



# **First Steps of Exploration**

Research, Compilation and Property Selection

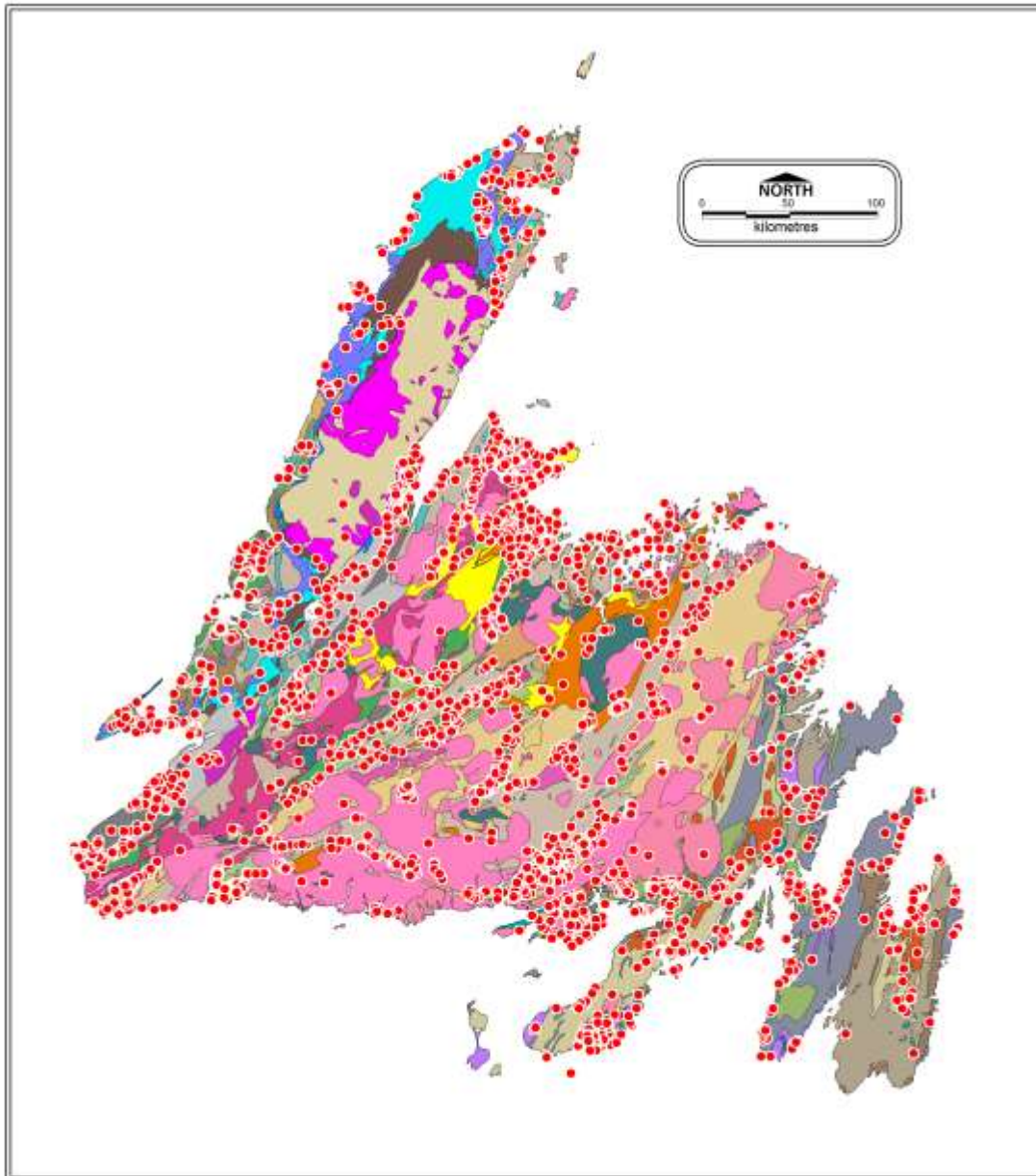


# Limited Knowledge & Basic Research

- Initial prospecting is often carried out with limited knowledge of an area of interest
- Could be examining a single mineral occurrence, sample site (i.e., lake sediment or till), or an area based solely on favorable geology
- Amount of research conducted at this point can vary
- Initial results and observations assist in the decision-making process
- If follow-up exploration is warranted, further research and compilation should be completed

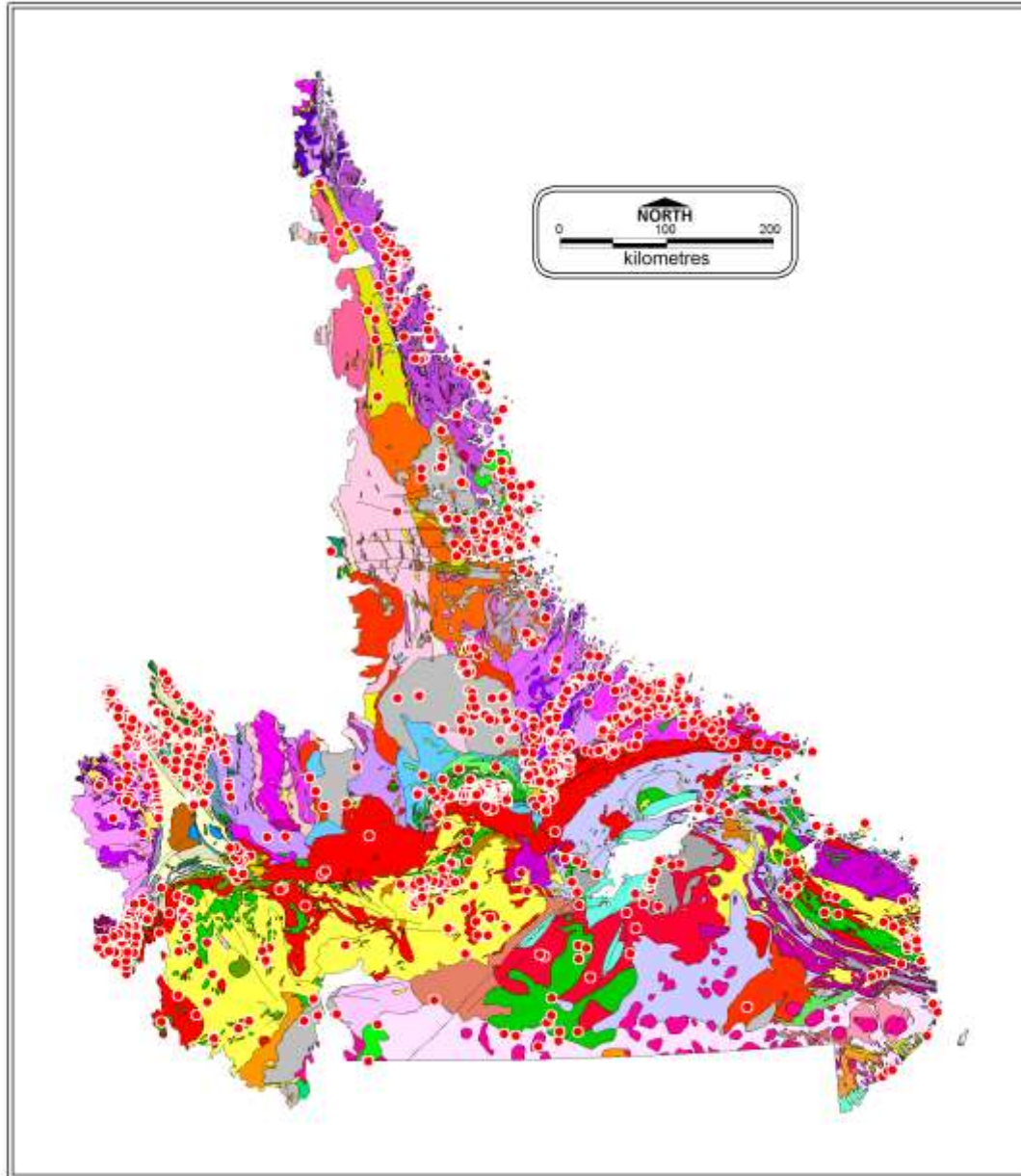


# Research: Data Review



- Most prospective areas have been subject to previous exploration efforts
- Work was completed by other prospectors, companies, government, academia
- Results of this work are often available from the Department of Natural Resources
- Most information can be accessed by using the Geoscience Atlas

# Research: Data Review



- If information is not available online, there are other options:
  - Coming to DNR to conduct search in person
  - Requesting a search from [Cindy Saunders](#) at DNR
  - Consulting with the Matty Mitchell Resource Room Geologist [Pat O'Neill](#)
  - Contacting DNR's Mineral Exploration Consultant [Phil Saunders](#)



# Research: Data Review & Preliminary Work

- Review the occurrences listed in the Mineral Occurrence Database (MODS)
- Read the assessment reports and select the more pertinent results
- Conduct a site visit and do reconnaissance prospecting and sampling
- Ground work done before an area is staked can be claimed for assessment credit
- Stake the ground if you think it has potential
- If ground is acquired, compile available data into a usable format, i.e., Compilation Map

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

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

**Mines Branch Services**

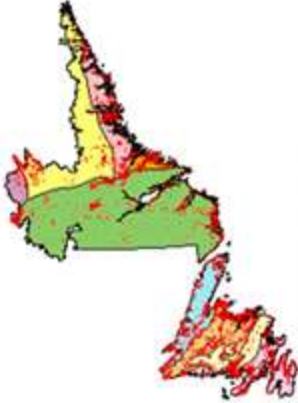
<a href="#">Mineral Lands Claim Staking</a>
<a href="#">Geofiles Metadata Search</a>
<a href="#">Mineral Rights Inquiry Form</a>
<a href="#">Geological Reports and Maps</a>
<a href="#">Mineral Occurrence Data System (MODS)</a>

**Energy Branch Services**

<a href="#">Onshore Petroleum Maps and Data</a>
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**National GIS Resources**

<a href="#">Earth Sciences Resources</a>
<a href="#">NRCan Free Topographic Data Sets - Geogratis</a>



Contact us at:  
[GeoScienceOnline@gov.nl.ca](mailto:GeoScienceOnline@gov.nl.ca)



# Research: Finding a Property

The screenshot displays the Newfoundland Geoscience Atlas web application. The main map area shows a grid of land parcels with various labels such as 'Burton Basin', 'Glass Hill West Pond', and 'Noble Head'. A red line highlights a specific parcel, 'P022402M'. The 'Contents' sidebar on the right lists various categories and sub-categories, with a red arrow pointing to the 'Historical Claims' option under 'Mineral Lands'. The application is running in a web browser, with the address bar showing 'http://geosites.gov.nf/Default.htm'. The Windows taskbar at the bottom shows the system tray with the date '10/23/2015' and time '3:42 PM'.

**Geoscience Atlas**

**Contents**

- Index - Airborne Geophysical Surveys
- Land Use**
  - LI - Labrador Inuit Lands
  - LIISA - Labrador Inuit Settlement Areas
  - Public Water Supplies
  - Municipal Boundaries
  - Planning Areas
- Mineral Lands**
  - Map Staked Claims
  - Original Boundaries
  - Historical Claims
  - Mineral Rights Cancelled
  - Notices Gazetted
  - Mineral Tenure
  - Quarries - New Applications
  - Quarries - Subordinate Permits
  - Quarries - Permits
  - Quarries - Leases
  - Quarries - Permit Expired Last Year

Windows taskbar: 10/23/2015 3:42 PM

# Research: Finding a Property

The screenshot displays a web-based GIS application interface. At the top, the browser address bar shows the URL [geoatlas.gov.nl.ca/Default.htm](http://geoatlas.gov.nl.ca/Default.htm). The main content area is divided into several sections:

- Search Results:** A table listing search results with columns for OLDLIC, LICENSE\_NBR, AREA, LEN, FILENUM, CLIENT\_NAME, and LOCATION. Red arrows point to the 'Zoom' and 'Links' columns.
- Map:** A map showing property boundaries and search results. A large cyan-shaded area highlights a specific property. A red arrow points to this area.
- Legend:** A legend on the left side of the map, including sections for Coastal Monitoring and Coastal Characterization. A red arrow points to the legend.

	OLDLIC	LICENSE_NBR	AREA	LEN	FILENUM	CLIENT_NAME	LOCATION
<a href="#">Zoom</a>						Atlantis Exploration Inc.	Burlins Pond/Baie Verte Penn
<a href="#">Links</a>							
<a href="#">Zoom</a>						Buchans Minerals Corporation	Nippers Harbour, Baie Verte Peninsula
<a href="#">Links</a>							
<a href="#">Zoom</a>						Granges Inc.	Nippers Harbour/Baie Verte Pn
<a href="#">Links</a>							
<a href="#">Zoom</a>						British Canadian Mines Ltd.	Nippers Islands, Baie Verte Peninsula
<a href="#">Links</a>							

Legend:

- Contours (scale dependent)
- Coastal Monitoring
  - Coastal Monitoring Sites
- Coastal Indices
  - Coastal Erosion Index
  - Coastal Sensitivity Index
  - Petroleum Vulnerability Index
- Coastal Characterization
  - Original Points
  - Slope
  - Substrate
  - Width
  - Sediment





# Research & Compilation

- Step one after staking claims should be to conduct a program of research & compilation
- Research could lead to the discovery of new showings not documented in MODS and/or anomalous results that remain untested
- Information from research efforts can be used to plan prospecting trips and should also be plotted onto a compilation map
- A compilation map displays important results from previous exploration and highlights area(s) requiring further exploration
- Time spent preparing a compilation map may be claimed for assessment credit



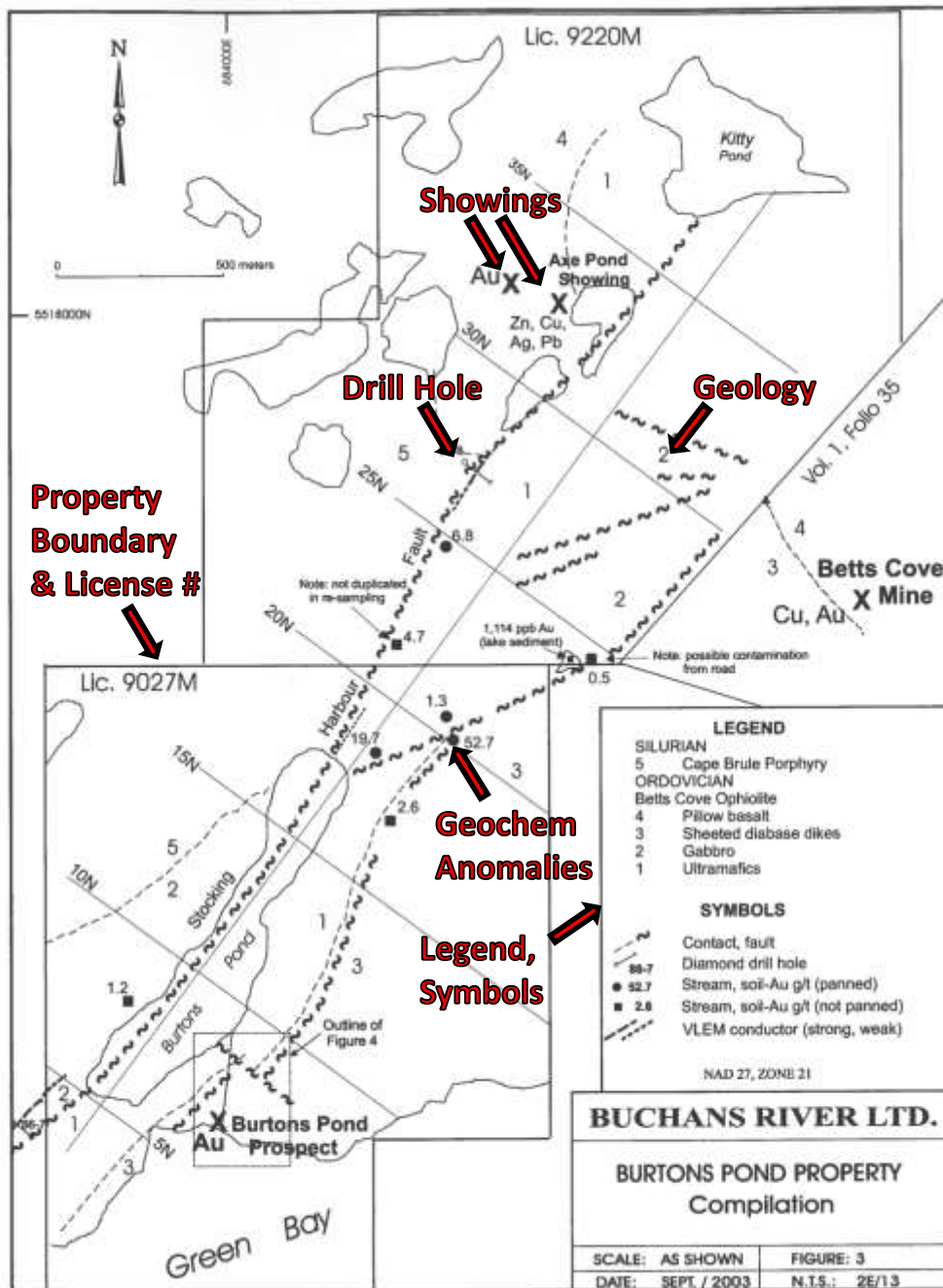
# Compilation Map

- First and foremost, you need a base map to plot data on
- Choose an appropriate scale that will allow you to show details, but can be easily reproduced
- You may find an existing map in a previous assessment report or government files
- The page-sized map that comes with your mineral license information might be suitable
- Google Earth Pro will allow you to plot data – convenient for adding new data
- You can print a map from the Geoscience Atlas or ask [Pat O'Neill](#) at the Matty Mitchell Resource Room for assistance

# Compilation Map



- Review available files and identify features of interest (i.e., geology, showings, anomalies, trenches, drill holes, etc.)
- Plot all relevant features (including assay highlights) on your map
- Add any preliminary results you may have obtained prior to staking the property
- Add a list of symbols to explain the features shown
- Add your license boundaries and numbers for quick reference
- Make note of any references to other work that might require follow-up



- Compilation map highlighting significant results of previous exploration
- Allows you to see what has been found and areas that you should focus on
- Map should be updated as you do work on the property
- Helps demonstrate mineral potential to investors
- Ideal way of showing why Prospector Assistance is needed, and proposal is of merit



# Compilation vs Tabulation

- Tabulated highlights from previous assessment reports
- Simply listing previous work is NOT compilation
- Nonetheless, it is a good resource to have and can complement the map

*First Year Report, Burtons Pond Property, Newfoundland*

Company/year/ File No.	Work performed	Results
<b>Riocanex/Granges (cntd.)</b>		
1983 2E/486	stripping, mapping and sampling	Best assay-8.9 g/t Au, 0.43% Cu / 0.6 m, gold in soils and panned silts about 1 km along fault to north
1984 2E/519	lake and stream sampling, north block, 6ddh - 531m	-gold in streams to north, -gold in 5 holes, best assay - 10.2 g/t Au, 15.2 g/t Ag, 1.6% Cu/3.0m
1985 2E/536	Mag/VLF surveys, VLEM	anomaly over main showing
1986 2E/540	2 ddh - 218.6m VLEM	-no significant mineralization, VLEM holes
1988 2E/626	8 ddh - 812 m -4 holes on main zone (one lost at 50m), -3 on VLF anomalies	-gold in 4 holes, best assays-9.1 g/t Au/0.6m, 10.3 g/t Au/0.4m. -VLF anomalies - faults
<b>Noveder</b>		
1995 2E/954	Soil sampling	strong anomaly to 3,030 ppb Au over showing, weak 600 m long anomaly to east
1996 2E/964	Input airborne survey over ophiolite	weak-moderate conductors near Burtons Pond not explained
1997 2E/995	Geological mapping, sampling	Axe Pond showings: Best assays 31% Zn/3.5% Cu; 10.5 g/t Au
1997 2E/1002	Geological mapping	7 drill holes proposed



# Reminders

- When selecting areas to conduct exploration, keep in mind community issues, environmental concerns and/or aboriginal land claims
- If you are working with a partner, you must register a property ownership agreement with the Mineral Claims Recorder's office
- This will protect your interest in the property and simplifies the process should the claims be optioned
- All exploration work done on a mineral license, including boots and hammer work **requires** Exploration Approval (EA)
- Offense under the Mineral Act to do exploration work without an EA. Additionally, funding will be rejected if work is completed without an EA
- Read the **entire** Exploration Approval for the purpose of understanding **all** of the conditions



# DEPARTMENT OF NATURAL RESOURCES CONTACTS

- Phil Saunders      Exploration Consultant      709 729 6193      [philsaunders@gov.nl.ca](mailto:philsaunders@gov.nl.ca)
- Pat O'Neill      Matty Mitchell Room      709 729 2120      [matty@gov.nl.ca](mailto:matty@gov.nl.ca)
- Cindy Saunders      Geofiles, file searches      709 729 6280      [cindysaunders@gov.nl.ca](mailto:cindysaunders@gov.nl.ca)

Department of Natural Resources Website: <http://www.nr.gov.nl.ca/nr/>

Geoscience Resource Atlas: <http://gis.geosurv.gov.nl.ca/>

Matty Mitchell Room: [http://www.nr.gov.nl.ca/nr/mines/pro prospector/matty\\_mitchell/index.html](http://www.nr.gov.nl.ca/nr/mines/pro prospector/matty_mitchell/index.html)