Geology Matters 2011

Program with Abstracts

Report ME 2011-2
D.R. MacDonald, Ed.

The Westin Nova Scotian Hotel
October 24 and 25, 2011

Nova Scotia

Honourable Charlie Parker
Minister of Natural Resources

Duff Montgomerie
Deputy Minister

Halifax, Nova Scotia
2011
<table>
<thead>
<tr>
<th>Abstracts</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. H. Calder: <em>Coal Age Galápagos</em>: Launching the Geoheritage Initiative</td>
<td>1</td>
</tr>
<tr>
<td>Terry Coughlan: <em>GoGold Resources</em></td>
<td>2</td>
</tr>
<tr>
<td>G. J. DeMont: <em>Defining a Space for Mineral Resource and Aggregate</em></td>
<td>3</td>
</tr>
<tr>
<td>Matt Ferguson: <em>Canada, a Beacon for Mining</em>: 125th Anniversary of the Mining Society of Nova Scotia</td>
<td>4</td>
</tr>
<tr>
<td>David Haley: <em>Lower Churchill Hydroelectric Generation Project</em>: Overview of the Muskrat Falls Development</td>
<td>8</td>
</tr>
<tr>
<td>Scott Hoeg: <em>Aggregate</em>: The Cornerstone of Nova Scotia’s Infrastructure</td>
<td>9</td>
</tr>
<tr>
<td>Laurie Jones and Chris MacIntyre: <em>Of Prospectuses and Prospectors</em>: Some Legal Gems for Mining Companies</td>
<td>10</td>
</tr>
<tr>
<td>G. W. Kennedy: <em>Selected Activities of the Hydrogeology Program</em></td>
<td>11</td>
</tr>
<tr>
<td>D. F. Keppie: <em>Economic Implications of Tectonic Constraints in the Kennebecook Basin</em></td>
<td>12</td>
</tr>
<tr>
<td>T. G. MacHattie: <em>Volcanic Stratigraphy and Nature of Epithermal-style Gold Mineralization in Upper Devonian-Lower Carboniferous Volcanic Rocks of the Northeastern Cobequid Highlands, Nova Scotia</em></td>
<td>14</td>
</tr>
<tr>
<td>J. D. MacNeil: <em>Automation of the Registry of Mineral and Petroleum Titles</em></td>
<td>15</td>
</tr>
<tr>
<td>Brendan Matheson: <em>Harrigan Cove Gold Deposit</em>: A Fresh Perspective</td>
<td>16</td>
</tr>
<tr>
<td>Carl Poirier: <em>Carbon Capture and Storage Potential for Nova Scotia</em></td>
<td>20</td>
</tr>
<tr>
<td>G. A. Prime: <em>The Aggregate Program</em>: Research with Economic, Social and Environmental Implications</td>
<td>22</td>
</tr>
<tr>
<td>R. J. Ryan: <em>Protecting 12% by 2015</em></td>
<td>25</td>
</tr>
<tr>
<td>Michael J. Simons: <em>Rock Fall Protection Systems - Methods to Mitigate a Geohazard</em></td>
<td>26</td>
</tr>
<tr>
<td>Michael R. Taylor: <em>SLAM Exploration Ltd.: Gold, Silver, Base Metals</em></td>
<td>27</td>
</tr>
<tr>
<td>Mike Villeneuve, Christine Hutton, Cathryn Bjerkelund and Serge Paradis: <em>Overview of Targeted Geoscience Initiative 4 (TGI-4) Ore System Projects</em>: a National, Thematic Program to Enhance Effectiveness of Deep Exploration</td>
<td>28</td>
</tr>
<tr>
<td>C. E. White, D. Archibald and Katherine Voy: <em>Preliminary Bedrock Geology Map of the Antigonish Highlands, Northern Mainland Nova Scotia</em></td>
<td>29</td>
</tr>
<tr>
<td>C. E. White and S. M. Barr: <em>Revised Stratigraphy and Tectonic Evolution of the Meguma Terrane</em></td>
<td>30</td>
</tr>
</tbody>
</table>
Program, Monday, October 24

8:00 am - 3:00 pm  Registration
8:00 am - 9:00 am  Coffee station sponsored by The Mining Society of Nova Scotia
9:00 am  Exhibits Open
9:00 am - 9:20 am  Opening Remarks, Duff Montgomerie, DNR

Session 1: New Initiatives
9:20 am - 9:40 am  The Natural Resources Strategy - Rob Naylor, DNR
9:40 am - 10:00 am  12% by 2015 - Bob Ryan, DNR
10:00 am - 10:20 am  Automation of the Registry of Mineral and Petroleum Titles - John MacNeil, DNR
10:20 am - 10:40 am  Coffee break sponsored by Merrex Gold Inc.
10:40 am - 11:00 am  Land Asset Management Pilot Project - Dan Khan, DNR
11:00 am - 11:20 am  TGI-4, Targeted Geoscience Initiative - Mike Villeneuve, Natural Resources Canada

Session 2: Exploration and Mining I
11:20 am - 11:40 am  Canadian Exploration Industry Trends - Brad McBain, Accurassay Laboratories Ltd.
11:40 am - 12:00 pm  Volcanic Stratigraphy and Nature of Epithermal-style Gold Mineralization in Upper Devonian-Lower Carboniferous Rocks of the Northeastern Cobequids - Trevor MacHattie, DNR
12:00 pm - 1:30 pm  Luncheon - Guest Speaker David Haley, SNC-Lavalin Inc. - Lower Churchill Project - Overview of the Muskrat Falls Development
1:30 pm - 1:50 pm  Harrigan Cove Gold Deposit: a Fresh Perspective - Brendan Matheson, Stay Gold Inc.
1:50 pm - 2:10 pm  The Next One - Terry Coughlan, GoGold Resources

Session 3: Energy
2:10 pm - 2:30 pm  Forent Energy: an Exploration Update - Ian Shook, Forent Energy
2:30 pm - 2:50 pm  Carbon Capture and Storage - Carl Poirier, CCS Nova Scotia
2:50 pm - 3:10 pm  Coffee break sponsored by Conestoga-Rovers & Associates
3:10 pm - 3:30 pm  Economic Implications of Tectonic Constraints in the Kennetcook Basin - Fraser Keppie, DNR
3:30 pm - 3:50 pm  The Global Coal Industry: Nova Scotia’s Energy Plan and the Donkin Coal Project - Peter Akerley, Erdene Resource Development
3:30 pm - 5:00 pm  Student Workshop sponsored by Acadian Mining Corp. - Harbour Suites

Session 4: Reclamation and Mining
3:50 pm - 4:10 pm  Mine Reclamation and Sustainability in the Mineral Sector- Fred Bonner, TBL Resource Solutions
4:10 pm - 4:30 pm  Surface Coal Mining Enhancement Initiative - Helen MacLeod, DNR
4:30 pm - 4:50 pm  Rockfall Mitigation - Michael Simons, Maccaferri Canada Ltd.
4:50 pm - 5:30 pm  Networking in Commonwealth Ballroom
5:30 pm - 7:30 pm  Reception and Awards Ceremony, Hosted by the Honourable Charlie Parker, Minister of Natural Resources. Sponsored by Conrad Brothers, Atlantic Cat, Dexter Construction, GoGold Resources, McInnes Cooper, National Gypsum, Pioneer Coal
Program, Tuesday, October 25

8:00 am - 3:00 pm  Registration
8:00 am - 9:00 am  Coffee station sponsored by the Mining Association of Nova Scotia
9:00 am  Exhibits Open
9:00 am - 9:10 am  Opening Remarks - TBA

Session 5: Land-use Planning

9:10 am - 9:30 am  Defining a Space for Mineral Resource and Aggregate Development in Land-use Planning - Garth DeMont, DNR
9:30 am - 9:50 am  Coal Age Galapagos: DNR Launches its Geoheritage Initiative - John Calder, DNR

Session 6: Exploration and Mining II

9:50 am - 10:10 am  Mining Activities Update - Alan Davidson, DNR
10:10 am - 10:30 am  Coffee break sponsored by Atlantic Gold NL
10:30 am - 10:50 am  Atlantic Gold’s Meguma Projects: an Update - Wally Bucknell, Atlantic Gold NL
10:50 am - 11:00 am  Viewpoint of the Nova Scotia Mining Industry from the Mining Association of Nova Scotia (MANS) - Pat Mills, President, MANS
11:10 am - 11:30 am  Prospector’s Report - Ron Mills, DNR
11:30 am - 11:50 am  Of Prospectuses and Prospectors: Some Legal Gems for Mining Companies - Laurie Jones & Chris MacIntyre, McInnes Cooper
12:00 pm - 1:30 pm  Luncheon - Guest Speaker Amanda Dillon, PDAC - Mining Matters: Bringing the Wonder of Canada’s Geology and Mineral Resources to Canadian Educators and Students
1:30 pm - 1:50 pm  Striking the Balance: Optimizing Turn-around Time and Quality Needs in Your Mineral Testing Programs - Brad McBain, Accurassay Laboratories Ltd.
2:00 pm - 5:00 pm  Wetlands 101 Workshop co-sponsored by Atlantic Chapter of the Canadian Land Reclamation Association and the Mining Association of Nova Scotia - Harbour Suites
2:00 pm - 2:10 pm  Revised Stratigraphy and Tectonic Evolution of the Meguma Terrane - Chris White, DNR
2:10 pm - 2:30 pm  Canada, a Beacon for Mining: 125th Anniversary for the Mining Society of Nova Scotia - Matt Ferguson, President, Mining Society of Nova Scotia

2:30 pm - 2:50 pm  Coffee break sponsored by Selwyn Resources Ltd.
2:50 pm - 3:10 pm  Title TBA - Jason Dunning, Selwyn Resources Ltd.
3:10 pm - 3:30 pm  Understanding the Rocks: a Guide to Bedrock Aggregate Exploration in Nova Scotia - Garth Prime, DNR
3:30 pm - 3:50 pm  Aggregates: the Cornerstone of Nova Scotia’s Infrastructure - Scott Hoeg, Conestoga-Rovers & Associates
3:50 pm - 4:10 pm  Greenlight’s Project Updates: Nova Scotia - John Wightman, Greenlight Resources
4:10 pm - 4:30 pm  Gold, Silver, Base Metals - Mike Taylor, Slam Exploration
4:30 pm - 5:30 pm  Booths and Poster Displays in Commonwealth Ballroom
5:30 pm  Conference Closes
Sponsors

Thank you to our sponsors for contributing to the success of Geology Matters 2011.

Coffee Break Sponsors

Student Workshop Sponsor

Wetlands 101 Workshop Sponsors

Sponsors for the Minister’s Reception and Awards Ceremony
List of Poster Titles

Economic Development

R. Puchalski, C. E. White, S. M. Barr, and K. L. Scallion
Field relationships and petrology of the Trafalgar plutonic suite, Meguma terrane, Nova Scotia

C. E. White, D. Archibald, and Katherine Voy
Preliminary bedrock geology map of the Antigonish Highlands, northern mainland Nova Scotia

T. G. MacHattie
Epithermal (Au, +/- Ag, Pb, Zn) mineralization in the eastern Cobequid Highlands

B. E. Fisher and T. G. MacHattie
Using LiDAR to evaluate the geological resources of the Cobequid Highlands

D. E. Webber
Education, outreach and promotion

G. A. Prime
The Aggregate Program: research with economic, social and environmental implications

R. F. Mills
2011 Mapping at Meander River, Hants County, Nova Scotia

D. F. Keppie
Structural interpretation of tectonic constraints in the Kennetcook Basin: insights from new mapping

Education and Outreach

J. H. Calder
Coal Age Galapagos: launching our geoheritage program

G. J. DeMont
Creating a green economy in Nova Scotia through mineral resource development

Information Services

B. E. Fisher
Providing free digital geoscience information to support sustainable economic growth and protect health and safety

B. E. Fisher
Geological Resource Atlas: helping to grow the economy and protect the environment

J. M. McMullin and M. J. O'Neill
The Drillhole and Drill Core Database - a vital tool for economic development and geological research

Environmental Geology

P. W. Finck
Applications of coastal and engineering geology in the identification, prediction and adaption to geohazards in Nova Scotia

continued
Environmental Geology (continued)

G. W. Kennedy
Selected activities of the hydrogeology program

D. J. Utting
Coastal mapping: reducing the risk of coastal change

G. A. O'Reilly and T. A. Goodwin, J. S. McKinnon and B. E. Fisher
GIS approach to produce a radon in air potential map of Nova Scotia

Mineral Development and Policy

Registry of Mineral and Petroleum Titles
Mining operations in Nova Scotia

R. J. Ryan
Reaching 12% by 2015

D. A. Khan
Land Services Branch: Land Asset Management pilot project