

Nova Scotia

Minerals Update



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Natural Resources

Nova Scotia Mineral Incentive Program Builds on Success

The second year of the Nova Scotia Mineral Incentive Program (NSMIP) was launched in May 2013 and will run until February 14, 2014, which is the deadline for submission of final reports. Fifty-three applications were received this spring: 29 under the Prospector Grant Program and 24 under the Advanced Project Grant Program. Project areas include 15 of the 18 counties of Nova Scotia, and proposals for more than \$2 000 000 of exploration expenditures were received. Similar to last year, there is a concentration of projects focused on the search for gold in the Meguma Supergroup, where 32 of the projects are located. Some of the other key minerals to be explored for are tin, lead, zinc, copper, silver and rare earth elements.

Fifteen of the applications this year represent project areas that received a grant from NSMIP last year. These 15 projects received close to \$300 000 in grants last year, which was approximately 50% of the grant money awarded. Some of the projects funded last year succeeded in finding new mineral occurrences or new mineralized systems, which will increase the value of these properties to the licence holder. Two exploration areas that received a Prospector Grant last year now have proposals submitted under the Advanced Project Grant Program after the success of last year's findings.

All of the proposals will be reviewed by the NSMIP Evaluation Committee over the next few weeks. Projects that are viewed to have the best chance of obtaining important economic and geological knowledge, and attracting investment, will be favourably scored in the evaluation.

Mick O'Neill



George O'Reilly investigates a large quartz crystal at the Long Lake Mo-W occurrence in Lunenburg County. The site received NSMIP funds for prospecting in 2012.

Review of the *Mineral Resources Act* Begins

The process of reviewing Nova Scotia's *Mineral Resources Act* has begun. A Working Group, consisting of managers and staff of the Mineral Development, Regional Resources, Land Administration, and Policy and Planning divisions of the Department of Natural Resources (DNR) was formed in February 2013 to lead the review. This group will do most of the research, analysis and consulting, and will work with appropriate government instruments to address core issues.

The Working Group will meet monthly and report quarterly to the department's Executive team, consisting of the Executive Directors and Deputy Minister of DNR. The Working Group met on April 17 and May 13, 2013. The scope of the review, how roles and responsibilities will be defined, and a draft Project Charter were discussed. The Charter outlines the context for the review, its purpose and scope, the resources needed to conduct it, and key deliverables, milestones, issues and risks. The final Project Charter is now approved and the Working Group is entering the 'Issues Identification' step.

Review of the *Mineral Resources Act* will proceed as follows: issues will be identified and analyzed by the Working Group; external stakeholders will be consulted to ensure that all of the relevant issues have been identified and analyzed; and then appropriate policy instruments will be chosen to address each of the issues. There is a range of policy instruments available, including education, guidelines, best practices, policy and changes to the *Mineral Resources Act* and its associated Regulations.

The review of the *Mineral Resources Act* will be successful when stakeholders have been engaged, amendments have been made and most stakeholders support (or accept as an improvement) the updated *Mineral Resources Act* and Regulations.

News on the progress of the review will be provided in future issues of the *Nova Scotia Minerals Update*.

Patrick Whiteway

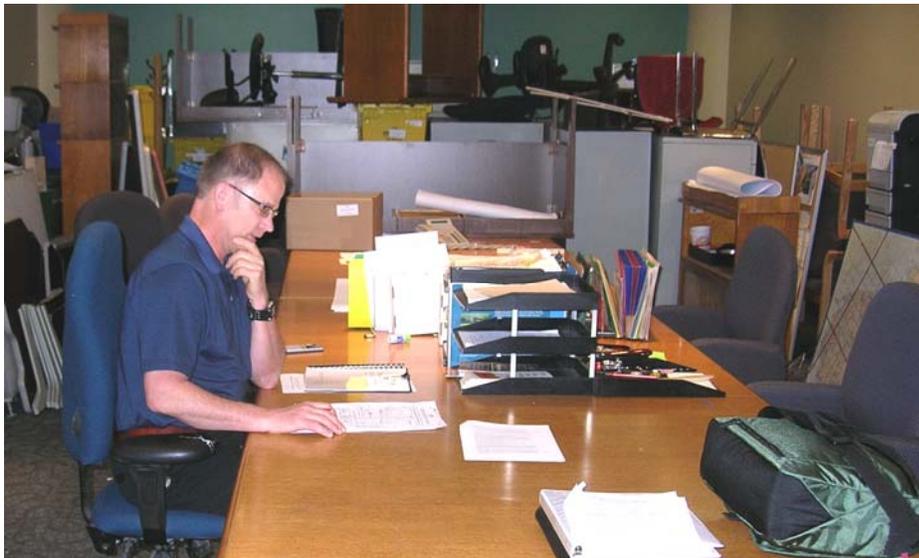
Status of the Registry Modernization Project

Work continues on the modernization of the Registry of Mineral and Petroleum Titles, which will enable clients to acquire and manage mineral rights over the Internet. Registry staff members have been working with project specialists to execute a robust testing plan for the navigation and functionality of the new system, and to verify data preparation and migration into the new system. This testing phase ensures that problems are identified and corrected before the system is commissioned. The registry anticipates a launch of the self-serve website this summer.

Mail-out campaigns to clients have been successful in updating records and maintaining valid contact information and agent information. This month will see a new look in the registry as the result of departmental renovation to the offices at Founders Square (see photo below). Included with the renovations will be the creation of two kiosks that will support the use of the new system when implemented.

Please watch for news on the launch of the new registry system in the next issue of this newsletter and on the branch web site.

Sandy Nickerson and John MacNeil



Assistant Registrar Andrew Wenning keeps things running in the temporary office of the department's Registry of Mineral and Petroleum Titles. DNR offices in the Founders Square building, Halifax, are in the third month of a major renovation. Despite the necessity for virtually all staff to move out of their offices for a few days, the department's essential operations and regular hours have been maintained.

Paul McCulloch and John McMullin to Retire in June

DNR geologists Paul McCulloch (top photo, on the left) and John McMullin (bottom photo, on the left) will both retire from the Mineral Resources Branch in June. Both have worked at the Core Library facility in Stellarton since the 1990s. Paul's last day will be June 4, after 28.5 years of service. John's last day will be in mid-June, after 31.3 years of service.

Further details on the careers of these men will follow in the summer issue, but for those clients who may wish another visit before they retire: this is your notice!



Conferences Showcase Nova Scotia Mineral Resources

Staff from the Mineral Resources Branch have been busy promoting the mineral resources and investment opportunities in Nova Scotia at mining conferences at home and across the country.

The conference season kicked off last fall with our own very successful Geology Matters 2012 on October 29 and 30 at the Westin Hotel in Halifax.

Geology Matters 2012 was followed by the Quebec Mines 2012 conference held November 26 to 29 in Quebec City. Diane Webber (Industry Liaison Geologist) and Ron Mills (Exploration Services Geologist) represented the Mineral Resources Branch in Quebec at the Nova Scotia booth and discussed opportunities in Nova Scotia to numerous industry representatives and potential investors. Diane delivered a promotional presentation, *Opportunities on the Ground*, to an audience in the Exhibit Hall and outlined the competitive advantage that Nova Scotia has to offer over other jurisdictions when it comes to mineral exploration and development. Over 6000 people attended the Quebec conference.

The Mineral Exploration Roundup, held January 28-31 at the Westin Bayshore in Vancouver, welcomed more than 7800 participants from more than 30 countries. Many rank the Roundup as the world's premier technical mineral exploration conference. Geologists Diane Webber and Brian Fisher discussed active exploration programs and opportunities in Nova Scotia to the many delegates that visited the Nova Scotia booth. Diane was invited to deliver a presentation where she discussed the mineral potential and competitive advantages that are generating increased interest in Nova Scotia at the conference. The technical program included short courses, technical sessions, the trade show, a core shack, map tent and prospectors' tent. Funding from the Nova Scotia Mineral Incentive Program (NSMIP) assisted three Nova Scotia prospectors to attend and to market their properties in the Prospectors' Tent.

The Mineral Resources Branch showcased an updated booth display for Nova Scotia at the Prospectors and Developers Association of Canada (PDAC) International Convention, Trade Show and Investors Exchange in Toronto from March 3-6, 2013. In recognition of the important role that prospecting plays in the discovery and future development of mineral resources in Nova Scotia, the NSMIP provided funding for travel and marketing assistance for 13 Nova Scotia prospectors to attend the PDAC and market their exciting prospects to potential partners and investors. DNR Geologist Ron Mills, who works closely with the prospectors, helped the group to prepare professional displays and provided support in the prospectors' booths at the conference. The prospectors experienced interest from both major and junior explorers at the conference and subsequently are negotiating or have already closed

deals for future exploration on their properties.

The Nova Scotia Mining Breakfast, held at the PDAC and hosted by the Minister of Natural Resources the Hon. Charlie Parker, has become an event not to be missed. Requests for seats at this event doubled in 2013, and over 80 industry representatives attended. Minister Parker discussed several projects in Nova Scotia and their potential to increase the value of mineral production and provide jobs in rural communities. Special guests included the Hon. Bruce Northrup (New Brunswick Minister of Natural Resources), Curtis Ajmani (Embassy of Canada for Japan) and Elian Turner (Director of Global Investment Banking, Scotiabank).

These conventions continue to grow in size and provide high visibility for Nova Scotia's mineral resources to both national and international audiences.

Diane Webber



From left, Minister of Natural Resources the Hon. Charlie Parker, Deputy Minister Duff Montgomery, Director of Geological Services Robert Naylor and Executive Director of Mineral Resources Donald James confer at the Nova Scotia booth, PDAC 2013.

Bye George!

George O'Reilly's retirement in June will leave Nova Scotia with a rich legacy, and huge boots to fill. George's 37 year career began with the Nova Scotia Department of Mines on June 25, 1976, when he was hired as a "Field Geologist" fresh out of Dalhousie University by Dr. 'Chat' Chatterjee to work on granites in southeastern Cape Breton Island. The following years took him quite literally from one end of the province to the other—from East Kemptville back to Cape Breton—to investigate the mineral occurrences and deposits in between, such as manganese at New Ross.

George is known to many for his work on building the Mineral Occurrence Database for Nova Scotia, which he inherited from Norman Lyttle but on which he made an indelible stamp. More than anyone, the Mineral Occurrence Database will forever belong to George: 3000 entries, most of which George has visited in person. In the process, he has become the most knowledgeable person ever on the mineral occurrences of Nova Scotia.

George freely shared his knowledge with any and all, including readers of this newsletter, which has featured his insight on several dozen mineral occurrences over more than a decade of *From the Mineral Inventory Files* articles (see page 5 for his last). Prospectors in Nova Scotia have been the lucky recipients of countless field guides and annual trips that he led with Ron Mills. George's field guides are treasures of information, with every length of roadway measured and all turnoffs well described (not to mention the geological information). Always supportive of the mineral industry, for several years he served as an editor for the *Bulletin of the Canadian Institute of Mining and Metallurgy*.

George has a deep appreciation for the work of those who have gone before, and of the rich history of mining, exploration and geological investigation across the province (e.g. see *Minerals Update*, v. 26, no. 1, p. 4). His passion

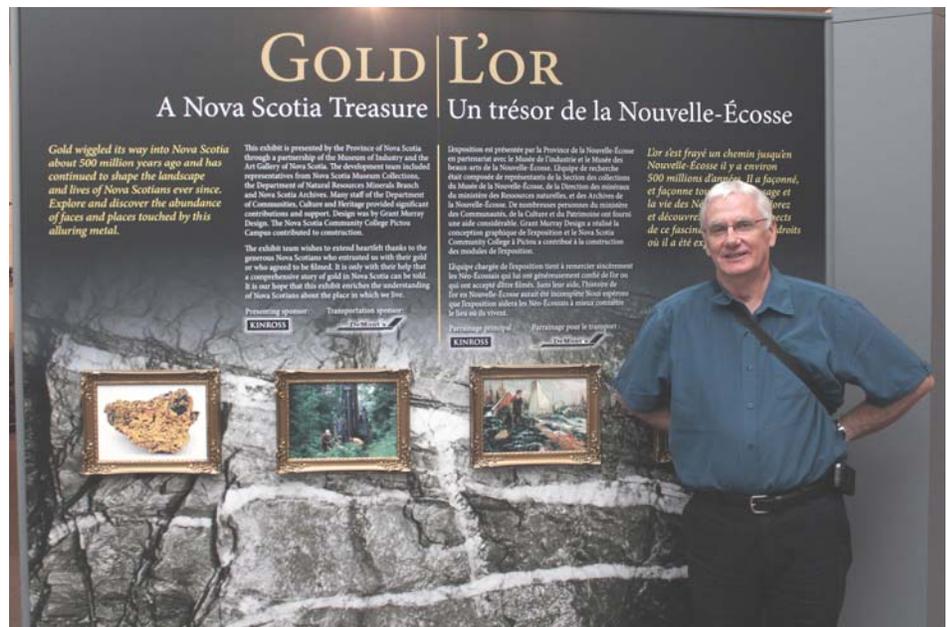
for minerals and history is writ large on the critically acclaimed exhibition *Gold: A Nova Scotia Treasure*, for which he was scientific advisor. The exhibit is currently on display at the Nova Scotia Museum of Industry.

There are many things that you can say about George's work ethic, but most of all he infused his work with an intellectual curiosity: if it was produced by George, you knew that it was done thoroughly and accurately. An authority on uranium and radionuclides, George advised the Nova Scotia Uranium Task Force of the 1980s, and recently compiled province-wide maps detailing radon risk, and uranium and related radionuclides in groundwater. Knowledge of these important environmental issues has the potential to benefit the health of Nova Scotians long after George retires.

For those of us who have worked with George, we'll miss his colourful sense of humour, which skewered the most routine and arcane emails, and his unwavering love of *les Habitants*, even if his hero Guy Lafleur is now in the minor leagues advertising foot baths. George's passion flowed equally to his daughters' years of soccer with Dartmouth United and at university: he's been a sometime team manager, and always devoted soccer dad, travelling across the country to cheer (and console) at Nationals.

On one of his last days at work, George wistfully shared the wish that he could go back to relive his early years at work with the knowledge that he now has. Unfortunately, I don't think anyone is likely to invent a time machine with that much cargo space.

John Calder and Doug MacDonald



George O'Reilly poses beside the opening panel of the travelling exhibit *Gold: A Nova Scotia Treasure*. For those of us who have spent our careers working with George, he is the real "Nova Scotia treasure." Once, at a meeting to discuss plans for fieldwork in the upcoming summer, the author of every proposal asked for George's advice on some aspect of their plans: he'd been there and he remembered what he'd seen. One of his comments warned of an aggressive dog in the area recommended for study. George is truly one of DNR's outstanding "Experts on the Ground!"

From the Mineral Inventory Files

Granite- and Metasediment-hosted W-Sn-Mo-Cu-Zn-Ag-Au at Westfield, Queens County

There is a Westfield Gold District on the books, but in reality this northern Queens County mineral property has little to compare with the bedding-concordant, auriferous quartz vein deposits that typify Meguma Zone gold districts. Around 1868 a very thick quartz “reef” was reported at Westfield, which was subsequently named the Jumbo Vein (Fig. 1). The discovery received interest from industry, but this was more related to the immense dimensions of the vein (8-23 m width) than its modest Au content (approx. 0.25 oz./ton). Also somewhat atypical was the presence of Ag with the Au. Westfield is most notable as probably being the last Au property mapped by eminent GSC geologist E. R. Faribault before his retirement in 1933.

The Jumbo Vein just did not fit into existing geological models for Meguma Au deposits. Faribault’s unpublished 1933 map of the district showed, in addition to the Jumbo Vein, the presence of several prospect pits on mineralized quartz veins in and adjacent to a finger-like protrusion of granite exposed on the Westfield River 500 m north of the Jumbo (Fig. 1).

The late 1970s tin exploration boom spurred a re-examination of Westfield by myself, and others, searching for granite-related tin deposits. I mapped the Westfield area, and it became obvious that the quartz veins and mineralized zones are associated with highly developed hydrothermal alteration in the endo- and exo-contact zone of an albitized and greisenized porphyry. The porphyry and associated veins occur at the contact of the South Mountain Batholith and apparently intrude along a northeast-trending shear/fault zone. The altered granites contain disseminations of wolframite, scheelite, cassiterite, molybdenite, pyrrargyrite, arsenopyrite and pyrite, while the veins and stockworks carry scheelite, cassiterite, molybdenite, pyrrargyrite, Cu-Pb-Zn sulphides, arsenopyrite, pyrite and marcasite. Records indicate that free Au occurs in the veins, as well as disseminated gold in arsenopyrite.

Seabright Resources Incorporated drilled five holes on the Jumbo Vein in 1985. The drilling returned sporadic Au levels, but did prove that the vein is discordant to bedding and consists of a mixed zone of massive

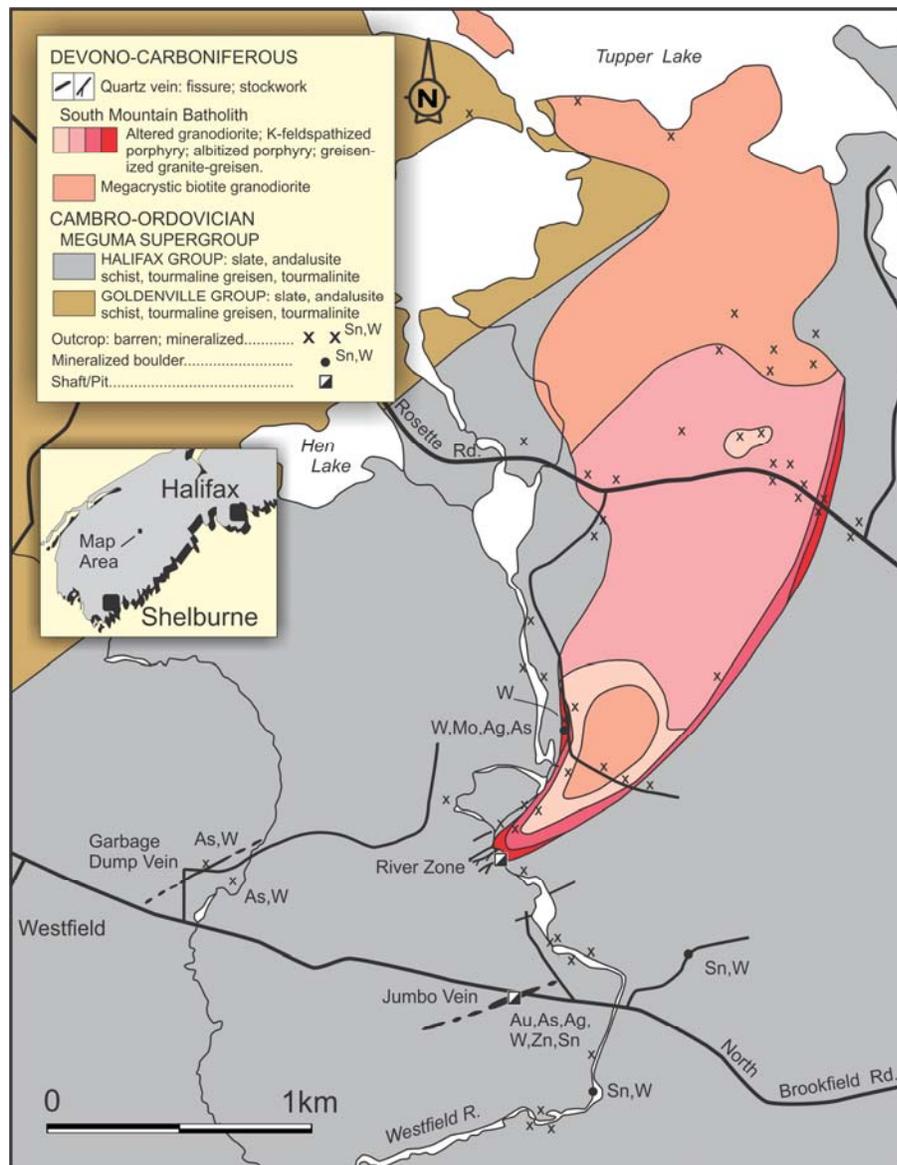


Figure 1. Geology of the Westfield, Queens County, area showing the locations of granite- and metasediment-hosted W-Sn-Mo-Cu-Zn-Ag-Au mineral occurrences.

quartz and intensely silicified slate of the Halifax Group. The zone parallels a northeast-trending shear and extends for at least 300 m along strike and 130 m depth. Figure 1 shows several other quartz veins and stockworks about the property that are similar to the Jumbo but smaller. In addition, there is an abundance of quartz boulders, some containing scheelite and sulphides, in the streams and woods roads of the region. The granite also hosts zones of well developed greisen and albite

alteration, which carry pods of wolframite/scheelite ± cassiterite.

Since the demise of the tin exploration boom in the mid-1980s, the Westfield property has been ignored. Perhaps with the current renewal of industry interest in W-Sn deposits, coupled with the potential for precious metals in the Westfield vein system, the property will receive the round of serious exploration it deserves.

G. A. O'Reilly



Geoscience at the DNR Open House

The Nova Scotia Department of Natural Resources (DNR) will hold its second Open House for the public on the weekend of June 1st and 2nd at the Shubenacadie Provincial Wildlife Park, and the Mineral Resources Branch will be there.

On May 31st, Grade 6 students from across the province will have a special day of their own to partake in hands-on activities. The departmental Open House offers a glimpse of the wide range of activities that DNR undertakes with respect to natural resources: from woodlots and wildlife, to mines and groundwater. The Mineral Resources Branch will feature hands-on activities and provide people the opportunity to quiz staff geologists, engineers and GIS specialists.

Come learn about the rocks, minerals and fossils of Nova Scotia, how geologists explore for mineral deposits, see a working model of groundwater, learn how geology affects coastal erosion, or explore the department's interactive maps and tools on the Internet.

John Calder

January - March 2013 Open Assessment Reports

Report Number	NTS	Licensee
AR ME 2011-001	11E/01A	Ressources Appalaches Incorporated
AR ME 2011-002	11E/04D	Annapolis Properties Corporation
AR ME 2011-003	11D/16C, D; 11E/01A	DDV Gold Limited
AR ME 2011-004	21A/10A	Hudgtec Consulting Limited
AR ME 2011-005	11F/04D	MacKinnon, R P
AR ME 2011-006	11D/16D	Bezanson, P T
AR ME 2011-007	11E/01B	Scratch Exploration and Mining Corporation Limited
AR ME 2011-008	21A/16D	Riteman, L A
AR ME 2011-009	11D/16C	Oicle, G
AR ME 2011-011	11E/01A	DDV Gold Limited
AR ME 2011-012	11E/08B	DDV Gold Limited
AR ME 2011-013	11F/03C; 11F/04A, B, C, D; 11F/05A, B	Exploration Orex Incorporated
AR ME 2011-014	11F/04D	Exploration Orex Incorporated
AR ME 2011-015	11E/11B	Clear Lake Resources Incorporated
AR ME 2011-016	11D/13D; 11E/04A	DDV Gold Limited
AR ME 2011-017	11E/04B	Grant, S
AR ME 2011-018	11E/09A, B	Cobequid Gold Corporation Limited
AR ME 2011-020	21A/07A	Globex Mining Enterprises Incorporated; NSGold Corporation
AR ME 2011-021	11E/03C; 11E/06B	Maritime Titanium Limited
AR ME 2011-022	11F/04C	Rainbow Resources Limited
AR ME 2011-024	11E/04B	DDV Gold Limited
AR ME 2011-025	21A/04B	Ayarco Gold Corporation Limited
AR ME 2011-026	21H/08D	Bellefontaine, P
AR ME 2011-027	11K/07D; 11K/10A, B	Richman, J
AR ME 2011-028	21A/02D	Hiltz, K R
AR ME 2011-029	11E/01A	DDV Gold Limited
AR ME 2011-030	21A/07B	Hiltz, K R
AR ME 2011-031	11E/08B	Shadbolt, D
AR ME 2011-032	20O/16D; 20P/13C; 21A/04B	Champlain Mineral Ventures
AR ME 2011-033	11E/08D; 11F/05C	Elk Exploration Limited
AR ME 2011-034	11F/05C	Blackfly Exploration and Mining
AR ME 2011-035	11D/16D	Bezanson, P T
AR ME 2011-036	11D/16C	DDV Gold Limited
AR ME 2011-037	11F/04C; 11F/04D	Schenkels, H F

Susan Saunders

Gates Opened for Three New Parcels of Crown Land in Western Nova Scotia

In December 2012, the Province of Nova Scotia purchased 555,000 acres of land from Bowater Mersey. This land contains 2500 km of forest roads, many of which were previously blocked off to vehicles. In April 2013, the province announced the opening of thirteen road gates (see the map below), providing access to 1700 km of forest roads. Provincial Crown land policy allows Nova Scotians access to all provincially owned land, except where restricted for appropriate reasons, such as ecological protection.

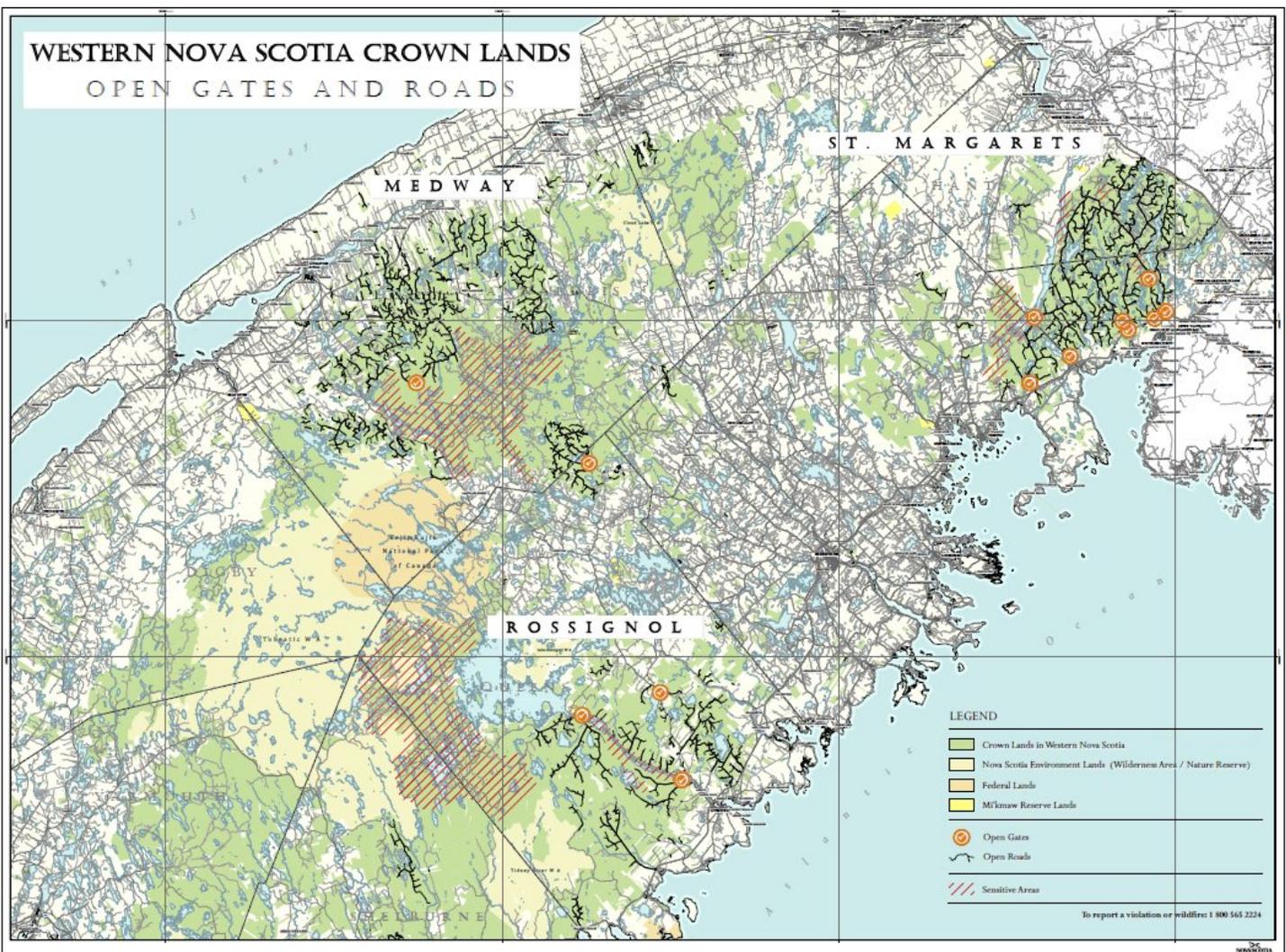
The Western Crown Land Planning Process and planning for Parks and Protected Areas are both currently under

way. As part of those two interconnected processes, more decisions will be made regarding the balance needed to provide greater access to these lands while ensuring protection of sensitive habitats.

During the public consultation meetings as part of the Western Crown Land Planning Process, public concerns were raised regarding access to the former Bowater lands for the purposes of prospecting and mineral exploration activities. As with all such activities, landowner permission must be obtained prior to accessing any land for mineral exploration purposes. The former

Bowater properties are now Crown lands, and requests to access these lands for prospecting or mineral exploration should be directed to the local Regional Geologist. The Regional Geologist will review the proposed exploration activities and will work with the prospector or exploration company to determine a course of action for all proposals. As Regional Geologist in western Nova Scotia, I have listed my contact information below.

*Sandra Johnston, Geologist (Western Region)
Lunenburg, phone 902-634-7518
JOHNSTSL@gov.ns.ca*



Mert Stewart 1930 - 2013

If a prospector could be a “giant” of the mineral industry, Mert Stewart of Miramichi was such a man. Credited with dozens of significant discoveries in the nation, Mert’s work in the Maritimes is legendary. Born into a mineral exploration family and cutting his teeth in New Brunswick, many mineral occurrences have seen Mert’s attention, by discovery or follow-up, always adding to the historical base, continually advancing properties. Work Mert did in Nova Scotia changed the economy of the province more than once and employed hundreds, adding hundreds of millions of dollars to local economies.

In the late 1960s Mert was following one of Avarud Hudgins’s (at the time) wacky theories of Mississippi Valley type deposition in the Shubenacadie Basin. Following streams, Mert recognized honey colored sphalerite that had been overlooked by so many with higher learning or less commitment to the task. The discovery led to a huge rush and many millions in exploration expenditure, culminating in Esso’s Gays River Mine development. A few years later in Yarmouth County, Mert recognized mineralized altered boulders being delivered for armour stone near the Cape Forchu lighthouse. He followed the dump truck back to Plymouth, where it had been loaded. This helped to begin several exploration investments, leading to discoveries at Dominique and the largest tin deposit in the western hemisphere at East Kemptonville. Exploration in the area is still under follow-up as this is being written. Mert also had a legendary personality: upbeat, fun-loving and positive. In 1986, Mert was given the Bill Dennis Award, one of the highest honors in the nation a prospector can be given, by the PDAC for the significant discoveries made in Nova Scotia. Anyone who thinks that a single individual can’t have an impact on his community should take a page from Mert’s book. Lets just call it *Mert Stewart: Larger than Life*.

Ron Mills with Bruce Hudgins and Don Black

Pardon the Interruption

As mentioned on page 2, the last three months have been a period of upheaval in the department’s work space in the Founders Square building on Hollis Street, Halifax. Physical renovations are now complete and only the last stages of unpacking remain. To those of our clients who may have experienced delays over this time period, we thank you for your patience. We hope the photos below illustrate the cause of any interruptions.



DNR’s Registry of Mineral and Petroleum Titles (shown at left and above) had to be packed, moved, painted, re-floored, moved back, unpacked and re-constituted. Every other part of DNR’s space repeated the pattern, in stages.

Special Note

E-mail Notification

If you would like to receive an e-mail notice (with hot links) when new maps, digital products 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

May 22-24, 2013

GAC-MAC 2013, Winnipeg Convention Centre, Winnipeg, MB. For more information please visit the website <http://gacmacwinnipeg2013.ca/>.

June 1 and 2, 2013

Nova Scotia Department of Natural Resources Open House, Shubenacadie Provincial Wildlife Park, Hants County, NS. For more information please visit the web site <http://novascotia.ca/natr/openhouse/> and see page 6.

August 16-18, 2013

Nova Scotia Gem and Mineral Show and Sale, Lion’s Recreation Centre, Western Ave., Parrsboro, NS. For more information call the Fundy Geological Museum (902-254-3814) or visit the web site: <http://museum.gov.ns.ca/fgm>.

October 31-November 2, 2013

Newfoundland and Labrador Mineral Resources Review 2013, Delta St. John’s Hotel, St. John’s, NL. For more information please visit the web site: <http://www.nr.gov.nl.ca/nr/mines/mineral.html>.

November 3-5, 2013

Exploration, Mining and Petroleum New Brunswick, Delta Hotel, Fredericton, NB. For more information please visit the web site: http://www2.gnb.ca/content/gnb/en/departments/energy/conference/Conf_home.html.

November 13 and 14, 2013

Geology Matters 2013 conference, Westin Hotel, Halifax, NS. For more information please contact Diane Webber (webberde@gov.ns.ca).