



GEOSCIENCE ATLAS

A NEW BEGINNING

Presentation Outline:

- 1) Browser Setup
- 2) Geoscience OnLine (gis.geosurv.gov.nl.ca)
- 3) The Geoscience Atlas (geoatlas.gov.nl.ca)
- 4) Overview of tools, layers and help files

Browser Setup:

- use recent versions of Internet Explorer, Google Chrome or Mozilla Firefox (other browsers, such as Apple Safari, work with most tools)
- enable pop-ups or allow pop-ups for this site (geoatlas.gov.nl.ca)
- ad blockers may cause problems
- may need to clear history, cache and possibly cookies if Atlas becomes 'glitchy' (be careful not to lose any saved login passwords or filled forms)

Geoscience Resources of

gis.geosurv.gov.nl.ca


Newfoundland
Labrador
CANADA

Home Contact Government Home

Only Natural Resources

Search

Department of
Natural Resources



Welcome to the New Geoscience Atlas. Please see the "What's New" link for further information and read the "Atlas Help" for how to navigate around the new Atlas.

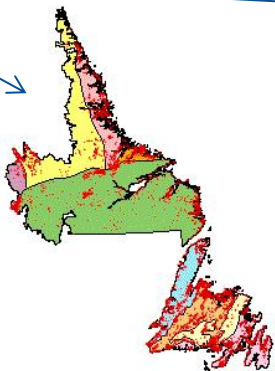
To avoid errors when using the New Geoscience Atlas – please ensure that you have a current internet browser
(eg: IE9 or greater, Chrome, Firefox, etc...)

Keep an eye on
announcements

The Petroleum Development's layers in the Geoscience Atlas are down for maintenance. We apologize for any inconvenience.
Please contact Jillian Owens (jillianowens@gov.nl.ca) for additional information.

GeoScience OnLine - [What's New](#)

Click to enter
The Atlas



Contact Us GeoScienceOnline@gov.nl.ca

Check out
"What's New"

Geoscience Atlas

[Interactive Maps of](#)
[Geology, Geophysics, Geochemistry](#)
[Mineral Occurrences, Claims, Drill Core](#)
[Reports, Maps and more](#)

Mines Branch Services

[Mineral Lands Claim Staking](#)
[Geofiles Metadata Search](#)
[Mineral Rights Inquiry Form](#)
[Geological Reports and Maps](#)
[Mineral Occurrence Data System \(MODS\)](#)

Energy Branch Services

[Onshore Petroleum Maps and Data](#)

National GIS Resources

[Earth Sciences Resources](#)
[NRCan Free Topographic Data Sets - Geogratis](#)
[CCOG GeoBase: DEM, NRoadN, Satellite data](#)


Links to Other
Information
and Forms

This site is best viewed with up to date browsers

geoatlas.gov.nl.ca/Default.htm

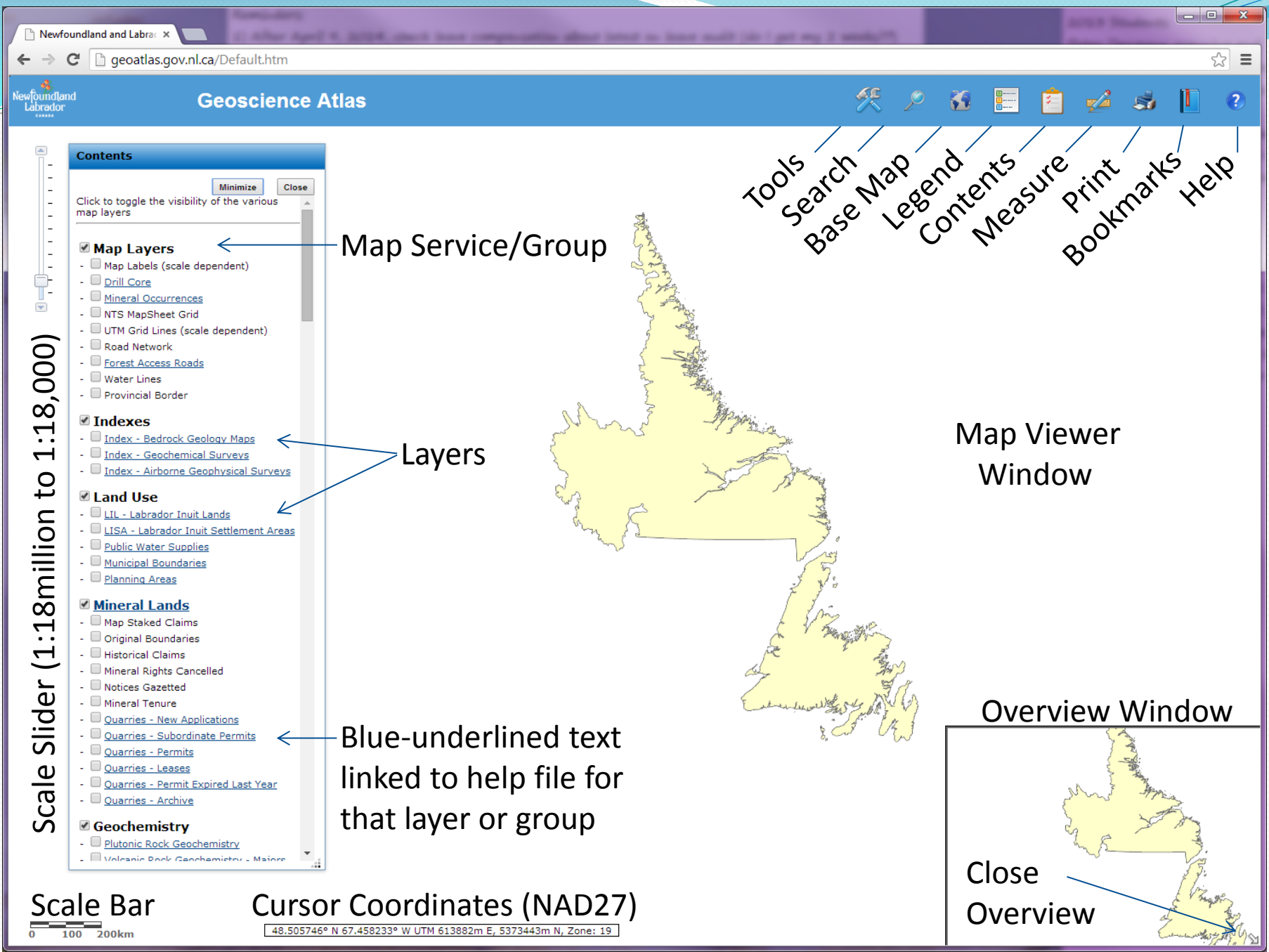
geoatlas.gov.nl.ca/Default.htm

Disclaimer



The Geological Survey Division of the Department of Natural Resources, Government of Newfoundland and Labrador ('Geological Survey Division') provides this website to disseminate digital geological data and ancillary data. The Geological Survey Division retains the sole right and title to the original geoscience data and the information contained in any product thereby produced and provided. The Geological Survey Division makes available for public use open file reports, maps and digital geological data. These materials have not been formally edited or peer reviewed and are based upon preliminary data and evaluation. The Geological Survey Division assumes no legal liability or responsibility.

**Read Disclaimer,
then Click to Enter
The Atlas**



Contents

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Click to toggle the visibility of the various map layers

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 - ☐ UTM Grid Lines (scale dependent)
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- ☒ **Geochemistry**
 - ☐ [Plutonic Rock Geochemistry](#)
 - ☐ [Volcanic Rock Geochemistry - Main](#)

Scale Slider (1:18million to 1:18,000)

Scale Bar

Cursor Coordinates (NAD27)

48.505746° N 67.458233° W UTM 613882m E, 5373443m N, Zone: 19

- Tools
- Search
- Base Map
- Legend
- Contents
- Measure
- Print
- Bookmarks
- Help

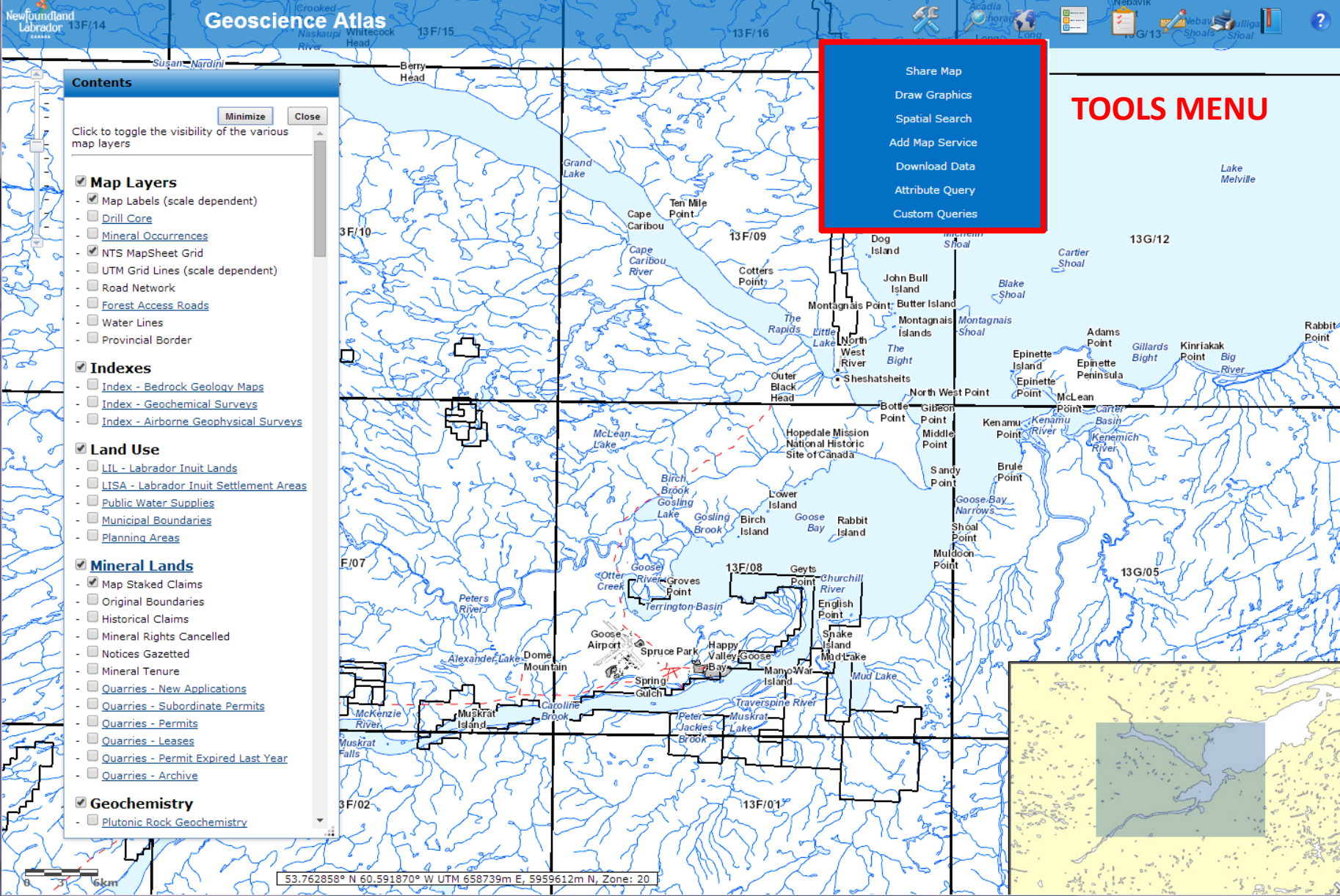
Map Viewer Window

Overview Window

Close Overview

Navigating around the Map Viewer Window:

1. Hold down the shift key and drag a box on the map to **zoom in**
2. Hold down Ctrl+Shift to **zoom out**
3. Double click to **zoom in**
4. Use the mouse roller to **zoom in/out**
5. Drag the scale slider to **zoom in/out**
6. Click and drag the mouse to **pan** the map
7. Click the shaded box in the overview window and drag it to a new location to quickly **pan** the map.

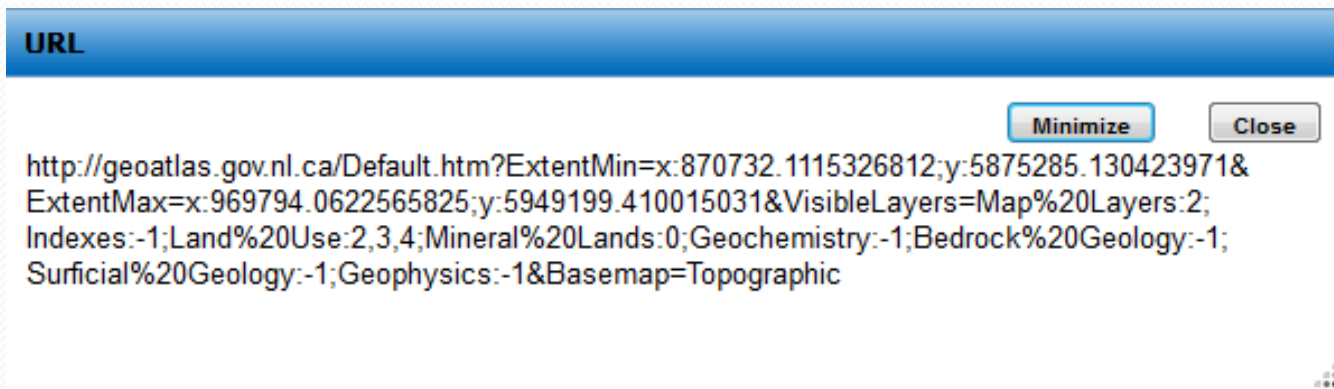




TOOLS MENU: -refer to Atlas Help for a more detailed description

1) Share Map:

- creates a URL web address of the present map to share with colleagues
- copy and paste the URL to an email and send
- they will copy and paste the URL to their internet browser address bar and press enter to see the same view of the Atlas

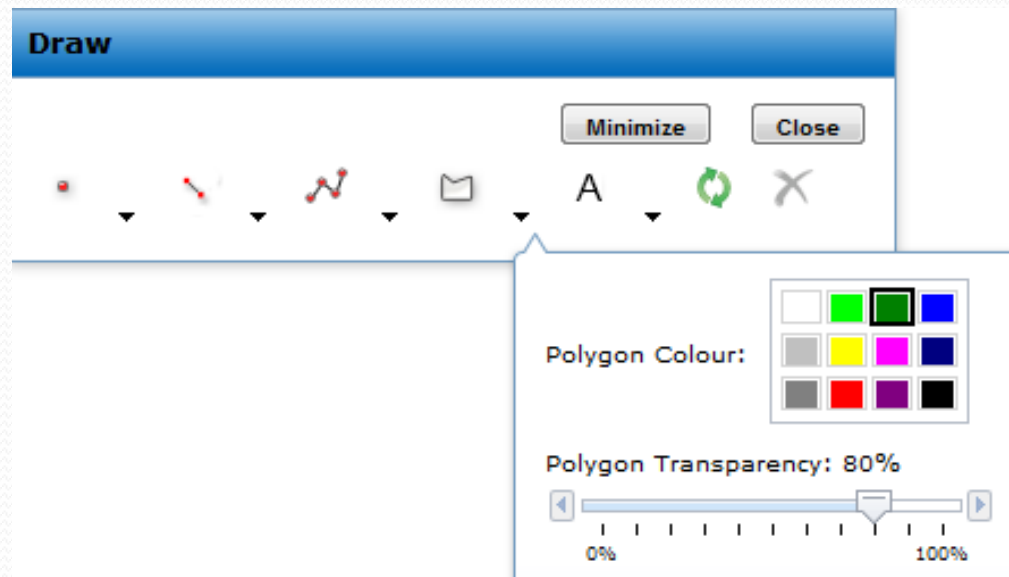




TOOLS MENU: -refer to Atlas Help for a more detailed description

2) Draw Graphics:

- add points, lines, polylines, polygons and text to your map
- when printing, these graphics are only included using the quick print tools on the lower right side of the print window





TOOLS MENU > 3) Spatial Search:

-based on overlap of

- i) a drawn graphic (e.g. intersecting a line or within a polygon), or
- ii) current results (i.e. current selection in a Search Results window)

Buffer Distance can be used around either Graphic or Current Results.

Example: What mineral occurrences are within 10km of Corner Brook?

The screenshot displays the Geoscience Atlas web application. The main map shows a geological map of Newfoundland and Labrador. A red dot on the map indicates the location of Corner Brook. A red rectangle highlights the area around this dot, which is the search location. A red arrow points from the 'Search Location' dropdown in the Spatial Search window to this red rectangle on the map.

Search Results Window (3): This window displays the results of the search. It includes a table with columns: NMINO, COMNAME, DEPNAME, MODSLABEL, COMMODS, STATUS, EAST, and NORTH. The table lists three mineral occurrences:

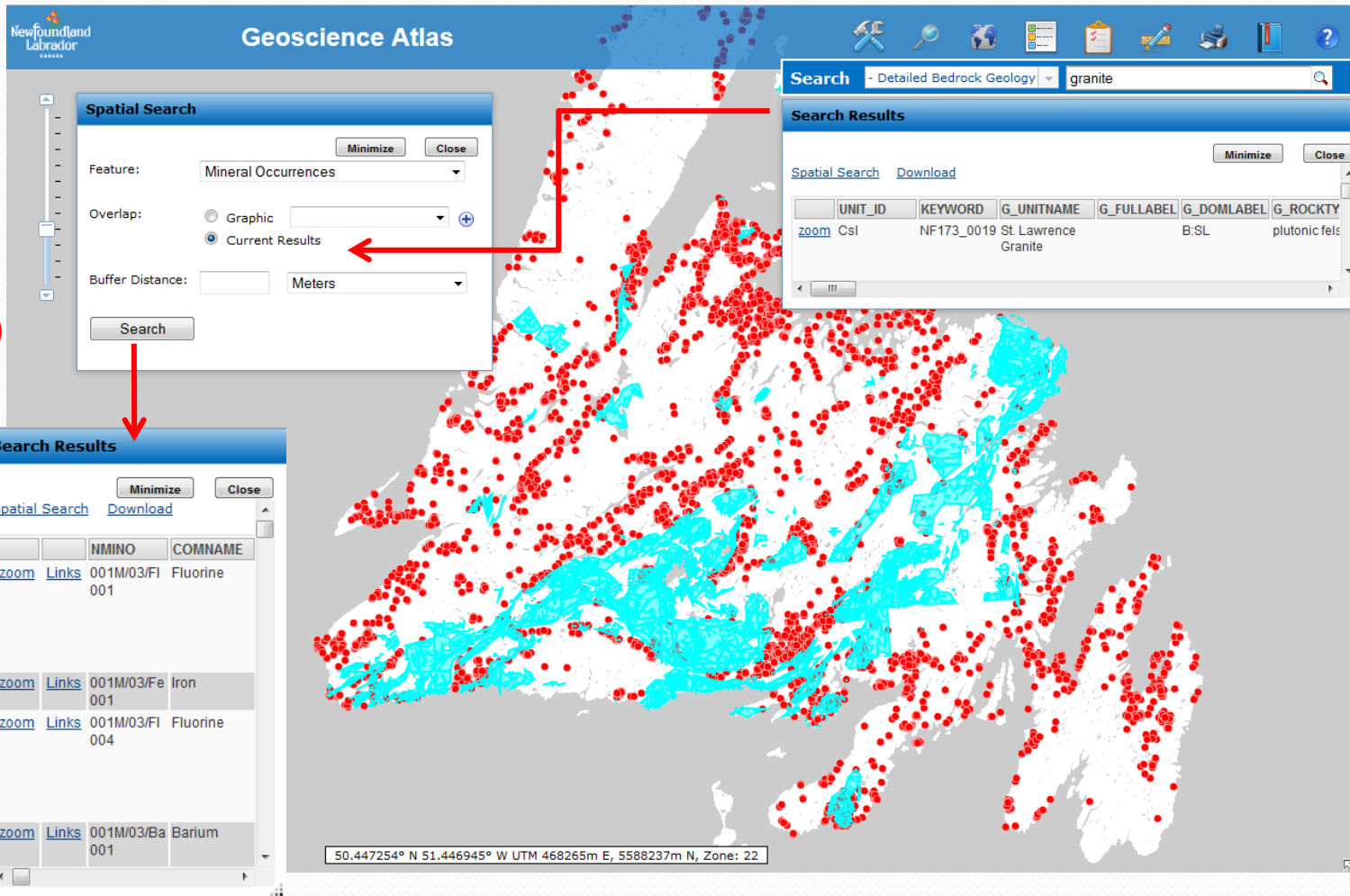
NMINO	COMNAME	DEPNAME	MODSLABEL	COMMODS	STATUS	EAST	NORTH
012A/13 /Stn001	Slate	North Star Shale Quarry	Stn		Past Producer (Dormant)	432920	5423280
012A/13/Zn 005	Zinc	Wild Cove Lake South	Zn	Lead, Silver, Copper	Indication	438330	5424280
012B/16/Au 001	Gold	Meadow Point	Au	Silver	Indication	422650	5426850

Spatial Search Window (2): This window is used to perform the search. It includes a 'Feature' dropdown set to 'Mineral Occurrences', an 'Overlap' section with 'Graphic' selected and 'Search Location' chosen, and a 'Buffer Distance' of 10 Kilometers. A 'Search' button is at the bottom.

Search Bar (1): The search bar at the top right of the map area contains the text 'corner brook, nl'.

TOOLS MENU > 3) Spatial Search:

Example: What mineral occurrences occur within granites on the Island?



Geoscience Atlas

Spatial Search

Feature: Mineral Occurrences

Overlap: ☐ Graphic ☒ Current Results

Buffer Distance: Meters

Search

Search Results

[Spatial Search](#) [Download](#)

UNIT_ID	KEYWORD	G_UNITNAME	G_FULLLABEL	G_DOMLABEL	G_ROCKTY
Csl	NF173_0019	St. Lawrence Granite	B:SL	plutonic fels	

Search Results

[Spatial Search](#) [Download](#)

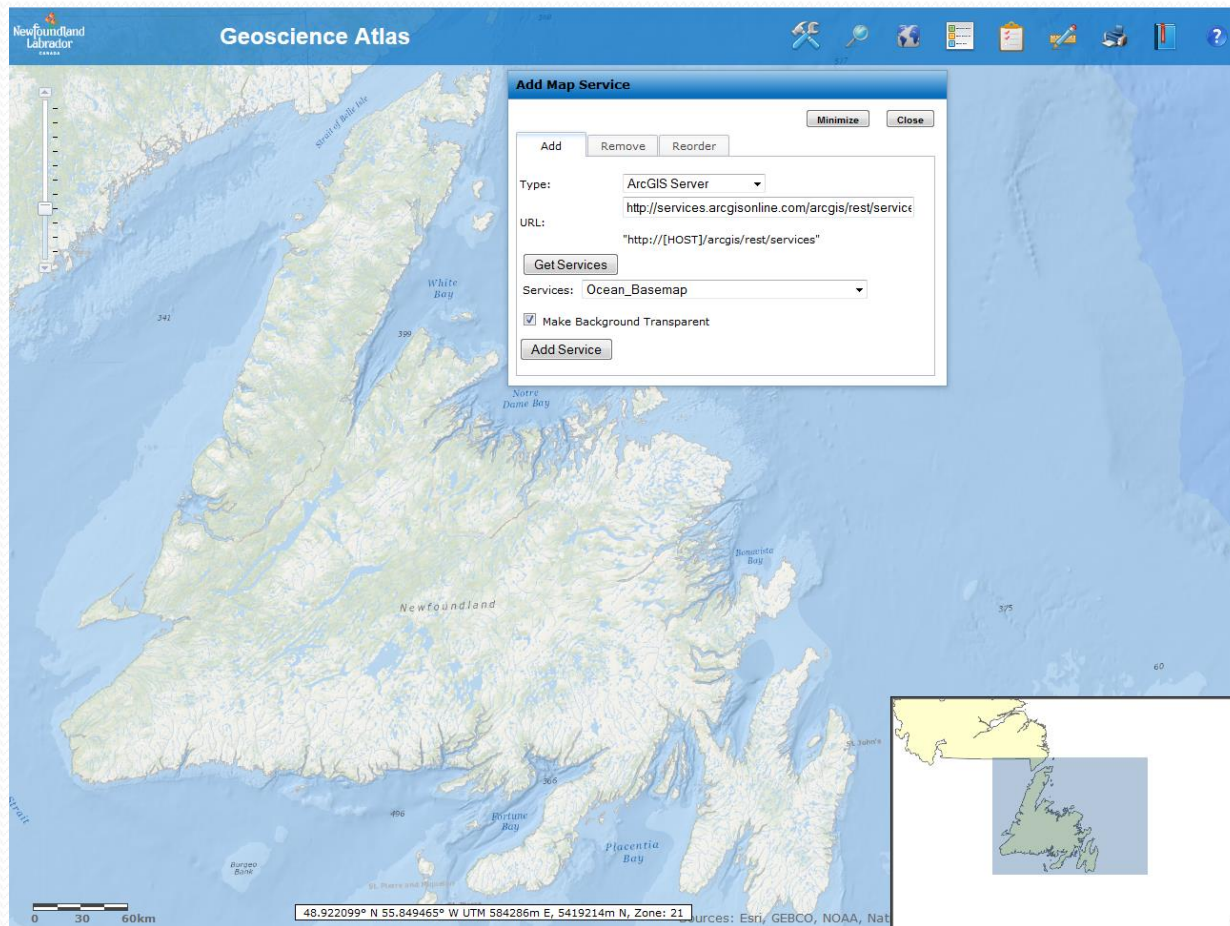
NMNO	COMNAME
001M/03/FI 001	Fluorine
001M/03/Fe 001	Iron
001M/03/FI 004	Fluorine
001M/03/Ba 001	Barium

50.447254° N 51.446945° W UTM 468265m E, 5588237m N, Zone: 22



TOOLS MENU > 4) Add Map Service:

Example: enter URL <http://services.arcgisonline.com/arcgis/rest/services/>, click Get Services and choose a service such as Ocean Basemap - in the 'Reorder' tab, move the added layer above the Atlas layers (note that Atlas layers cannot be reordered).



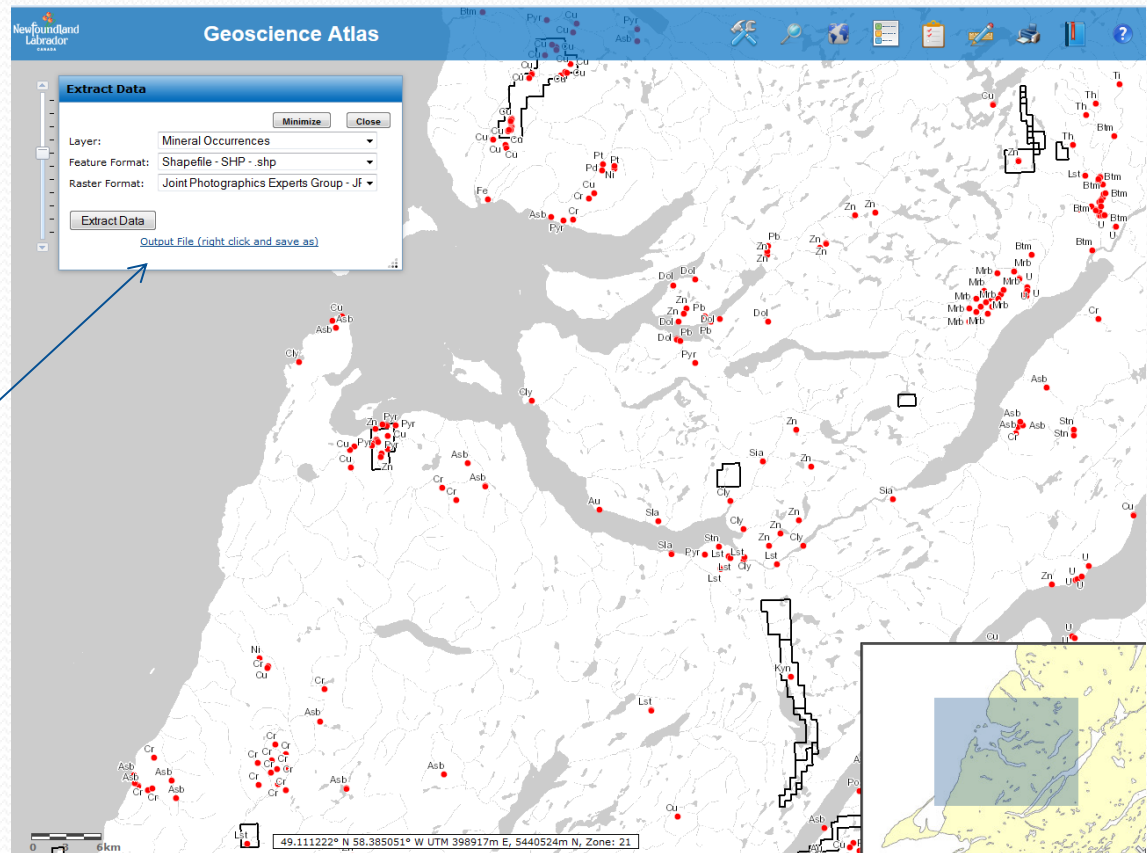
Note that ArcGIS Online layers are in WGS84 datum, so will not overlay perfectly on Atlas layers (NAD27).



TOOLS MENU > 5) Download Data (Extract):

Choose the layer from the drop-down list (vector features or raster images). The layer does not have to be turned on. Base maps cannot be downloaded.

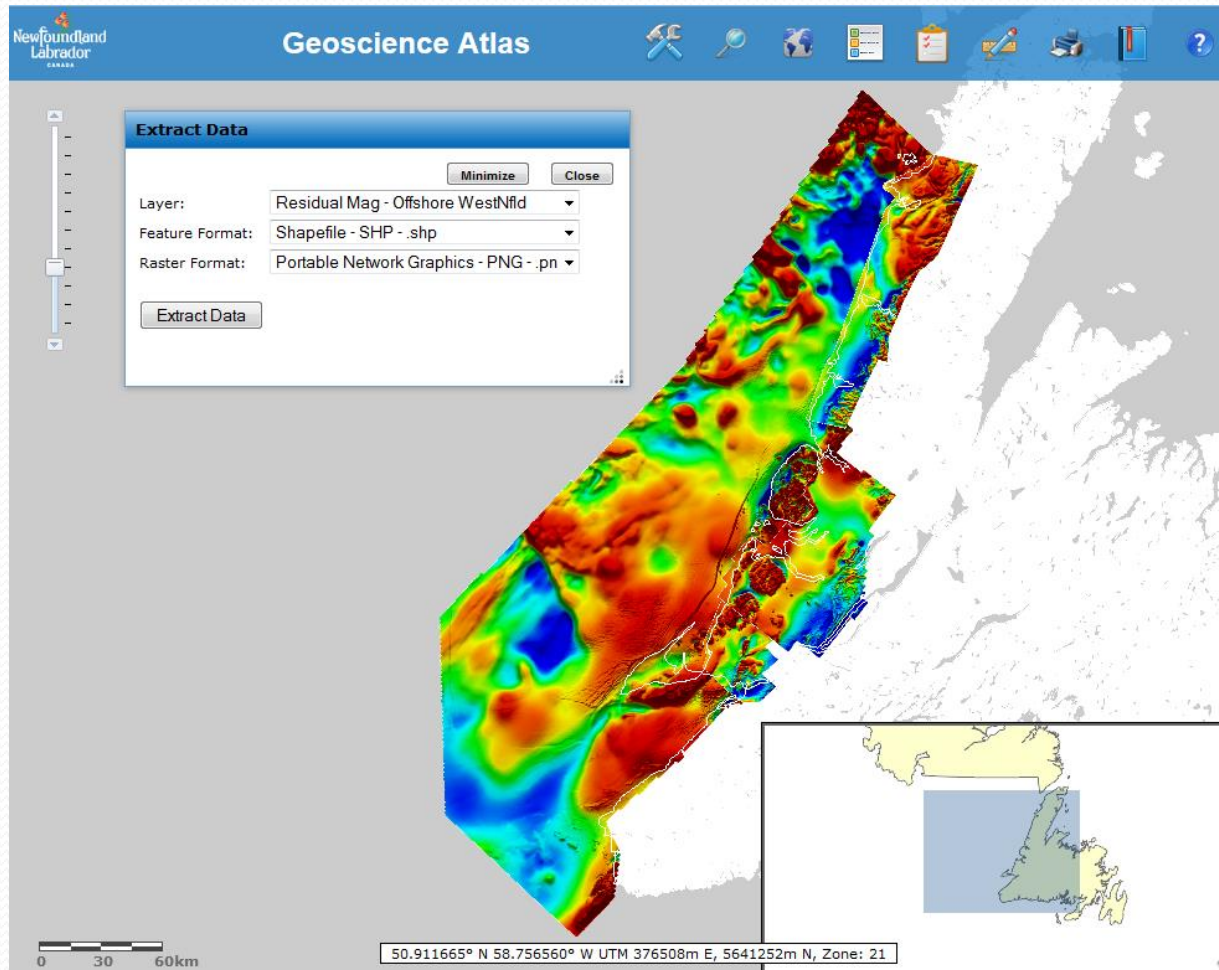
‘**Features**’ (i.e. point, line or polygon vector features) ***within the current window extents*** are downloaded in the chosen format (.shp, .gdb or .dgn). Save the .zip file to your computer.





TOOLS MENU > 5) Download Data (Extract):

For 'Raster' images (e.g. geophysics raster images, lake sediments element images), the **whole image** is downloaded in the chosen format (.jpg, .tif, or .png). The layer does not have to be turned on.





TOOLS MENU > 6) Attribute Query:

Select the layer and field (attribute) of interest; choose an operator and click on 'Get Sample Values' for **examples** of values; select a value from the drop down list or enter a value in the box below; click on the 'Add to Query Expression' and Run the Query; Search Results will be highlighted on the map

The screenshot displays the Geoscience Atlas web application. The main map shows the outline of Newfoundland and Labrador with numerous blue dots representing sediment sites. A 'Contents' panel on the left lists various layers, with 'Till Sediment Sites' selected. An 'Attribute Query' dialog box is open on the right, configured with the following settings:

- Layer: Till Sediment Sites
- Attribute Selection: AU1_PPB
- Operation: Greater than
- Value: 100 (selected from a dropdown menu showing 0.5 and 100)
- Query Expression: AU1_PPB > 100

A blue arrow points from the 'Get Sample Values' link in the Value field to a dropdown menu on the right, which shows a list of values from 1 to 18, with 0.5 highlighted. Below the map, a 'Search Results' table displays data for the selected query.

	AG1_PPM	AG6_PPM	AL2_PCT	AS1_PPM	AS2_PPM	AU1_PPB
27	-9	0.2	8.370000000000001	33	-9	168
135	-9	0.2	8.01	25	-9	113
19	2.5	-9	5.997	50.2	48.42	109
111	2.5	-9	6.591	26	23.78	549
134	2.5	0.3	6.75	2300	2529	2360
1070000004	-9	0.05	6.76	26	9	276
153	-9	0.05	6.59	32	30	105
137	-9	-9	5.724	0.25	2.59	287

At the bottom of the interface, a scale bar indicates 0, 100, and 200 km. The coordinates are 63.571885° N 62.650789° W UTM 517342m E, 7049159m N, Zone: 20.



TOOLS MENU > 7) Custom Query:

Select one of 17 Custom Query forms.

Example: search for 'mafic' **Stratigraphic Units** of the Victoria Lake Supergroup

The screenshot displays the Geoscience Atlas web application. The top navigation bar includes the Newfoundland and Labrador logo, the title 'Geoscience Atlas', and a series of icons for various tools. The main content area is divided into two panels. The left panel, titled 'Search Results', contains a table with columns for various geological attributes. The right panel, titled 'Custom Queries', shows a dropdown menu for 'Stratigraphic Units' and input fields for 'Group Name contains', 'Formation Name contains', and 'Rock Type contains'. A blue arrow points from the 'Rock Type contains' field to the text 'GEOSCIENCE ATLAS: SEARCH AND QUERY (UNDER CONSTRUCTION)'.

D_ROCKTYPE	D_AGERANGE	D_AGEBASE	D_AGETOP	D_SUPERGRP	D_GROUP	D_FORMATN	D_MEMBER	D_SUBUNIT
volcanic mafic marine	Middle Cambrian to Early Ordovician	504	478	Victoria Lake Supergroup	Tulks Hill volcanics			m
volcanic mafic marine	Middle Cambrian to Early Ordovician	504	478	Victoria Lake Supergroup	Tulks Hill volcanics			m

**GEOSCIENCE ATLAS:
SEARCH AND QUERY
(UNDER
CONSTRUCTION)**



There are a number of search and query capabilities in the Geoscience Atlas, under the Tools drop down menu and using the Search icon on the main menu bar. These search and query tools provide the user with the ability to search for locations, specific tabular information, features within polygon, or features within a measured distance from another feature. **Note that Base Maps are static layers and cannot be queried.**

Contents

- [Spatial Search](#)
- [Attribute Query](#)
- [Custom Queries](#)
- [Search](#)
- [Identify and View](#)
- [Contact](#)



Search: for Locations (e.g. 50 Elizabeth Ave., St. John's, NL)
Click on the red dot to go to Bing Bird's Eye view; can also do a Spatial Search around that location

Newfoundland and Labrador
Geoscience Atlas

Search Location 50 elizabeth ave., st john's, nl

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Click to toggle the visibility of the various map layers

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☒ Indexes

- ☐ Index - Bedrock Geology Maps
- ☐ Index - Geochemical Surveys
- ☐ Index - Airborne Geophysical Surveys

☒ Land Use

- ☐ LIL - Labrador Inuit Lands
- ☐ LISA - Labrador Inuit Settlement Areas
- ☐ Public Water Supplies
- ☐ Municipal Boundaries
- ☐ Planning Areas

☒ Mineral Lands

- ☐ Map Staked Claims
- ☐ Original Boundaries
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- ☐ Quarries - Subordinate Permits
- ☐ Quarries - Permits
- ☐ Quarries - Leases
- ☐ Quarries - Permit Expired Last Year

Google Street View
Bing Bird's Eye
Spatial Search
Delete
Close

47.586099° N 52.706985° W UTM 371649m E, 5271491m N, Zone: 22





Search: for **layer information** -choose ALL, or an individual group or layer, from the drop down list, to do a text search; type the search text (e.g. buchans) and press enter.

Geoscience Atlas

Search

Search Results

Map Service:

Results:

[Spatial Search](#) [Download](#)

		SURVEY_ID	DIGITAL	SURV_DATE	GEOFILE	LINE_SPACE	PARAMETERS	COMPANY
zoom	Links	DL08771	Yes	Spring, 1997	23H/07/0105	200 m, Az: 135	Mag, 4-frequency	Buchans River Ltd.

Indexes

- Land Use
- Geochemistry
- Surficial Geology
- Mineral Lands
- Bedrock Geology
- Map Layers

Search Results:
Click on the **Map Service** drop down list to pick one of seven groups, such as Indexes, that include a layer containing the word 'buchans'.
Click on the **Results** drop down list to pick the layer of interest, such as the Index of Airborne Geophysical Surveys.

0 50 100km

49.273167° N 51.899846° W UTM 434541m E, 5457993m N, Zone: 22

Search Results Window: a pop-up window with results from Spatial Search, Attribute Query, Custom Query, Search icon and Cursor Identify (maximum of 1000 records).

For each record – can **'zoom'** to feature and **'Link'** to further information (e.g. Airborne Surveys, Geofiles, Mineral License Inquiry, MODS, photos in the future)

Spatial Search link – can use the search results in a further spatial search

Download link – provides the search results in an output **shape** file
or click and drag over the results table to select them and copy and paste to a spreadsheet

Example: Did Noranda hold any claims in the province between 2000 and 2011? If so, how much money did they spend on each claim (scroll to Total Expenditures column on right side of the table)? Zoom to each claim using the 'zoom' link beside each record. Check out their assessment reports using the 'Links' beside each record.

Geoscience Atlas

Custom Queries

Custom Query: Historical Claims

NTS 250

License Number contains

Client Name contains Noranda

Start Date 2000-01-01

End Date 2010-12-31

Run Custom Query Clear

Search Results

Spatial Search Download

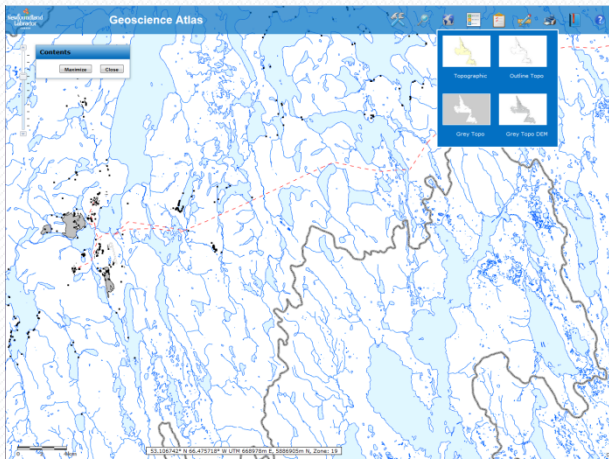
		MIRIAD.CLAIMSARCHIVE.OBJECTID	MIRIAD.CLAIMSARCHIVE.LICENSE_NBR	M
zoom	Links	35012	009840M	nl
zoom	Links	35013	009759M	nl
zoom	Links	35014	009853M	nl
zoom	Links	35015	009855M	nl
zoom	Links	35016	009704M	nl
zoom	Links	35017	009747M	nl
zoom	Links	35018	010070M	nl
zoom	Links	35019	009792M	nl
zoom	Links	35020	009854M	nl
zoom	Links	38572	010852M	nl
zoom	Links	38573	011099M	nl
zoom	Links	185281	009792M	nl
zoom	Links	184685	010070M	nl
zoom	Links	182694	009854M	nl
zoom	Links	194269	009855M	nl
zoom	Links	192204	009853M	nl
zoom	Links	1250	009747M	nl
zoom	Links	190203	009759M	nl
zoom	Links		009840M	nl
zoom	Links		009704M	nl

Mineral License Inquiry
Geofiles Search

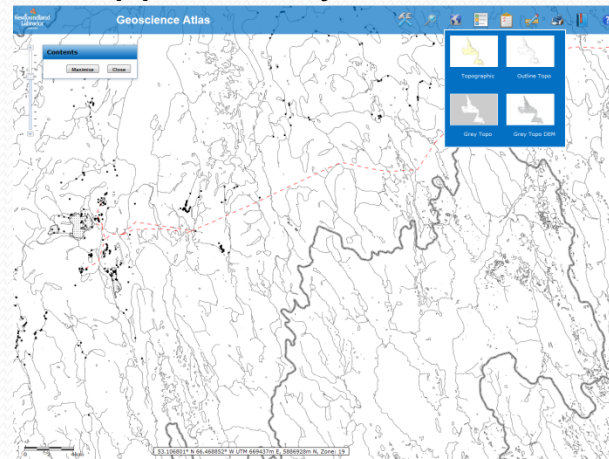


Base Maps:

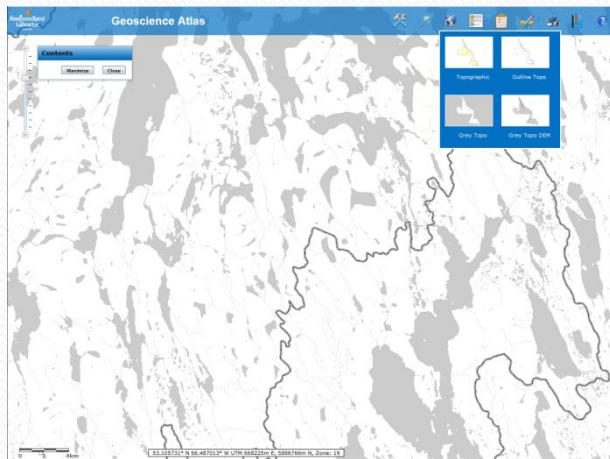
Base maps display under all other layers; they cannot be queried or downloaded. More detailed information is supplied as you zoom in.



Topographic



Outline Topo



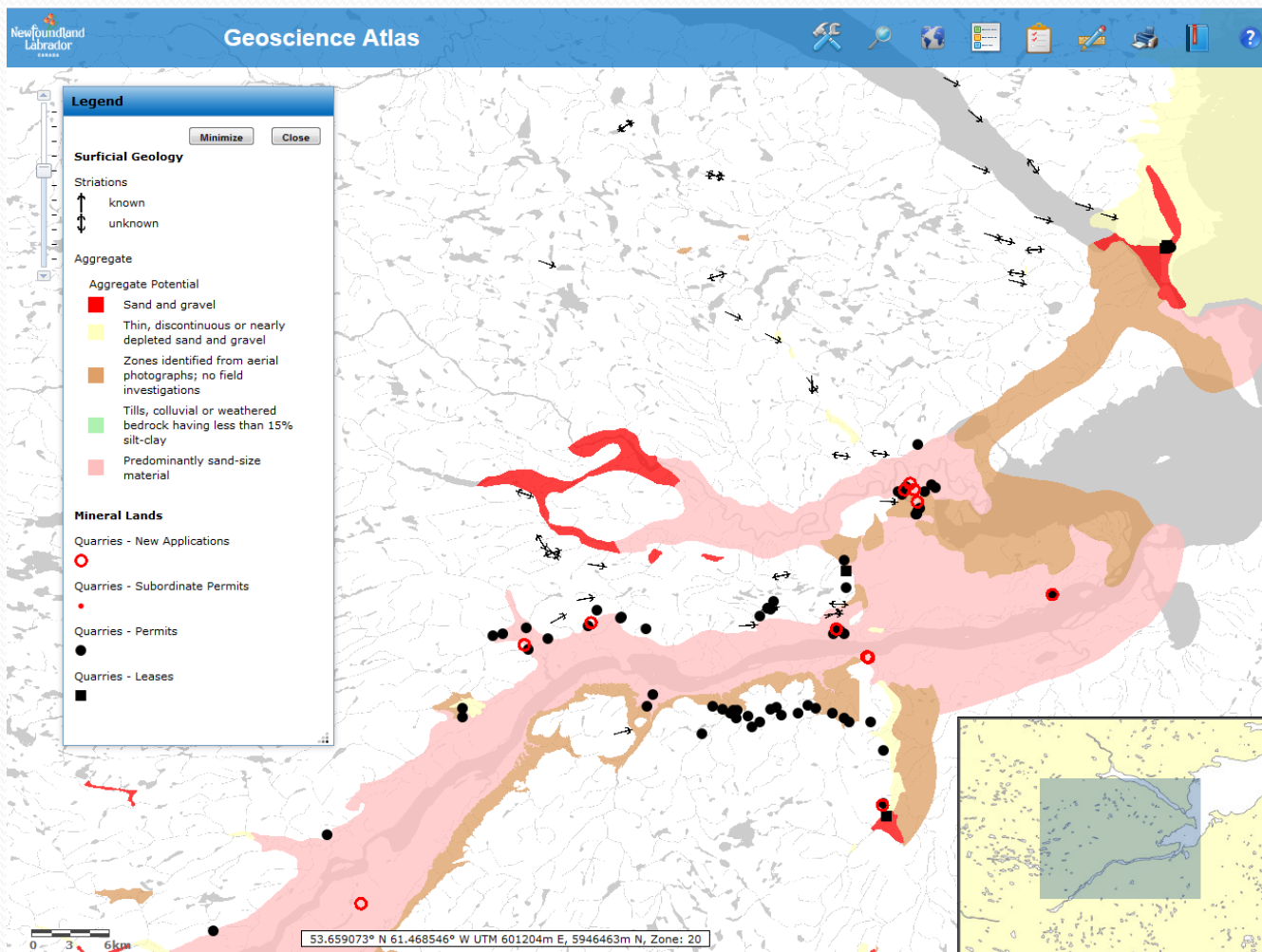
Grey Topo



Grey Topo DEM




Legend: includes **all** features for **all** open layers, not just features in the map window; base maps, road networks and raster image values are not included





Contents:

- on by default, click icon to toggle off; can minimize and move around
- order cannot be changed; all drop down lists use this order
- groups are not collapsible
- points, lines and polygons are listed in the top half; geophysics images are listed in the bottom half
- see **Atlas Help > List of Layers** for a complete list and description

Content Layers: this is the standard order; if your order is different, please refresh your browser (F5 or) 

Map Layers – Map Labels to Contours

Indexes – Bedrock Geology to Airborne Geophysics

Land Use – LIL to Planning Areas

Mineral Lands – Map Staked Claims to Archived Quarries

Geochemistry – Plutonic Rocks to Lake Seds Geochem Images

Bedrock Geology – 1:1million Faults & Contacts to Hydrogeology

Surficial Geology – Carbon 14 Age Dates to Regional Surficial Geology

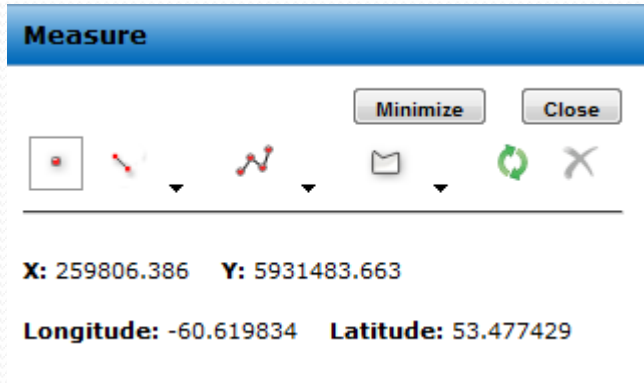
Geophysics – Shabogamo Lake 2011 to Residual Mag Newfoundland



Measure

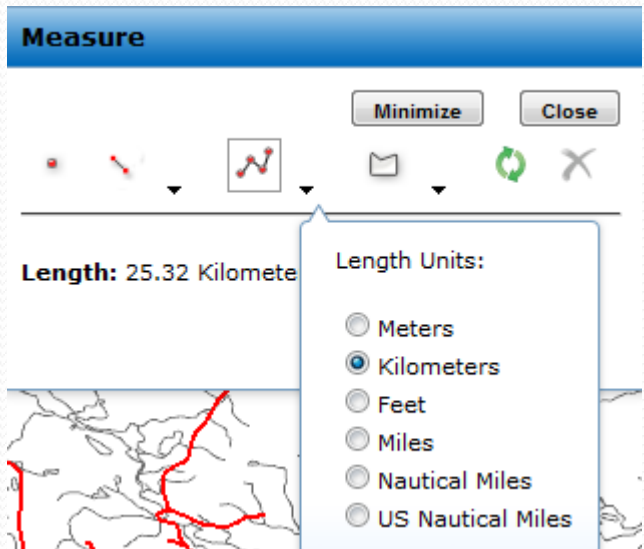
Point

Provides X/Y coordinates in UTM (**Zone 21**) and Longitude/Latitude, based on the **NAD83** datum (note that the coordinates at the bottom of the map window are based on NAD27). Values can be selected, copied and pasted.



Polyline

Click the arrow next to the polyline icon to choose a unit of measurement. On the map click to start drawing, click to add vertices and double click to finish. The length of the polyline displays in the unit of measurement chosen. The default unit is Kilometers.



See Atlas Help file for Line and Polygon options, Clear and Close.



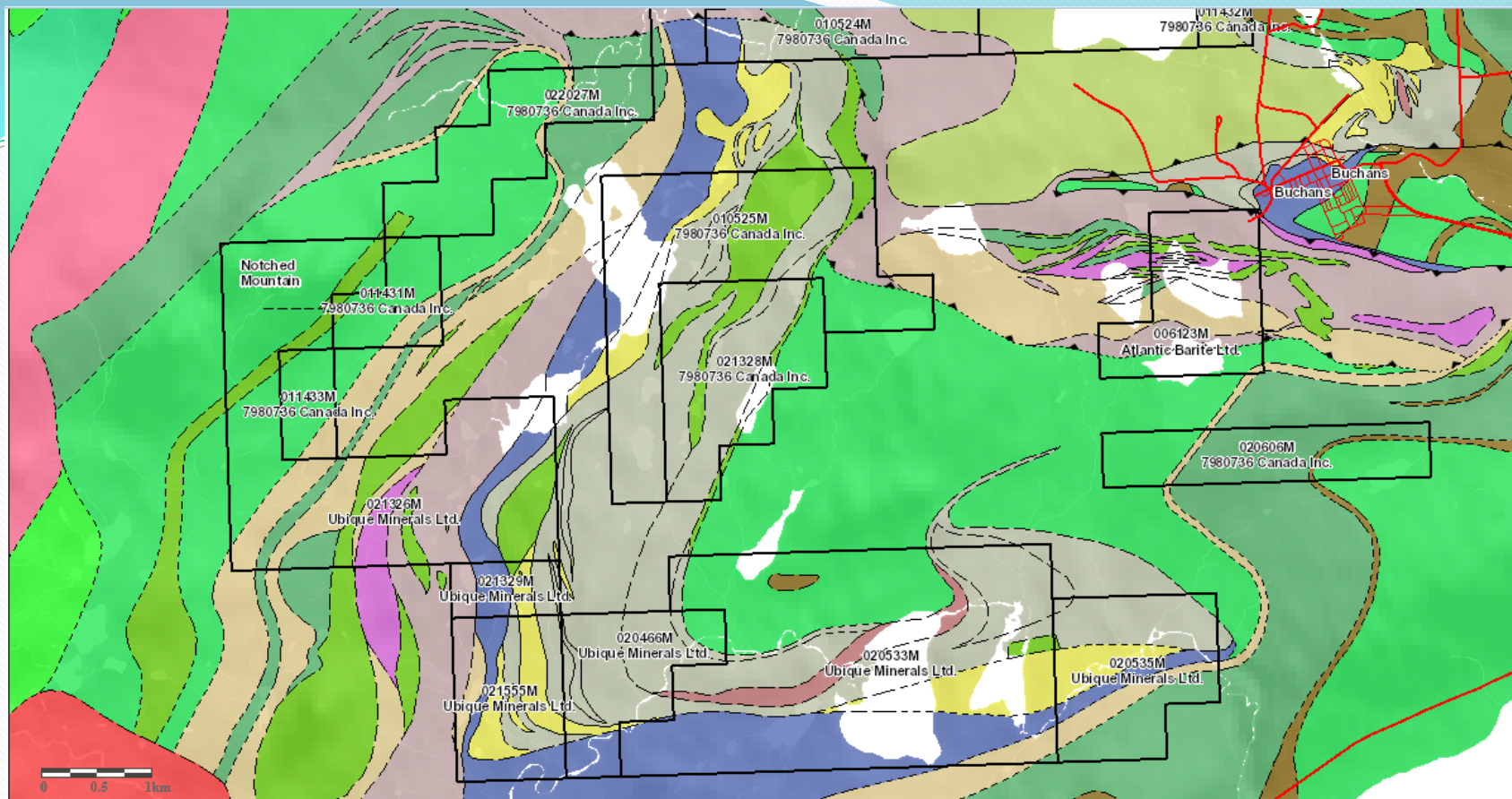
Print

Click the Print icon to open another window with a preview of the map and several printing options below.

Custom Print (left side): Fill in the Map Title, choose a Map Layout from the drop down list. If you manually enter a scale, the map will be based on the centre of the preview image. Create Map and open the PDF to view, save and print the map. Drawn graphics **are not** included.

Quick Print (right side): Drawn graphics **are** included.

1. Print Image - Prints the map 'as is' with no title or north arrow but with a scale bar.
2. Save Image - The image is produced with no title, north arrow or scale bar. Right click on the image and save as a png or bmp (depending on your browser).
3. Save Image as PDF - The image can be saved as a pdf file, with no title, north arrow or scale bar.
4. Print Legend - The legend opens in a new window tab, listing feature symbols from the whole province for open layers, not just features in the map window. Click the print button to display the network printer options. Legend does not display base map info, road networks or image values.



Map Title: Buchans Area Geology

Map Layout: Landscape8x11

Map Scale: 1 : 50000

Create Map

Open PDF

Landscape8x11

Portrait8x11

Landscape11x17

Portrait11x17

Landscape8x11_NoLatLongGrid

Portrait8x11_NoLatLongGrid

Print Image

Save Image

Save Image as PDF

Print Legend

Print above 'as is', with just scale bar

Save above as png (no title, NA, scale)

Save above as pdf (no title, NA, scale)

Print legend for open layers

Contents

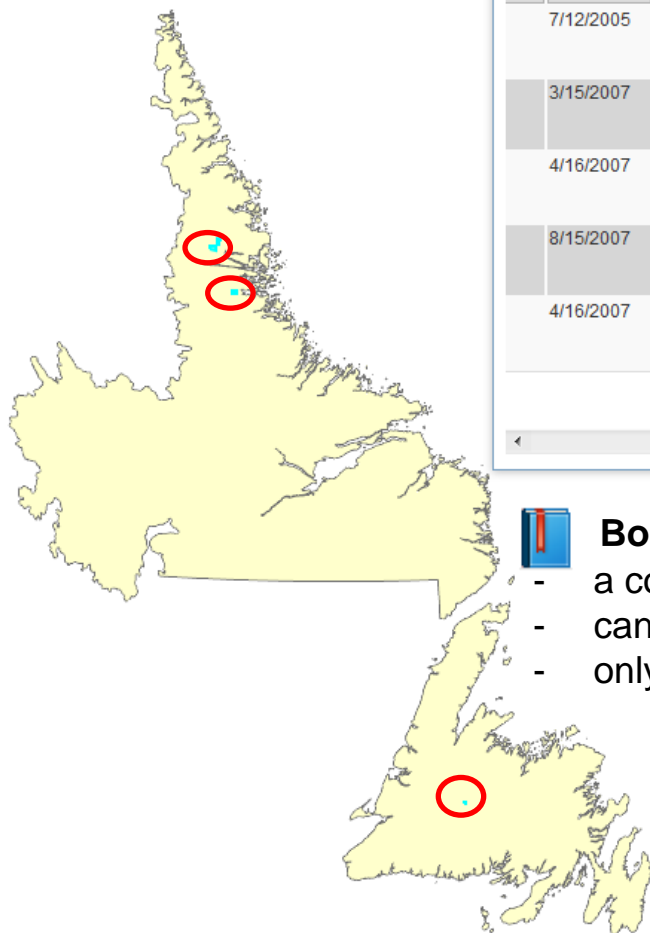
Maximize Close

Search Results

Minimize Close

TUS	STAKEDATE	RECDATE	ISSDATE	WRKDUE	MAPSHEETS
	7/12/2005	7/12/2005 11:35:39 AM	8/11/2005	10/10/2014	14D01 14D08
	3/15/2007	3/15/2007 9:44:02 AM	4/16/2007	6/16/2014	12A10
	4/16/2007	4/16/2007 3:03:11 PM	5/16/2007	7/15/2014	14D15
	8/15/2007	8/15/2007 8:35:18 PM	9/14/2007	11/13/2014	14D15
	4/16/2007	4/16/2007 3:06:34 PM	5/16/2007	7/15/2014	14D15 14E02

- Labrador
- Newfoundland
- Initial Extents
- Project 14D/08
- Project 12A/10
- Project 14D/15
- Add Bookmark



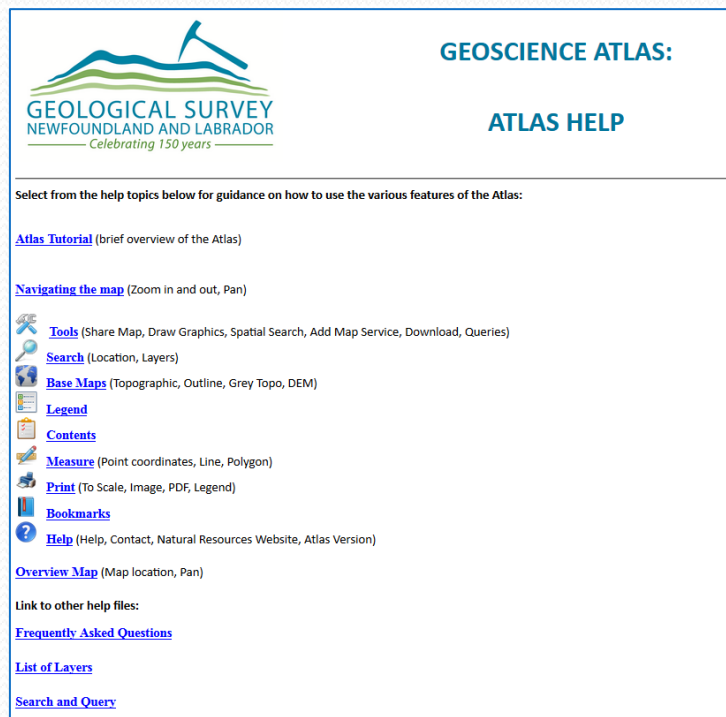
Bookmarks

- a collection of direct links to predefined map extents
- can create new ones, rename, and delete old ones
- only saves the map extents, not which layers are turned on

Example: Use Search Results to '**zoom**' to each map sheet area (i.e. 14D/01,08; 14D/15; 12A/10) and using the Bookmarks tool, click 'Add Bookmark' for each project area.

? Help

Atlas Help – provides brief descriptions of all the tools, as well as links to the **Atlas Tutorial**, **Frequently Asked Questions (FAQ)**, **List of Layers** (description of all the layers), and a **Search and Query** help file.



Contact Information: 709-729-2301; GeoscienceOnline@gov.nl.ca

Home: link to the Department of Natural Resources web site

About Atlas: provides Atlas version number and link to Tamarack website