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
Research: Finding a Property
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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

<table>
<thead>
<tr>
<th>Company/year/ File No.</th>
<th>Work performed</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td><strong>1983</strong> 2E/486</td>
<td>stripping, mapping and sampling</td>
<td>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</td>
</tr>
<tr>
<td><strong>1984</strong> 2E/519</td>
<td>lake and stream sampling, north block, 6ddh - 531m</td>
<td>-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</td>
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<tr>
<td><strong>1985</strong> 2E/536</td>
<td>Mag/VLF surveys, VLEM</td>
<td>anomaly over main showing</td>
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<tr>
<td><strong>1986</strong> 2E/540</td>
<td>2 ddh - 218.6m VLEM</td>
<td>-no significant mineralization, VLEM holes</td>
</tr>
<tr>
<td><strong>1988</strong> 2E/626</td>
<td>8 ddh - 812 m, -4 holes on main zone (one lost at 50m), -3 on VLF anomalies</td>
<td>-gold in 4 holes, best assays-9.1 g/t Au/0.6m, 10.3 g/t Au/0.4m, -VLF anomalies - faults</td>
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<tr>
<td><strong>1995</strong> 2E/954</td>
<td>Soil sampling</td>
<td>strong anomaly to 3,030 ppb Au over showing, weak 600 m long anomaly to east</td>
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<tr>
<td><strong>1996</strong> 2E/964</td>
<td>Input airborne survey over ophiolite</td>
<td>weak-moderate conductors near Burtons Pond not explained</td>
</tr>
<tr>
<td><strong>1997</strong> 2E/995</td>
<td>Geological mapping, sampling</td>
<td>Axe Pond showings: Best assays 31% Zn/3.5% Cu, 10.5 g/t Au</td>
</tr>
<tr>
<td><strong>1997</strong> 2E/1002</td>
<td>Geological mapping</td>
<td>7 drill holes proposed</td>
</tr>
</tbody>
</table>
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

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- Pat O'Neil  Matty Mitchell Room  709 729 2120  matty@gov.nl.ca
- Cindy Saunders  Geofiles, file searches  709 729 6280  cindysaunders@gov.nl.ca

Department of Natural Resources Website:  http://www.nr.gov.nl.ca/nr/
Matty Mitchell Room:  http://www.nr.gov.nl.ca/nr/propsr/cons/matty_mitchell/index.html