

Volume 27, no. 2

Spring 2010

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**Natural Resources****Summer Program Activities of the Geological Services Division**

The Geological Services Division has a wide range of project activities planned for the summer of 2010, spanning the spectrum from evaluating the potential for coastal erosion to studying rare-earth element (REE) mineralization. Summer activities of the division's nine programs are summarized below.

Mineral Resources Program

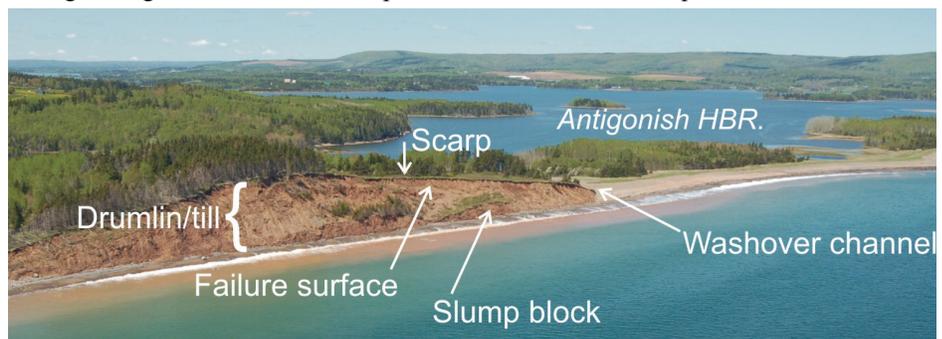
Trevor MacHattie is expanding his study of REE mineralization and alkali-metasomatism in the Byers Brook Formation, northeastern Cobequid Highlands. This will require detailed mapping, sampling and drill core examination to delineate mineralized zones. Trevor will also work closely with George O'Reilly on IOGC mineralization along the Cobequid-Chedabucto Fault Zone.

Bob Ryan is working on delineating the extent of alteration around the Coxheath base metal deposit. Ron Mills continues to assist Nova Scotia prospectors with advice on exploration and analytical techniques, and interpretation of geological, geochemical and geophysical data.

Terry Goodwin will collect and process five 10 kg till samples this summer as part of the Nova Scotia Gold Grain Study. The study was designed to establish the number of gold grains, their relative size and grain morphology for each till sample collected as an aid to mineral exploration programs being conducted throughout the province. Garth Prime will continue his work on the aggregate project, which is designed to evaluate bedrock and surficial sources of aggregate for domestic consumption and export markets. This summer Garth will focus on completing his work in southwestern Nova Scotia and embarking on new studies in the Cobequid and Antigonish Highlands.

Energy Resources Program

John Calder and Bob Ryan are continuing basin analysis research in support of hydrocarbon exploration in Carboniferous basins. This summer they will focus on the Cumberland Basin and Walton Shore areas. John is also working with our GIS group on organizing the data collected as part of the Nova Scotia component of the Na-



Coastal studies provide the means for communities to adapt to climate change. This photo interpretation was done by geologist Dan Utting in the summer of 2008.

tional Coal Database project. This large volume of information will be made available online.

Water Resources Program

Gavin Kennedy and Danielle Finlayson-Bourque continue to collaborate with Nova Scotia Environment and other partners on the collection and interpretation of groundwater quality and quantity information to improve our understanding of the province's groundwater resources. Project work this summer will include strategic drilling in the Halifax area to characterize the distribution and extent of surficial aquifer materials. This work has the potential to identify new high-quality sources of groundwater in areas that are not currently serviced by city water. Gavin and Danielle are also working with Nova Scotia Environment and Saint Francis Xavier University to assess the vulnerability of coastal communities in Nova Scotia to seawater intrusion. This work forms part of the federally funded Regional Adaptation Collaborative (RAC) program. Additional details about the RAC program are provided below under the Environmental Geology Program description.

Geological Mapping Program

The division's senior bedrock mapper, Chris White, will be mapping Cambrian and Ordovician strata in southwest Nova Scotia, working on latest Neoproterozoic to Cambrian and Silurian to Early Devonian rocks in the Annapolis Valley, and mapping Avalonian rocks exposed in the Antigonish Highlands. Chris is particularly interested in examining a recently recognized package of Ordovician rocks in the Antigonish Highlands that has a unique mineralogy and potential for REE enrichment.

The division has recently expanded its mapping capability by hiring Fraser Keppie as a full-time bedrock mapper (see p. 3). During June Fraser will assist John Waldron (University of Alberta) with mapping in the Noel Shore area. For the remainder of the summer Fraser will begin mapping the Goldenville and Halifax groups along the Eastern Shore with Mick O'Neill. Mick is a new employee and is based out of the department's Core Library in Stellarton (see p. 3).

Economic Development Program

Increasing awareness of opportunities for economic growth through responsible development of the province's mineral resources is a priority for the division. Garth DeMont and Diane Webber take the lead on this work with lots of support from their fellow staff members.

Garth will continue to work closely with Department of Economic Development and Regional Development Agencies to explore mineral-related development opportunities throughout the province. Garth will sit as team member on Team West, the economic development committee established by the Premier to evaluate short- and long-term economic development opportunities in Southwest Nova Scotia.

Over the next few months, Diane will be planning and preparing for the Mining Matters Conference in October and the Exploration Quebec Conference in November. She will attend the Annual General Meeting of the Mining Society in June and the Rock and Gem Show in Parrsboro in August, and will liaise with industry through various field trips, including visits to East Kemptville, Brazil Lake, Goldboro, Pioneer Coal, Canadian Salt and Shaw Resources.

Environmental Geology Program

Work undertaken as part of this program will include studying the potential for coastal erosion and flooding in various areas of Nova Scotia and providing support for environmental geology studies involving arsenic concentrations in soil, radon in soil gas and acid rock drainage.

The coastal work will form part of the federally funded Regional Adaptation Collaborative (RAC) program. This program helps communities prepare effectively for climate change and its impacts. The division's role will be to provide the geoscience information necessary to allow communities to make informed planning decisions. Phil Finck, Dan Utting and Garth DeMont are working with several collaborating agencies (Nova Scotia Environment, Saint Mary's University, and the Ap-

plied Geomatics Research Group) on the RAC program. Collectively these organizations will be evaluating the potential for coastal erosion and flooding in the Oxford-Pugwash, Yarmouth and Lunenburg areas.

Terry Goodwin will begin a province-wide soil sampling program to determine background arsenic concentrations to support the assessment and management of ecological and human health risks. Terry will also continue to assess radon in soil gas across the province. Both these projects are supported by Health Canada and the Geological Survey of Canada. Terry and Chris White will continue to study the acid-producing and -consuming abilities of bedrock exposed in metropolitan Halifax.

Core Library Program

John McMullen and Mick O'Neill will be assisting clients at the core library throughout the summer. Mick is working on the much-anticipated update of the provincial drill-hole database.

GIS Program

Brian Fisher, Jeff Poole, Jeff MacKinnon, and Angie Ehler are working on a full complement of projects to deliver digital information to division clients. This summer the focus is on preparation of two major sets of map products. Chris White's new series of bedrock maps for south and southwest Nova Scotia encompasses approximately twenty 1:50 000 sheets and represents a major advance in the understanding of Nova Scotia's bedrock geology. Garth Prime's aggregate, clay, sand and dimension stone resource maps of the Annapolis Valley and southern Nova Scotia will consist of twenty-six 1:50 000 sheets and provide a comprehensive evaluation of these important resources.

Publications Program

Geoscience editor Doug MacDonald is busy year round and summertime is no exception. Finalizing the 2010 Report of Activities and preparing the summer newsletter will be his priorities. Doug will also work on the maps in progress with the GIS Section, discussed above.

Chris White and Rob Naylor

Personnel Changes in the Mineral Resources Branch

January 2010 marked more than a new year for the Mineral Resources Branch of DNR. In January, Executive Director Scott Swinden retired from the Nova Scotia department. Scott joined DNR in January 1996, after spending the previous 12 years with the Newfoundland Geological Survey. During his term as Executive Director, Scott was the leader of many initiatives, such as the government's Energy Strategy in 2002 and the long-term project to bring UNESCO World Heritage designation to the Joggins Fossil Cliffs.

Scott's retirement in January started a chain of personnel changes that have taken place since then. Mike MacDonald was selected to be the new Executive Director for the branch. Mike's former job as Director of the Geological Services Division was then filled by Rob Naylor, who was named to that post in April. Rob's former job as Manager of the Geological Mapping and Environmental Geology Section is now vacant and the process to fill the position is under way.

In addition to the chain of changes in management, the Geological Services Division has also hired two geologists to fill new positions. Mick O'Neill has accepted a position with the division, effective February 1, 2010, and is based in the Core Library, Stellarton, working with John McMullin. Mick received his B.Sc. in geology from University College Dublin in 1994 and his M.Sc. in geology from Acadia University in 1996. Mick has worked on lead/zinc projects in Ireland and southwest Spain with the CSA Group, with the Ontario geological consulting firm GeoVector, and latterly worked with Atlantic Gold in Nova Scotia from 2005 to 2010 on the Touquoy property and other gold properties in eastern Nova Scotia.

The second new geologist to join the division is Fraser Keppie. Fraser began work on April 30, 2010. His formal educational accreditations include: B.Sc. in geology, St. F.X. 1996; Computer Science degree, Acadia 2002; Advanced GIS Diploma, College of Geographic



Mike MacDonald (L) is the new Executive Director of the Mineral Resources Branch. Scott Swinden (R) retired as Executive Director in January 2010.



Rob Naylor, Director, Geological Services Division.

Sciences 2004; Ph.D., McGill 2009; and a post-doctoral fellowship at the California Institute of Technology, 2009-2010. Initially Fraser will focus on bedrock mapping in the Eastern Shore area. This will mark a return to familiar ground as his undergraduate thesis involved a study of structural controls on the occurrence of gold deposits in the Oldham Gold District. The division is very pleased to have acquired both Fraser's and Mick's services and we are excited about the contributions that they will make to our programs.

Doug MacDonald, Norman Lyttle and Rob Naylor



Mick O'Neill, Geologist, Geoscience Information Services Section.



Fraser Keppie, Geologist, Geological Mapping and Environmental Geology Section.

Promoting the Resources of Nova Scotia

The Department of Natural Resources (DNR) plays an important role in informing both junior and major exploration and mining companies of the mineral resources and investment opportunities in Nova Scotia. The Exploration Roundup conference in Vancouver and the Prospectors and Developers Association of Canada (PDAC) conference in Toronto are rated as two of the best events in North America for increasing exploration and development activity in the province.

Roundup 2010 was held from January 18 to 21 at the Westin Bayshore in Vancouver. The conference is hosted by the Association for Mineral Exploration British Columbia and is regarded as the world's largest technical mineral exploration conference. Over 4,500 registrants from 30 countries and over 40 provinces and states attended the 27th annual Roundup, which featured 10 short courses, 2 field trips, 8 technical sessions, a prospector's tent, core shack, map tent and 270 trade show booths.

Executive Director of the Mineral Resources Branch Mike MacDonald and Liaison Geologist Diane Webber attended Roundup 2010 with the Nova Scotia booth to highlight current exploration and development activities and promote the mineral resources of Nova Scotia. There was plenty of activity at the

booth and Diane continues to respond to potential clients who have requested information on various properties held by prospectors and mining companies.

The PDAC 2010 International Convention, Trade Show and Investors Exchange, March 7-10, broke an attendance record with nearly 23,000 people attending the 78th gathering at the Metro Toronto Convention Centre. Approximately 800 exhibits filled the South building of the convention centre. The atmosphere at this year's event was exhilarating, with a noticeably increased attendance from last year and a sense of excitement in the industry.

This year's Natural Resources delegation consisted of Minister the Hon. John MacDonell, Deputy Minister Peter Underwood, Mineral Resources Branch Executive Director Mike MacDonald, Registrar of Mineral and Petroleum Titles John MacNeil, Liaison Geologist Diane Webber and Mineral Deposits Geologist Trevor MacHattie. DNR had an opportunity to promote the mineral resources of the province with excellent visibility in both the Nova Scotia booth and the Atlantic Rock Room. The Rock Room (see photo) is the area where Nova Scotia, New Brunswick and Newfoundland present an Atlantic Canada pavilion

with the theme: "Explore the Potential." Thousands of attendees passed through the DNR booth space and pavilion, gathering information and inquiring about opportunities in the Nova Scotia mining sector.

In recognition of the importance of prospectors to the prosperity of the Nova Scotia mineral sector, DNR provided financial assistance for sixteen prospectors to attend the PDAC conference this year. DNR rented booth space for the prospectors to display their materials and following the show the prospectors reported having one of their best shows ever. Properties that were presented at the PDAC and available for option in Nova Scotia included the Kemptville Gold District, the Fanning Lake and Carleton Gold District, the Dominique Polymetallic Prospect, the Highfield Macumber Base Metals Property, the Minard Brook Gold and Antimony Prospect, the Highlands Gold Prospect, the Debert Lake Rare Earth Prospect, the Widow Point and Cranberry Head prospects, the Rare Metal Lower Caledonia Property and Fifteen Mile Stream Gold Property, the Mount Thom and College Grant/Lochaber Lake Copper/Gold IOGC targets, and the St. Mary's Basin IOGC target. Many of the prospectors were able to secure deals for further exploration on their properties as a result of their presence at the PDAC.

It was a pleasure to have Minister of Natural Resources the Hon. John MacDonell attend his first PDAC, and for him to experience the scope of the industry and its important role in growing the province's economy. Mr. MacDonell hosted a breakfast and luncheon for industry representatives and discussed the small footprint of the mining industry and its impact on the sustainable growth of Nova Scotia's economy, while adhering to its 'best practice' obligations.

Nova Scotia mineral resources received high visibility at the PDAC 2010, and the conference proved to be a huge success for Nova Scotia prospectors and the mineral industry.



The Atlantic Rock Room at PDAC.

Diane Webber

From the Mineral Inventory Files

Eastern Promises

Deposits of Li, Ta, Nb, Cs, Rb, Mo and Be are in vogue these days as society advances into an era of ever increasing environmental awareness. These elements are required in the manufacture of all the advanced batteries, magnets and other devices associated with non-gasoline burning automobiles, solar panels and other green energy technologies. As a result of these current and projected needs, the mineral exploration industry is searching the globe for new deposits in order to define reserves of these elements. Nova Scotia, rightfully so, is attracting its fair share of this exploration attention. There are exploration programs under way or planned on properties like the attractive Brazil Lake spodumene pegmatite (see v. 19, no. 2, Spring 2002), the East Kemptville Sn deposit and surrounding granites, and the numerous showings in the highly evolved granites around Port Mouton and New Ross.

All of the prospects cited above are in southwest Nova Scotia and many have been known for over a century. It is my opinion, however, that the eastern region of the Meguma Terrane, the area east of the St. Marys River, may also hold promise for rare metal deposits that equals that of the southwest. The eastern Meguma Terrane shares many geological features in common with the southwest, most notably a similar elevated regional metamorphic grade (amphibolite facies). Globally, rare metal pegmatite deposits tend to be preferentially formed within granitoids near the amphibolite-greenschist facies metamorphic boundary so it is no surprise that this association holds true in Nova Scotia. In addition, the east has its share of rare metal showings. One that is currently receiving attention comprises the Lower Caledonia Be pegmatites, with their spectacular concentrations of beryl (see v. 17, no. 4, Fall 2000). Other examples include the McMillan prospect near Country Harbour Mines (v. 26, no. 2, Spring 2009) and a small Ta-rich pegmatite outcropping on Highway #7 just north of Sherbrooke.

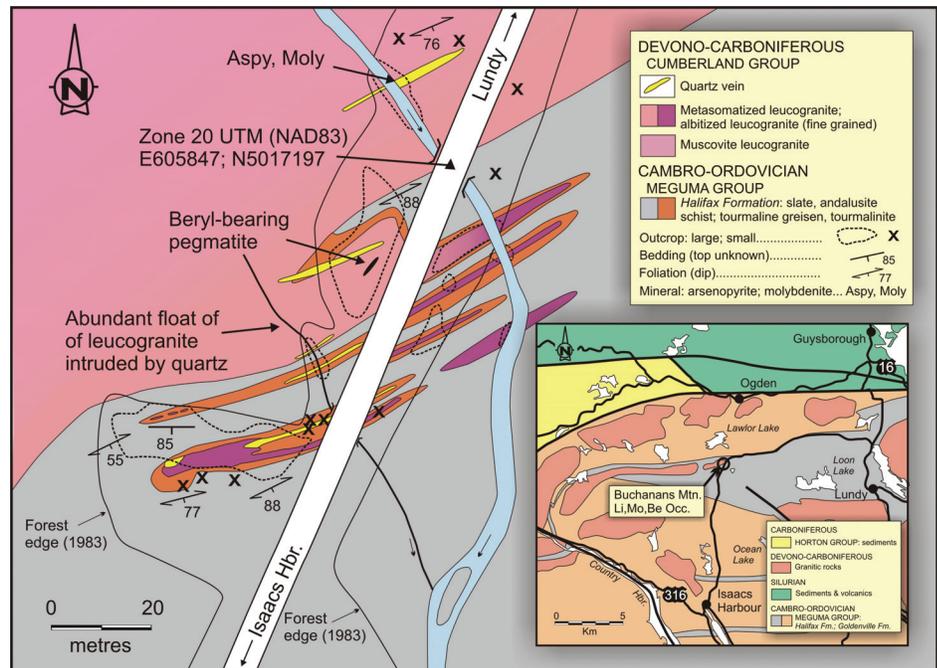


Figure 1. The Buchanans Mountain Li, Mo, Be Occurrence, Guysborough County.

Another prospect that I feel warrants special mention is the Buchanans Mountain Li, Mo, Be occurrence (Fig. 1). In 1981 Esso Resources Canada Limited discovered Mo-bearing leucogranite boulders along the newly constructed Eight Mile Lake lumber road that linked Isaacs Harbour and Lundy (inset on Fig. 1). Construction of this road permitted easy access to a large region of previously inaccessible wilderness. In 1982, geological mapping by the Department of Mines and Energy indicated a molybdenite-bearing quartz vein intruding a leucogranite outcrop where a stream draining Buchanans Mountain passes under the lumber road (Fig. 1). The following year I plane tabled the occurrence and found several very interesting features. Most notable were the presence of tourmaline greisen zones developed within the highly altered Halifax Formation slates that envelope several quartz veins and fine-grained albitite dykes (Fig. 1). It is also apparent that the albitized rocks are gradational with leucogranite, which progresses from a

typical pinkish, medium-grained, muscovite leucogranite through a lighter colored greisenized facies and into the finer grained albitite-rich facies. The tourmaline greisens are nothing short of spectacular. They grade from unaltered slate through slate speckled with euhedral tourmaline laths, which increase in abundance until they reach massive tourmalinite (>90% tourmaline) immediately adjacent to the leucogranite or quartz. As part of my examination I ran a suite of samples for major and trace element analysis and was surprised and pleased to find that most samples of the tourmaline alteration returned in the order of 0.2 % Li, 0.5% F, around 500 ppm Sn and, of course, between 1-2% B.

Well, in the early to mid 1980s nobody cared much about rare metal or Li deposits and this interesting showing was simply filed away and nearly forgotten. Times have changed and perhaps now this little-explored occurrence and others in the eastern Meguma Terrane will receive their just due

G. A. O'Reilly

Nova Scotia Gem and Mineral Show 2010

The weekend of August 20, 21 and 22 will mark the 45th anniversary of the annual Nova Scotia Gem and Mineral Show and Sale in Parrsboro, on the Fundy coast and home of the Fundy Geological Museum. Rock and gem enthusiasts travel from as far away as central Canada and the United States to buy and sell fine mineral and fossil specimens, jewelry and many other treasures. This is a family-friendly event that is a great experience for exhibitors and visitors alike.

There will be more than thirty exhibits, numerous field trips and interpretive walks to spectacular sites of geological interest, and demonstrations of gem cutting, jewelry making, gold panning and much more. The Nova Scotia Metal Arts Guild will showcase work of Nova Scotia silver and goldsmiths. Geologists and mineral collectors from the Department of Natural Resources, Atlantic Geoscience Society, Nova Scotia Prospectors Association and Nova Scotia Gem and Mineral Society will be present to identify your mineral treasures and discuss the geology and mineral potential that Nova Scotia has to offer. The Royal Ontario Museum will be exhibiting their travelling display of superlative Canadian minerals. If you enjoy minerals this display alone is well worth the price of admission.

The Nova Scotia Gem and Mineral Show will be held at the Lions Recreation Centre on Western Avenue in Parrsboro. Admission to the show is \$3 per person (children under 12 free). Show hours are 10 am – 7 pm Friday and Saturday, and 10 am – 5 pm on Sunday. There are door prizes and special events for every day of the show. For more information call the Fundy Geological Museum at 902-254-3814 or visit <http://museum.gov.ns.ca/fgm>.

Diane Webber

January-March 2010 Open Assessment Reports

Report Number	NTS	Licensee
AR ME 2008-001	11F/05A, D	Schenkels, H F
AR ME 2008-002	11F/10C	Barrett, A M
AR ME 2008-003	21A/06A	Banks, A
AR ME 2008-004	21A/04A	Avalon Ventures Limited
AR ME 2008-005	11K/01C	Barrett, A M; Richman, J
AR ME 2008-007	11D/16D	Bezanson, P T
AR ME 2008-008	11E/01A	Ross, J I; Meguma Resource Enterprises Incorporated
AR ME 2008-009	11D/16C	Scratch Exploration and Mining Corporation Limited
AR ME 2008-010	11D/16C	H and E Mullen Investments Limited
AR ME 2008-011	21A/02D	Allen, L J
AR ME 2008-012	11F/15A	Acadian Mining Corporation
AR ME 2008-013	11E/04A	Horne, E N
AR ME 2008-014	11E/04A	Horne, E N
AR ME 2008-015	11F/05B	DDV Gold Limited
AR ME 2008-016	11F/04C; 11F/05B	DDV Gold Limited
AR ME 2008-017	11D/13D; 11E/04A	Grant, S
AR ME 2008-018	11D/13D	DDV Gold Limited
AR ME 2008-019	11E/03B	Wightman, J F
AR ME 2008-020	11F/15D	Unama'ki Resource Exploration and Investment
AR ME 2008-021	11F/15D	Unama'ki Resource Exploration and Investment
AR ME 2008-022	11E/02C; 11E/07B	Isenor, G P
AR ME 2008-023	11E/01B	Scratch Exploration and Mining Corporation Limited
AR ME 2008-024	11D/16C	Jewers, J M
AR ME 2008-025	21A/02D	Oickle, R T
AR ME 2008-026	11K/03A, D	Acadian Mining Corporation
AR ME 2008-027	21A/05A	Tripple Uranium Resources Incorporated
AR ME 2008-028	21A/05D	Tripple Uranium Resources Incorporated
AR ME 2008-029	21A/05D	Tripple Uranium Resources Incorporated
AR ME 2008-030	21A/12A, B	Tripple Uranium Resources Incorporated
AR ME 2008-031	21A/16A, B, 21A/16C, D	Tripple Uranium Resources Incorporated
AR ME 2008-033	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-034	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-035	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-036	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-037	11E/07D; 11E/08C	Ecum Secum Enterprises Limited
AR ME 2008-038	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-039	11E/02C; 11E/07B	Elk Exploration Limited
AR ME 2008-040	21A/11C; 21A/12D	Tripple Uranium Resources Incorporated
AR ME 2008-041	11E/11D	Tripple Uranium Resources Incorporated
AR ME 2008-042	21A/09C, D	Tripple Uranium Resources Incorporated
AR ME 2008-043	11D/16D	Bezanson, P T
AR ME 2008-044	11F/14B	Richman, J
AR ME 2008-045	11E/09A	Acadian Mining Corporation
AR ME 2008-046	11D/16C	Meguma Resource Enterprises Incorporated
AR ME 2008-048	11K/02B	Merrex Gold Incorporated
AR ME 2008-049	11E/07D	Ecum Secum Enterprises Limited
AR ME 2008-050	11E/03B	Scozinc Limited
AR ME 2008-051	11E/11B, C; 11E/12A, D	Tripple Uranium Resources Incorporated
AR ME 2008-052	11D/15B	Hilchey, A F
AR ME 2008-053	11E/03B	Acadian Mining Corporation
AR ME 2008-054	11F/14A	Barrett, A M
AR ME 2008-055	11E/02D	Acadian Mining Corporation
AR ME 2008-057	11D/14C	Hilchey, A F
AR ME 2008-058	11F/16B, C, D	Thompson, A C

Susan Saunders and Norman Lyttle

Phase II of the Natural Resources Strategy Complete

The second step in the three-part development of a new Natural Resources Strategy has been completed. The four non-government Panels of Expertise have finished gathering technical information in their four areas (forestry, minerals, parks and biodiversity) and have submitted their reports to the Steering Panel. The Panels of Expertise completed a review of the Phase I report, developed work plans to guide their activities throughout Phase II, reviewed reports and other resources to enhance their understanding in their areas of focus, identified and researched technical information gaps in their focus areas, solicited and reviewed written submissions, and finally prepared and submitted their final draft reports to the Steering Panel.

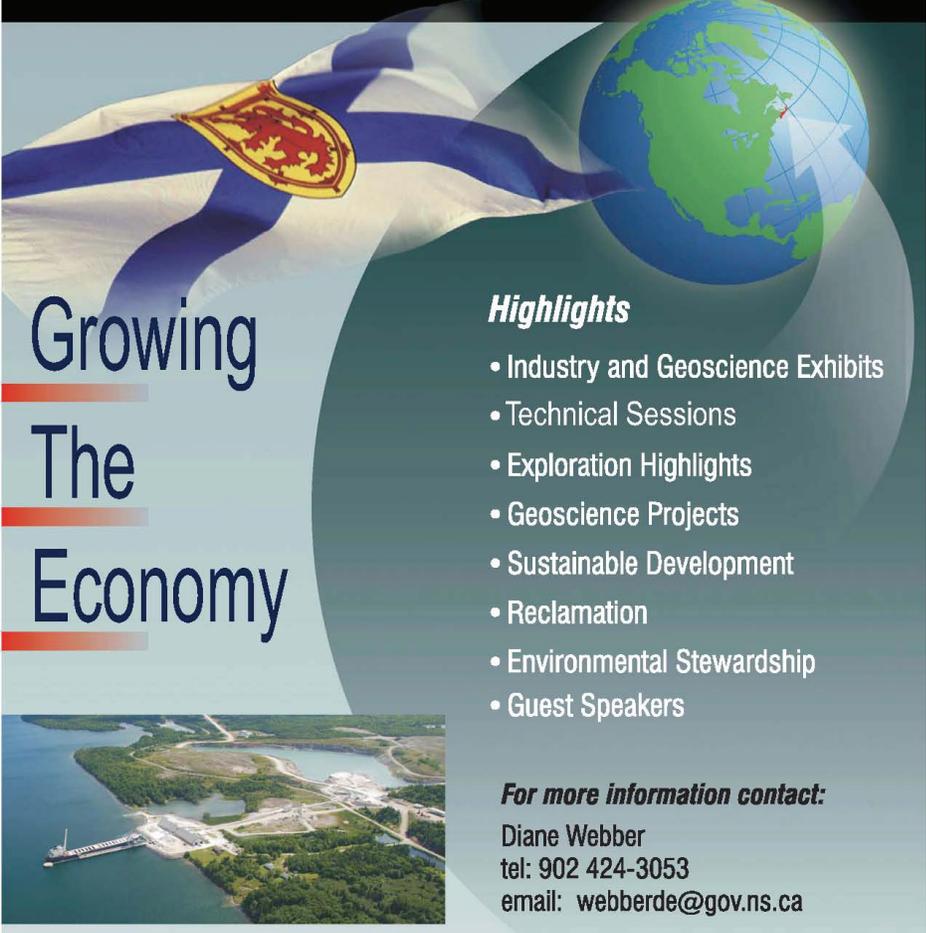
Phase I (citizen engagement) and Phase II (stakeholder expertise engagement) were both supported by DNR but conducted by citizen committees independent from DNR. The Phase I report concluded that, in terms of natural resources and their management, Nova Scotians value collaboration, transparency, informed decision-making, diversity and sustainability most of all.

The Panels of Expertise have submitted their reports and the Steering Panel has completed a final Phase II report that was presented to the Minister of Natural Resources and the Cabinet. On May 7 all of these reports were released to the public on the DNR web site <http://www.gov.ns.ca/natr/strategy2010/phase2report.asp>. The Natural Resources Strategy document will be written in the next 3-4 months. The Minister of Natural Resources has appointed Patricia MacNeil, Executive Director of the department's Policy and Planning Secretariat, to draft the Phase III strategy document. Ms. MacNeil has been involved with the strategy process from its inception and her role is neutral regarding the four focus areas. The Natural Resources Strategy document should be completed before the fall of 2010.

Diane Webber

Mining Matters 2010 Conference

October 25th and 26th, Westin Hotel, Halifax, Nova Scotia



Growing
The
Economy

Highlights

- Industry and Geoscience Exhibits
- Technical Sessions
- Exploration Highlights
- Geoscience Projects
- Sustainable Development
- Reclamation
- Environmental Stewardship
- Guest Speakers

For more information contact:
 Diane Webber
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 email: webberde@gov.ns.ca

Mining Matters 2010 – Growing the Economy

Mining Matters 2010 will be held on October 25 and 26 at the Westin Hotel in Halifax. This year's event will showcase opportunities to grow Nova Scotia's economy through development of our mineral resources. There will be geoscience exhibits, technical sessions and special guest speakers, and the conference will address issues including environmental stewardship, reclamation, and sustainable and economic development. In attendance will be government and non-government organizations, prospectors, exploration and mining companies, employees of the industry, consultants, investment and service companies, students and the general public. Additional details will be provided as they become available in the next issue of the *Nova Scotia Minerals Update* and on the Minerals Resource Branch website (<http://www.gov.ns.ca/natr/meb/>). For further information please contact the author.

Diane Webber
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 902-424-3053

DNR Land Administration Conference Tours Martin Marietta Quarry

DNR staff gathered in Antigonish on April 15 and 16 for the annual Land Administration conference. The department's Land Administration program helps Nova Scotia achieve and sustain prosperity by expanding and utilizing Nova Scotia's Crown land base in a balanced, sustainable manner that supports economic development and protects environmental goals.

The two-day conference is organized by and aimed at land administration coordinators, technicians and officers. Those attending include foresters, biologists, surveyors, conservation officers, regional resource managers and park planners. The conference brought staff up to date on a broad range of topics impacting the current and future use of Crown lands. These topics included provincial energy initiatives, development and maintenance of recreational trails on the abandoned railway corridor, consulting with the Mi'kmaq for proposed Crown land activities, the government's goal to protect 12% of its land base by 2015, and mineral development.

Dan Fougere, administrative manager of the Martin Marietta Aulds Cove quarry, presented one of the highlights of the conference - a tour of the quarry. Dan Fougere and plant manager Mike Shea led the group of 19 through the quarry operations starting at the top where the granite is drilled and blasted away from the rock face, through the crushing, washing and sorting stages, and ending at the bottom of Porcupine Mountain where the stone is conveyed by belt onto bulk carriers for export to the United States and Caribbean. The Martin Marietta quarry at Aulds Cove produced approximately 4 million tonnes of crushed stone in 2009, making it the sixth largest aggregate quarry in Canada. The quarry has operated for more than 50 years and continues to contribute to the economic growth of Nova Scotia.

Diane Webber

Donkin Coal Project Advances Toward Production

Erdene Resource Development Corp. and partner Xstrata Coal Canada continue to advance the Donkin coal project toward production. Activity has begun to increase following an announcement in early February stating the companies' intent to focus on coking coal as the main product from the operation. The Donkin Coal Project has previously received all necessary approvals to commence production of up to 350 000 tonnes of run-of-mine coal, with delivery in the initial years of the project via road transportation. The revised development plan includes assessment of a possible coal transportation system in the Donkin headland area to facilitate offshore barge-to-ship transfer of the coal and the construction of a wash plant, which will require additional federal and provincial approvals.

Recently, the partners initiated surface works with mine access road construction while significant efforts have been dedicated to engineering the coal preparation plant, and barge-loading facility, and working with the regulators to finalize the path to development. Municipal Ready Mix Ltd., located in Sydney, is constructing the 2.5 km long road with work beginning immediately. This work is expected to be completed by mid-July 2010. In the past month, Xstrata Coal has initiated studies by Sedgeman and GW Engineering/Kellogg Brown & Root Pty Ltd. to add a wash plant to the coal handling facility and to prepare pre-feasibility level studies on the offshore transportation system. Mining consulting firm Marston (Missouri) has been engaged to complete a pre-feasibility study of the revised project scope. Xstrata Coal has contracted Stantec Inc., a North America based global environmental and engineering firm, to lead the environmental permitting and regulatory compliance process. The joint venture currently employs nine people, directly and through contracts, the majority of whom are underground mine personnel. In association with recent developments on the Donkin Coal Project, Xstrata Coal will appoint a Nova Scotia-based Project Manager and an Environment/Community Liaison Officer. These individuals will lead the project team to advance the Donkin project into the next phase of development.

Peter Akerley, Erdene Resource Development Corp.

Mining Society of Nova Scotia AGM

Originally founded in 1887 as the "Gold Miners' Club of Nova Scotia", The Mining Society of Nova Scotia was the first professional mining association in Canada. In 1892, prompted by a threatened royalty on coal, the mining industry of Nova Scotia closed ranks and the Gold Miners' Club became The Mining Society of Nova Scotia. Active in the province for 123 years, the society has continuously represented and promoted the interests of exploration, mining, metallurgy, petroleum and related industries in Nova Scotia.

On June 9, 10 and 11, 2010, the Mining Society will host its 123rd Annual General Meeting at Keltic Lodge Resort and Spa in Ingonish, Cape Breton Island. This year's technical program will focus on "Atlantic Canada Mining – Improving Our Lives". Talks will highlight a wide-range of subjects covering the diverse mining industry in Atlantic Canada.

The Mining Society of Nova Scotia strives to be a leader in networking, knowledge sharing, and professional development in the mineral industries. We invite participants from all aspects of the industry to attend.

To view a complete list of talks, and for registration information, please visit our website www.miningsocietyns.ca.

*Matt Ferguson, 2nd Vice-President
Mining Society of Nova Scotia*

Mountain Lake Resources Inc. – Focusing on Growth Through Gold

Mountain Lake Resources Inc. (TSX-Venture: MOA) is a mineral exploration company based in Nova Scotia with a focus on gold projects in Atlantic Canada. President and CEO Gary Woods, who was a regional exploration manager for Noranda/Falconbridge before joining Mountain Lake and has been directly involved in mineral exploration in eastern Canada since 1983, believes in focusing exploration efforts where you have the most familiarity. That belief seems to be paying off for Mountain Lake given the recent results from its flagship Valentine Lake property, which hosts the Leprechaun gold deposit.

Leprechaun is the largest undeveloped gold deposit in Newfoundland and most advanced of several known gold occurrences within the 30 km strike length of the Valentine Lake Property. In December 2009, Mountain Lake entered into a joint venture agreement with Marathon PGM Corp. Marathon can earn a 50% interest in the project by spending \$3 million on exploration and making a \$3 million payment to Richmond Mines Inc., Mountain Lake's former partner on the project. Marathon is the operator of the project and, based on the consistently positive results of the first phase of drilling in 2010, must be pleased with the company's decision to participate in Valentine Lake. The latest resource estimate at the Leprechaun deposit, based on a January 2005 NI 43-101 report, is 1.3 million tonnes at a grade of 10.5 grams gold per tonne (g Au/t) uncut, or 443,000 ounces of gold. The price of gold then was \$425 per ounce and the plan was to evaluate the potential of the deposit as an underground operation, so a minimum cutoff of 5 g Au/t was used. Anything less than 5 g Au/t (worth roughly \$185 per t at today's price) was excluded from the resource.

Marathon's focus is on evaluating the deposit as an open pit operation. A lower cutoff grade for open pit gold operations these days is typically 0.5 g Au/t, so there's potential for a huge increase in the number of contained ounces of gold

Table 1. Selected results from the first 4000 m drill program in 2010, Leprechaun gold deposit.

Hole	From (m)	To (m)	Core Width (m)	True Width (m)	Gold (g/t)	Gold (oz./t)
VL-10-154	63.8	80	16.2	7.4	10.3	
VL-10-156	17.5	40.0	22.5	20.8	4.43	
VL-10-160	152	179	27	25	6.68	
VL-10-164	126	131.6	5.6	5.6	9.35	
VL-10-165	164	173	9	9	38.32	1.12
including	167	167.8	0.8	0.8	321.05	9.36
including	167	167.4	0.4	0.4	506.15	14.76

just by including the ounces that were ignored in the past associated with intercept grades in the 0.5 g Au/t to 5.0 g Au/t range. The latest drill program will most certainly add substantially to the known gold resource with 29 of 33 drillholes reporting gold and the majority of the holes intersecting mineralized zones on the margin or outside the envelope of the 2005 resource. Drilling in 2010 to date has produced some spectacular results, which include grades up to 506 g Au/t (see Fig. 1) within a 9 m intersection (true width) of 38 g Au/t in hole 165. Some of the more impressive drill results from the 4000 m drill program are included in Table 1.

Drilling focused on the near-surface section of the deposit, which will be the most critical area in the early stages of the open pit mine plan. Much of the originally planned drilling was not accomplished due to the unusually mild winter which prevented sufficient build up of ice to support the drills in what could be the most favourable area. Mountain Lake Resources has information at depth from previous drilling north of the pond but unfortunately the company was not able to test the near-surface area updip from the best mineralized zones at depth. This area is planned to be drilled by barge in the next round of drilling.



Figure 1. Visible gold in drill core from a 9 m intersection grading 38 grams gold per tonne (g Au/t).

Other targets exist on the Valentine Lake property as well, which require further testing, especially at Valentine East. This site is 13 km from the Leprechaun deposit, where significant gold enrichment has been identified over a 700 m strike length and is essentially untested below 100 m.

Gary Woods, President and CEO, Mountain Lake Resources Inc.

Note: Rocks that host the Leprechaun deposit, described above, are also found in the Aspy and Bras d'Or terranes of central Cape Breton Island. There may be several analogies between this deposit in Newfoundland and similar occurrences in Cape Breton Island (e. g. Mac-Millan Flowage and Whycomagh).

Chris White

Mining Association of Nova Scotia Holds Annual General Meeting

The annual general meeting of the Mining Association of Nova Scotia (MANS) was held in Halifax on April 13, 2010, at the Halifax Citadel Hotel. Conference Chair Jason Bernier and his team put together an excellent program with the theme: "Where are we going and how do we get there?" More than 60 delegates enjoyed a variety of sessions featuring speakers from both the private and public sectors. The Mining Association was also pleased to have the Honourable John MacDonell, Minister of Natural Resources, address the crowd at breakfast. His comments were well received by the attendees and prompted some interesting questions and comments from those present.

To answer the "Where are we going?" part of the theme, delegates heard presentations on topics such as the new underground mining regulations, administrative penalty regulations, wetland management of development projects, coal gasification and the role of Cape Breton University's Centre for Sustainability, and financial trends in the mining industry in Atlantic Canada.

"How do we get there?" also proved interesting to address. Foremost was a dynamic presentation on the new Strategic Plan for MANS that was presented by the association's Vice President Paul K. Smith. There was also a presentation on liability, occupational health and safety, Bill C45 and a case law review that helped employers and employees find the best path forward.

New business for MANS included the election of a new President and Board of Directors (see photo). Paul K. Smith will serve as President and his team comprises Peter Oram (Past President), Gavin Isenor and Pat Mills (Vice-Presidents), Laurie Vaughan (Secretary-Treasurer), Mike Bishop, Harry Cabrita, Joel Hill, Scarth MacDonnell, Bill Mundle, Jeff Newton, Ian Palmeter, Rick Ratcliffe, Doug Roy, Ralph Stea, Steve Weeks, Paul White and John Wightman. A special thanks was extended to Peter Oram, who completed his two-year mandate as President. Peter's efforts on behalf of the association and dedication to MANS were recognized by Gordon Dickie, Chair of the Nominating and Governance Committee, and applauded by all those present.

The coming year will be both interesting and challenging for the Mining Association of Nova Scotia as we focus on our new Strategic Plan. Watch for news on the association's future events and activities.

Michelle Landreville, Executive Director of MANS



New President Paul Smith (front and centre) and the MANS Board of Directors.

Special Note

E-mail Notification

If you would like to be added to our mailing list to receive an e-mail notice when new maps and publications are released, or when a new issue of the *Nova Scotia Minerals Update* is released, please send your e-mail address to minerals@gov.ns.ca.

Dates to Remember

June 9-11, 2010

The Mining Society of Nova Scotia 123rd Annual General Meeting, Keltic Lodge Resort and Spa, Ingonish, NS. For more information please see the article on p. 8 and visit the web site: www.miningsocietyns.ca.

August 20-22, 2010

Nova Scotia Gem and Mineral Show, Lions Recreation Centre, Western Ave., Parrsboro NS. For more information please see the article on p. 6 and visit the web site: <http://museum.gov.ns.ca/fgm>.

October 25 and 26, 2010

Mining Matters 2010, the Westin Nova Scotian Hotel, Halifax, NS. For more information please see the article on p. 7 and watch for new details on the Mineral Resources Branch web site: <http://www.gov.ns.ca/natr/meb>.

November 4-6, 2010

Mineral Resources Review 2010, Delta Hotel and Conference Centre, St. John's, NL. For more information please visit the web site: <http://www.nr.gov.nl.ca/nr/mrreview10/index.htm>

November 7-10, 2010

Exploration, Mining and Petroleum New Brunswick 2010 conference, Delta Hotel, Fredericton, NB. For more information please contact Carol McNeill-Dobbelsteyn, phone 506-453-2206, e-mail carol.mcneill-dobbelsteyn@gnb.ca or visit the web site: www.gnb.ca/0078/minerals.