Using Online Databases

the human energy company™ Chevron

AUSTRALIAN EARTH SCIENCE EDUCATION

Using Online Databases – Teacher Resource

Powering Careers in Energy Link:

Unit 2: Demonstrate an understanding of the importance of science in LNG operations.

Background Information:

There are a large number of online databases that can be used to assist students with this course. Using online databases provides students a fantastic opportunity to familiarise themselves with important aspects of digital technologies and with the content for this course.

Aim

To explore the publicly accessible Geoview database.

Materials

- Access to a device (preferably a laptop or desktop computer to allow for ease of navigation and viewing)

Safety Notes

Consider your workstation set up in reduction of muscle fatigue and eye strain.

Method

Instructions on how to work with Geoview can be found in the worksheet that follows. This is an enormous database so students may wish to spend a bit of time exploring it. Generally we find that students most enjoy exploring an area close to home or significant to them. We recommend not zooming in too much as there will be little variation in data represented.

Discussion

1. What did you find using Geoview that surprised you?

Answers will vary. Many students are surprise about just how many mines or mineral deposits are in their selected area.

2. Why do you think the Western Australian government funds this database (and the work required to collect this data)?

Providing free information encourages companies and small explorers to look more closely at WA, leading many to invest in our state.

3. Who would find this database useful?

Resources companies, small explorers, prospectors, people with a keen interest in geology/geophysics/geochemistry, students finding out more about our state.

Extension:

Students could be asked to produce and annotate a series of maps for an area.

Worksheet: Using Online Databases

Aim

To explore the publicly accessible GeoView database by the Geological Survey of WA.

Materials

- Access to a device (preferably a laptop or desktop computer to allow for ease of navigation and viewing)

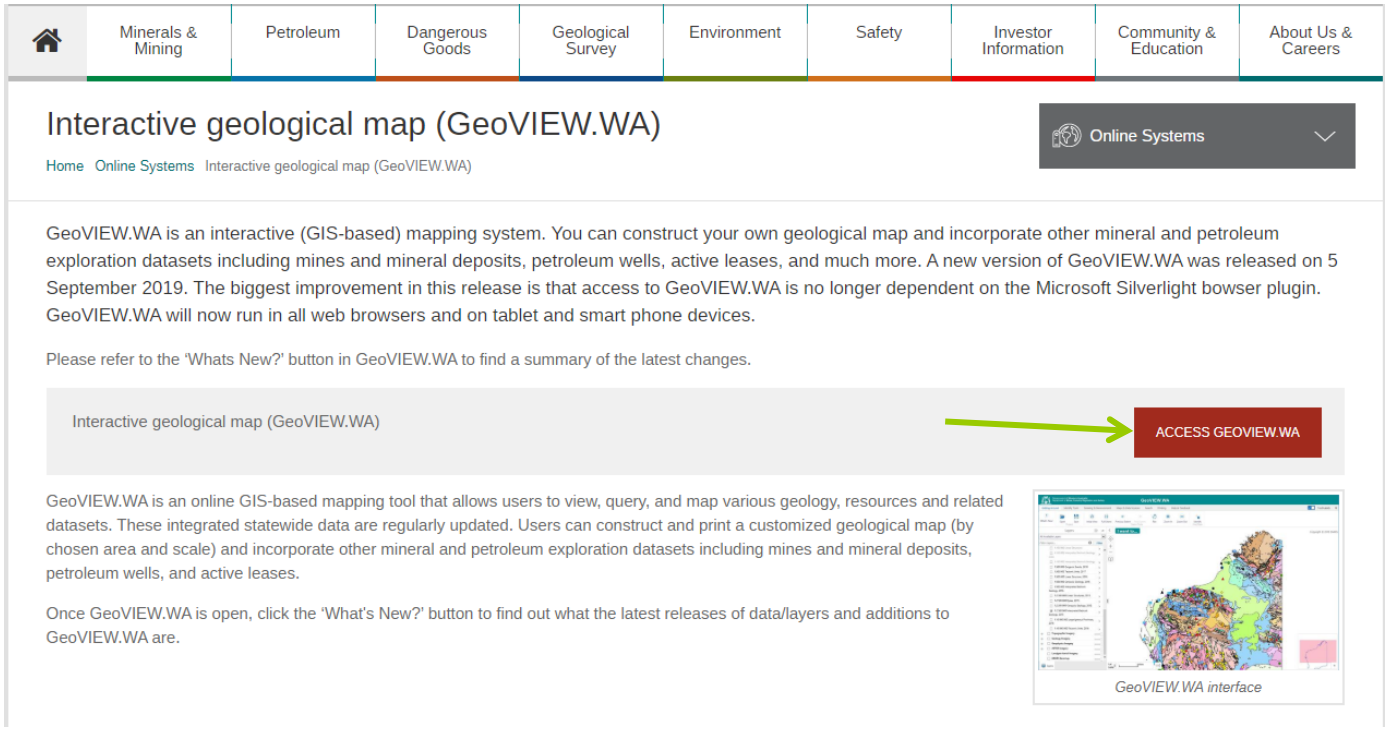
Safety Notes

Consider your workstation set up in reduction of muscle fatigue and eye strain.

See the following page for further instruction

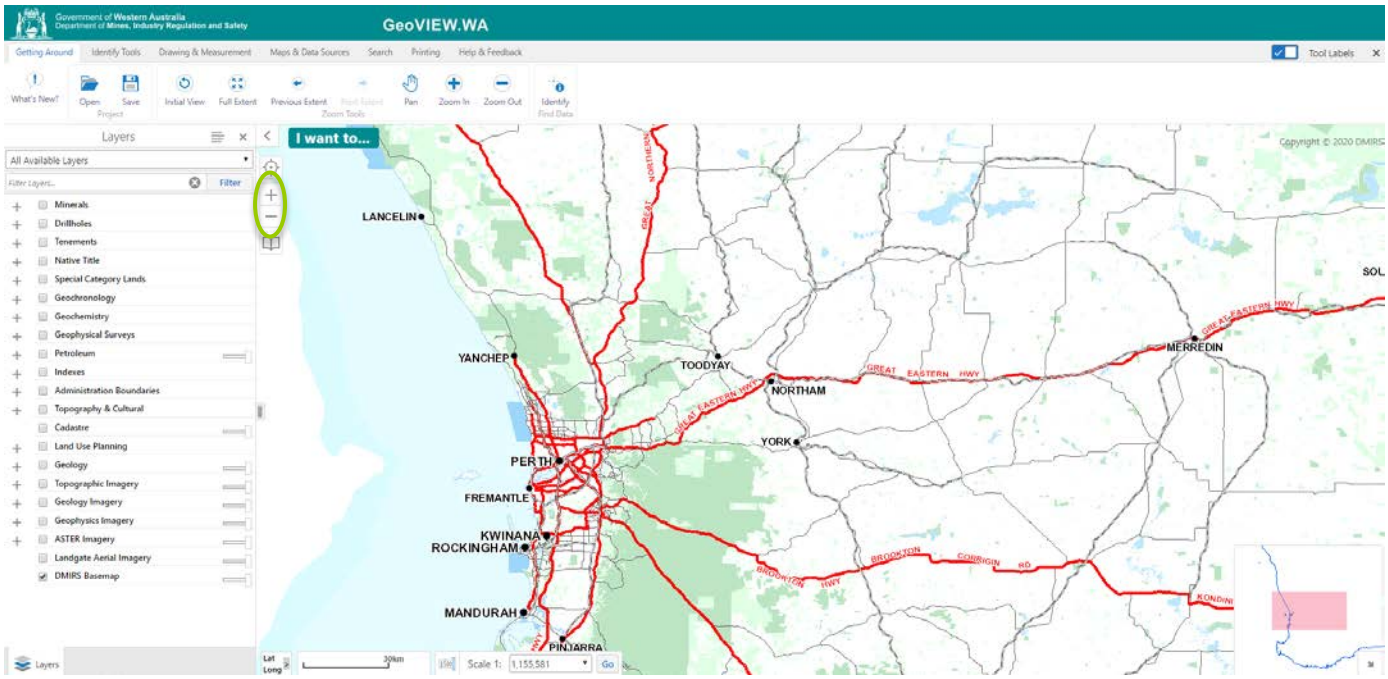
Method

1. Access the GeoView.WA database.

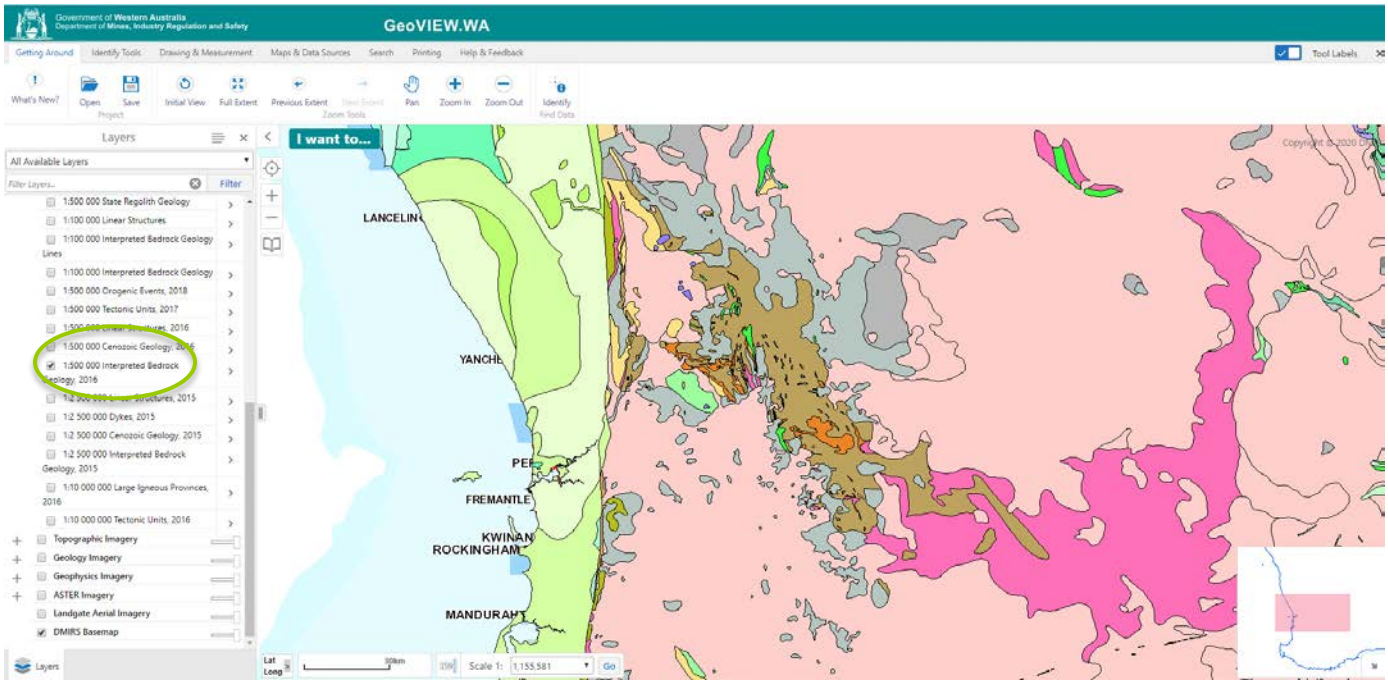


GeoVIEW.WA interface

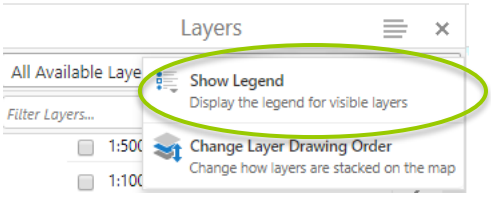
2. Zoom into an area of interest for you.



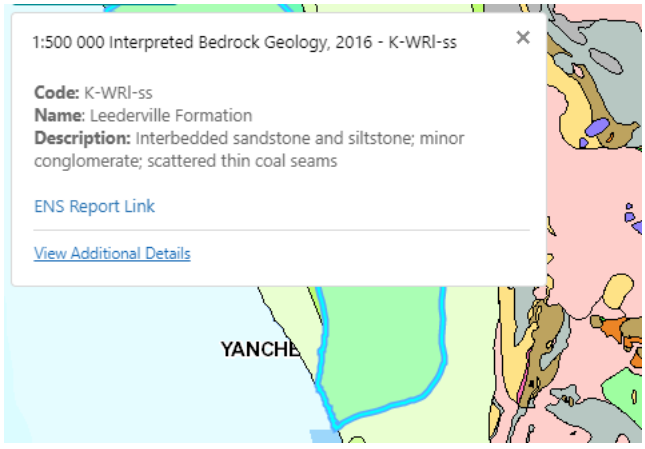
3. Examine the geology of the area. There are lots of choices on the panel on the side. In this case we have chosen to examine the 1:500 000 interpreted bedrock. Don't forget to turn off layers before you turn on new ones and to allow time for them to load.



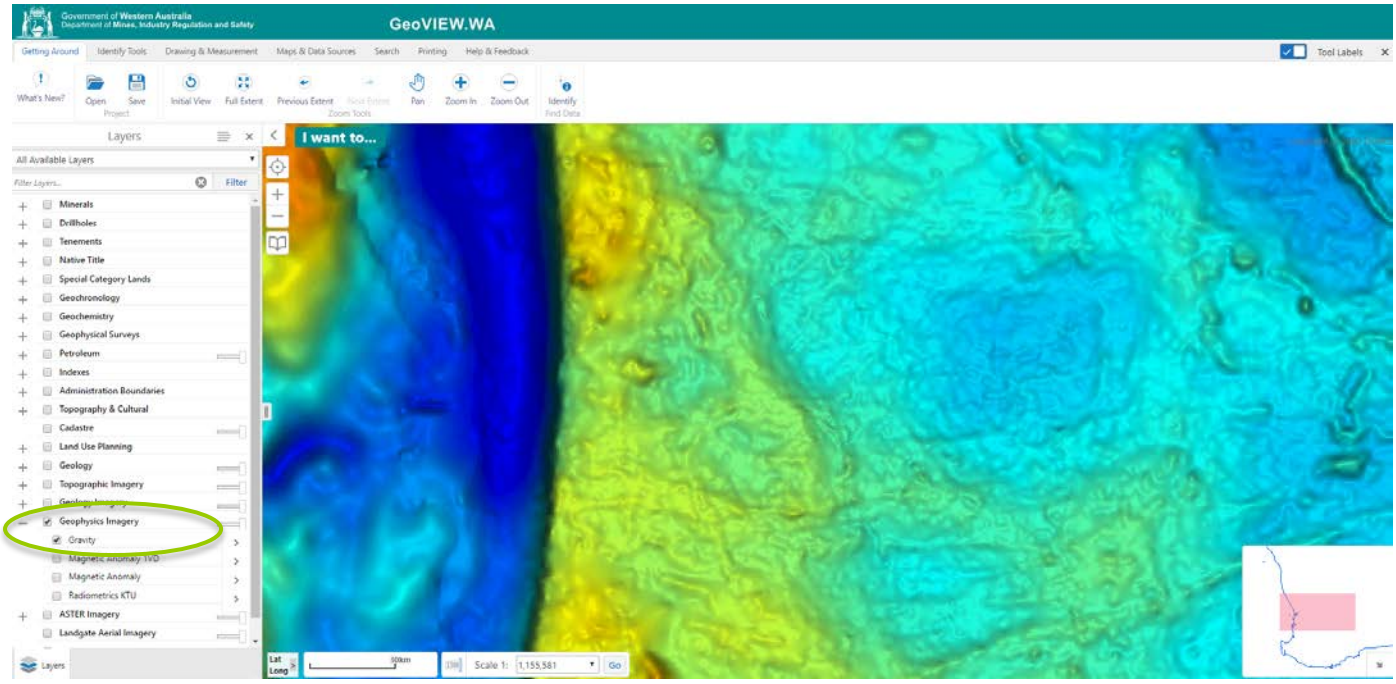
4. You can show the legend for all of the colouring on the map by choosing it in the side panel



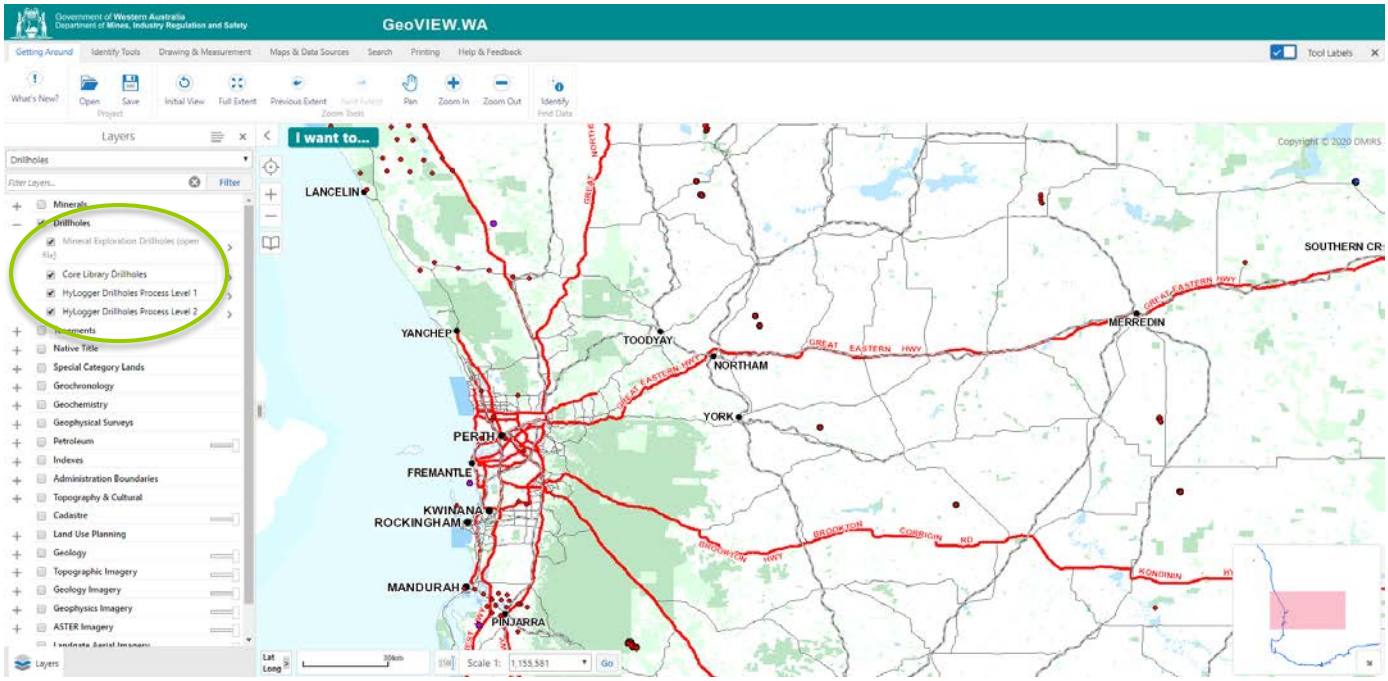
In this case the legend is coded and this could be difficult to follow. If you want to know more about particular rock units click on them and an information box pops up.



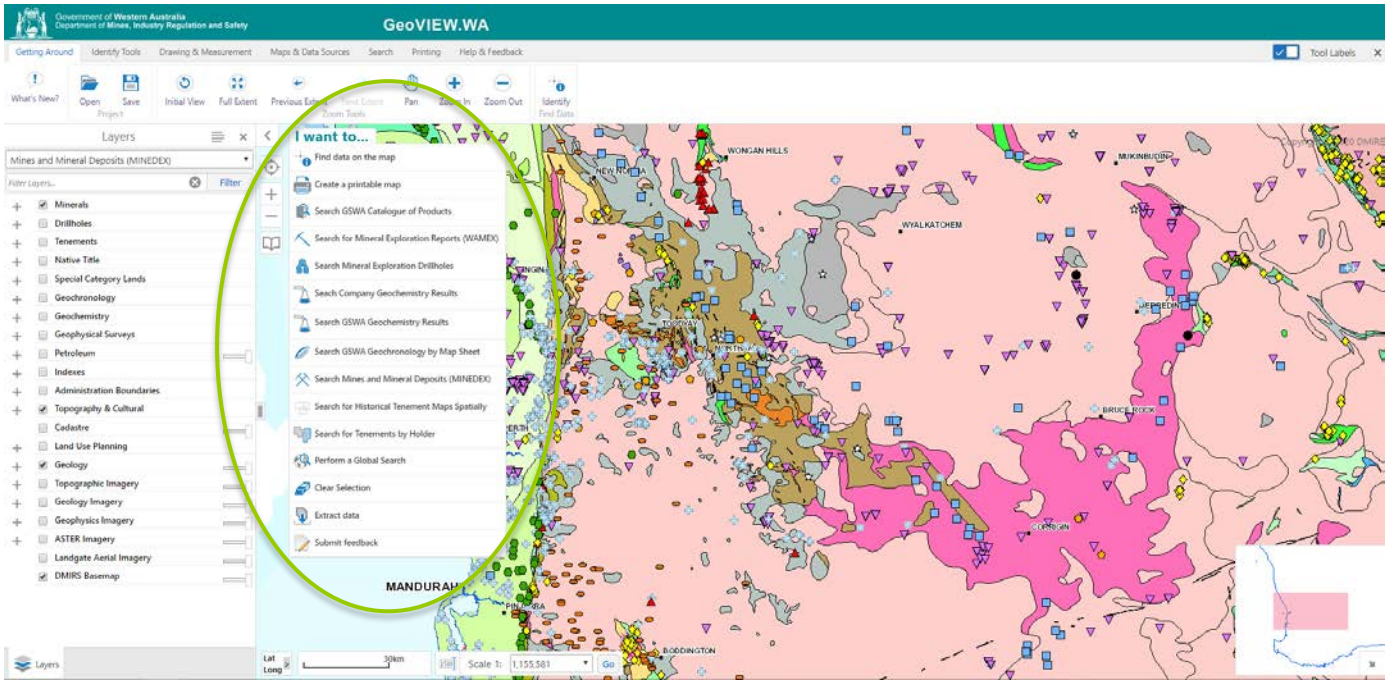
5. Explore other map layers, like geophysics imagery. We have chosen the gravity layer. Blue areas indicate low gravity (and therefore density) rocks in the subsurface through to red (high).



6. You can also explore things like the drillholes available at core libraries (yes there are actually libraries of rock core)!



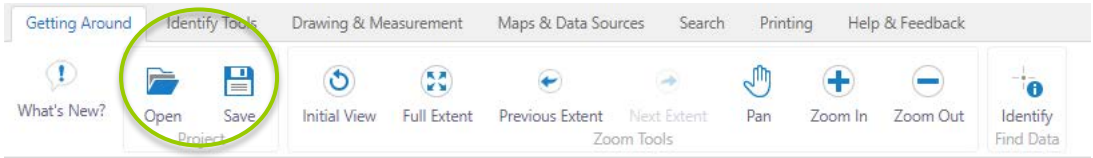
7. You can also use the I WANT TO button to explore combinations of data.



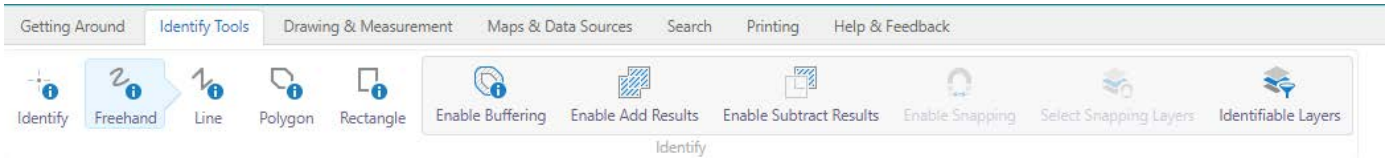
In this case we chose to 'Search Mines and Mineral Deposits (MINEDEX)'. The legend was very helpful on this one.

8. Explore the tools available to you.

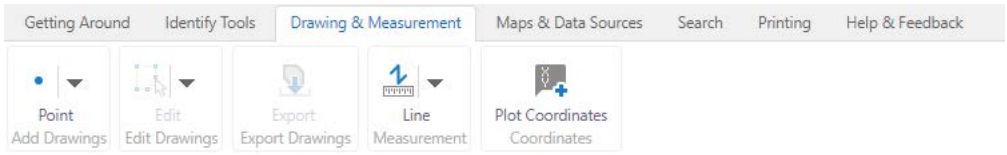
If you don't have the time to finish exploring the area you wish to in one session you can save the file and import it next time you visit.



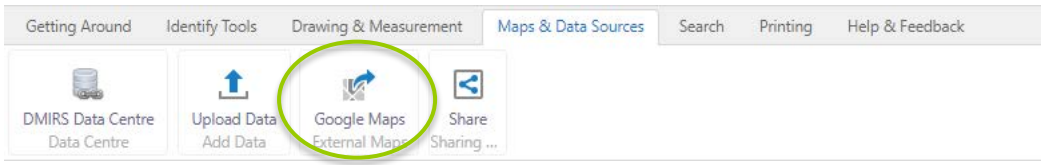
Using the identify tools you can find out more about any area of the map. Just choose a way to draw around the area and then wait for the results to load.



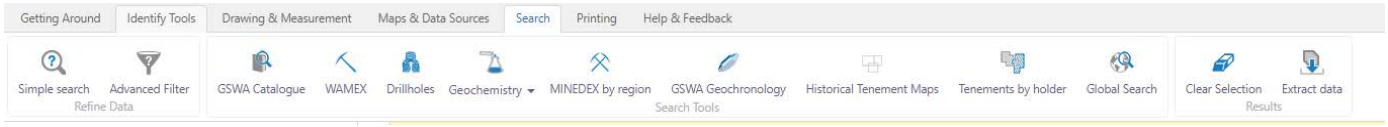
You can draw on the map, measure areas and plot coordinates (great for identifying areas you want to check out further!).



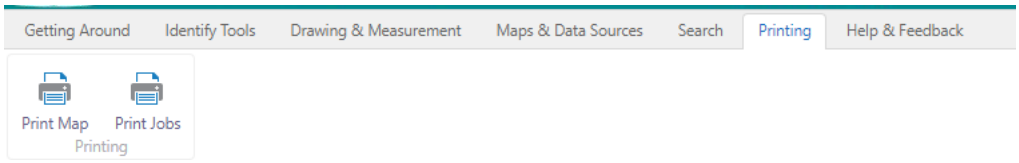
You can get directions to the area you are looking at.



You can conduct more detailed searches



You can print your maps – I like to print them to pdf!



Discussion

4. What did you find using Geoview that surprised you?

5. Why do you think the Western Australian government funds this database (and the work required to collect this data)?

6. Who would find this database useful?