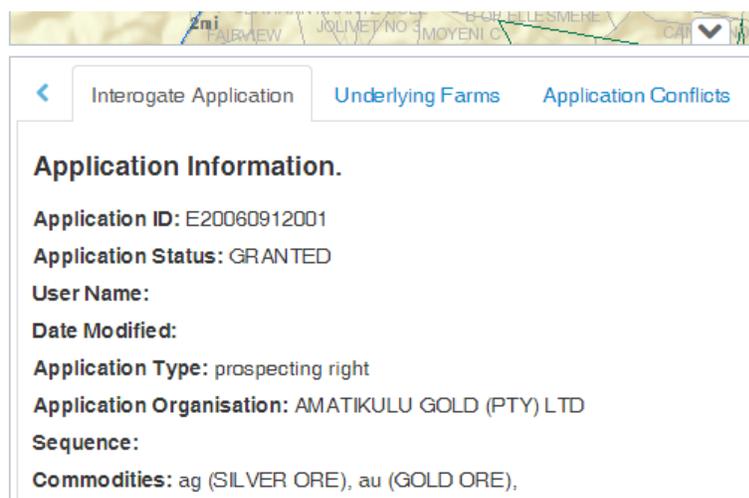


Figure 5: The selected application on the map

When more than one application was found, the user can switch the selection to other rows in the results table. Correspondingly the map and the information at the bottom will adjust to reflect the change. This makes it easy to compare various overlapping applications.

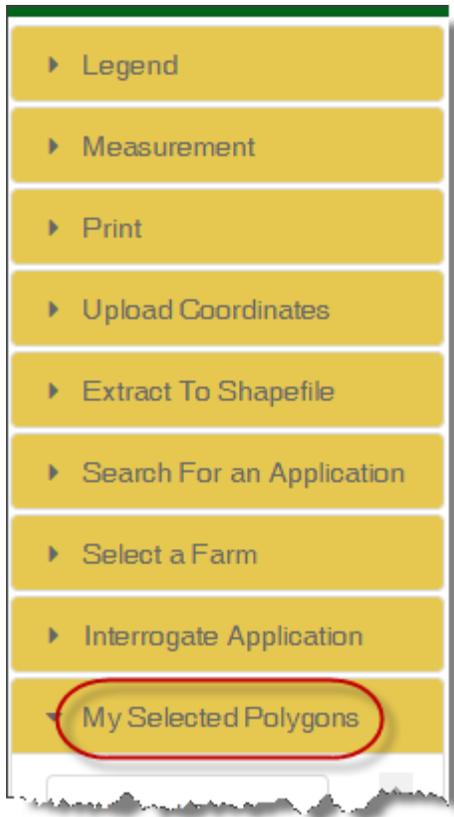


Figure 1: The My Selected Polygons tool

My Selected Polygons

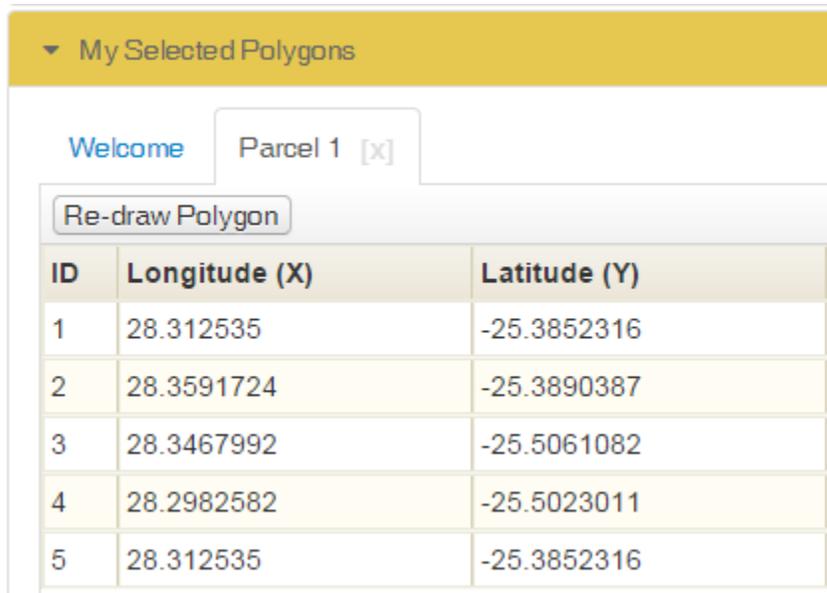
The My Selected Polygons tool serves to accumulate the various polygon parts as well as to validate and save the area of the mineral-rights application. Of course, it might be that there is only one polygon.

Finding the Tool

The My Selected Polygons tool is found on a sidebar to the left of the map. This sidebar shows a succession of clickable tiles in a column. You will find the title of the My Selected Polygons tool on the ninth tile from the top (Figure 1). The sidebar might be hidden and needs in this case to be expanded by clicking the arrow in the middle of the left margin.

Interface

When you have found the tool, you should see that it is already open. Otherwise, click the tile to open the interface, which will appear on the pane below the tile. The tab that is open on the table should show the coordinates of the last polygon part you captured (Figure 1).



ID	Longitude (X)	Latitude (Y)
1	28.312535	-25.3852316
2	28.3591724	-25.3890387
3	28.3467992	-25.5061082
4	28.2982582	-25.5023011
5	28.312535	-25.3852316

Figure 2: The My Selected Polygon dialogue

If no polygon has been captured, you should be greeted with the message seen in Fig 3. In this case proceed to the Upload Polygon tool to define a polygon.

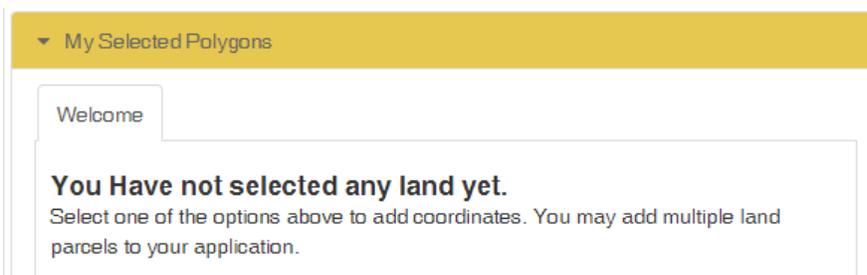


Figure 3: First capture at least one polygon

Validation

Click the Validate button. The validation checks the application against a number of rules. One of these checks looks for conflicts with other applications.

Saving

Click the Save button. The application is saved and appears as a temporary application on the map (unless the layer is switched of). A success message saying "Application saved" is displayed. The Complete Capture button appears.

Complete Capture

Click the Complete Capture button. The user is requested to close the browser tab or window and to return to the application into which the map viewer is nested.

You have not selected any land yet.

Select one of the options above to add coordinates. You may add multiple land parcels to your application.

60km

30mi

Help x

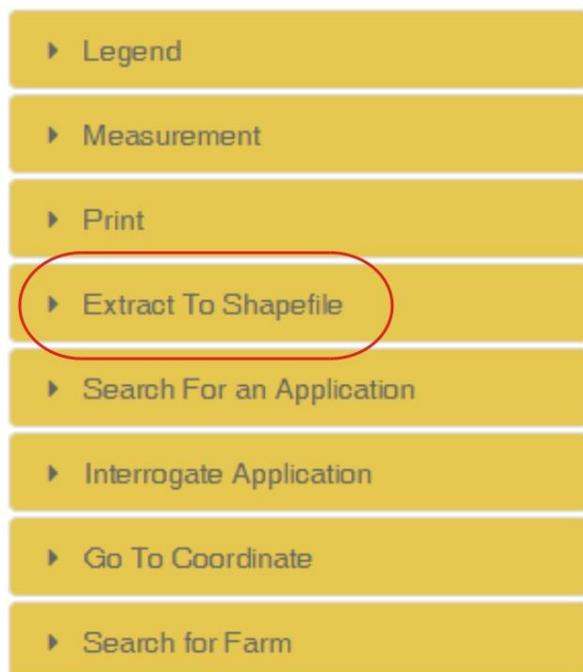


Figure 1: The Extract To Shapefile tool

Extract To Shapefile

The Extract To Shapefile tool provides a way for the user to select an area on the map and export the underlying Application to shapefile.

Finding the Tool

The My Selected Polygons tool is found on a sidebar to the left of the map. This sidebar shows a succession of clickable tiles in a column. The sidebar might be hidden and needs in this case to be expanded by clicking the arrow in the middle of the left margin.

Interface

When you have found the tool you can click it to expand the interface. The tool consists of three buttons. A button to select the area for which an extract operation must be performed. A button to initiate the extract procedure and finally a button to clear the extract area.(Figure 2).

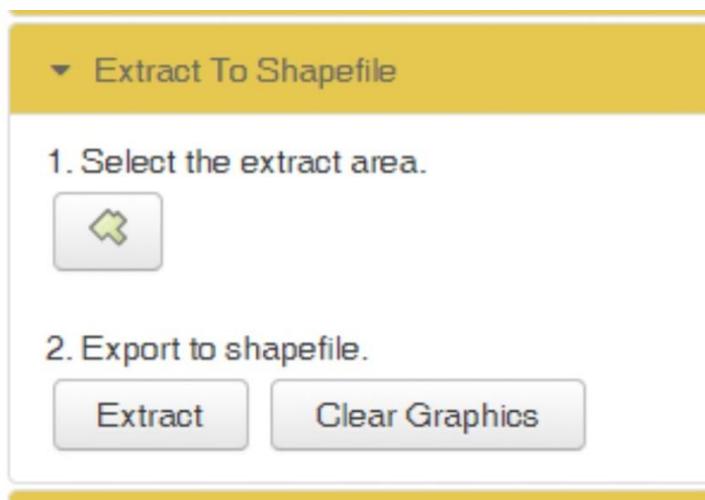


Figure 2: The Extract To Shapefile interface.

Usage

Step 1

Step one in using the Extract To Shapefile tool is to select an area on the map to extract to shapefile. Please ensure that the area that you select intersects an Application. If the selected area does not intersect an Application then an empty Shapefile will be returned.

Step 2

Click the Extract button. The loading animation will be displayed whilst the extract is performed.

Optional step

Should you decide to not perform the extract after you selected an extract area then you may click the Clear Graphics button to remove the extract graphic from the map.