GeoVIEW.WA

GeoVIEW.WA
Exercise Book

Stretch and move yourself

to creating your maps online

August 2022

Government of Western Australia
Department of Mines, Industry Regulation and Safety

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

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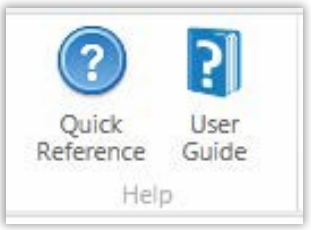
Introduction

GeoVIEW.WA is an online interactive mapping system which allows you to create and print your own maps and search and explore mineral and petroleum exploration datasets.

You can construct your own geological map and incorporate other mineral and petroleum exploration datasets including mines and mineral deposits, petroleum wells, active leases and much more.

The purpose of these exercises is to guide you through how to use GeoVIEW.WA. They have been developed to teach you how to use some of the basic GeoMap.WA functions and tools to work with the Department of Mines, Industry Regulation and Safety (DMIRS) GIS data.

This workbook is designed to work in conjunction with the GeoVIEW.WA User Guide and Quick Reference guide, which can be found in the **Help & Feedback** section of GeoVIEW.WA.



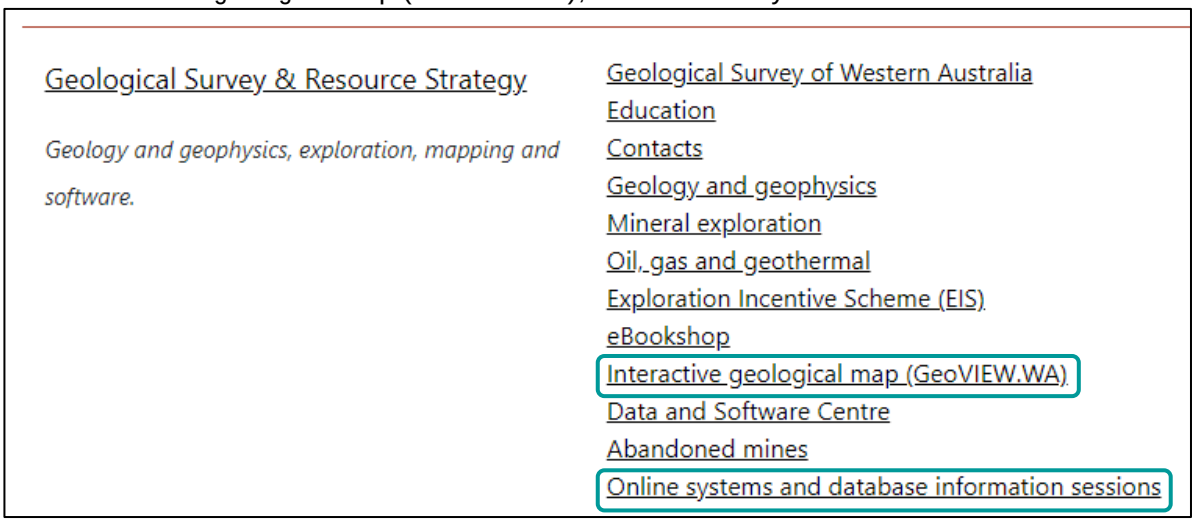
Exercise 1: How to navigate to GeoVIEW.WA on the website

Warm up

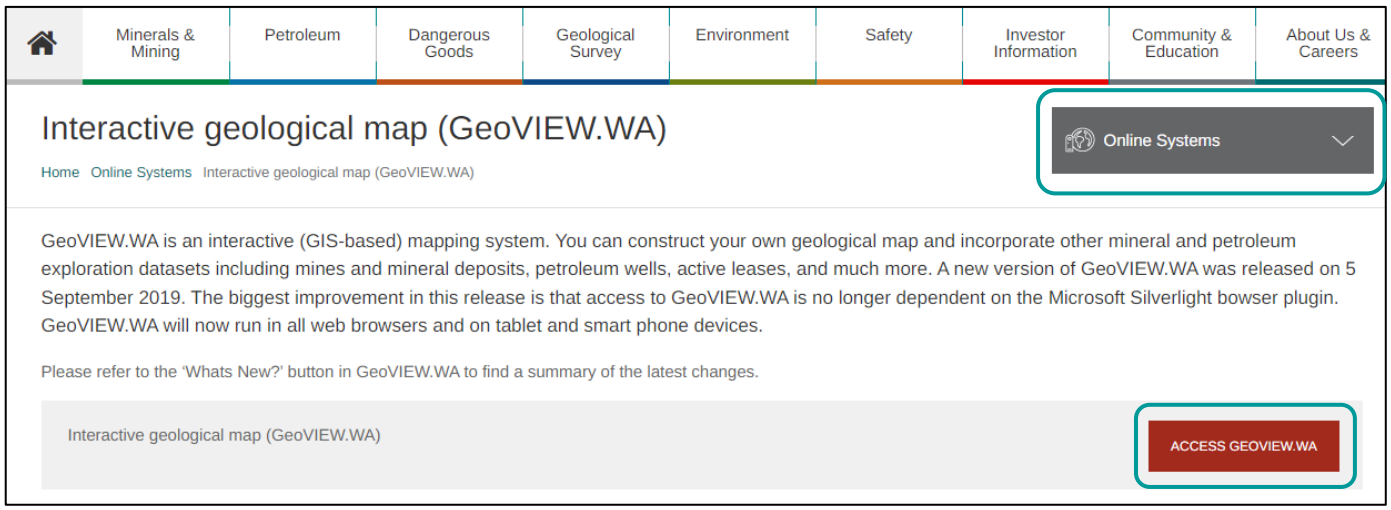
From the Department of Mines Industry Regulations and Safety website.
https://www.dmirs.wa.gov.au/

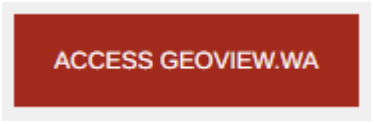
Click on Resource & Environmental Regulation.

Then click on Interactive geological map (GeoVIEW.WA), or the Online systems and database information sessions.

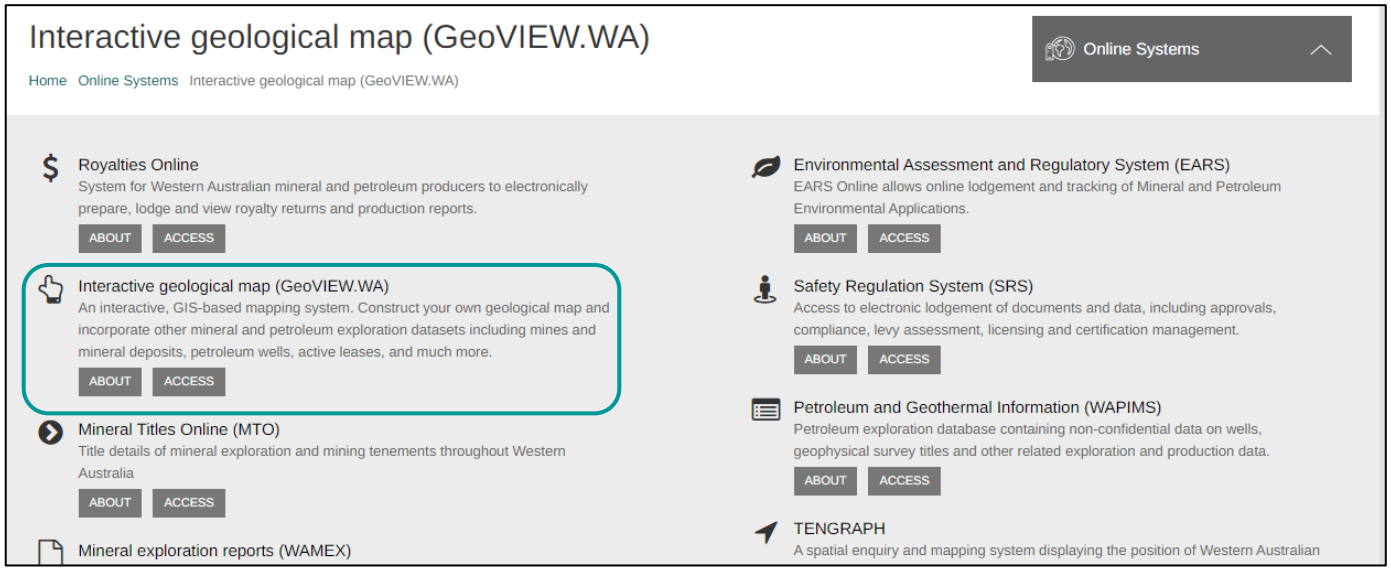


If Interactive geological map was selected, the following page is displayed. This gives a brief overview of what GeoVIEW is and what it contains.

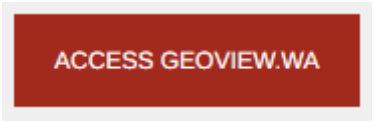


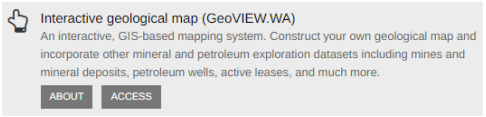
To open GeoVIEW directly, click on the ACCESS GEOVIEW button. 

To see what other online systems are available, click on the Online Systems button. Under this button, are all the publically available databases and web Viewers, including GeoVIEW.WA.

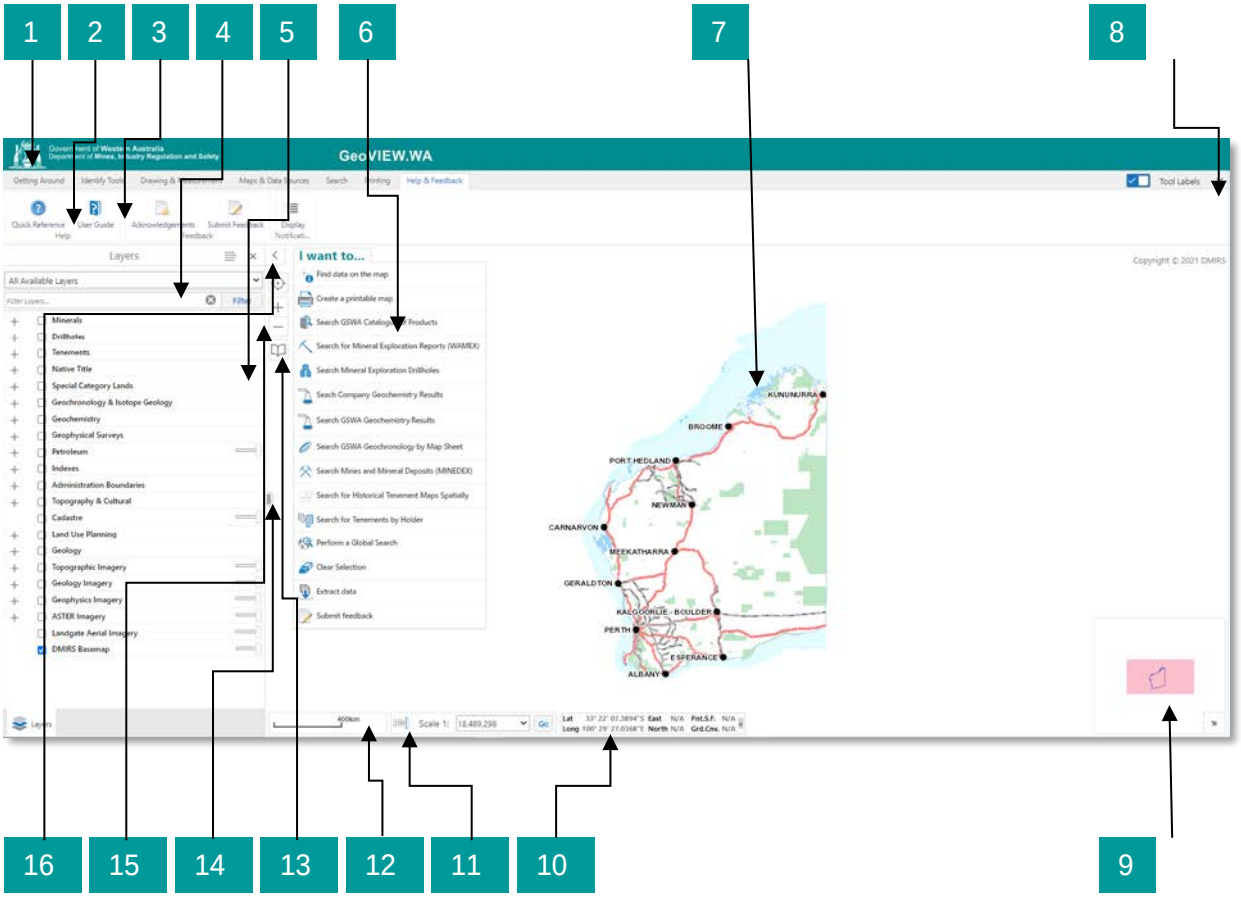


If Online systems and database information sessions is selected, the following page will display. This provides the training schedule for the main GSWA applications.

Selecting 

or 

will open the GeoVIEW.WA interactive mapping system.



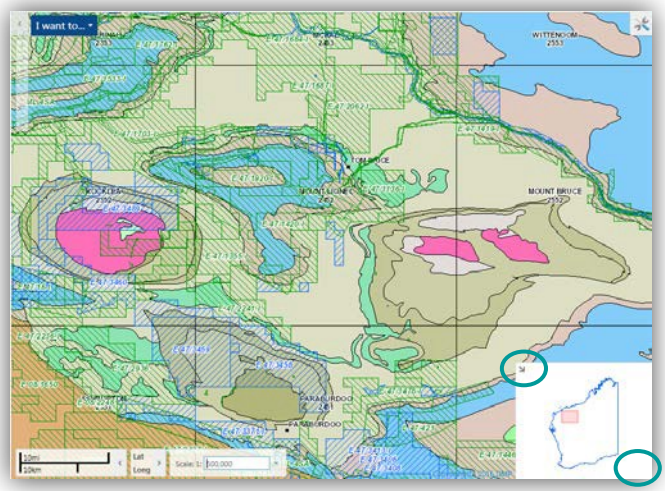
Navigation features in the main screen of the Viewer

Number	Screen Element
1	**Viewer title bar**: Displays the title of the application.
2	**Toolbar**: The toolbar contains numerous tools that are grouped into tabs by function.
3	**Toolbar tabs**: The toolbar consists of tabs that categorize the tools into high-level groups: Getting Around, Identify tools, Drawing & Measurement, Maps & Data Sources, Search Tools, Printing & Reports and Help & Feedback.
4	**Layer Theme**: Select from a list of predefined Layer Themes (i.e. Geology) or All Available Layers (default).
5	**Information panel**: This panel lists different kinds of information when you interact with the map. For example, it displays Map Layers where you can select different layers to hide or show on the map or it displays a details of map features in the Results List when you perform a search or use the Identify tool.
6	**I want to...**: A menu of shortcuts to frequently-used tools. This menu tries to anticipate what you will want to do most often.
7	**Map**: The map window where you interact with the map by zooming, panning, annotating, or right-clicking to get more information.

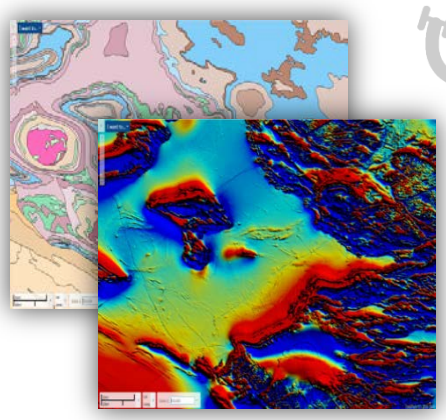
8	**Toolbar Icon**: Shows or hides the toolbar when clicked.
9	**Overview Map**: Displays a thumbnail of the whole map with the current view shown as a small square on the map. The Overview map is an orientation tool to identify which part of the overall map you are currently zoomed in to. To hide the Overview map, click the arrow in the top left corner.
10	**Mouse Position**: The position (co-ordinates) of the computer cursor on the current map. To hide the mouse position, click the small arrow on the right.
11	**Scale**: The current scale of the map.
12	**Scale bar**: Graphical representation of current map scale in Kilometre units.
13	**Bookmarks:** Zoom to a predefined map extent or create a custom map extent for quick navigation.
14	**Increase / Decrease Panel:** Drag the symbol to move the panel width. A similar symbol 'button' can be used on the table rows that appear at the bottom of the screen to move the bottom panel up and down.
15	**Zoom In/Out**: Use these buttons to zoom in or out of the map in step increments.
16	**Information Panel Toolbar**: Contains icons that you can use to control the information listed in the Information Panel. Clicking different icons changes the information to Map Layers, Results and any other options configured for the map. The Information Panel opens when you run a search. To open it manually, click the arrow to the left of the **I want to...** menu. To display Information panel To hide Information panel

Overview map

When you are zooming in and out and moving around on a web-based map, it is easy to lose track of where you are. If this happens, you can click the small arrow in the bottom right corner of the map to open the Overview map, which shows the current view as a blue square on the full map. To close the overview map, click the top left arrow.



Exercise 2: Change what you see



Because web-based maps are built in layers, it is easy to control what you see in the map.

Warm up

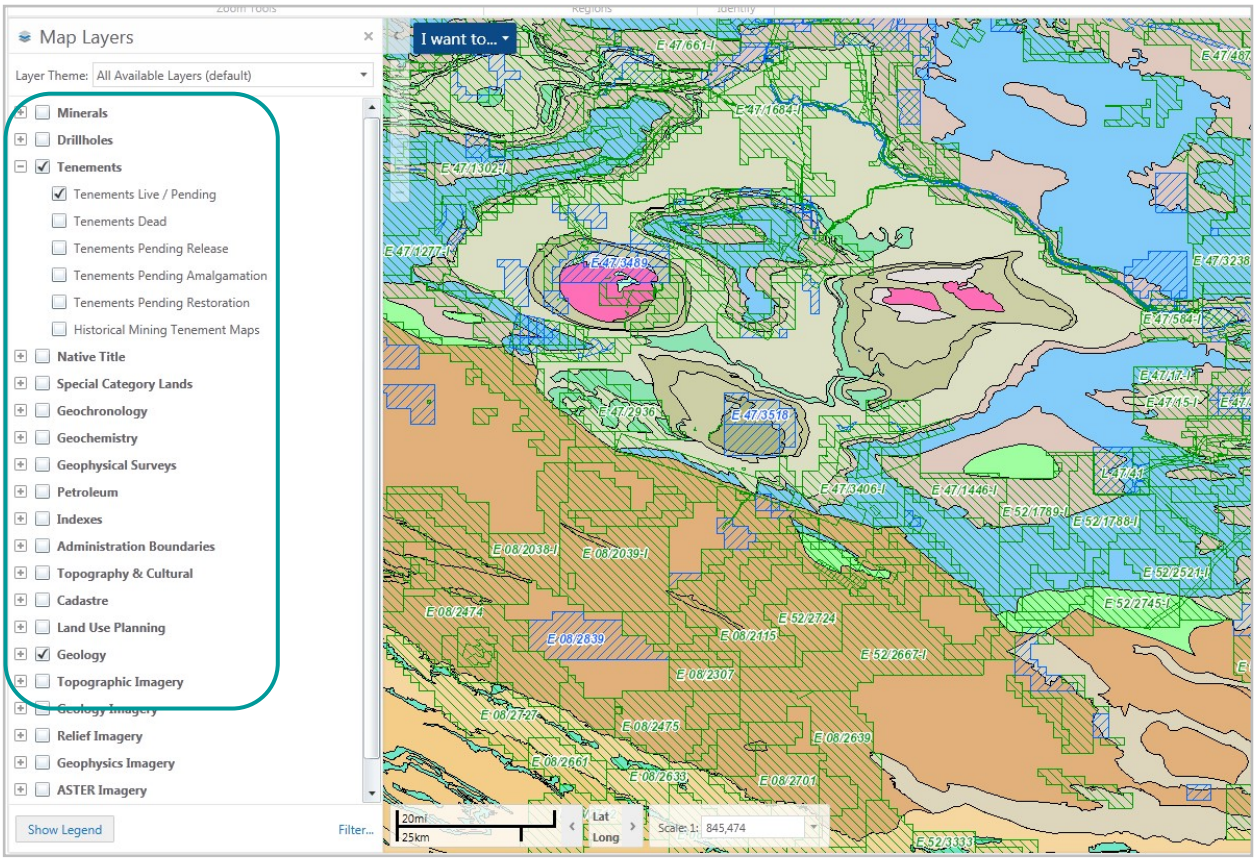
Open GeoVIEW.WA

Method

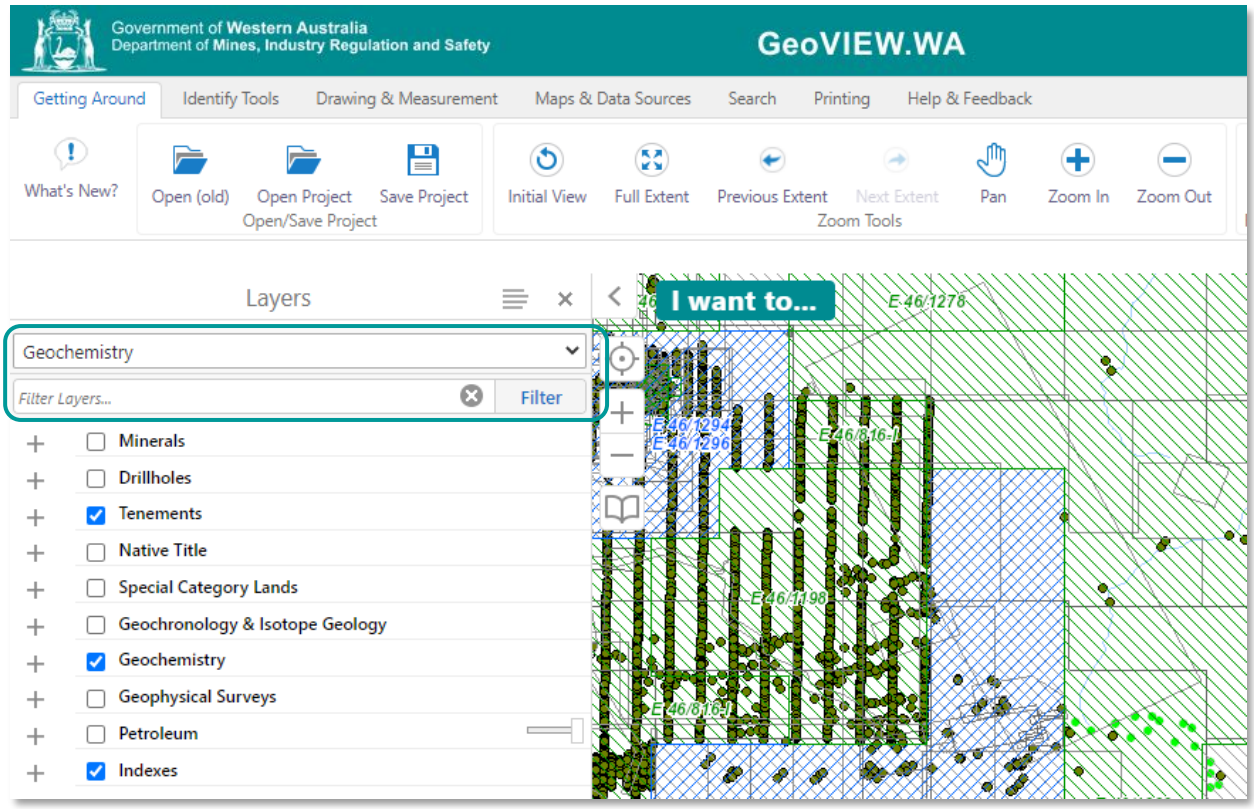
You can change what you see by switching different layers on or off to the left of the screen, or in some maps, by choosing a Layer Theme, which contains only specific layers, for example, only Live Tenements, Towns and Geology.

Each layer has a set of sublayers which can be viewed by clicking on the plus symbol ⊞ next to the layer in order to expand the list.

In this example, the Geology and Tenements Live/Pending are turned on.



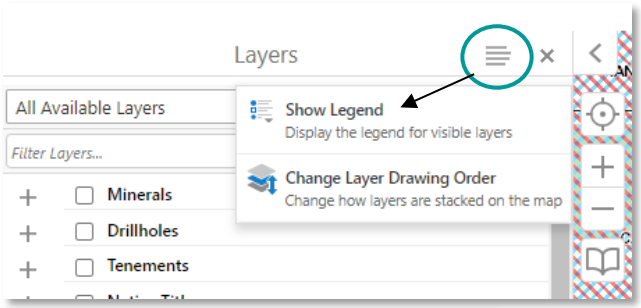
In this example, the Geochemistry Layer Theme is selected.

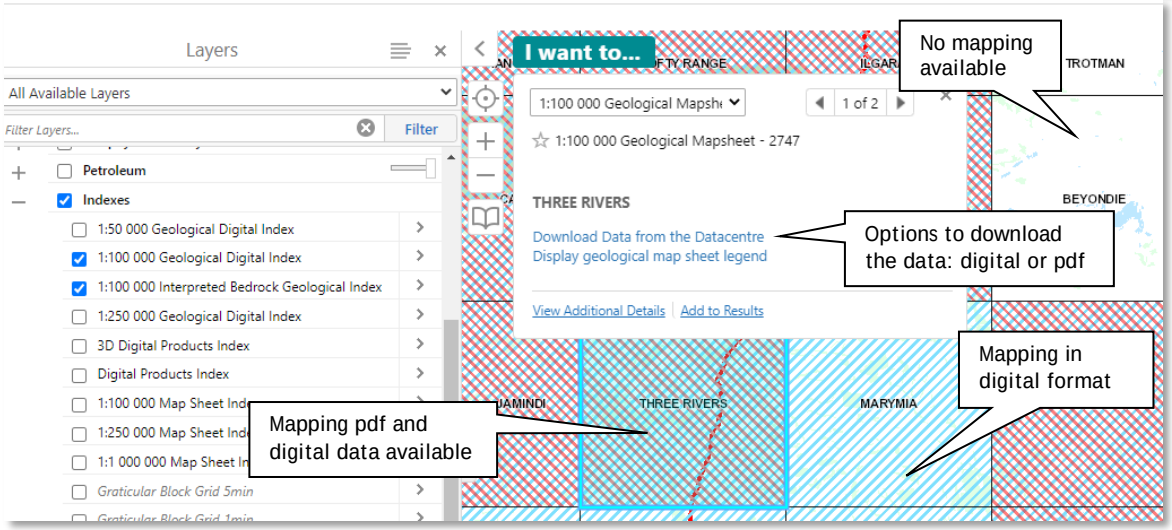


Legend

Legend information for most layers can be accessed via the tool to the right of the Layers panel (see red circle).

For geological legends, the Indexes layer must be turned on, for the geology scale required. Then, by clicking on the mapsheet square for the area of interest, a pop-up window will display, with a hyperlink to the data for that sheet as either hard copy pdf or digital shape / geodatabase.



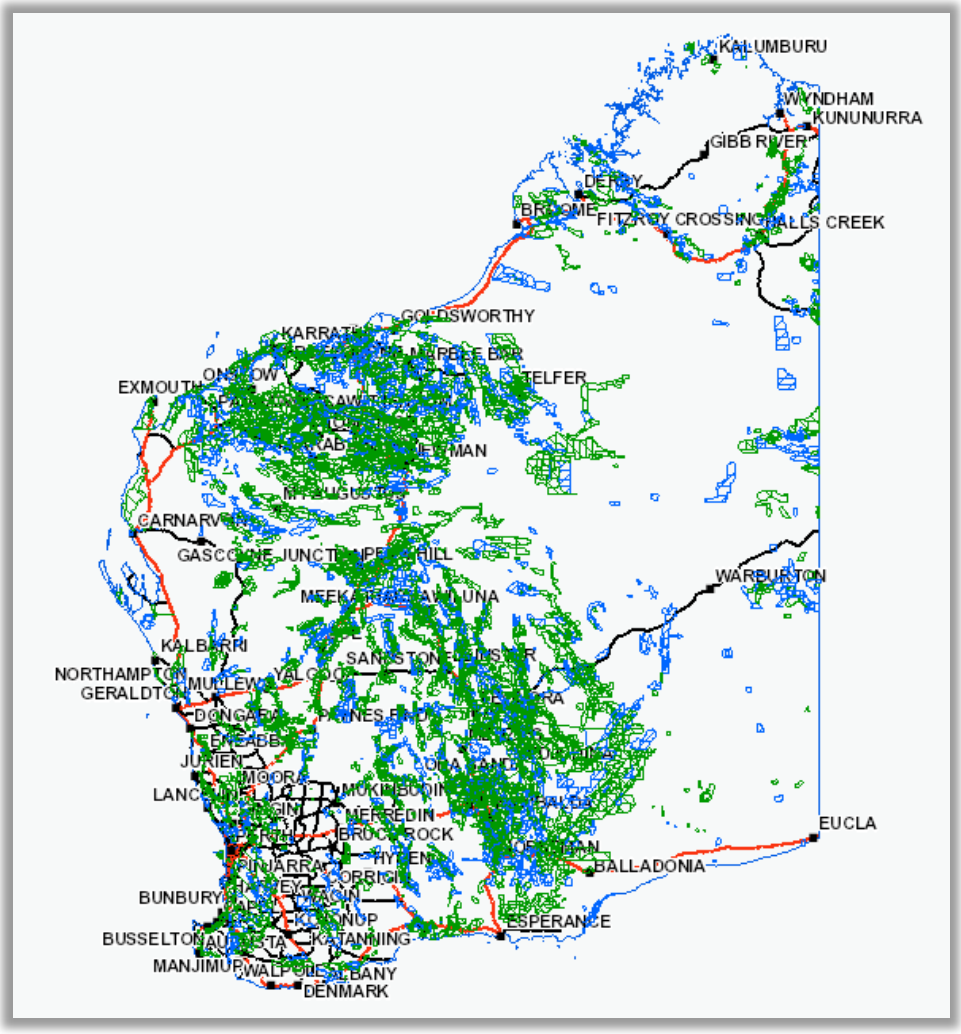


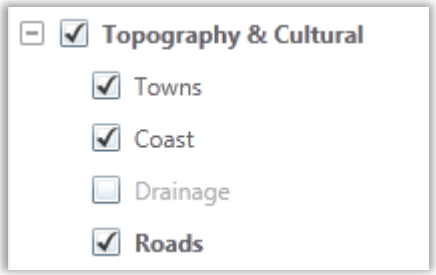
Exercise

Now that you have explored your layer controls, click on Topography & Cultural to activate *Towns, Coast, Roads, Tenements Live / Pending*.

Deactivate the Geology layer.

Your map should look like the one below.

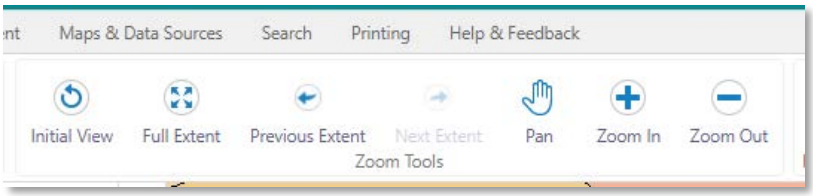




TIP: Make sure your top layer is active with the tick in the box; otherwise sub-layers won't be displayed, even if they have a tick in the sub-layer box.

Exercise 3: Use the Pan and Zoom tools

The ability to pan and zoom in and out of the map is a key feature of web maps, so it is not surprising that there are many different ways to do this on the map.



Warm up

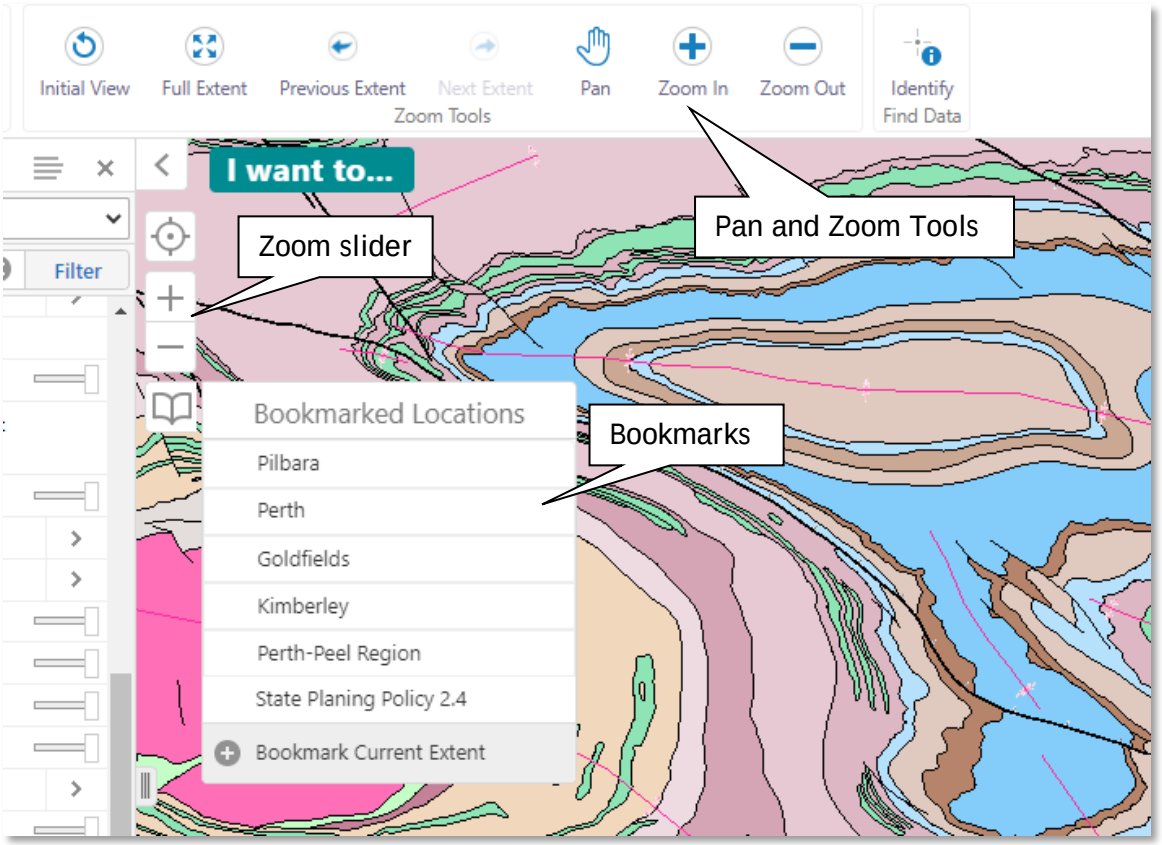
Open GeoVIEW.WA.

In the Geology Group, turn on *1:2 500 000 Interpreted Bedrock Geology.*

Method

Pan tool

You can use the Pan tool to drag the map in any direction, or use the arrow keys on the keyboard to move in increments up, down, or sideways. Pan, zoom and bookmark tools make it possible to move quickly to specific areas of a map.

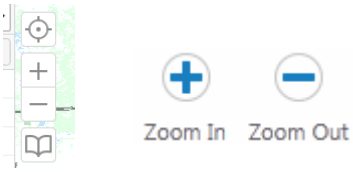


Zoom slider

How to use the zoom slider:

- Click the **Plus +** or **Minus -** to zoom in or out on the map.

Zoom In and Out

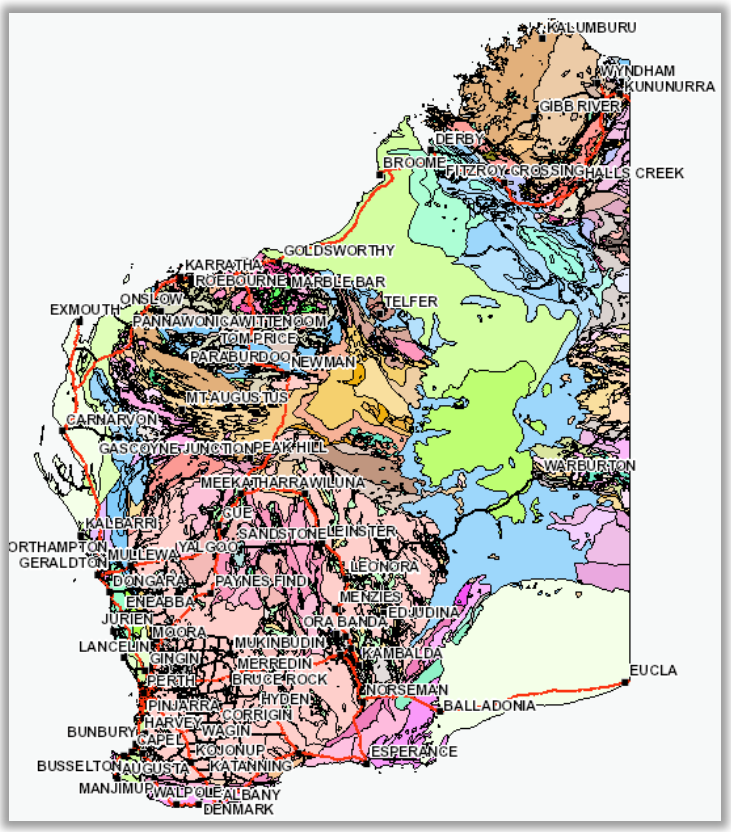


When you click or (above the Bookmark button), the map will zoom in or out to the next scale increment and centres the map. You can use the Zoom tools (Zoom In or Zoom Out) more precisely by clicking the tool and dragging a box on the map. Releasing the button zooms to the area defined by the box. Scrolling with a wheel mouse also enables you to zoom in (roll wheel forward) and zoom out (roll wheel backwards).

Exercise

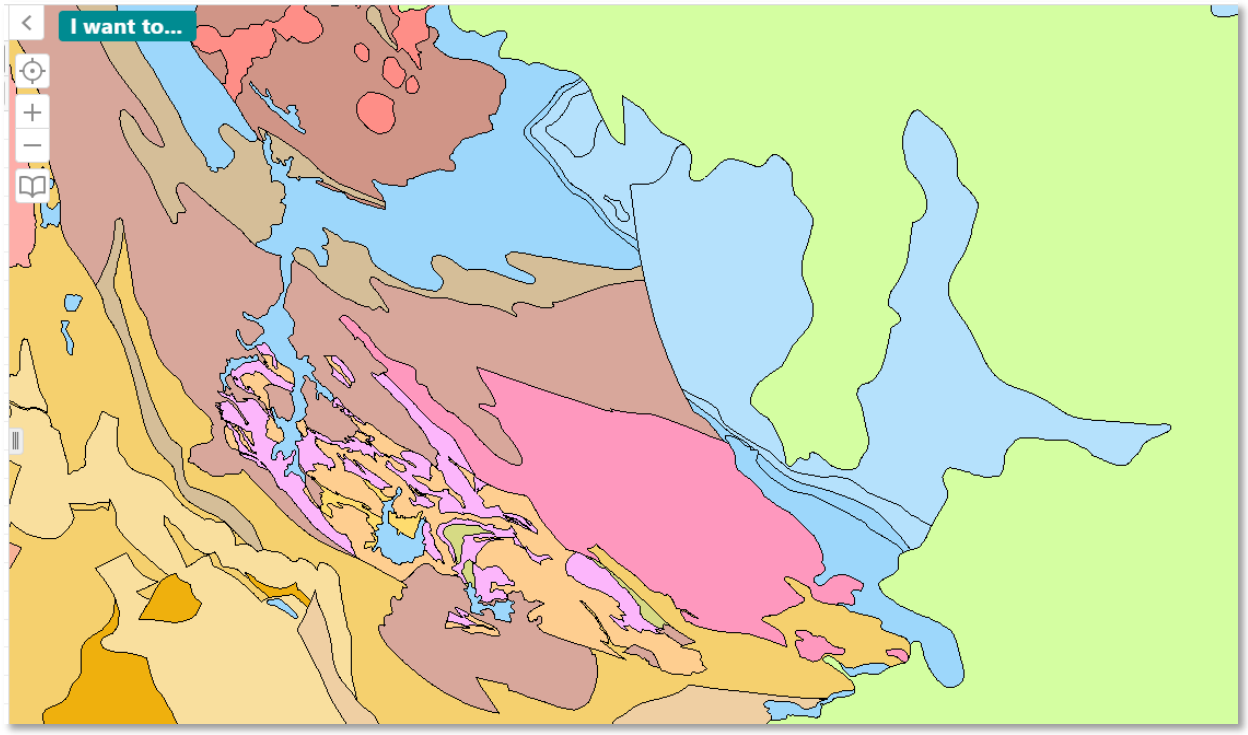
Now that you have explored your layer controls, find and activate the following sub-layers: *1:2 500 000 Interpreted Bedrock Geology*, *Towns, Coast,* and *Roads*.

Your map should look like the one below.



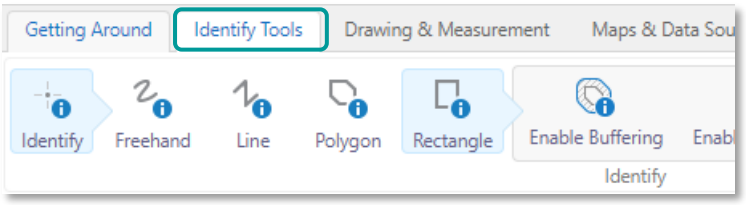
Click on the plus button four times.

Your new map should look something like this.



Exercise 4: Use Identify Tools

The Identify Tools tab contains tools to help you find feature information.



Warm up

Open GeoVIEW.WA.

Turn on layers *Geology 1:2 500 000 Interpreted Bedrock Geology* and *Tenements Live/Pending* (see Exercise 2).

Zoom to an area of interest.

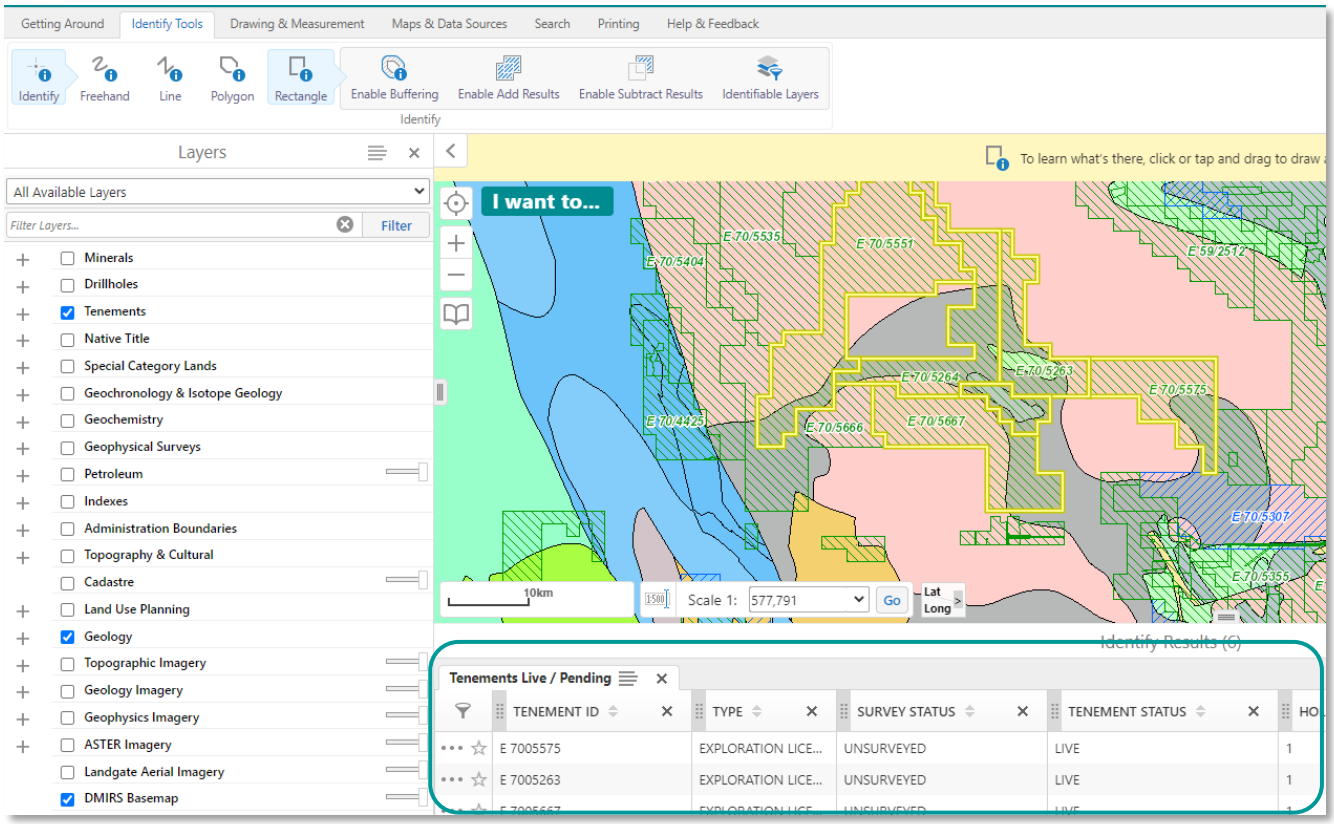
Method

Identify: Use several identify tools to find data by layer.

Use this tool...	To...
Point	Identify data at a particular point anywhere on the map. All the features beneath the point you click are listed in Results.
Freehand	Identify features by drawing a line in any direction on the map. All the features that intersect with the line you draw are listed in Results.
Line	Identify features by dragging a line in any direction on the map. All the features that intersect with the line you draw are listed in Results.
Polygon	Identify features by drawing a segmented shape over an area on the map. All the features beneath the shape you draw are listed in Results.
Rectangle	Identify features by drawing a rectangle over an area on the map. All the features beneath the shape you draw are listed in Results.

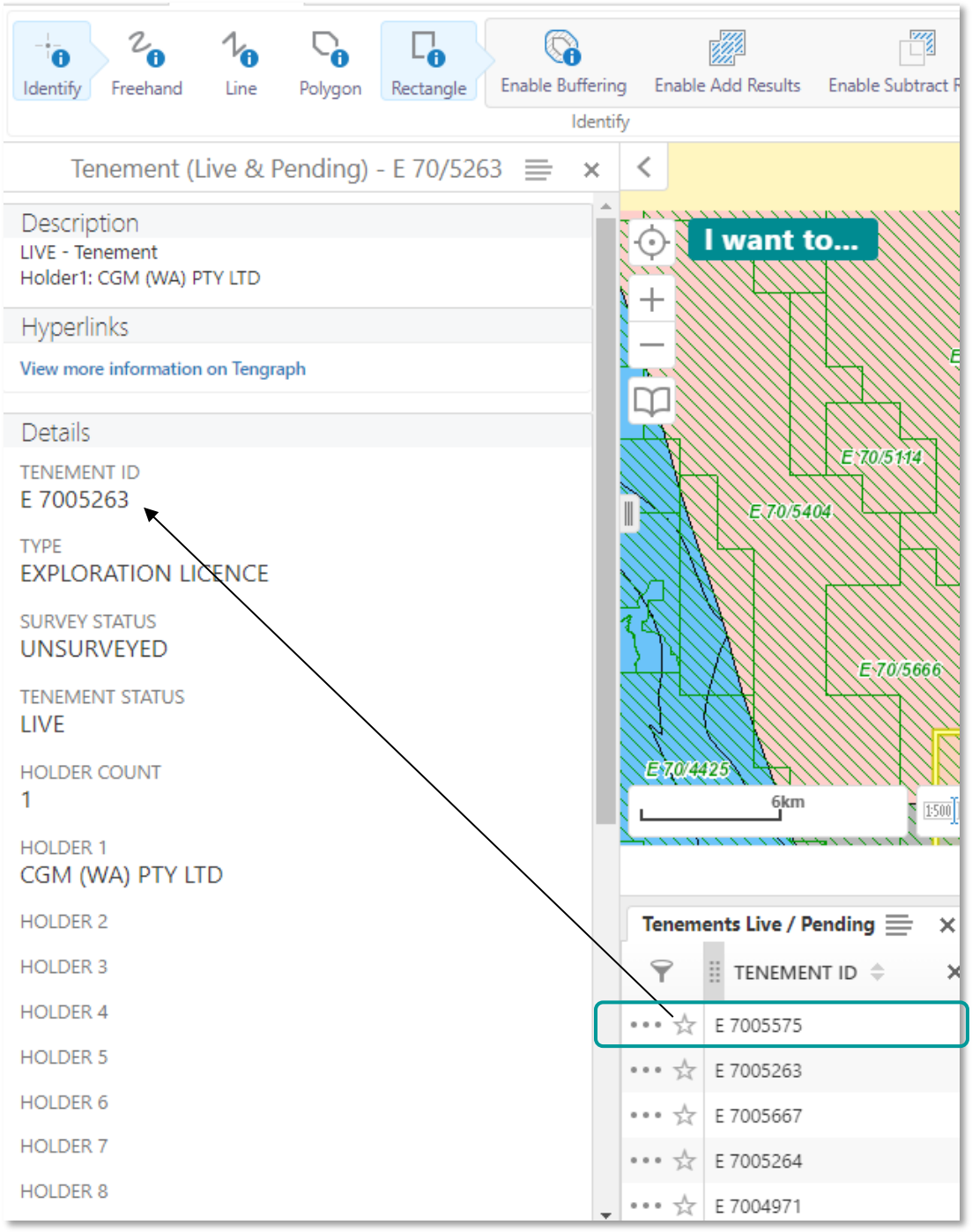
Exercise

In this example, the Rectangle Identify Tool was used.



All the features beneath the shape you draw are listed in the Results list.

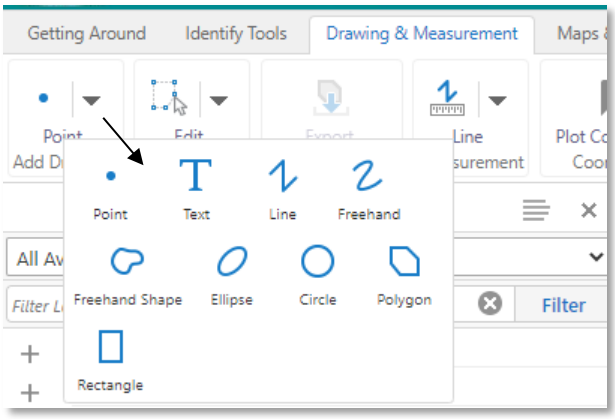
By clicking on one of the features in the results list (the table view below the map), more information can be obtained and viewed in the left panel. A link to the Tengraph web map system is also available for more specific data on the tenement selected (Note: a free registration / login is required to view Tengraph).



The text information associated with E 70/5263.

Exercise 5: Use of Drawing Tools

Provide tools for creating, formatting, and editing annotations to the map, including shapes and text.



Warm up

Open GeoVIEW.WA.

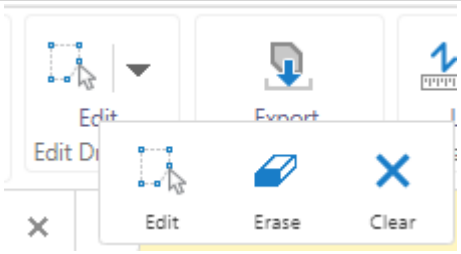
Turn on layers *Geology 1:2 500 000 Interpreted Bedrock Geology* and *Tenements Live/Pending* (see Exercise 2).

Zoom into an area of interest.

Method

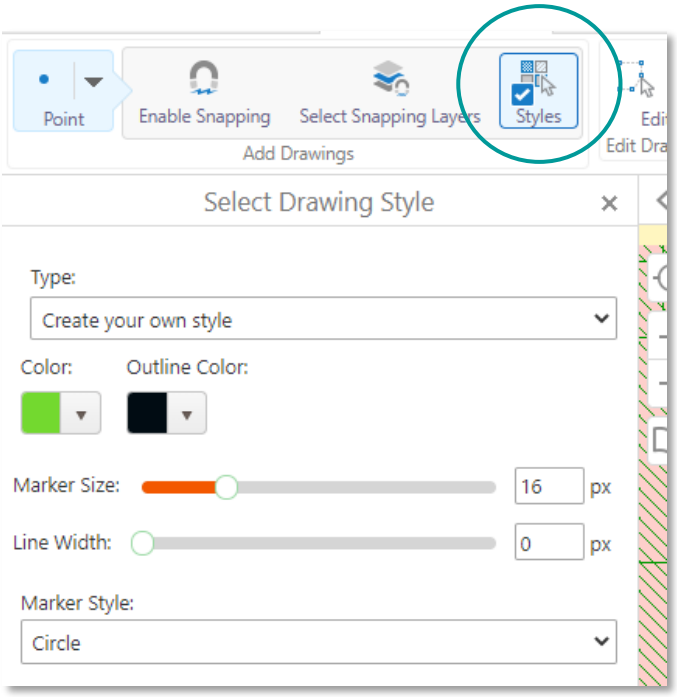
Some tools in this section are active only when an annotation on the map exists and is selected.

Use this tool...	To...
Point	Draw a point on the map. The shape, size, colour and transparency of the point can be set using tools that appear on the toolbar when you select one of the drawing tools.
Text	Add text to the map. Click on the map and type the text. You can change the font, size, colour, transparency and angle of the text.
Line	Draw a straight line or click to change the line and draw in a new direction. The style, thickness, colour, and transparency of the line can be set.

Use this tool...	To...
Freehand	Draw freely as a line on the map in any direction. The style, thickness, colour, and transparency of the line can be set.
Freehand Shape	Draw freely as a closed object on the map in any direction. The style, thickness, colour, and transparency of the line can be set.
Ellipse	Draw an ellipse on the map. Drag in different directions to change the shape and size of the ellipse. You can set the thickness, colour, and transparency of the border and the colour and transparency of the fill.
Circle	Draw a circle on the map. Drag into the centre or outwards to change the size of the circle. You can set the thickness, colour, and transparency of the border and the colour and transparency of the fill.
Polygon	Draw a polygon on the map, clicking to change direction. Double-click to stop drawing. You can set the thickness, colour, and transparency of the border and the colour and transparency of the fill.
Rectangle	Draw a rectangle on the map. Click and drag across the map. You can set the thickness, colour, and transparency of the border and the colour and transparency of the fill.
Edit Tools	
Edit	Each shape or object can be edited for shape and location. Click on the object and drag the node points to re-shape. Click inside a closed object / part of an object to move it to a new location.
Clear	Clear all the drawings on the map at the same time.
Erase	Remove drawings from the map one at a time by clicking on each one.

To change the style of an object select the

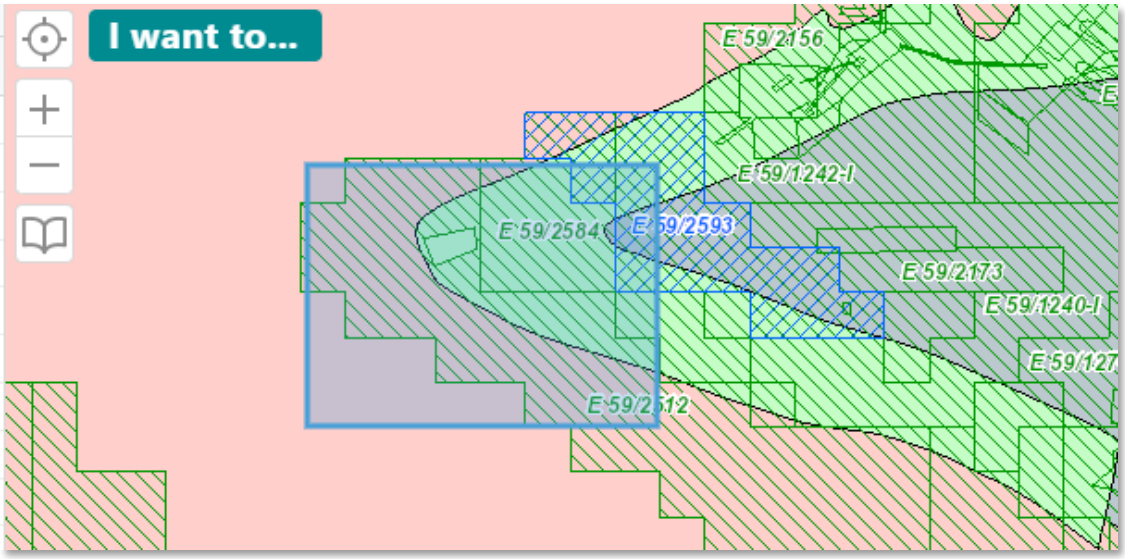
button and select from the available options.



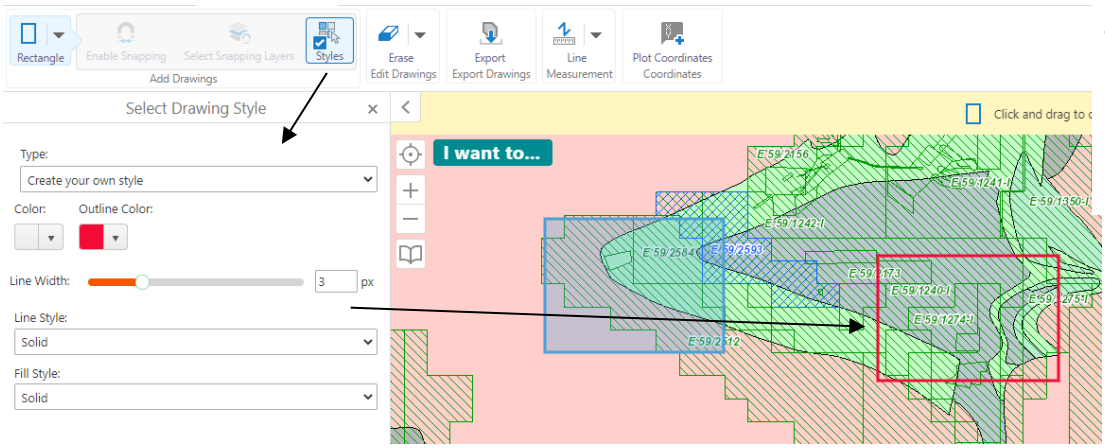
Exercise

Select Rectangle drawing tool and draw a rectangle on the map area.

Your map will look something like this by default.

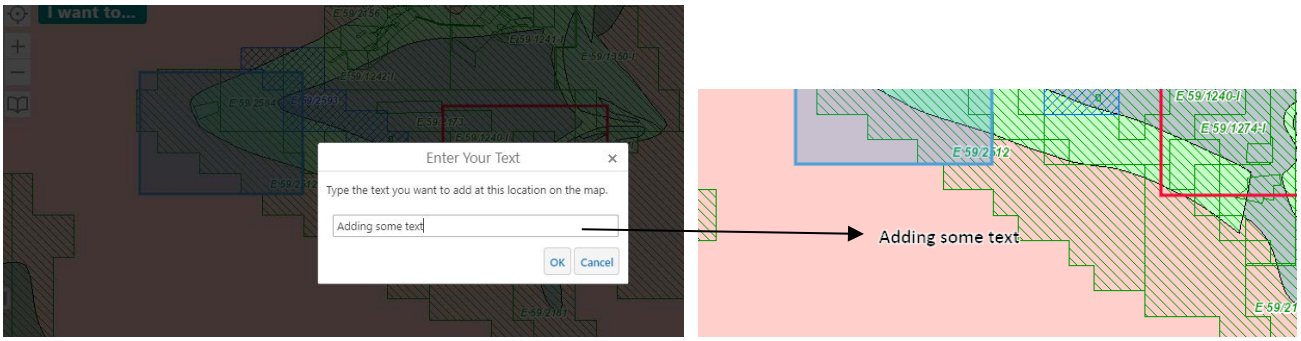


Change the rectangle properties to red and no fill and draw another rectangle.



To add text, select the

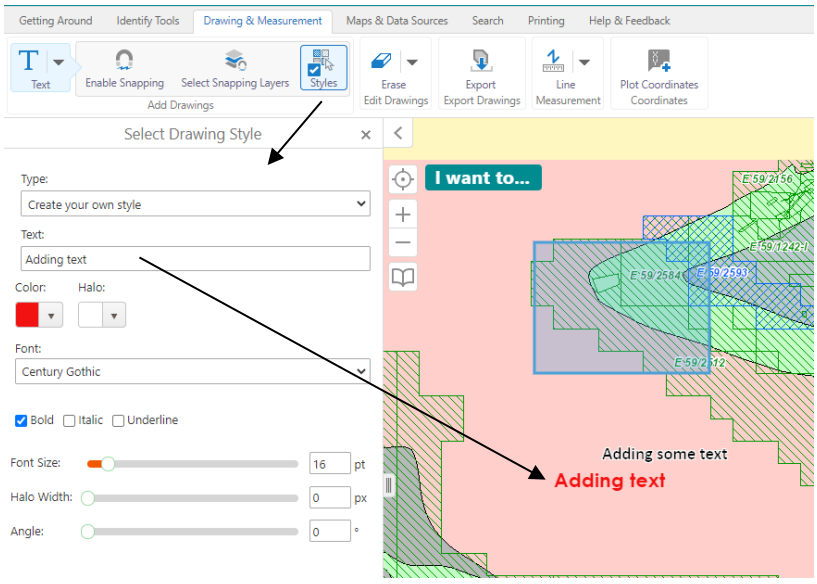
tool and click on the map area where you want the text. Enter your text in the pop-up box and click OK.



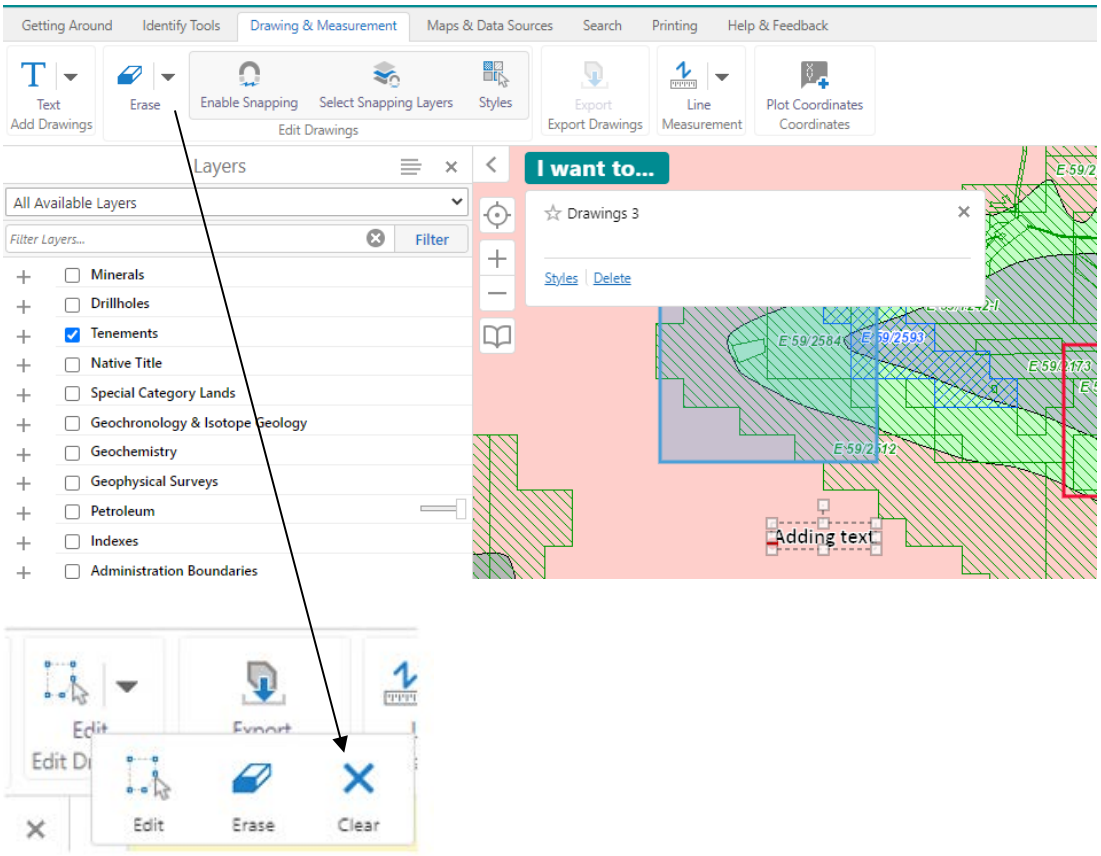
To add text with your own style select the

tool and click

Set up the properties you want and type in your text in the Text: box, then click on the map at your location for the text. Your map should now look something like this.

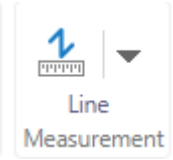


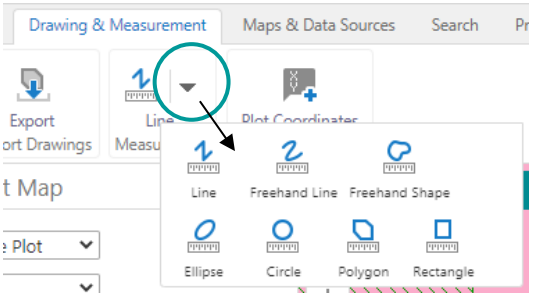
Clear removes all the drawings from the map.


Getting Around
Identify Tools
Drawing & Measurement
Maps & Data Sources
Search
Printing
Help & Feedback
Text
Add Drawings
Erase
Enable Snapping
Select Snapping Layers
Styles
Edit Drawings
Export
Export Drawings
Line
Measurement
Plot Coordinates
Coordinates
Layers
All Available Layers
Filter Layers...
Filter
Minerals
Drillholes
Tenements
Native Title
Special Category Lands
Geochronology & Isotope Geology
Geochemistry
Geophysical Surveys
Petroleum
Indexes
Administration Boundaries
I want to...
Drawings 3
Styles
Delete
E 59/2593
E 59/2512
Adding text
Edit
Erase
Clear

Exercise 6: Measure a distance

Provide tools for creating, formatting, and editing annotations to the map, including shapes and text.





Warm up

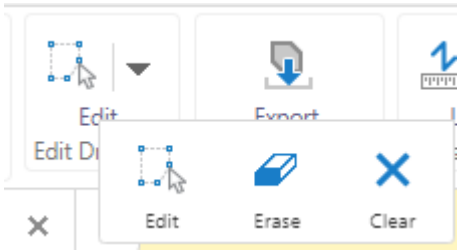
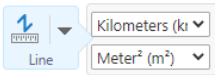
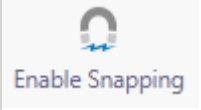
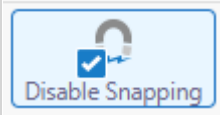
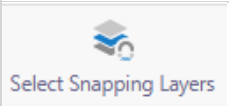
Open GeoVIEW.WA.

Turn on layers *Geology 1:2 500 000 Interpreted Bedrock Geology, Tenements Live/Pending,* and *Mines and Mineral Deposits (MINEDEX)* (see Exercise 2).

Zoom into an area of interest.

Method

Use this tool...	To...
Line	Measure distances on the map by drawing a segmented line through the area.
Freehand Line	Measure across the map by holding down the left mouse button and dragging the mouse cursor through the area required.
Freehand Shape	Measure an area of the map by drawing a shape around the area.
Ellipse	Measure an area of the map by dragging an ellipse over the area required.
Circle	Measure an area of the map by placing a point on the map and dragging a outwards over the area.
Polygon	Measure lengths and an area of the map by drawing a series of lines around the area.
Rectangle	Measure lengths and an area of the map by dragging a rectangle over the area.

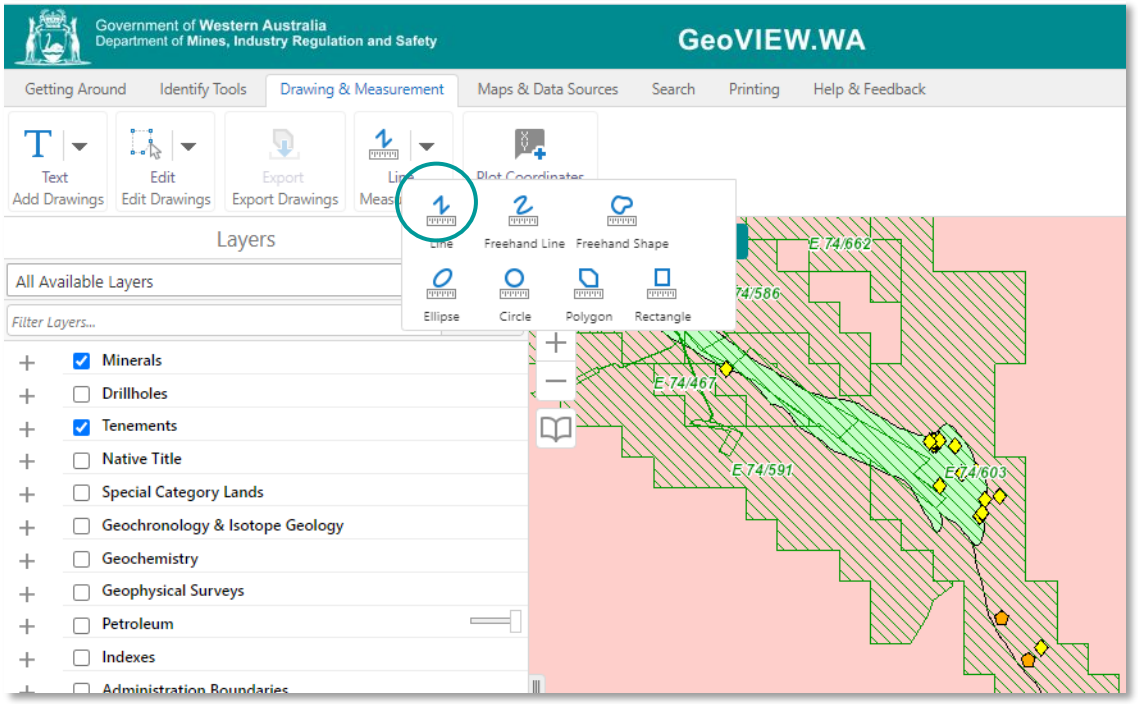
Use this tool...	To...
Edit Tools	
	Each shape or object can be edited for shape and location. Click on the object and drag the node points to re-shape. Click inside a closed object / part of an object to move it to a new location.
	Clear all the drawings on the map at the same time.
	Remove drawings from the map one at a time by clicking on each one.
	Choose the type of measurement: Feet, yards, metre, Kilometre, miles or nautical miles. Areas additionally by acres and hectares.
	Turn on snapping mode to snap to objects on the map. It displays as the Disable Snapping button below.
	Turn off the snap function by clicking the button again when it looks like this.
	Select which Layers to snap to.

Exercise

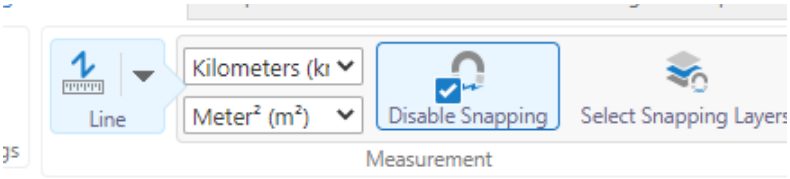
Measure the distance to a prospect location from a tenement corner.

Zoom in to an area of interest that shows both tenements and mines features.

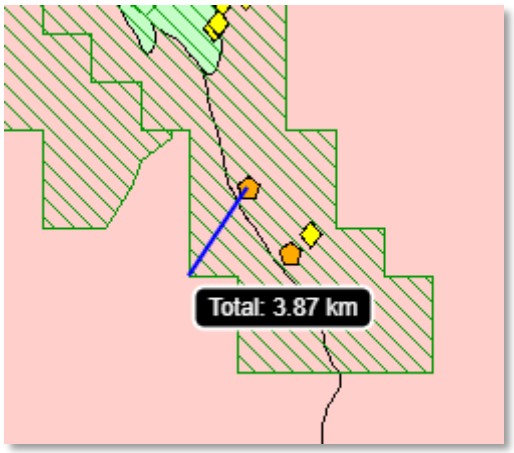
Select the Line tool from the options available.



To measure the distance from a prospect to the tenement corner, change the default Meters (m) Info to Kilometers (km). Click the Enable Snapping tool. A circle appears around the mouse point cursor.

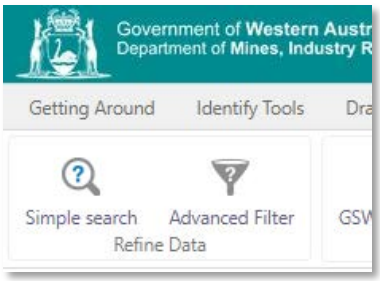


Click on the prospect and then double click on the tenement corner. In this case the distance is shown in kilometres. Your map should look something like this.



Exercise 7: Simple Query Builder

The Simple Query builder makes it possible to specify a search by layer, field, and values. It is also possible to add multiple conditions to a search.



Warm up

Open GeoVIEW.WA.

Turn on layers *Geology 1:2 500 00 Interpreted Bedrock Geology* and *Tenements Live/Pending (see Exercise 2).*

Zoom into an area of interest.

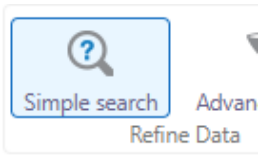
Method

The Simple Query Builder tool makes it possible for you to build complex queries without knowing how to write SQL statements. First you select the layer you want to query, and then you select the records or fields that you wish to query as well as the operator and the value. You can also add multiple conditions to the query. When you run the query, the results display in the Results List like all other searches.

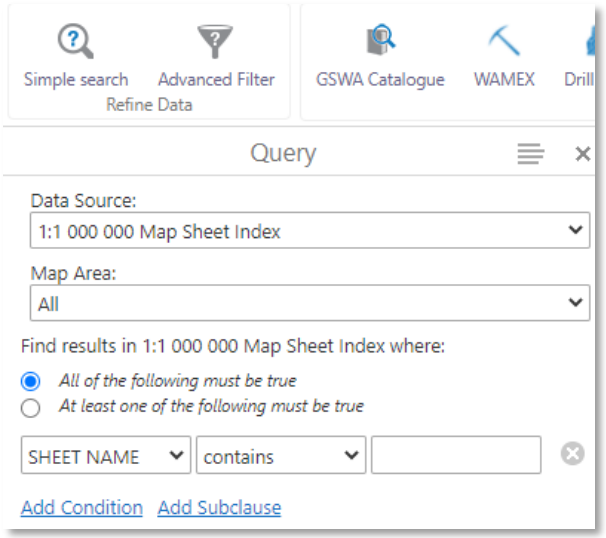
Exercise

To build a query using the Simple Query Builder:

On the **Search tab** of the toolbar, click **Simple Search**.



The Simple Search Query opens in the information pane.

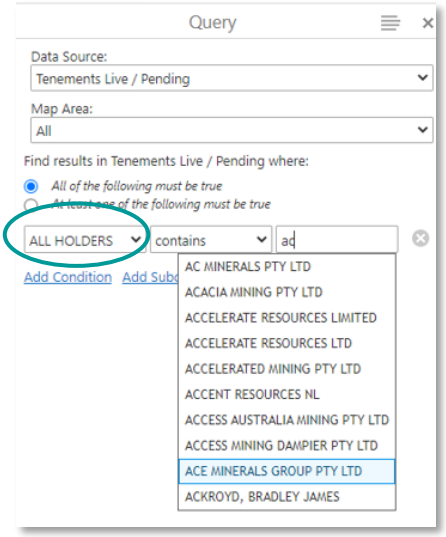


From the **Data Source** drop-down list, select the layer that you want to query, for example, **Tenements Live/Pending** near the bottom of the list in alphabetical order.

From the Field drop-down list, select the field that you want to search, for example a tenement with a certain company, **ALL HOLDERS**.

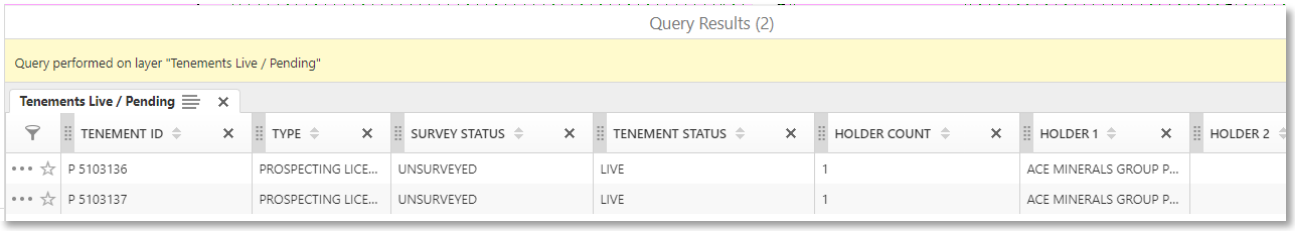
From the Operator drop-down list, select the operator, for example, **Contains**.

In the Value field (the last box on the right), start typing the Holder company name you want to query and select it from the list that appears, i.e. E 70/5736. If the tenement id does not appear it is usually because it does not exist, not is typed incorrectly.

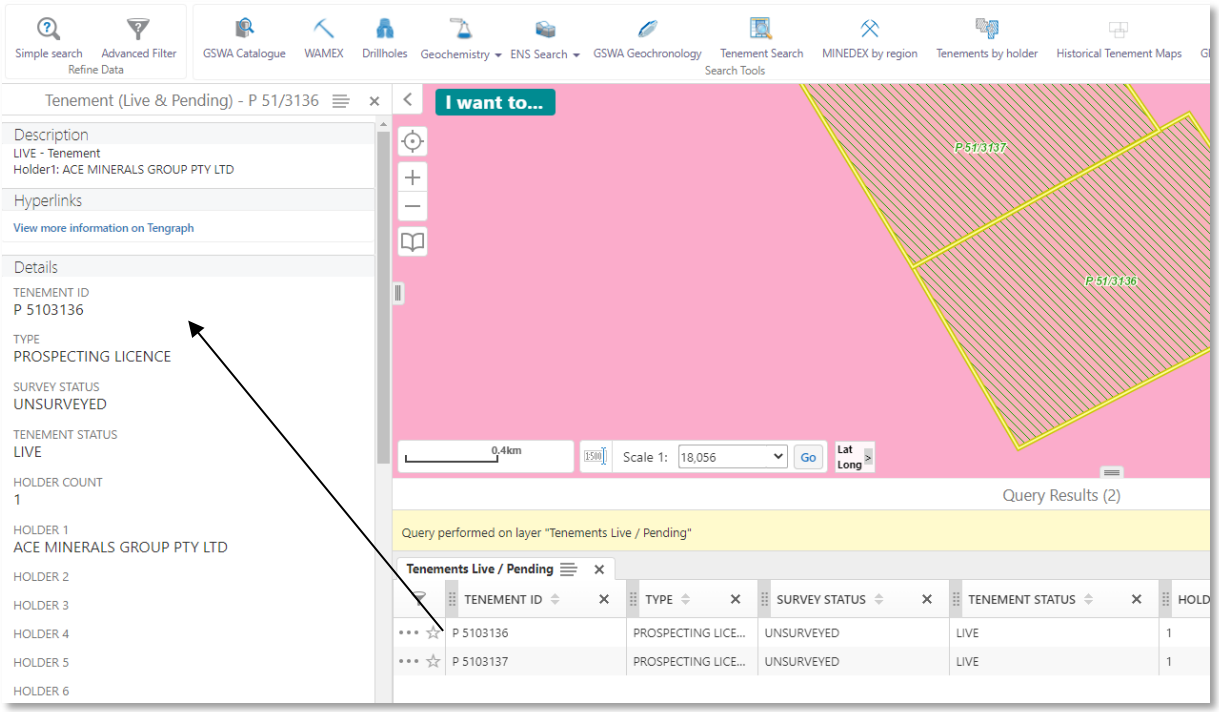


Then click the Search button at the bottom of the panel.

The result is a list of all tenements where a holder name contains ‘ACE Minerals Group Pty Ltd’.

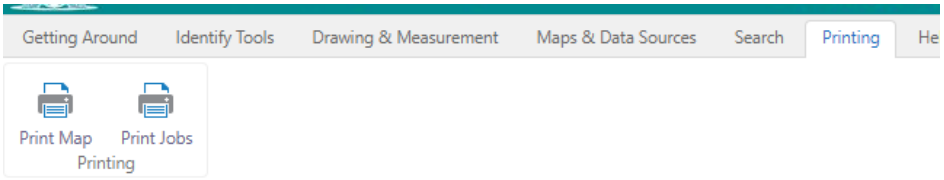


When you click on a row in the result list, the tenement is highlighted and centred, and the attributes are shown in the left panel. A link to Tengraph is also available at the top of the panel to obtain more data on this tenement.


Simple search
Advanced Filter
Refine Data
GSWA Catalogue
WAMEX
Drillholes
Geochemistry
ENS Search
GSWA Geochronology
Tenement Search
MINEDEX by region
Tenements by holder
Historical Tenement Maps
Search Tools
Tenement (Live & Pending) - P 51/3136
I want to...
Description
LIVE - Tenement
Holder1: ACE MINERALS GROUP PTY LTD
Hyperlinks
View more information on Tengraph
Details
TENEMENT ID
P 5103136
TYPE
PROSPECTING LICENCE
SURVEY STATUS
UNSURVEYED
TENEMENT STATUS
LIVE
HOLDER COUNT
1
HOLDER 1
ACE MINERALS GROUP PTY LTD
HOLDER 2
HOLDER 3
HOLDER 4
HOLDER 5
HOLDER 6
P 51/3137
P 51/3136
0.4km
Scale 1: 18,056
Go
Lat Long
Query Results (2)
Query performed on layer "Tenements Live / Pending"
Tenements Live / Pending
TENEMENT ID
TYPE
SURVEY STATUS
TENEMENT STATUS
P 5103136
PROSPECTING LICE...
UNSURVEYED
LIVE
1
P 5103137
PROSPECTING LICE...
UNSURVEYED
LIVE
1

Exercise 8: Printing a Map

When you print a map, you have options that make it possible to set up how your map should be printed, including the layout and scale.



Warm up

Open GeoVIEW.WA.

Turn on layers *Geology 1:2 500 00 Interpreted Bedrock Geology,* and *Tenements Live/Pending* (see Exercise 2)

Zoom into an area of interest.

Method

When you print a map, you have options that make it possible to set up how your map should be printed, including the layout and scale.

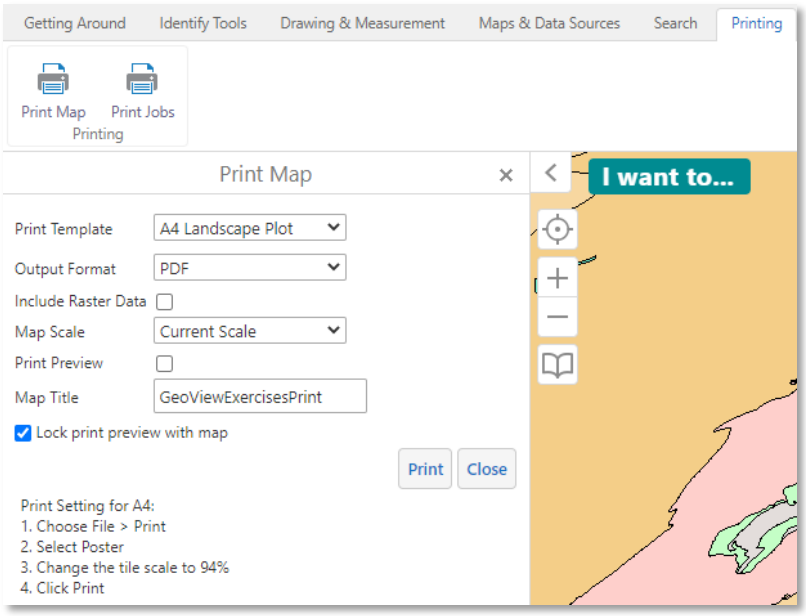
Use this tool...	To...
Print Map	Open the **Print Map** dialog box where you can select the Layout, Output Format and Scale to print the map.
Print Jobs	List of the current session print jobs that have been run. Click the Open link to open the pdf map in a new window.

Exercise

To print a map

On the **Printing** tab of the toolbar, click **Print Map**.

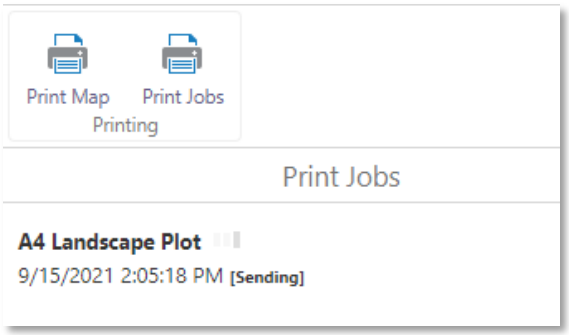
For this exercise we will print an A4 landscape, at map scale.

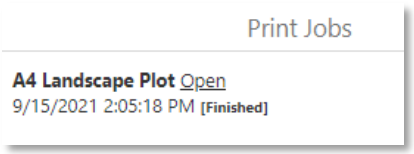


Select the following options:

- **Select Layout**: A4 Landscape Plot
- **Output Format**: PDF
- **Include Raster Data:** Tick this to print the raster images i.e. the basemap, geophysics or geology imagery
- **Map Scale**: Current Scale
- **Map Title**: Enter a title for the map
- Click **Print**

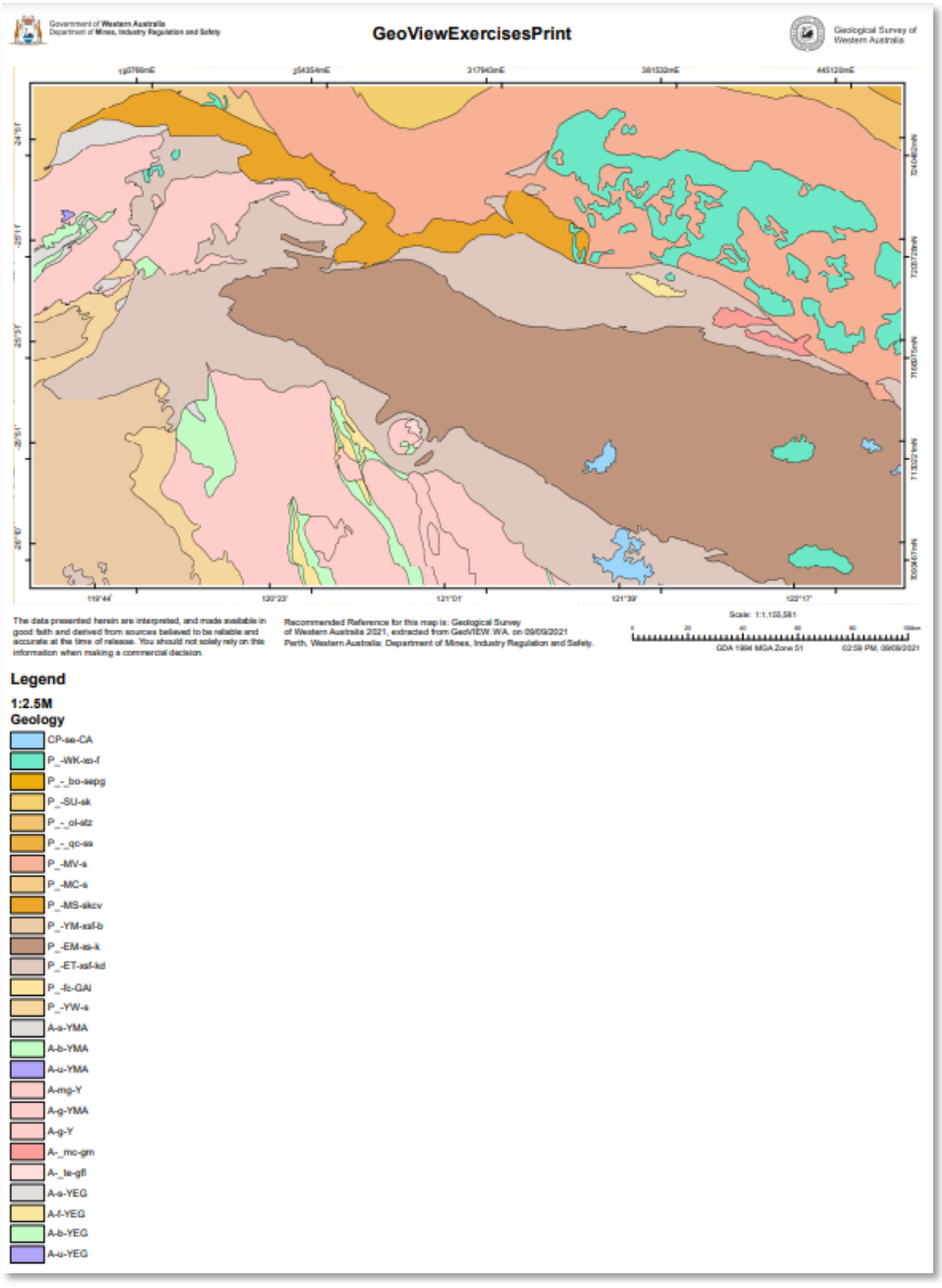
When your print file is ready, a confirmation message displays.





Click **Open**.

Depending on your choice of file format, the file opens in your PDF Reader or in your Browser window.



PDF print file open in Adobe Reader

Do one of the following:

- In Adobe Reader, click the **Print** icon, and then click **OK**
- In your browser, click **File** | **Print**, and then click **OK**
- In your browser, click the **Print** icon in the top right corner, and then click **Print,** or **Save** to create a pdf
- In a browser with no File menu, right-click on the map area, select **Print** from the list, and then click the **Print** button.