



AuScope



# AuScope Discovery Portal User Guide

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# Overview

The AuScope Discovery Portal <https://portal.auscope.org.au/> displays geospatial data obtained from a number of geoscience organisations around Australia. The portal provides a way to find and download geospatial data and display it on the map. Finding the data is managed by the *data services* panels at the left-hand side, and the new search bar at the top.

The following sections describe the portal: the first section of this document is an overview of the portal data services. Later sections provide details on the portal's operations. The examples section contains steps to perform common activities.

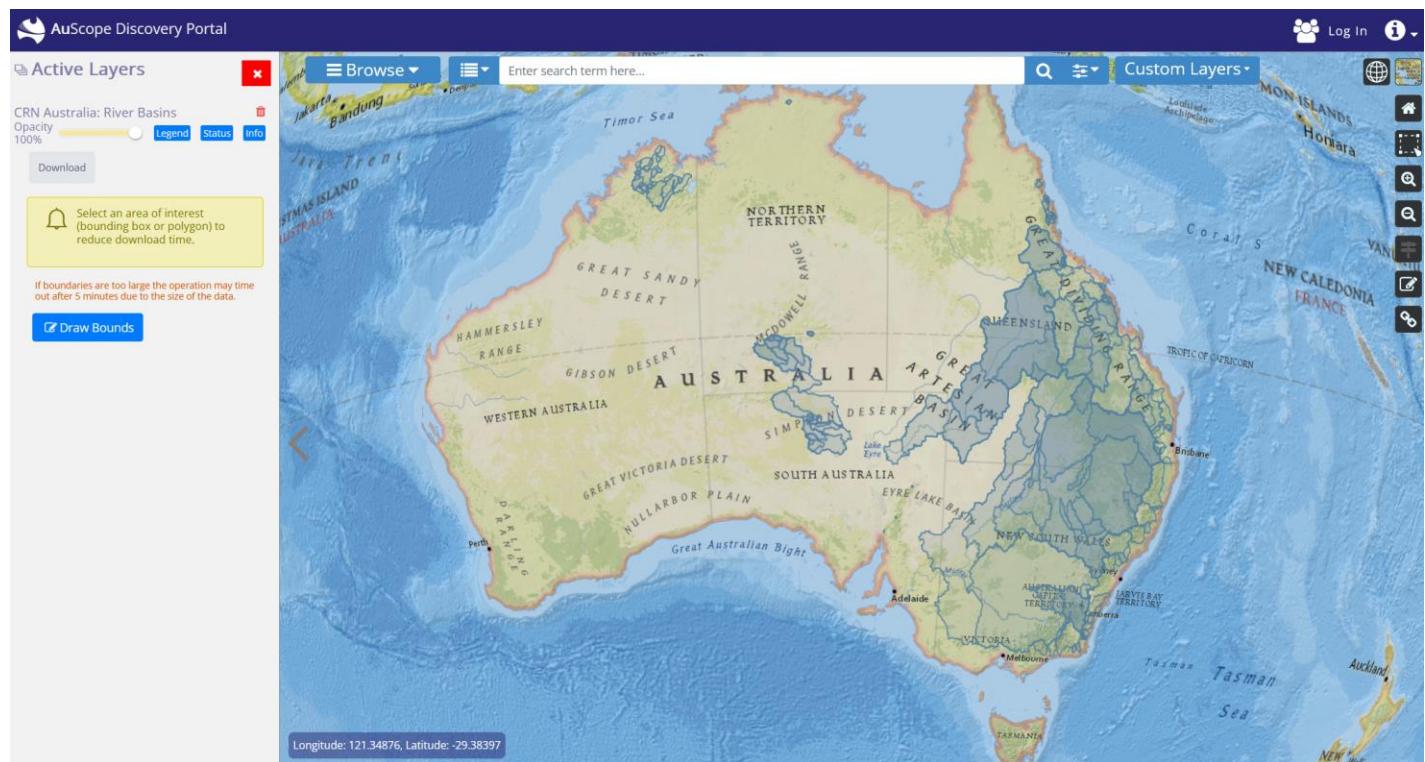


Figure 1: AuScope Portal with ESRI National Geographic base map.

# Data Services

The data services are a collection of web-based services from organisations around Australia that provide geospatial data, such as Geoscience Australia, CSIRO, state governments geological surveys and several Australian universities.

Various organisations provide data to the portal: it may be as simple as satellite imagery or a view into a geospatial database. The data provided by these services are drawn as *layers* overlaying the background map. Selecting the data to view can be done in two different ways:

1. “Browse Panel” will allow you to choose from a curated menu of layers grouped into categories. These layer categories are known as “Featured Layers Groups.”
2. “Search Panel” can be used to search from a large variety of layers by entering a search term into a text box.

## Information Panel

By clicking on the  button at the far top right corner of the window, information about this website and also this User Guide can be accessed, see Figure 2.

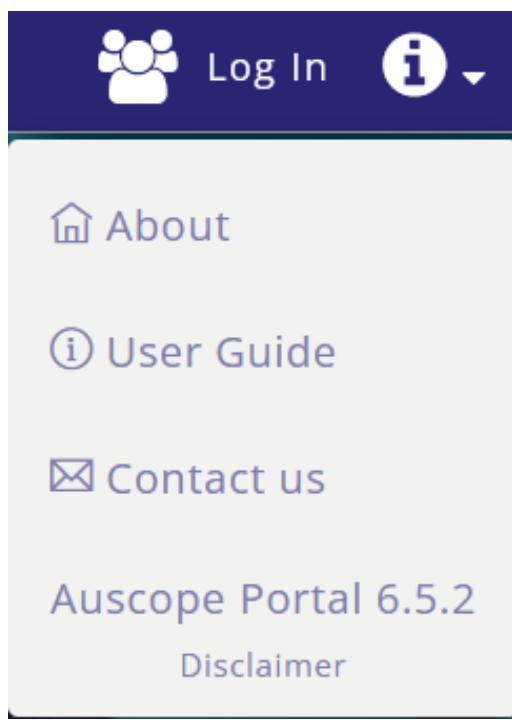


Figure 2: Information Panel

# Browse Panel

The screenshot shows the AuScope Discovery Portal's browse interface. On the left, there's a sidebar with a list of 'Featured Layer Groups' including ASTER Mineral Maps, Boreholes, Boundaries, Earth Resources Lite v2, Earth Resources v1, Field Observations, Geochemistry, Geochronology, Geochronology- OCTOPUS (Cosmogenic DB), Geological Maps, Geophysical Survey Dataset..., Geophysics, Geophysics- National Geophysical Compilat..., Gravity- GRACE, IGSN, Indigenous Data, Isotopes, Magnetics, Magnetotellurics, Mineral Deposits, Mineralogy- Geosample, Modelling- Loop3D, Models, Passive Seismic, Reports- Geoscience Australia, Reports- PMD\*CRC and LEME CRC, Spectral Samples, and Tenements. A search bar at the top right says 'Enter search term here...'. The main content area shows a map of Australia with a yellow overlay representing the 'Gravity dataset'. A legend indicates that yellow represents the gravity dataset. To the right of the map, there's information about the 'Geophysical Survey Datasets - Gravity' dataset, including its description, contact organization (Geoscience Australia), constraints (Creative Commons Attribution 4.0 International Licence), info URL, WFS, and WMS links.

AuScope Discovery Portal

☰ Browse ▲

Enter search term here...

Featured Layer Groups

- ASTER Mineral Maps
- Boreholes
- Boundaries
- Earth Resources Lite v2
- Earth Resources v1
- Field Observations
- Geochemistry
- Geochronology
- Geochronology- OCTOPUS (Cosmogenic DB)
- Geological Maps
- Geophysical Survey Dataset...**
- Geophysics
- Geophysics- National Geophysical Compilat...
- Gravity- GRACE
- IGSN
- Indigenous Data
- Isotopes
- Magnetics
- Magnetotellurics
- Mineral Deposits
- Mineralogy- Geosample
- Modelling- Loop3D
- Models
- Passive Seismic
- Reports- Geoscience Australia
- Reports- PMD\*CRC and LEME CRC
- Spectral Samples
- Tenements

**Geophysical Survey Datasets (GADDS) Lay...** Information  Stay Open

**Geophysical Survey Datasets - Gravity**

WMS Preview:

Gravity dataset

Gravity data measures small changes in gravity due to changes in the density of rocks beneath the Earth's surface. The data collected are processed via standard methods with rigorous corrections to ensure the response recorded is that due only to the rocks in the ground. The results produce datasets that can be interpreted to reveal the geological structure of the sub-surface. The processed data is checked for quality by GA geophysicists to ensure that the final data released by GA are fit-for-purpose.

Contact org: Geoscience Australia

Constraints: © Commonwealth of Australia (Geoscience Australia) 2019. This product is released under the Creative Commons Attribution 4.0 International Licence, <https://creativecommons.org/licenses/by/4.0>

Info URL: [Link to Geonetwork Record](#)

WFS: [WFS GetCapabilities Info](#)

WMS: [WMS GetCapabilities Info](#)

Figure 3: Browse Panel

To view a layer, you have to:

1. Click on  at the top left-hand corner of the screen. (Figure 3)
2. Select a category in the “Featured Layer Groups” column on the left-hand side.
3. Select a layer from the middle column, by clicking on the layer name.
4. The right-hand column will be updated with information about the layer.
5. Add the data as a map layer by clicking on **Add Layer** button in the right-hand column.
6. The “Browse Panel” will close when you add the layer. To disable this, you can select the “Stay Open” tickbox at the top right corner of the “Browse Panel.”
7. On the far-left hand side the “Active Layers” panel will appear. This can be used to modify the layer.



Note that adding a layer may not display the data immediately: the data has to be fetched from the providers and so it may take a few minutes and be displayed in batches.

## Active Layers Panel

The Active Layers Panel appears when a new layer is loaded onto the map. The controls are described in Figure 4 below.

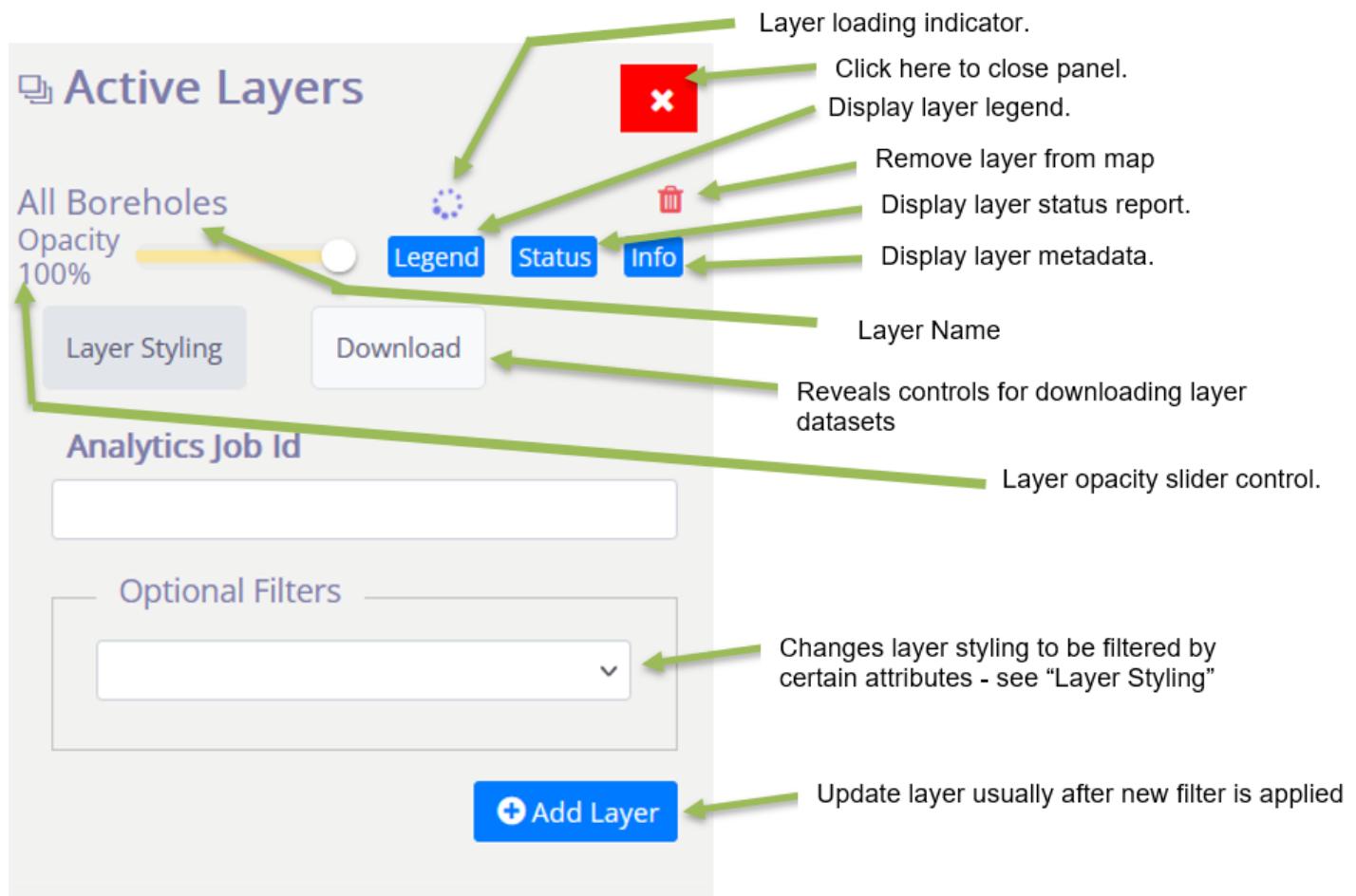


Figure 4: Active Layer controls.

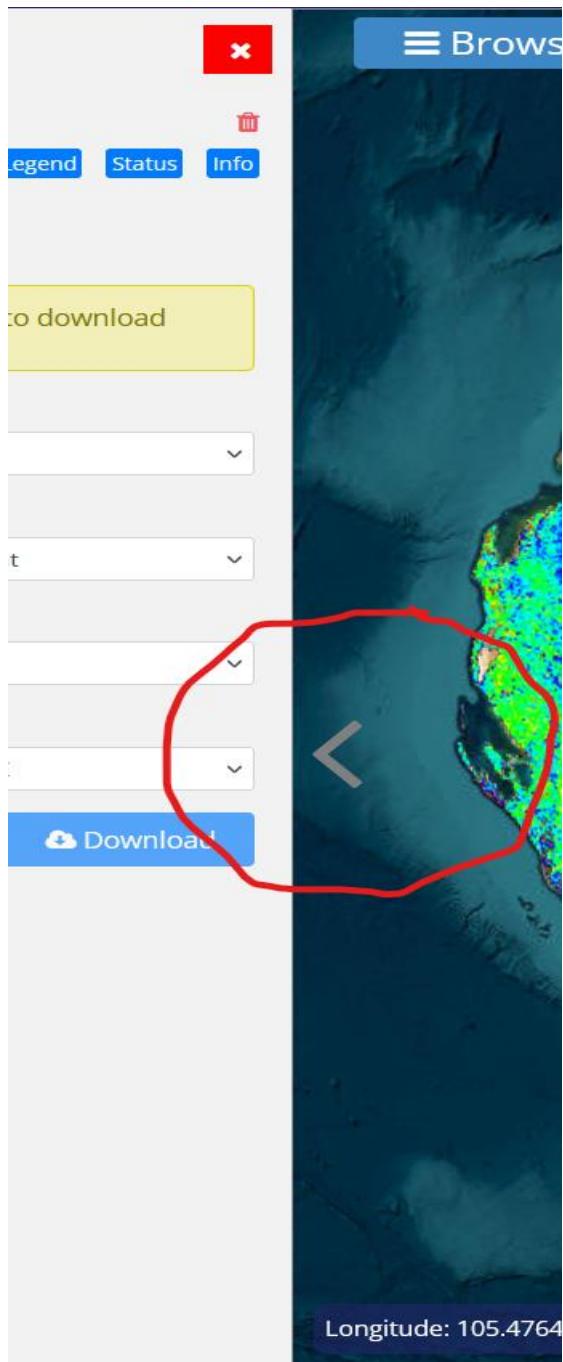


Figure 5: Toggle for opening and closing Active Layers panel.

To close “Active Layers” panel either:

1. Click on **X** at top right-hand corner of panel.
2. Click on “<” panel toggle, see Figure 5

To open “Active Layers”, click on “>” panel toggle, see Figure 5

## Status Panel

To check on the progress of layers that are being loaded onto the map click **Status** in the Active Layers panel to get a report. Figure 6 is an example.

Status report	
URL	Status
<a href="https://sarigdata.pir.sa.gov.au/geoserver/ows?SERVICE=WMS&amp;">https://sarigdata.pir.sa.gov.au/geoserver/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://geology.data.vic.gov.au/nvcl/ows?SERVICE=WMS&amp;">https://geology.data.vic.gov.au/nvcl/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://geology.data.nt.gov.au/geoserver/ows?SERVICE=WMS&amp;">https://geology.data.nt.gov.au/geoserver/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://geology.information.qld.gov.au/geoserver/ows?SERVICE=WMS&amp;">https://geology.information.qld.gov.au/geoserver/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://nvclwebservices.csiro.au/geoserver/ows?SERVICE=WMS&amp;">https://nvclwebservices.csiro.au/geoserver/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://www.mrt.tas.gov.au/web-services/ows?SERVICE=WMS&amp;">https://www.mrt.tas.gov.au/web-services/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://geossdi.dmp.wa.gov.au/services/ows?SERVICE=WMS&amp;">https://geossdi.dmp.wa.gov.au/services/ows?SERVICE=WMS&amp;</a>	Complete
<a href="https://gs.geoscience.nsw.gov.au/geoserver/ows?SERVICE=WMS&amp;">https://gs.geoscience.nsw.gov.au/geoserver/ows?SERVICE=WMS&amp;</a>	Complete

Close

Figure 6: Example Status Panel

## Displaying Map Legend

Clicking on the **Legend** button in the Active Layers panel will display the Map Legend on the map. See Figure 7 for an example.

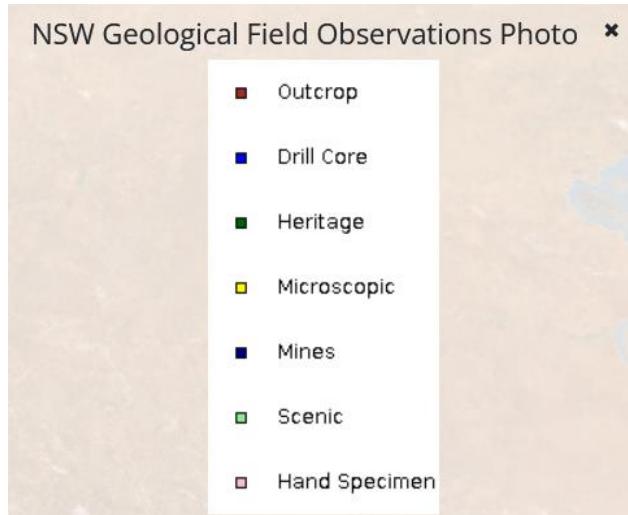


Figure 7: Example Legend

## Information Panel

Clicking on the **Info** button in the Active Layers panel will open up the Information panel to find more detailed information about the layer. Click on the provider name to display service details.

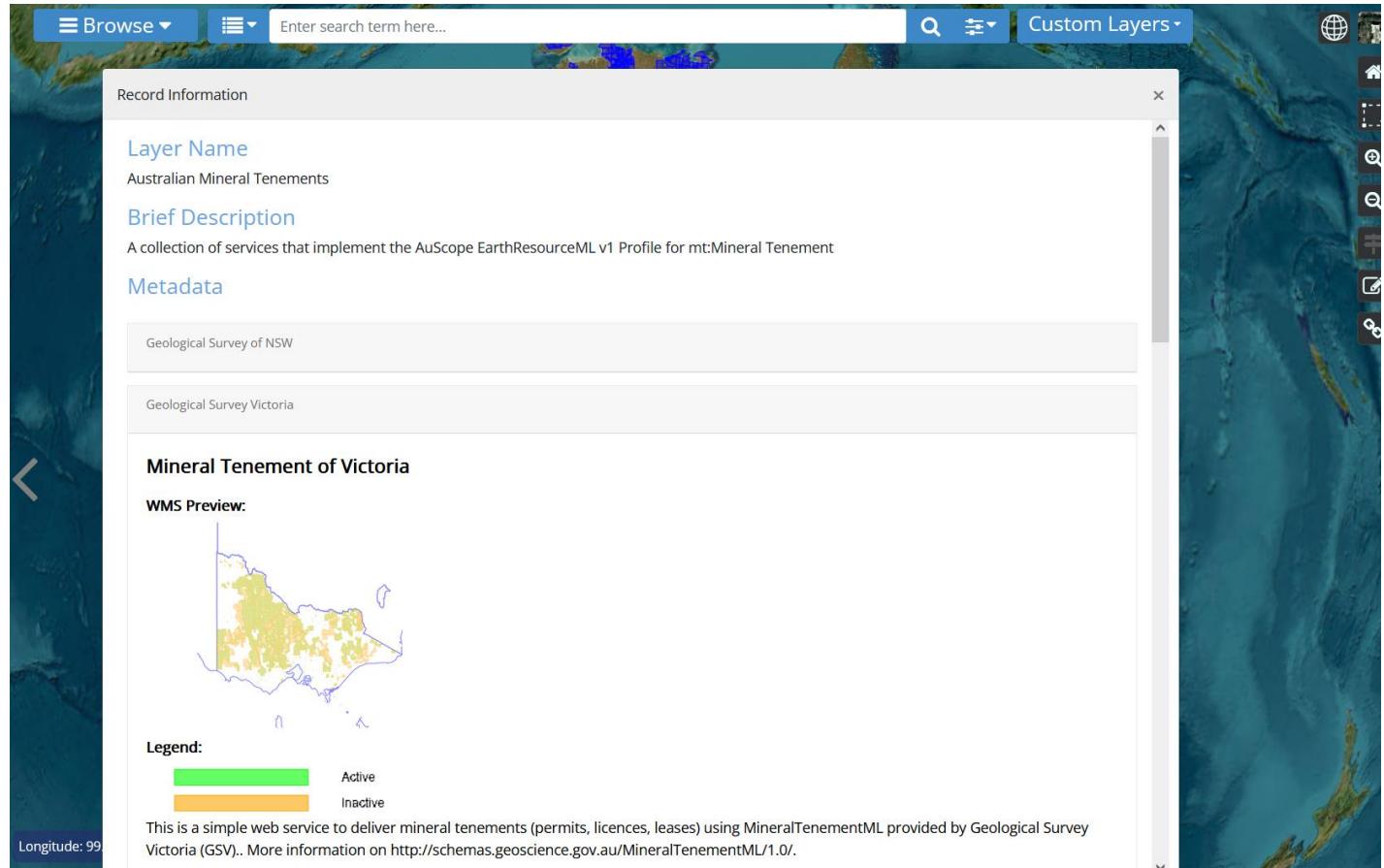


Figure 8: Information Panel

# Downloading from the Active Layers Panel

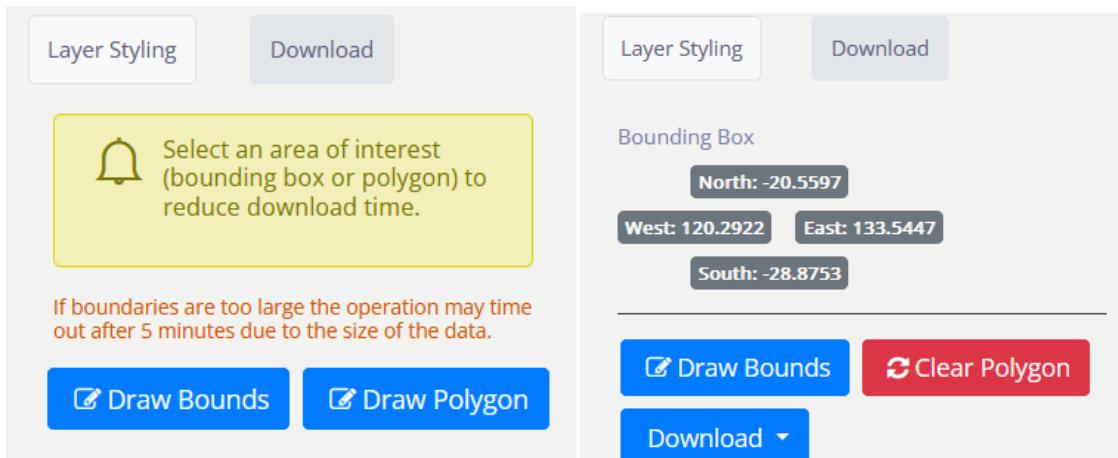


Figure 9: Two different modes of download Panel. On the left is before selecting a download area, on the right is after area selection.

If you would like to perform further analysis on the data being viewed in the portal, you can download the data to your workstation by selecting the **Download Tab**.

If you click on the **Download** button, you will download all the data from all providers. This request may fail if there is too much data, as the connection may time out.

It is therefore advisable to use the **Draw Bounds** or **Draw Polygon** (if available) buttons to reduce the size of the download request.

## Selecting a bounding box to limit the download size

If you click on the **Draw Bounds** button you can create a bounding box by clicking twice in the map area, once in the top left corner and again in the bottom right corner as shown above. Some layers will provide a **Draw Polygon** button that will allow you to draw a polygon to define download bounds.

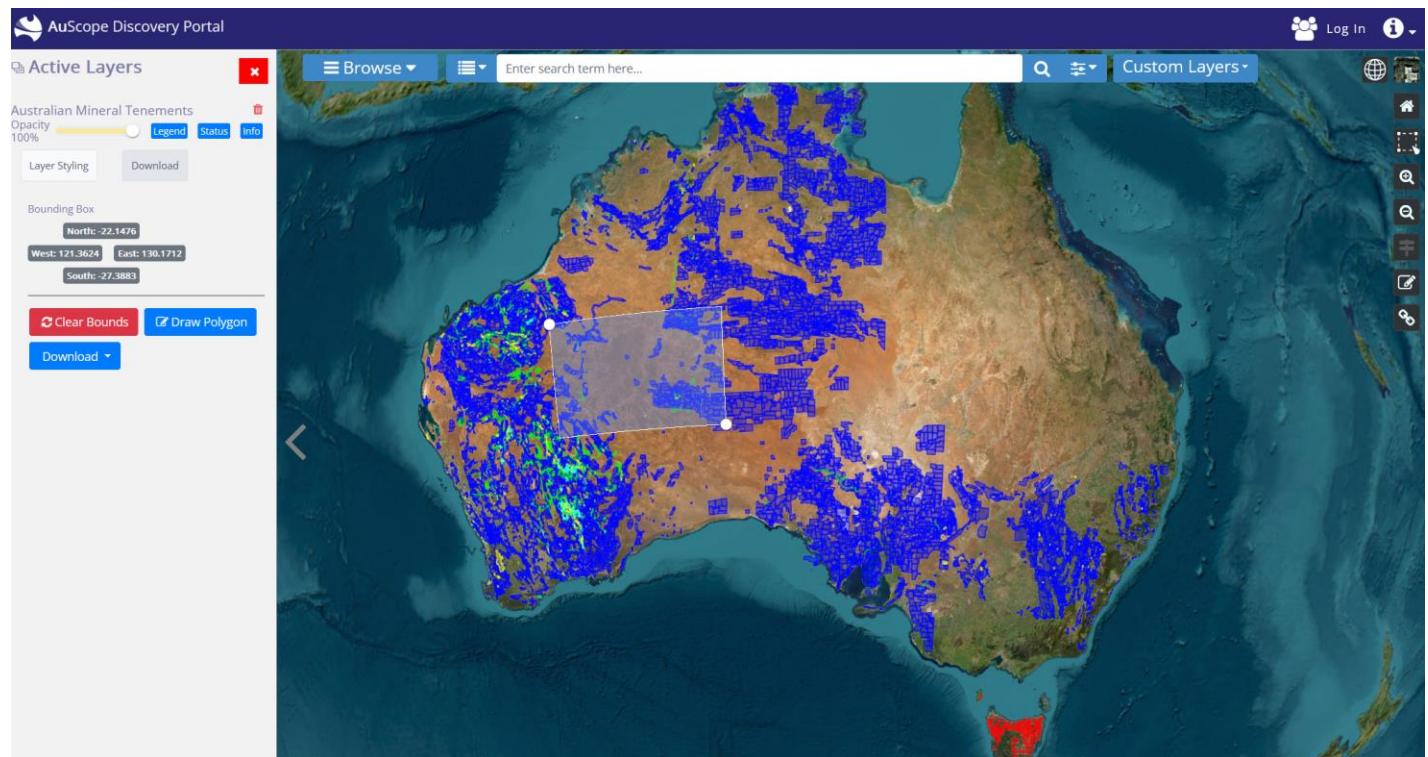


Figure 10: Selecting a bounding box to limit the download size.

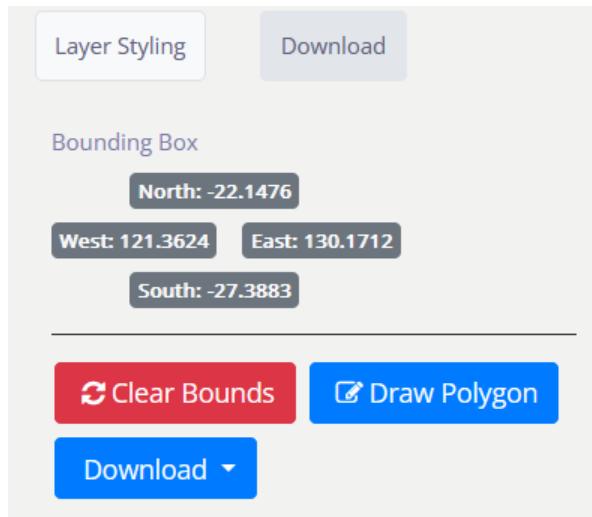


Figure 11: Download Panel with bounding box filter.

Once a bounding box has been defined, the Download Panel will display its coordinates (above), and you can click on the **Download** button to get the results.

# Layer Styling in Active Layers Panel

The screenshot shows the 'Layer Styling' tab selected in the top navigation bar. Below it, there's a 'Color Code' section and a 'Tenement Type' dropdown. The main area contains several filter sections: 'Optional Filters' (with a 'Select Filter' dropdown containing 'Provider'), 'Name' (with a text input 'Creaky Creek'), 'Expires After' (with a date input '22 / 07 / 2024'), and a list of providers. At the bottom is a blue 'Add Layer' button.

**Tenement Type** ↗ Mandatory filters are displayed here

**Select Filter:** ↗ Click here to remove optional filters  
Provider ↗ Click here to create new filters

**Name:**  
Creaky Creek ↗ This "Name" filter will allow the map to display features with a certain name

**Expires After:**  
22 / 07 / 2024 ↗ This "Expires After" filter will allow the map to display features whose expiry date is after the date below

Geological Survey of NSW  
 Geological Survey Victoria  
 Geological Survey of Western Australia (GSWA)  
 Department for Energy and Mining, South Australia  
 Northern Territory Geological Survey  
 Mineral Resources Tasmania

↗ "Provider" filter limits the map to display certain states and territories

**Add Layer** ↗ Update layer usually after new filter is applied

Figure 12: Filter Settings

Each layer provides different ways to filter the data depending on the structure of its data. The following image shows a sample of the filters from three different mining layers. Note that each filter provides fields of several types: plain text, dates and select lists.

- Plain text fields match the data exactly, but case insensitive. Some data services also support wildcards to match portions of the field.
- Date fields are in the format: "yyyy-mm-dd" and also provide a pop-up calendar to select the date (invalid dates are indicated with a red border around the input text box).
- Select lists are populated from unique values from the data.



Some layers may not have any filters. Layers that supply imagery may only provide a filter to change the layer's opacity when the images are drawn on the map.



Some layer fields are numeric, for example the amount of ore processed. There are no checks to verify that you have entered a numeric value in these fields. Entering a non-numeric value will result in either no data or the filter will be ignored.

Click the **Add layer to map** button to apply any filters to the data and display the results on the map. If the layer is already active it will be replaced by a layer with the new filter.



A number of data services provide data from external sources and when they are added to the map a copyright notice will be shown.

## Wildcards

Wildcards are special characters that allow filters to match all or part of a text field. They may also position the match at the beginning or end of the field.



A data provider may choose not to implement wildcards (for example, to reduce processing overheads) or limit their behaviour. This means a filter on a text field *may* accept any of these matching rules:

1. A strict match of the entire text field, usually case insensitive.
2. A match to any portion of the field. For example, a filter of "old" will match "goldfield lease" and "the folding chair".
3. A "match any" beginning/end wildcard (asterisk:). **For example, "sil"** will match "silver mine" and "silicon chip". Similarly, "\*ts" will match "hot spots" and "polar orbits".
4. A "single character" wildcard (Hash: #). For example, "\*9#" will match "bore 295" and "mine number 1294".

# Search and Download Bar

Use the search bar at the top of the page to search for specific layers.

Enter a search term in the text field provided and press the search button  to conduct the search. You may also choose from one of the suggested terms as you type by clicking on it.

If there are many results they can be viewed a page at a time via these buttons at the bottom



left of the panel:

Layers labelled with  will appear at the top of the search results list. These layers are also accessible from the Browse Panel.



Press the Advanced Options button  to show the Advanced Option toolbar (Figure 13), which allow you to further refine your search to specific record fields, OGC services and spatial locations.



Figure 13: Advanced Option Toolbar

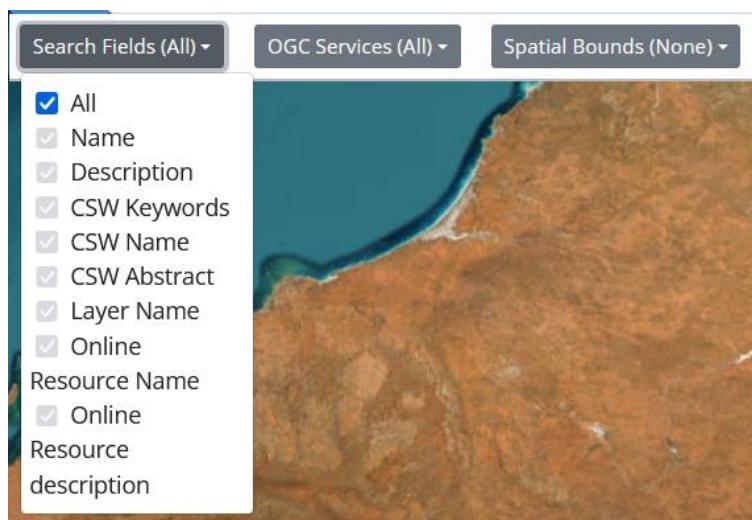


Figure 14: Advanced Option: change the fields that are searched.

In Figure 14 the fields within each record that are searched can be selected. By default, “All” fields are searched, but if the “All” is unticked, other services can be searched.

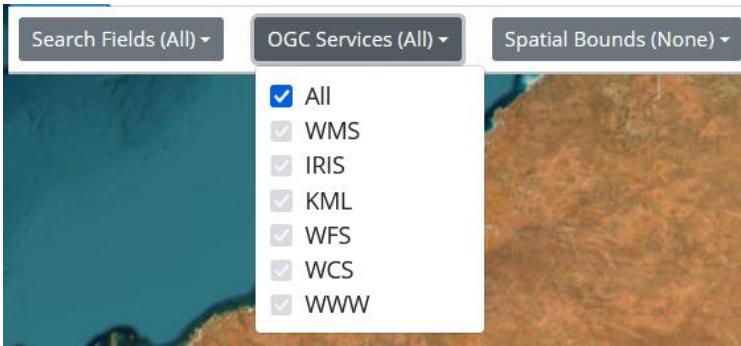


Figure 15: Advanced Option: Change the type of services searched for

In Figure 15 the type of services can be chosen. By default, “All” services are selected, but if the “All” is unchecked, other services can be selected.

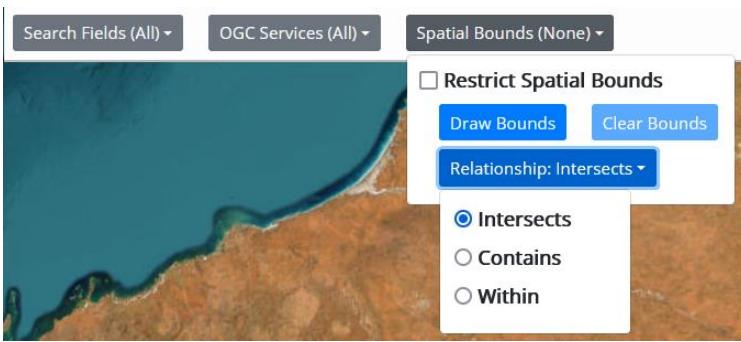


Figure 16: Advanced Option: Area search criteria.

In Figure 16 we see that one can search for records based on the area that they cover. The user must draw a polygon using the “Draw Bounds” button.

There are three kinds of spatial searches:

1. “Intersects” – all records that intersect with the drawn polygon.
2. “Contains” – all records that fully contain (i.e. envelop) the drawn polygon.
3. “Within” – all records that are completely within (i.e. inside) the drawn polygon

Layers in the list can be added to the map using button, if it is available. A pale button indicates that this cannot be added to the map.

Results may automatically be hidden as you interact with the map, to reveal them again press the show/hide results button

## Downloading Data with the Search Panel

The screenshot shows the GigaMap search and download interface. At the top, there's a search bar with the text "radiometric". Below it is a table of search results:

Results (2856)	Clear		
GA All Geochronology	Featured	Add	<input type="checkbox"/>
GA Deform/Metamorph/Alter Age Data	Featured	Add	<input type="checkbox"/>
<b>GA Igneous Crystallisation Age Data</b>	Featured	Add	<input checked="" type="checkbox"/>
GA Sedimentary Processes Age Data	Featured	Add	<input checked="" type="checkbox"/>
Geophysical Surveys - Radiometric	Featured	Add	<input checked="" type="checkbox"/>
Radmap v4 2019 filtered pct K	Featured	Add	
Radmap v4 2019 filtered ppm Th	Featured	Add	
Radmap v4 2019 filtered ppm U	Featured	Add	
Radmap v4 2019 filtered terrestrial dose	Featured	Add	
Radmap v4 2019 ratio Th over K	Featured	Add	

Below the table is a navigation bar with page numbers 1, 2, 3, 4, 5, ..., 102, 30, 300. To the right, there's a preview map titled "Igneous Crystallisation Age Data" and a legend:

**Information**  
**Igneous Crystallisation Age Data**  
**WMS Preview:**

**Legend:**

- < 347
- 347 - 649
- 649 - 1061

At the bottom, there's a section for "Selected Layers To Download":  
Layers: 0:0 Files: 0:0    
 Geophysical Surveys - Radiometric   
 GA Igneous Crystallisation Age Data   
 GA Sedimentary Processes Age Data

Figure 17: Search and Download Bar

If you click on the then a “Select Layers to Download” section will open up and you can select layers’ datasets for downloading. They are downloaded via the button. Multiple layers can be downloaded using the button.

# Map

The map area is a standard web-based map display: showing a background map with zero or more layers overlaying the map to display selected features. You can zoom in or out by using the mouse wheel and move the map by dragging the mouse around.

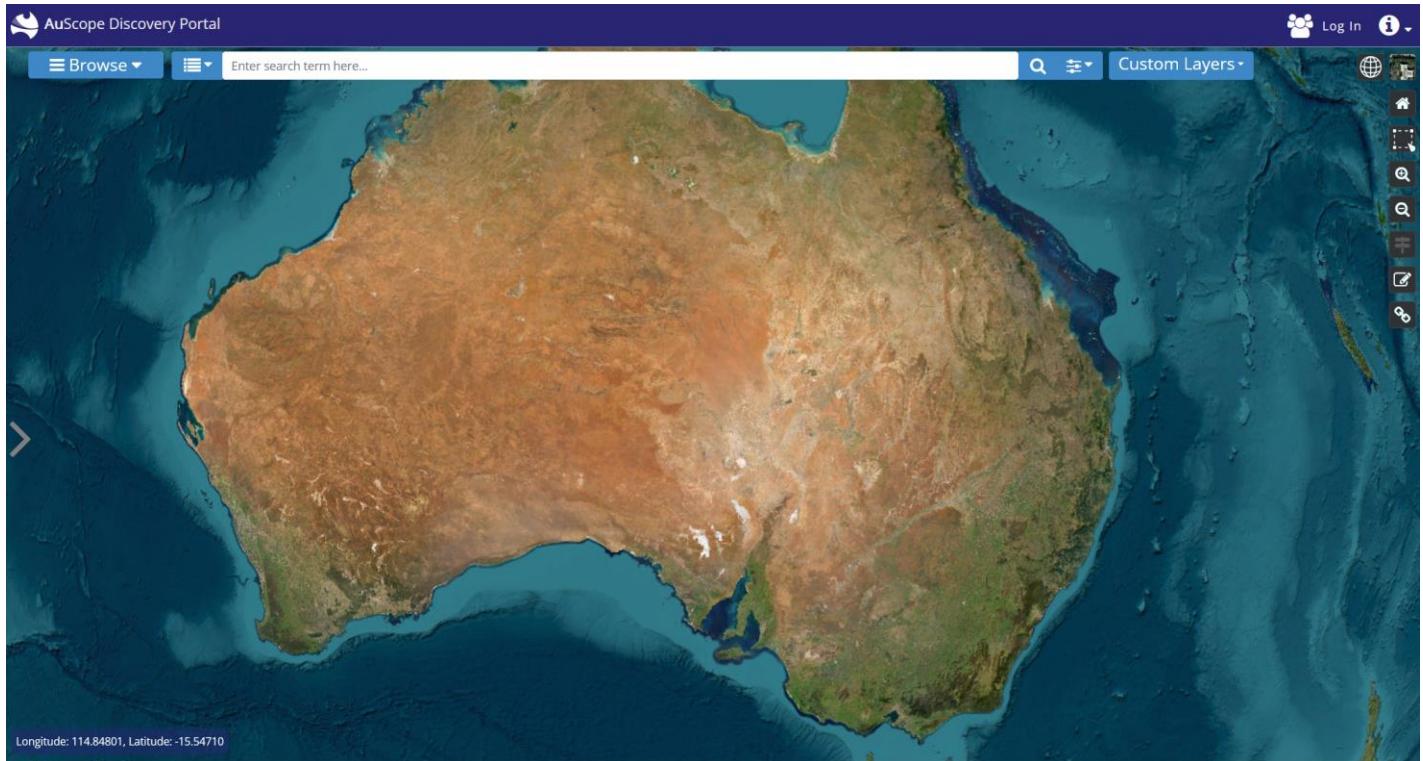


Figure 18: Map of Australia with default “ESRI World Imagery” base map.

# Map Navigation

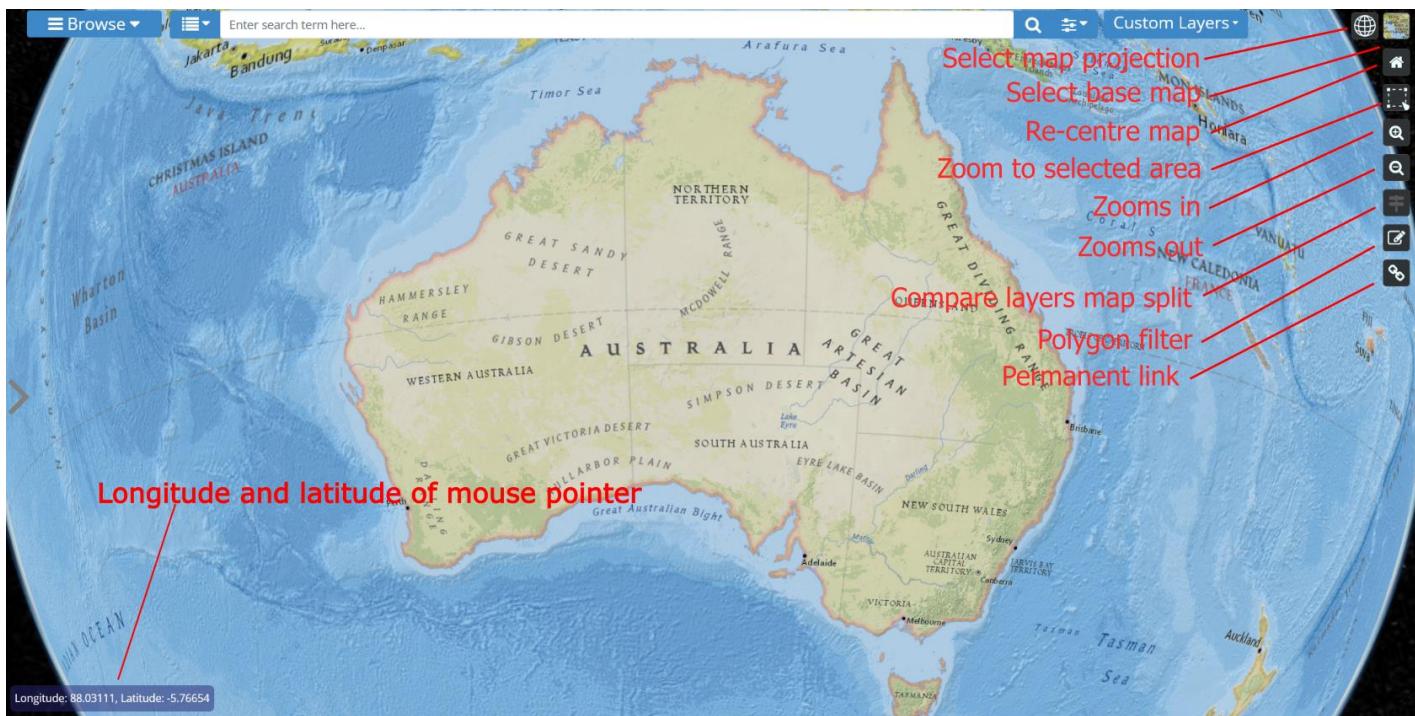


Figure 19: Using the magnify button to zoom to a certain area on the map (ESRI National Geographic)

There are several ways to navigate around the map.

- Using the Zoom button, click the or buttons to zoom in or out.
- **Magnify** button can be used to zoom to a particular area on the map:
  1. Click
  2. Click at the top left-hand corner.
  3. Click at the bottom right-hand corner.
- Using the mouse:
  - Move the map: hold the left-mouse button down and move the mouse.
  - Zoom in and out: use the mouse's scroll wheel.

## Split View

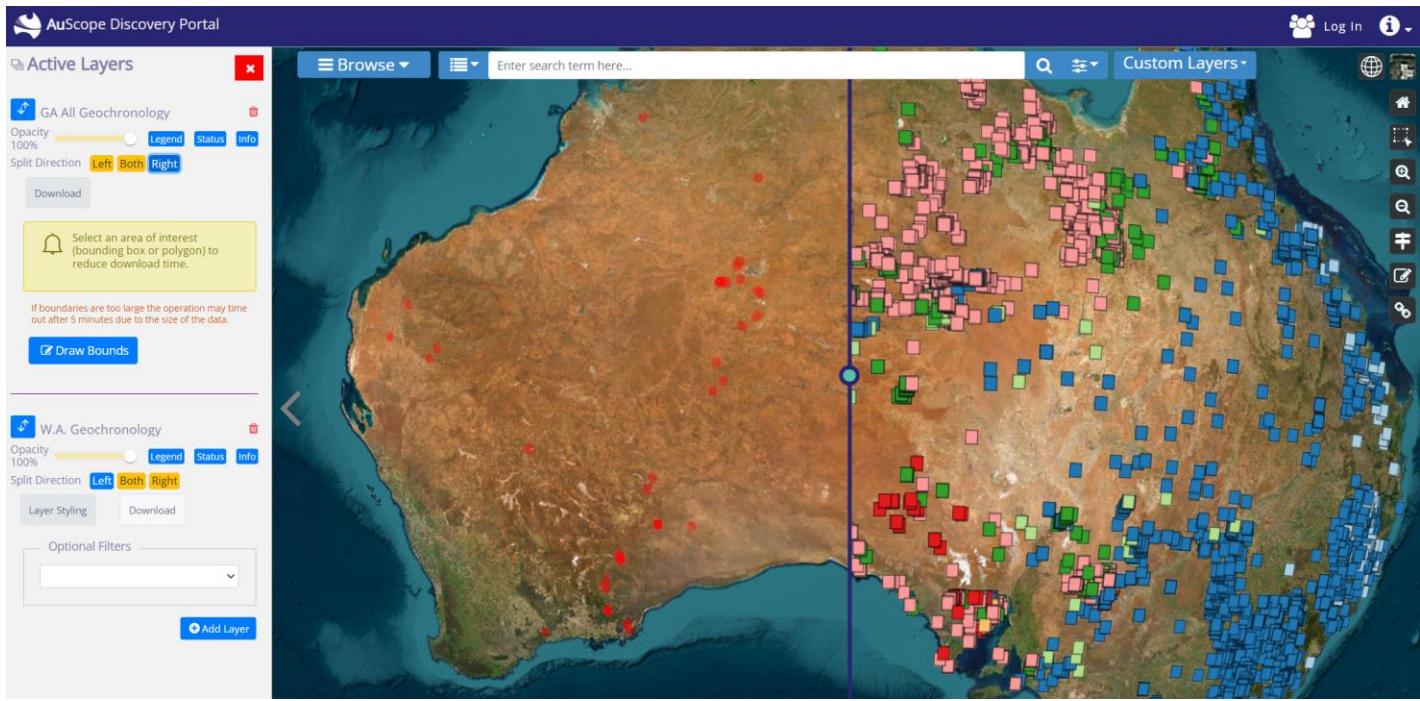


Figure 20: Comparing borehole layers using the split view and the “Left”, “Right” and “Both” buttons.



Once split view mode is enabled via this button, you can load two layers into the “Left”, “Right” or “Both” sides of the map by toggling the buttons in the Active Layers panel (see Figure 20)

## Map Projection



The map projection button has three modes of operation: or Using the selector (Figure 21) you can select one:

- 3D - three dimensional globe view
- 2D - two dimensional view
- Columbus View – two dimensional view, but from a distance above the map in 3D space



Figure 21: Selecting map projection.

## Changing the default ESRI World Imagery base map

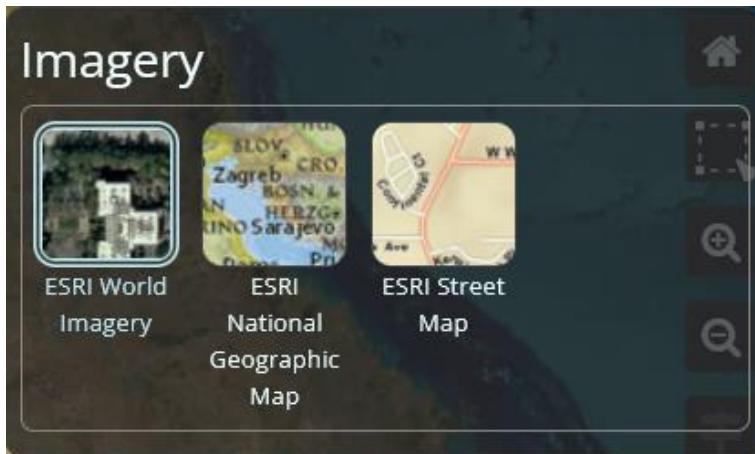


Figure 22: Background map selection.



There are a number of base maps to choose from by clicking on the button in the far top right corner of the map.

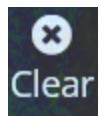
## Polygon Filter



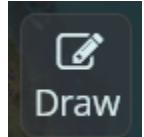
Figure 23: Polygon Filter



Clicking on reveals the Polygon Filter (Figure 23). The polygon filter is used as a map filter when selecting an exclusive area of the map from which to download data, for example.



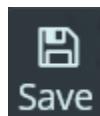
Clears a drawn polygon on the map.



Enables drawing a polygon on the map with the mouse



Loads polygon from local filesystem.



Saves polygon to local filesystem.



Creates a Region of Interest (ROI). This is a user defined polygon that can be retrieved and utilised in the same way as polygons from other sources. The ROI feature is only enabled when the user is logged in (See Login). The ROI is stored until removed by the user (see Managing ROIs and Permanent Links)

# Custom layers

The **Custom Layers ▾** button can be found at the top right-hand side of the window.

## Custom URL

KML/KMZ URL or OGC WMS Service URL

🔍

Enter your OGC WMS service endpoint  
e.g. "https://server.gov.au/service/wms"  
or KML/KMZ URL and hit **🔍**.

Figure 24: Custom layers.

Custom Layers allows you to add layers from any mapping server in the world. You will need the link (URL) to the web service and enter it into the field in the panel:

Press **Enter** or click on the **magnifying glass** 🔍 to connect to the service and the portal will query the service's capabilities. In the above figure a flood map provides precipitation and cloud maps amongst other weather data. These capabilities are treated like normal map layer and can be added to the map by clicking on the layer name and clicking the **Add layer to map** button.

Type of data	Source Type	URL
Flood reports	WMS	<a href="https://afrip.ga.gov.au/geoserver/floods/wms">https://afrip.ga.gov.au/geoserver/floods/wms</a>
WA bike trail	KML	<a href="https://catalogue.data.wa.gov.au/dataset/f950141e-f484-4edd-b6d3-2ead49a4a476/resource/553e646a-0bff-406f-8c45-85c733642f0f/download/munda_biddi_cycle_trail.kml">https://catalogue.data.wa.gov.au/dataset/f950141e-f484-4edd-b6d3-2ead49a4a476/resource/553e646a-0bff-406f-8c45-85c733642f0f/download/munda_biddi_cycle_trail.kml</a>
Power lines	KMZ	<a href="https://d28rz98at9flks.cloudfront.net/83105/ElectricityTransmissionLines_v2.kmz">https://d28rz98at9flks.cloudfront.net/83105/ElectricityTransmissionLines_v2.kmz</a>

Table 1: Example WMS, KML and KMZ URLs used to demonstrate "Custom Layers" capabilities.

## Custom File

Upload KML/KMZ file

 Load KML/KMZ

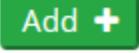
anomaly\_182.kml 

Figure 25: Load a KML or KMZ file onto map.

The user can also load a custom KML or KMZ file onto the map, by clicking on the “Load KML/KMZ” button, selecting a file, then adding the layer via 

# Create a Shareable and Citable Reference

The current state of the portal can be captured in the form of a unique URL. The URL is stored permanently in a database and can be revisited at any time by entering it into your web browser. This is very useful, for example for sharing maps with others or creating a citable reference.

## When not logged in

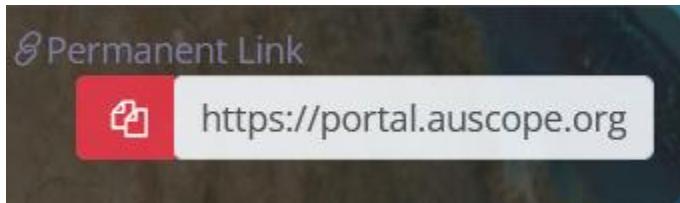


Figure 26: Creating a permanent link when not logged in.

To activate, you click on at the top left-hand corner of the window. A new unique URL will be generated. To copy it to the system clipboard, click on the button.

## When logged in

To activate, you click on at the top left-hand corner of the window. You can enter a name and an optional description of the link. You can also choose whether the link (URL) is accessible to the public.

### Create Permanent Link

A screenshot of a "Create Permanent Link" dialog box. It has fields for "Name" (with placeholder "Enter name..."), "Description" (with placeholder "Enter description (optional)..."), and "Make Public" (with a checked checkbox). There is also a "Link" field which is currently empty. At the bottom is a blue "Create Permanent Link" button.

Figure 27: Create a permanent link when logged in.

Hit to create the link (URL).

To copy it to the system clipboard, click on the button.

## Login and Bookmarks

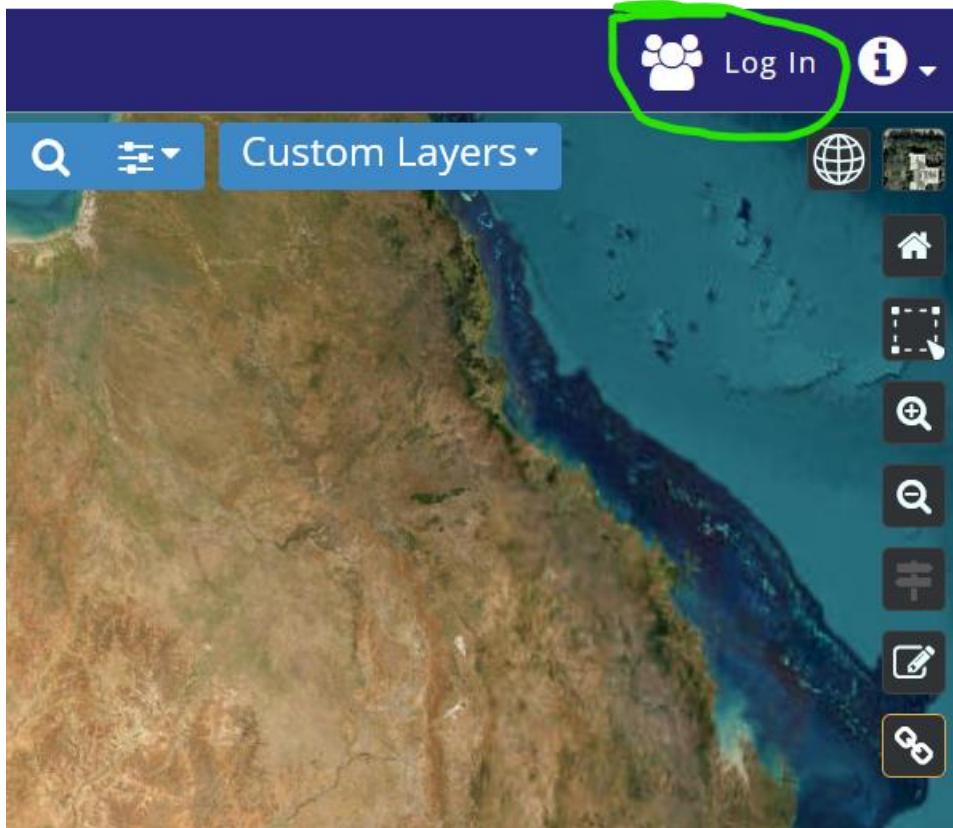


Figure 28: The location of the login button.

You can also login to the portal via AAF or Google or github by clicking on the login button shown above.

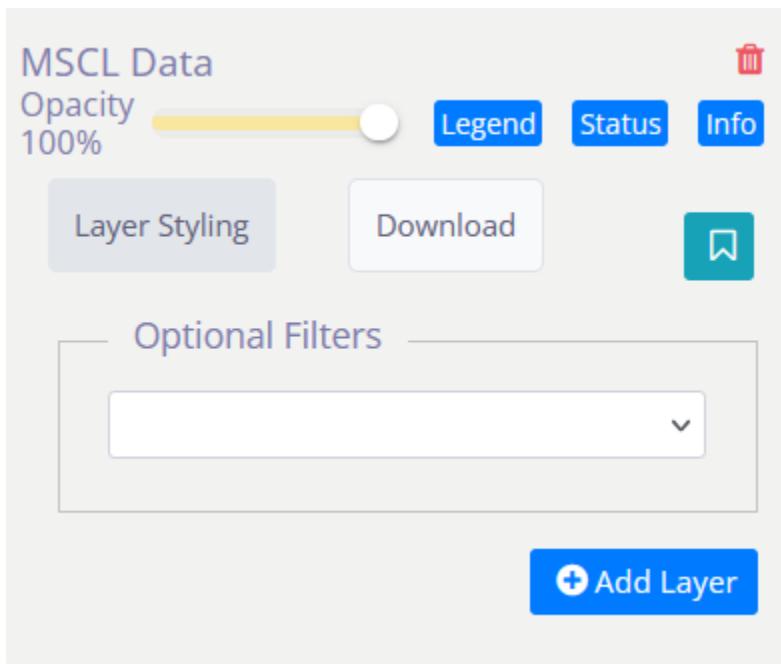
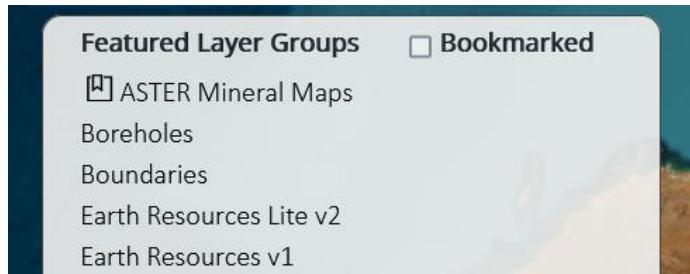


Figure 29: Layers can be bookmarked.



Once logged in, layers can be bookmarked for future reference using the toggle button. Click on the button a second time to undo the layer bookmark. The bookmarked layers are kept for you and will be available next time you login. Bookmarked layers are shown in Figure 30: Layers in "ASTER Mineral Maps" have been



*Figure 30: Layers in "ASTER Mineral Maps" have been bookmarked.*

Only the bookmarked layers are selectable if the “Bookmarked” tickbox is enabled (see Figure 30)

# Managing ROIs and Permanent Links

When a user is logged-in a dropdown menu is available to manage ROIs and Permanent Links



Figure 31: Managing ROIs and Permanent Links

## Managing ROIs

When “Manage Region of Interest” is selected (see Figure 31) a “Region of Interest” dialog box opens (Figure 32)

ROIs can be added to the map via the button and permanently deleted via (See Figure 32)  
To remove ROI from the map use the button in the Polygon tool .

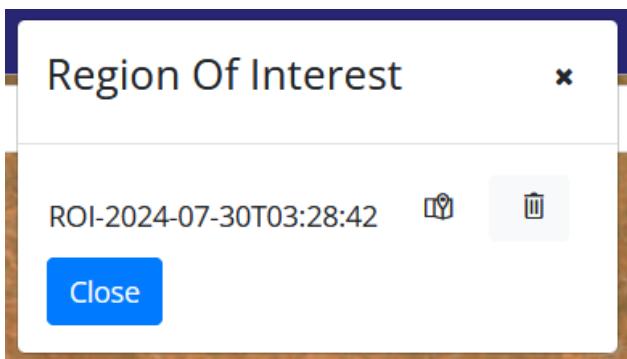


Figure 32: Managing Regions of Interest (ROI)

Permanent links can be:

- Edited using
- Permanently deleted via
- Loaded onto the map via

## Managing Access to Shareable URLs

Using the edit function the “Is Public” tickbox can be enabled and this URL will be available to anyone who cares to use it.

Conversely URLs can be made private by unticking the “Is Public” tickbox.

States

---

Name	Test
Date	May 28, 2024, 11:12:55 AM
Description	Description
Link	<a href="https://portal.auscope.org.au?state=9c9a2f7f-6836-4fe3-8813-04372b3a0a6b">https://portal.auscope.org.au?state=9c9a2f7f-6836-4fe3-8813-04372b3a0a6b</a> 
Is Public	<input checked="" type="checkbox"/>

 Edit  Delete  Load State

---

 Close

Figure 33: Managing Permanent Links

## Logout

Logout  can be selected via the  button on the top right-hand corner of the page.

## Example 1: NVCL Boreholes

The National Virtual Core Library (NVCL) is a geospatial database holding high resolution pictures of drill samples to help explore the mineralogy and composition of the upper 1-2 km of the Australian continent. The drill samples in the library come from a number of sources including State agencies and industry.

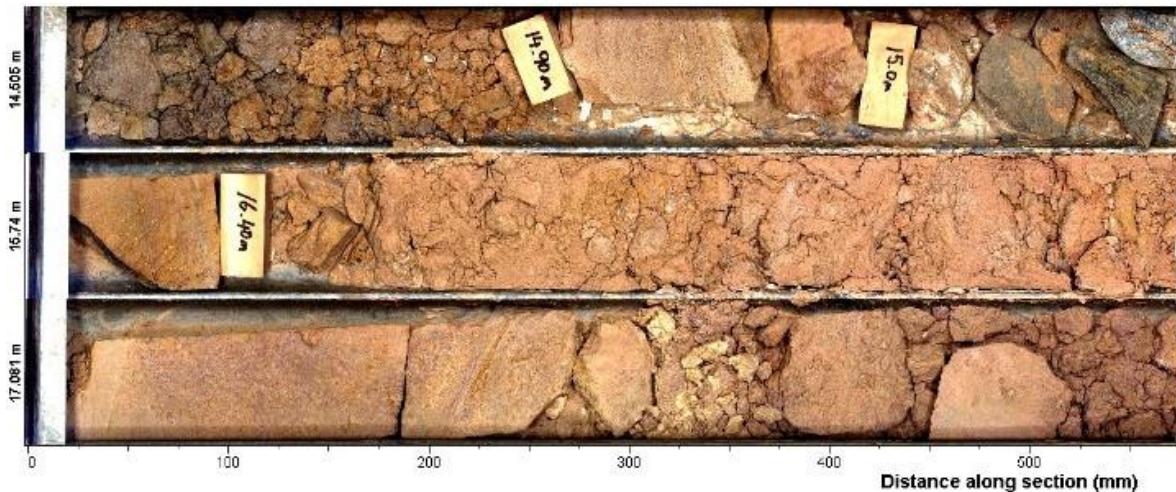


Figure 34: Example core sample.

The following steps display the NVCL data on the portal's map and view the details for one of the core samples. Images of each step are shown below.

1. Select **Browse**
2. Select **Boreholes**
3. Select the **National Virtual Core Library V2.0** from the list of layers.
4. Click on the **Add layer** button to draw the data points on the map. You may also filter the data to a subset using the options in the filter panel (remember to select the filters before adding the layer to the map).
5. Click on a red circular marker on the map, a popup dialog box will appear.
6. Click on borehole id to open up details panel.
7. Click on **Image** tab.
8. This shows thumbnail images of the borehole cores. Next, click on the **Scalar** tab.
9. This shows all datasets obtained from measurements of the core samples. For example, infra-red spectroscopy measurements of the samples. You can click on the "Definition" link to get more information about what kind of sample was taken. The next action is to select a dataset or more by clicking in the tickboxes.
10. Click on the graph icon to display a graph of the selected mineral measurements.

## NVCL Boreholes: Steps 1, 2, 3 and 4

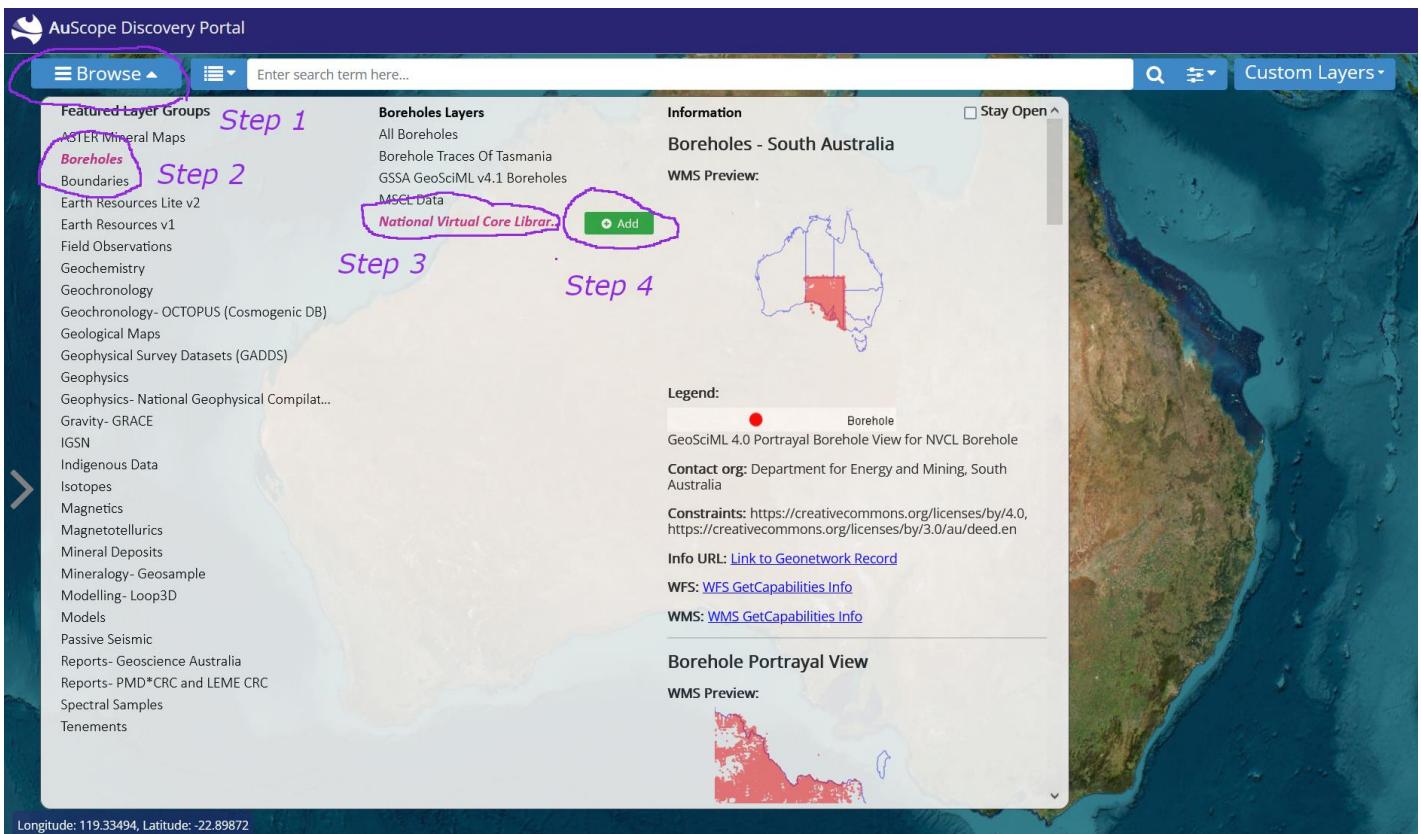


Figure 35: NVCL Boreholes: Steps 1, 2, 3 and 4

## NVCL Boreholes: Step 6

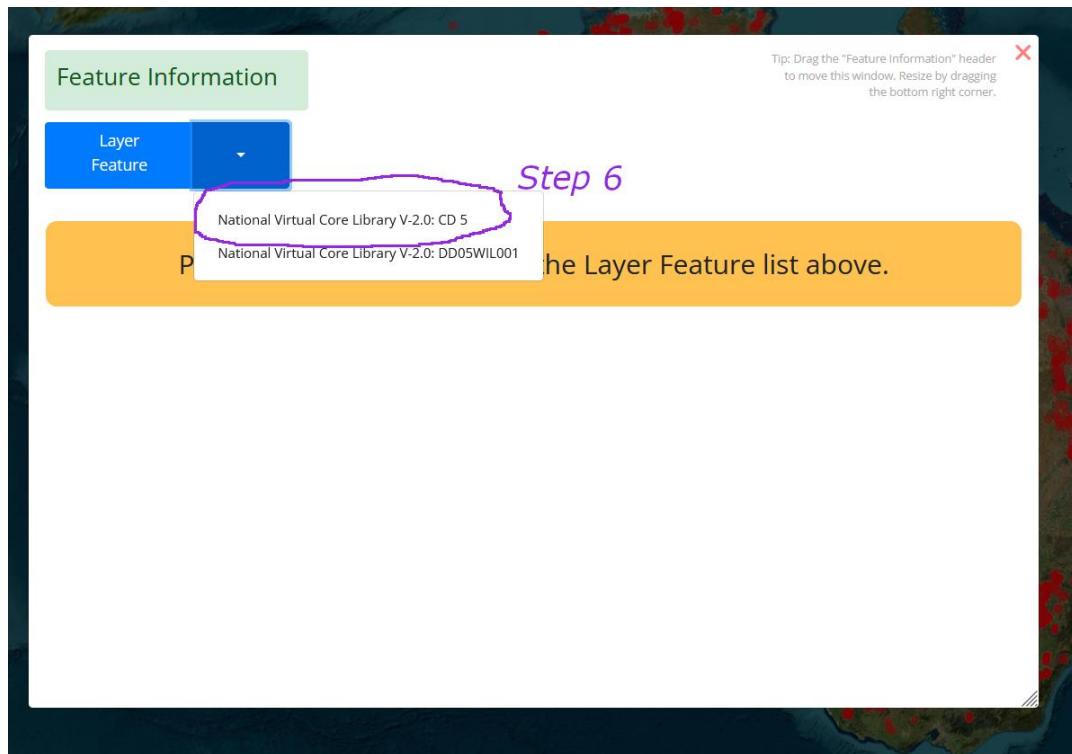


Figure 36: NVCL Boreholes: Step 6: Select a borehole.

## NVCL Boreholes: Step 7

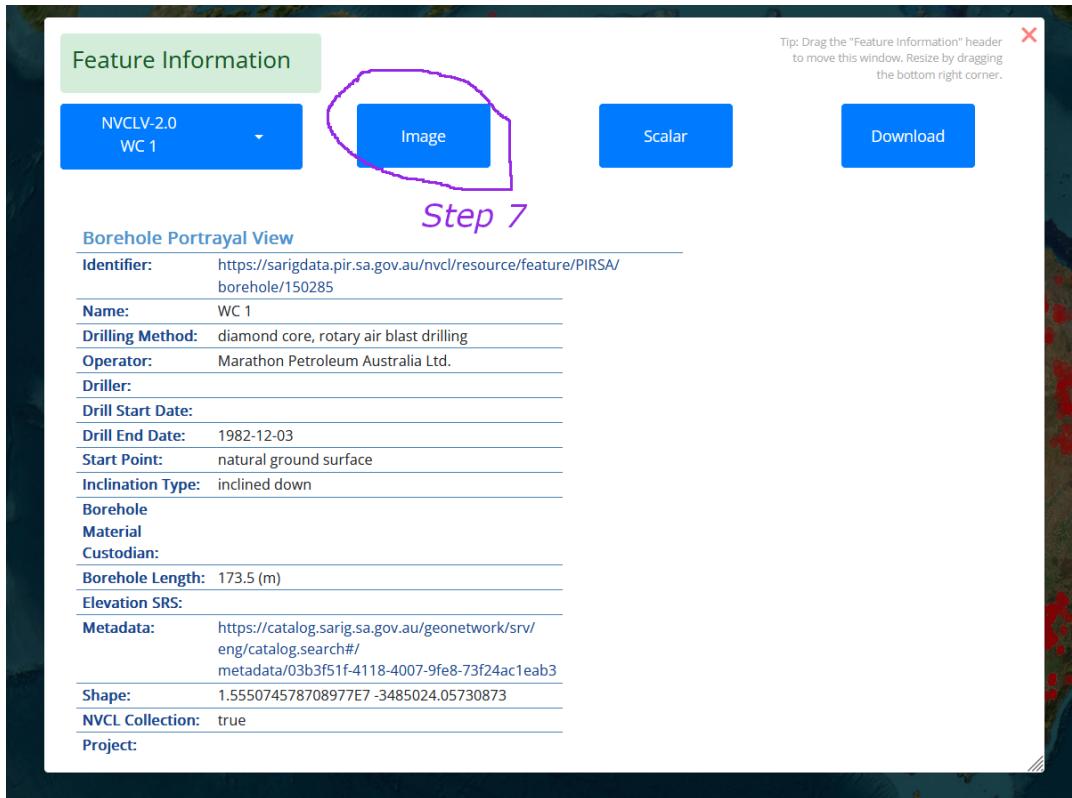


Figure 37: NVCL Boreholes: Step 7: click on Image tab.

## NVCL Boreholes: Step 8

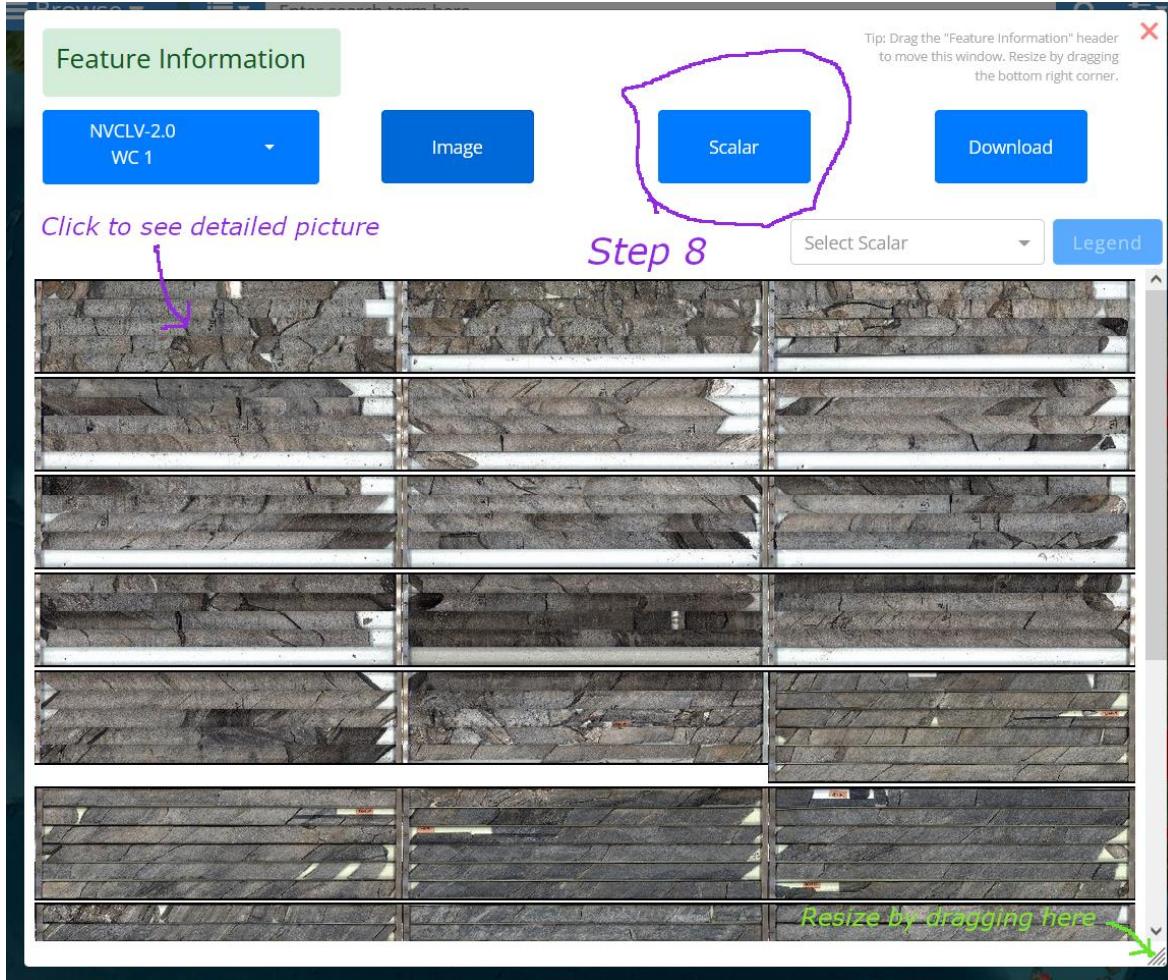


Figure 38: NVCL Boreholes: Step 7: Click Scalar tab.

## NVCL Borehole Service View

In Step 8 above, you can click on a thumbnail in the AuScope portal and get a high-resolution image of the borehole drill samples from the relevant NVCL service website.

At the left- and right-hand side of the image there are arrows which can be used to view borehole images at lower and higher depths (see below).

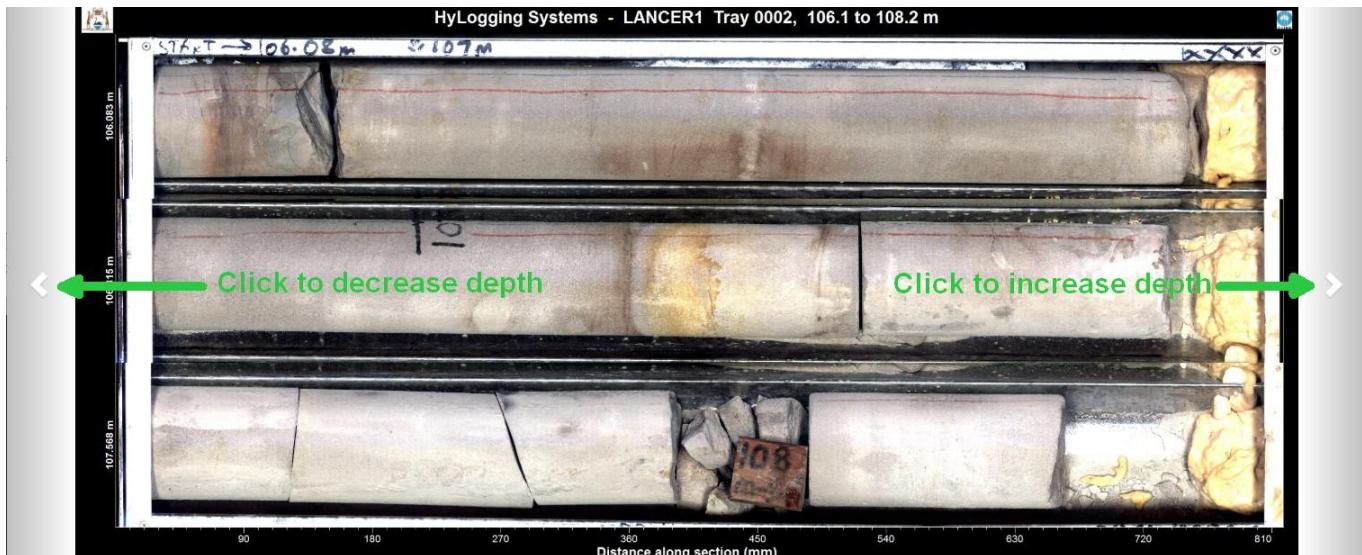


Figure 39: NVCL Borehole Service View

If you *double click* on this picture, you can see spectral data plots taken from the samples, as depicted below.

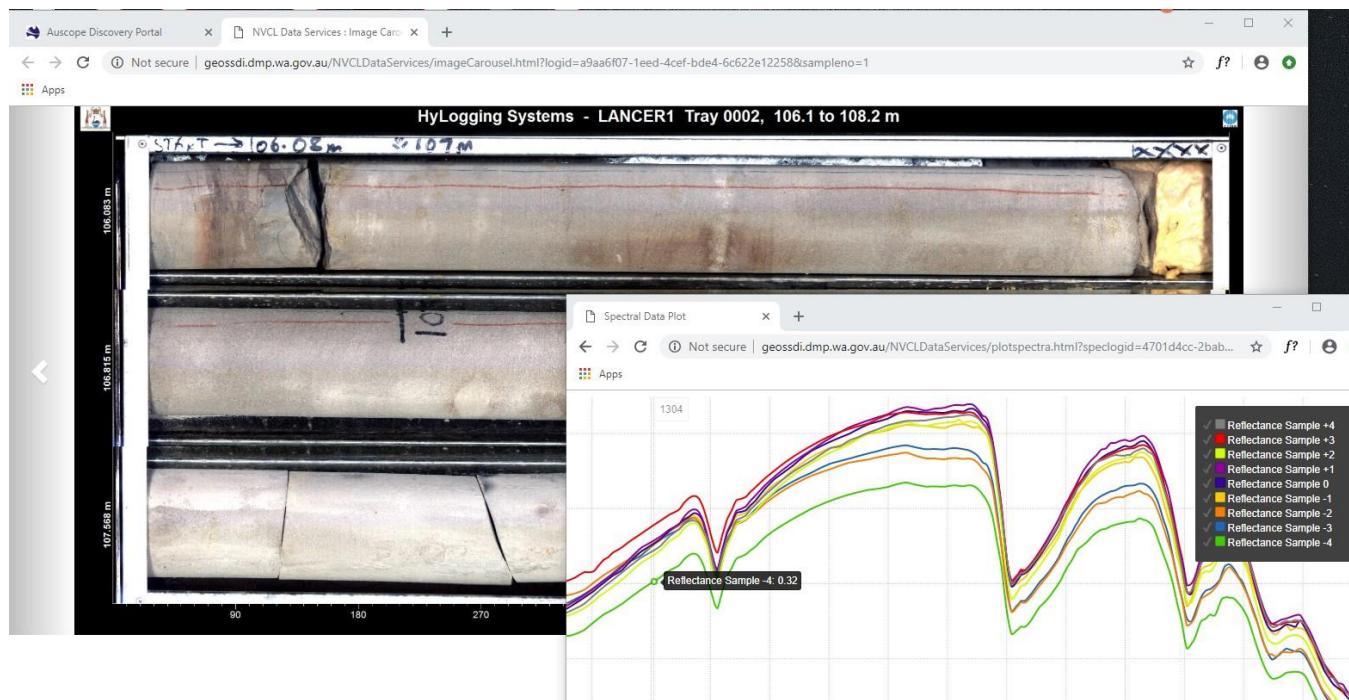


Figure 40: NVCL Borehole Service detailed image and spectral data plots.

## NVCL Boreholes: Steps 9 and 10

The screenshot shows a software interface for managing borehole data. At the top, there's a green header bar labeled "Feature Information". Below it, a blue bar displays "NVCLV-2.0 WC 1" with buttons for "Image", "Scalar", and "Download". A tip message in the top right corner says: "Tip: Drag the 'Feature Information' header to move this window. Resize by dragging the bottom right corner." Below these, a yellow box shows the "Dataset Name: 150285\_WC1". Underneath, a "Scalar" button is circled in purple. The main area lists various geological features with checkboxes and "Definition" buttons:

- Step 9 (checkbox checked, circled in purple)
- Step 10 (checkbox checked, circled in purple)
- Grp1 uTSAS
- Grp2 uTSAS
- Grp3 uTSAS
- Grp1 uTSAT
- Grp2 uTSAT
- Grp3 uTSAT
- Min1 uTSAS

At the bottom left, there's a coordinate message: "picture: 124.24193, Latitude: -20.87473".

Figure 41: NVCL Boreholes: Steps 9 and 10

A typical graph of the mineral measurements is shown below. A user can hold the mouse pointer over a point in the graph and the depth and sample count at that point will be displayed, e.g.

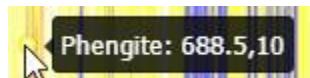


Figure 42: Depth and sample count at a point.

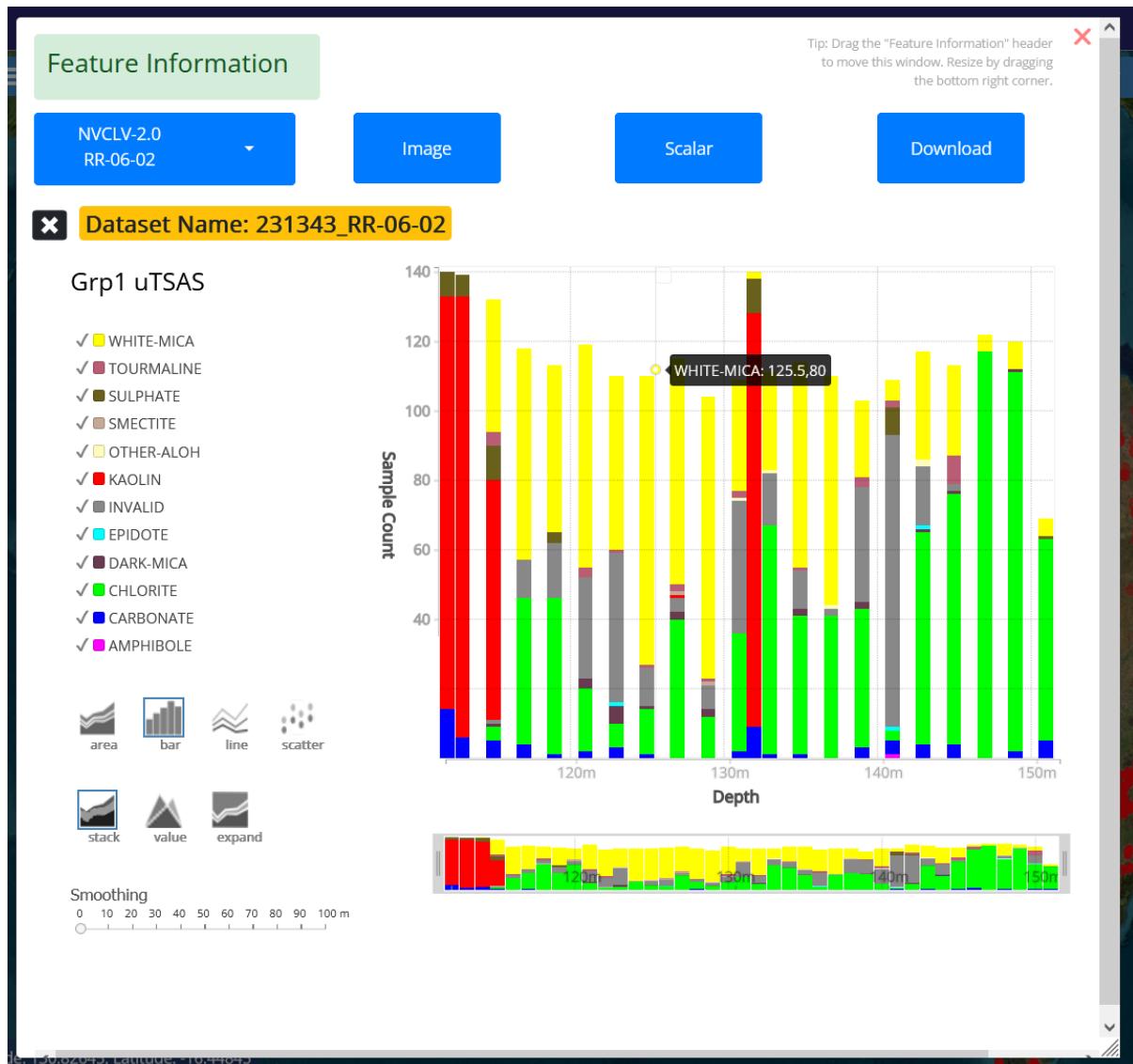


Figure 43: NVCL Boreholes: Graph of borehole minerals.

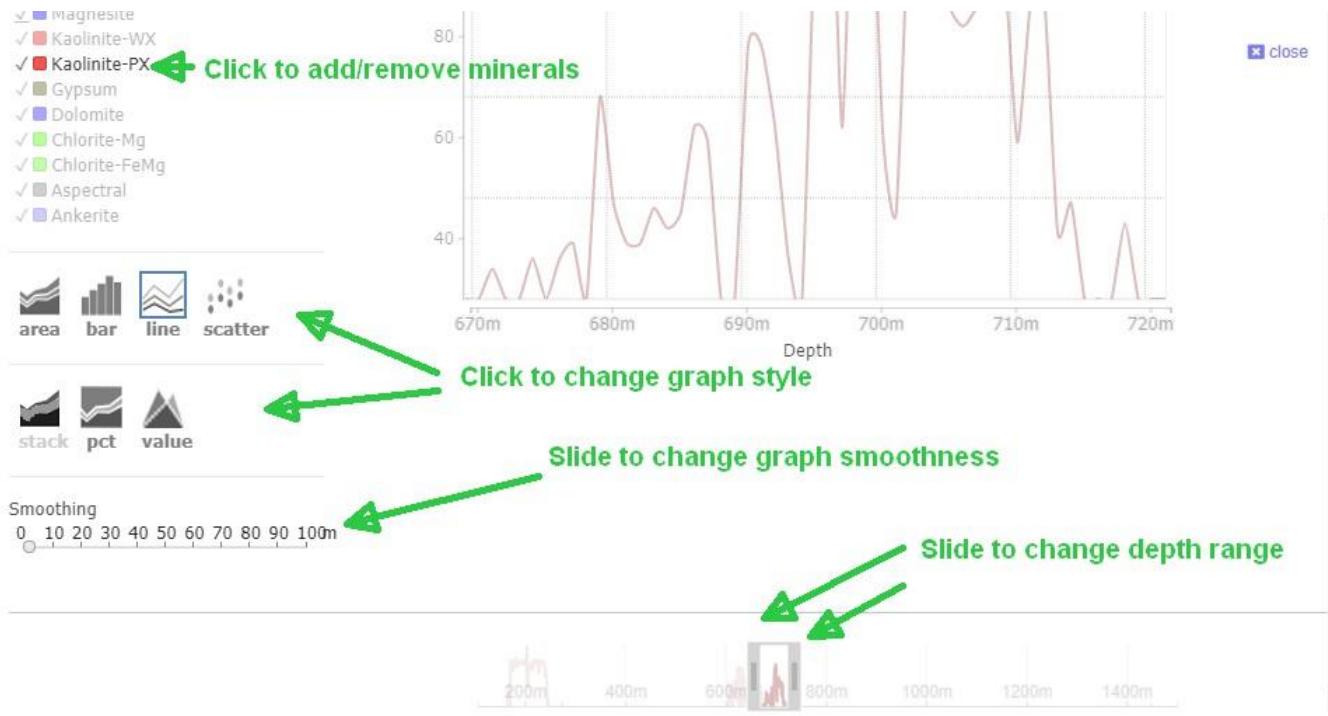


Figure 44: NVCL Boreholes: Details of graph controls.

## Example 2: Download an NVCL TSG Dataset

To download an NVCL TSG Dataset:

1. Click **Browse**, select **Boreholes**.

Select the **National Virtual Core Library V2.0** from the list of layers.

Click “Add layer”

Click on **Select Filter** dropdown and select **Name**.

Enter a name (e.g. Shittim).

Click **Select Filter** dropdown and select **Provider**.

Click on **Tasmania** (for example).

Click the blue **Add Layer** button to display boreholes on the map.

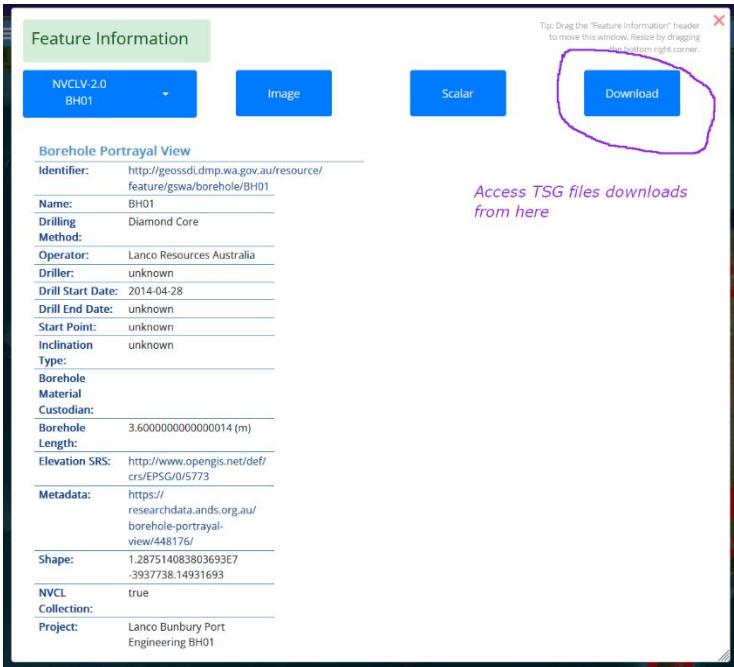


Figure 45: Click on "Download" tab.

2. Click a red borehole point on the map.

A popup window will open up.

Select a borehole if necessary.

Click the **Download** tab.

Either:

**Download Immediately from the NVCL File Cache**

1. Click on **Download Immediately from the NVCL File Cache** button.  
The file will be immediately downloaded via your browser.

OR

2. The TSG file cannot be found in the cache, so enter your email address.

Click **Prepare Tsg Dataset**

You can click on **Check status**

Feature Information

NVCLV-2.0  
GSQ GEORGETOWN 3

Image Scalar Download

This data is best viewed with the [free TSG Base](#).

\*\*\*[download - TSGCacheDownloadurl]\*\*\*

Unfortunately, this dataset is not available in the NVCL cache. You can request it from the State/Territory servers via the form below, but it might take some time to prepare. Alternatively, you can check other datasets as over 99% are available via the cache.

Email:

vincent.fazio@csiro.au

Prepare Tsg Dataset Check status

## NVCL Download Services : TSG file Download Requests Status Page

Timestamp	Status	Details
29 July 2024, 5:45:06 pm	Success	Georgetown3 Scan of borehole: http://geologyinformation.qld.gov.au/resource/feature/gsq/borehole/bh000954

Once status is "Success" you can download TSG file from here

This file was recovered from cache. If you believe it is stale you can force the service to regenerate it.

Having trouble? email support

Figure 46: Click on Prepare Tsg Dataset button.

## Example 3: Filter By Geological Province

Steps 1, 2 & 3: Filtering by name, add geological province layer.

The screenshot shows a geospatial data browser interface. At the top left is a 'Browse' button with a dropdown arrow, followed by a search bar containing 'Enter search term here...'. Below the search bar is a 'Stay Open' checkbox. On the left, under 'Featured Layer Groups', there is a list of categories including 'ASTER Mineral Maps', 'Boreholes', 'Boundaries' (which is circled in red), 'Earth Resources Lite v2', 'Earth Resources v1', 'Field Observations', 'Geochemistry', 'Geochronology', 'Geochronology- OCTOPUS (Cosmogenic DB)', 'Geological Maps', 'Geophysical Survey Datasets (GADDs)', 'Geophysics', 'Geophysics- National Geophysical Compilat...', 'Gravity- GRACE', 'IGSN', 'Indigenous Data', 'Isotopes', 'Magnetics', 'Magnetotellurics', 'Mineral Deposits', 'Mineralogy- Geosample', 'Modelling- Loop3D', 'Models', 'Passive Seismic', 'Reports- Geoscience Australia', 'Reports- PMD\*CRC and LEME CRC', 'Spectral Samples', and 'Tenements'. Under 'Boundaries', 'Geological Provinces' is also circled in red. To the right of this list is a 'Boundaries Layers' section with several options like 'Australian Coastline', 'Geological Provinces' (circled in red), and an 'Add' button (also circled in red). Further down are 'Information' sections for 'ProvinceFullExtent' and 'WMS Preview', which displays a map of Tasmania divided into various geological provinces. A legend below the map shows a color key for 'Provinces'. At the bottom right are links for 'Contact org: CSIRO', 'Constraints', 'Info URL', 'WMS GetCapabilities Info', and 'WFS GetCapabilities Info'.

Figure 47: Step 1: Add geological province layer.

Step 1: Click on “Browse” to open browse panel. Click in “Boundaries”, then “Geological Provinces”, then “Add” to add the Geological Provinces layer.

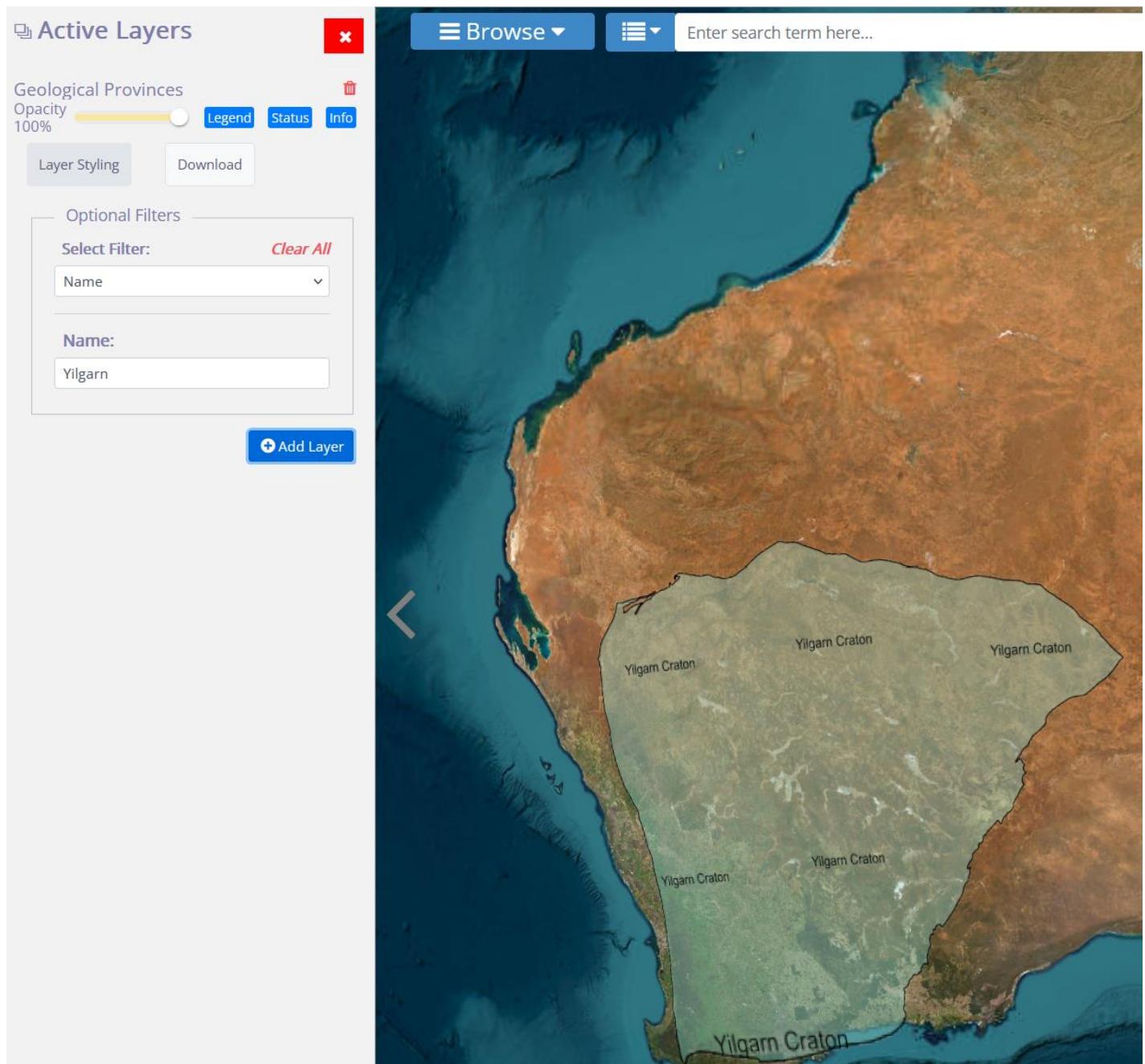


Figure 48: Step 2: Filter by name: "Yilgarn."

Step 2: Click on “Select filter”, select filtering by name, type in “Yilgarn”, hit “Add Layer” button.

Step 3: Click on green Yilgarn layer on map, a popup will appear.

## Step 4: Copying to clipboard.

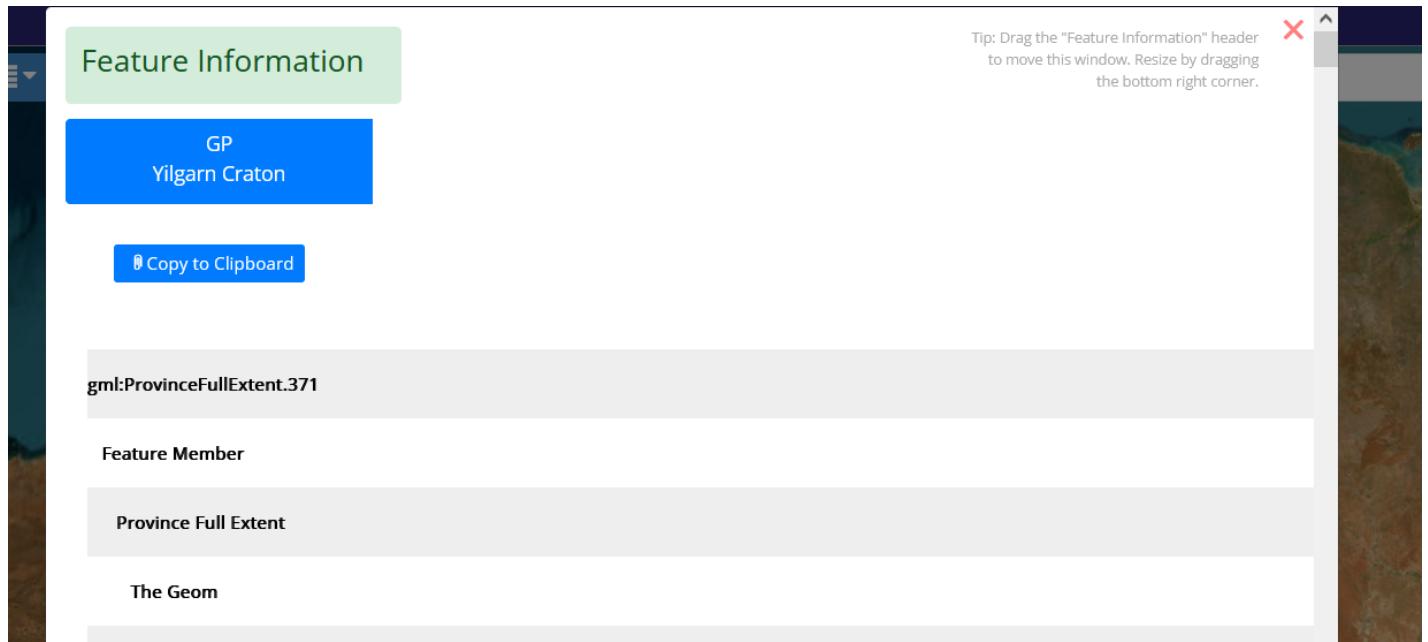


Figure 49: Step 4: Click on “Copy to Clipboard.”

Step 4: Click on “Copy to clipboard” button, close dialog box.

## Step 5: Add NVCL borehole layer.

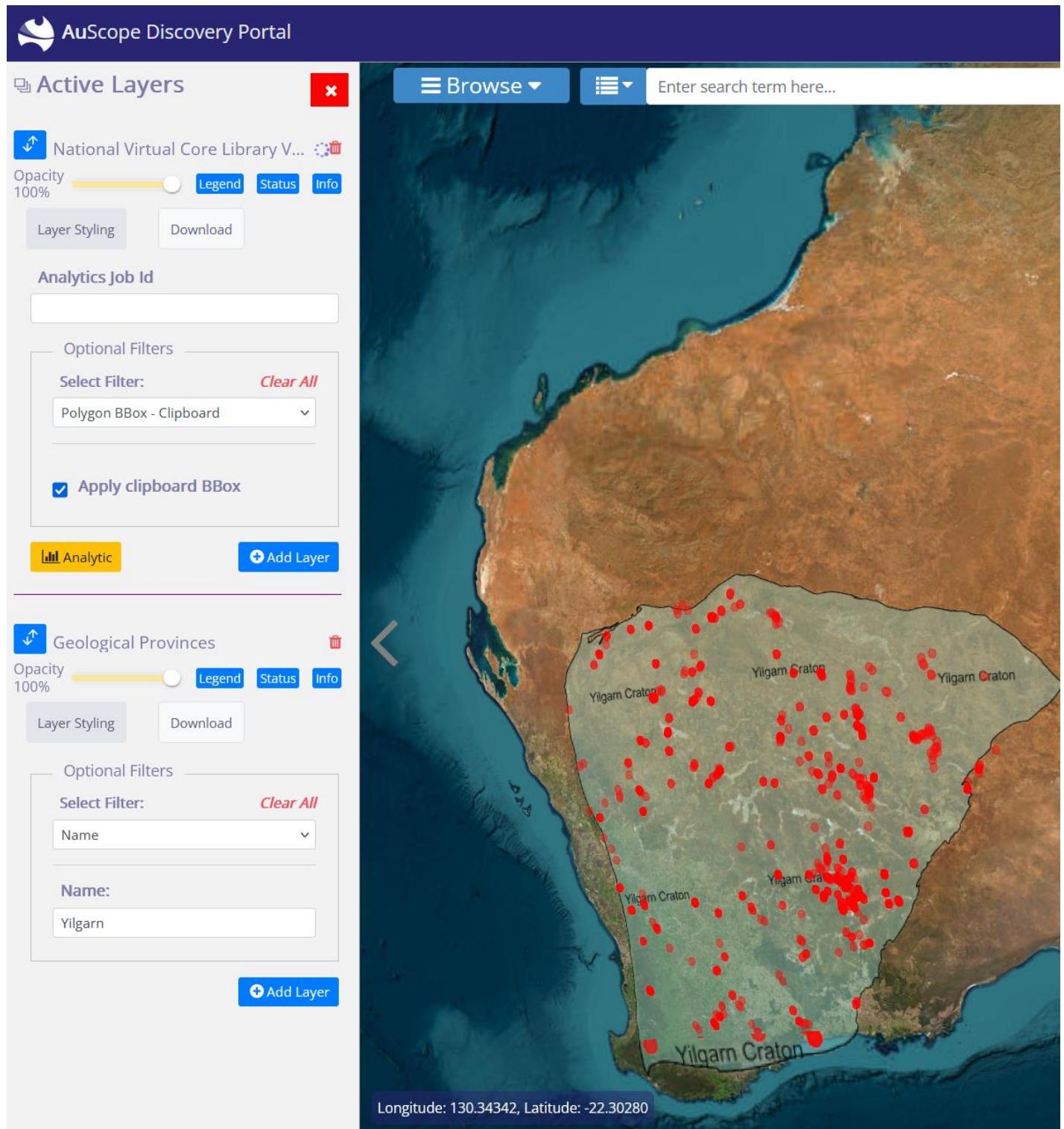


Figure 50: Step 5 & 6, National Virtual Core Library V2.0" layer and filter by geological province.

Step 5: Using Browse Panel, Add “National Virtual Core Library V2.0” layer, in the “Boreholes” category

Step 6: In the Active Layers, under “Select Filter”, select the "Polygon BBox - Clipboard" filter, making sure "Apply clipboard BBox" checkbox is ticked, then hit “Add Layer” button

# Glossary

Term	Meaning
<a href="#">CSW</a>	Catalog Service for the Web (Catalog Service – Web)
<a href="#">GA</a>	Geoscience Australia
<a href="#">GML</a>	Geography Markup Language
<a href="#">OGC</a>	Open Geospatial Consortium
<a href="#">ROI</a>	Region of Interest
<a href="#">SRS</a>	Spatial Reference System
<a href="#">URL</a>	Universal Resource Locator
<a href="#">WCS</a>	Web Coverage Service
<a href="#">WFS</a>	Web Feature Service
<a href="#">WMS</a>	Web Mapping Service
<a href="#">XML</a>	Extensible Markup Language