Nova Scotia
Minerals Update
Department of Natural Resources, Mineral Resources Branch

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In This Issue

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NOVA SCOTIA
Natural Resources

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Prospectors Hit the Field

The Nova Scotia Prospectors Association (NSPA) holds field trips lasting a full weekend each spring and fall. These trips serve both an educational and a social function. Hants County was chosen as the target area this spring. Mineral prices rise and fall in cycles, and Hants County hosts several substantial occurrences of base metals (non-ferrous metals such as copper, lead and zinc), whose price is believed to be on the verge of a worldwide rebound. Large base metal deposits have been found in Nova Scotia in the Macumber Formation (the basal formation of the Windsor Group), which underlies a large portion of the province and is widespread in Hants County. Few people can identify this formation and, hence, recognize its significance in the field. Members were given an opportunity to examine the formation in several localities.

Members also visited sites known for the collection of mineral specimens, such as Tennycape, formerly the largest manganese mine in the province and the origin of many specimens seen in mineral identification handbooks. Other significant mining locations were included, such as the huge barite-base metal-silver deposit at Walton. The gigantic pit stands today as a testament to the size of this world-class deposit. Field trips are filled with interesting history as well, such as a story regarding the demise of the West Gore antimony-gold mine, another excellent mineral collection site. The mine, on a tenuous economic footing, went bankrupt during WWI when a shipment of ore, needed to pay the bills and bound for a smelter in England, was sunk (along with the mine's fortunes) by a U-boat.

Field trip stops included titanium sands on the Shubenacadie River, emerging as a possible future resource for the province, as well as gold showings mixed in for fun and interest. Gold sites visited included the Meander River placer gold showing, as well as the former Centre Rawdon gold mine and West Gore, of course. An appreciation for the value of deposits from the Cretaceous period was provided at the Shaw Resources 'white sand pit', as well as a lesson on how to recognize this valuable commodity in the field. Other worthy lessons on industrial minerals were gleaned at the Scotia Slate quarrying operation and a red marble showing near Walton.

Anyone wishing to join these field trips or become a member of the NSPA should check out www.prospectors.ns.ca. The fall field trip will examine the geology and mineral occurrences around breathtaking Cape George and the Antigonish Highlands.

Ron Mills

Brad Maynard (L) and Lindsay Allen, President of NSPA, process alluvium for placer gold.

Two Parks, Two Plates…Too Beautiful!

Old Wife Point at Five Islands Park. Below the basalt flow is a white layer (arrow) that marks a major extinction event at the end of the Triassic Period (about 200 million years ago).

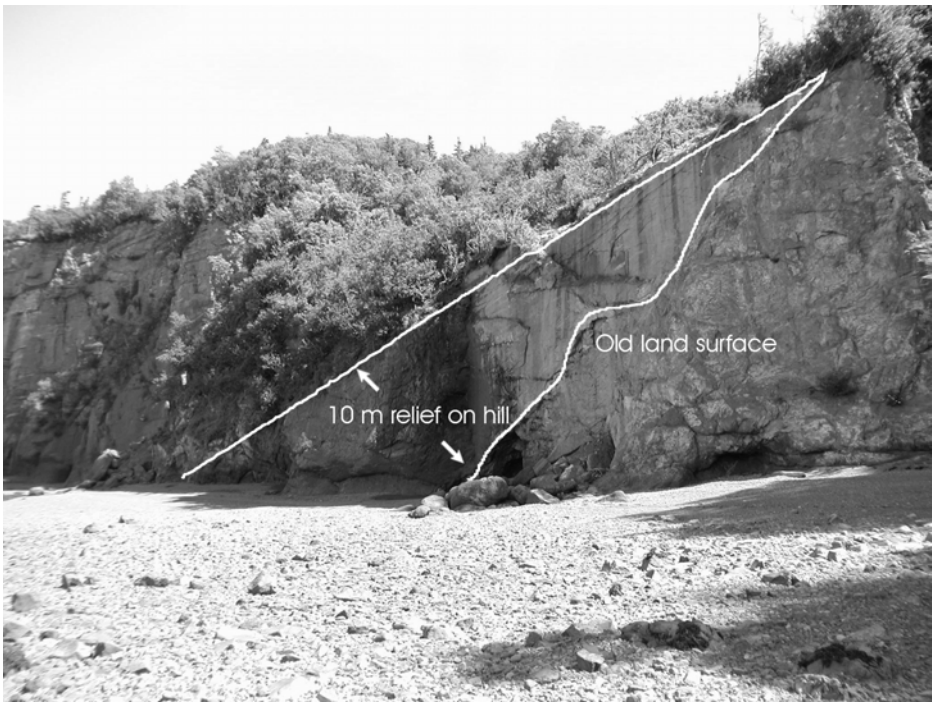
Timing of Events in the Parks

Years Before Present	
0	Our time to view the parks
10,000 to 8,000	Beaches and bars being formed before the land rebounds upward
10,000	Most icecaps have melted
10,600	Humans inhabited the Debert area
11,000	End of the last large glaciers
75,000	Beginning of the last glacial period
Approx. 40 Million	End of movement on the Cobequid Fault
200 Million	White layer at Five Islands and major extinction; eruption of lava
210 Million	Red sandstone deposited at Five Islands
300 Million	Grey sandstone rich in fossil plants deposited at Spicers Cove
350 Million	Eruption of volcanic rocks at Spicers Cove
Before 400 Million	Beginning of movement on the Cobequid Fault

Dinosaur footprints, violent volcanic eruptions, beautiful fault scarps, and raised beaches are part of the geological legacy left to us along the Minas Basin-Bay of Fundy Shore. Two parks in this region - Cape Chignecto and Five Islands - expose rocks which show ancient landscapes, movement of two plates along a major fault, creation of a rift valley, a major extinction event, and the advance and retreat of glaciers.

At Spicers Cove on the north side of Cape Chignecto Park, 350 million year old volcanic rocks representing violent eruptions formed an ancient landscape complete with small hills. One of these hills is 10 m high and was buried by layers of younger sandstone and conglomerate derived from the nearby uplift of land along the Cobequid Fault. Walking the trails at the north end of the park reveals beautiful vistas of the coast including sea stacks carved from red granite and pink volcanic rock. As you walk on the present sea floor in Spicers Cove, you can gaze up at the top of Squally Point to see an older sea floor. The bedrock at the top is a smooth flat surface created by the erosive power of waves. Beach sands and gravels are deposited on top of the wave cut surface. This beach formed shortly after the last glaciers melted away when the land was still depressed from the weight of the ice. As the ice melted, the land rose leaving this beach 30 m above the modern beach. Similar raised beaches 5 m above sea level can be seen at Five Islands.

On the south side of the park at Red Rocks you can put one foot on the ancient continent of Gondwana (southern Nova Scotia) and the other on Avalonia (northern Nova Scotia). Running between your feet is the Cobequid Fault. Along this deep crack in the earth's crust, plates moved thousands of kilometres past each other. By 300 million years ago all continents had been joined together to form Pangea. At 220 million years ago Pangea began to break apart by rifting. As the rift deepened along the Cobequid Fault, large amounts of mud, sand and gravel accumulated — you can see these red rocks at Red Rocks and at Five Islands Park.



Spicers Cove, Cape Chignecto Park. Weathering and erosion of volcanic rock produced ancient landforms, including a hill 10 m high. Later the hill was buried by sand and gravel, which hardened into rock, and then the entire area was tilted.

The drive between the two parks parallels the scarp of the Cobequid Fault. The older rocks to the north are more resistant to weathering, just like Economy Mountain is at Five Islands Park. Basalt flows, red sandstone, and sand and gravel of glacial origin underlie the land surface in the park. Dinosaur footprints and fish have been found in the red rocks. As rifting thinned the earth's crust, huge amounts of basalt flowed out into the valley. From Old Wife Point the view to the east is spectacular. Just below the brown basalt flow is a white layer of rock. This marks not only the boundary between the older Triassic rocks and the younger Jurassic rocks, but also a major extinction event. Many dinosaurs and other animals died in the aftermath of a meteor impact, which is located at Manicouagan, Quebec.

Both parks offer spectacular scenery and a fascinating geological history. See for yourself why the title "Two Parks, Two Plates... Too Beautiful" really works.

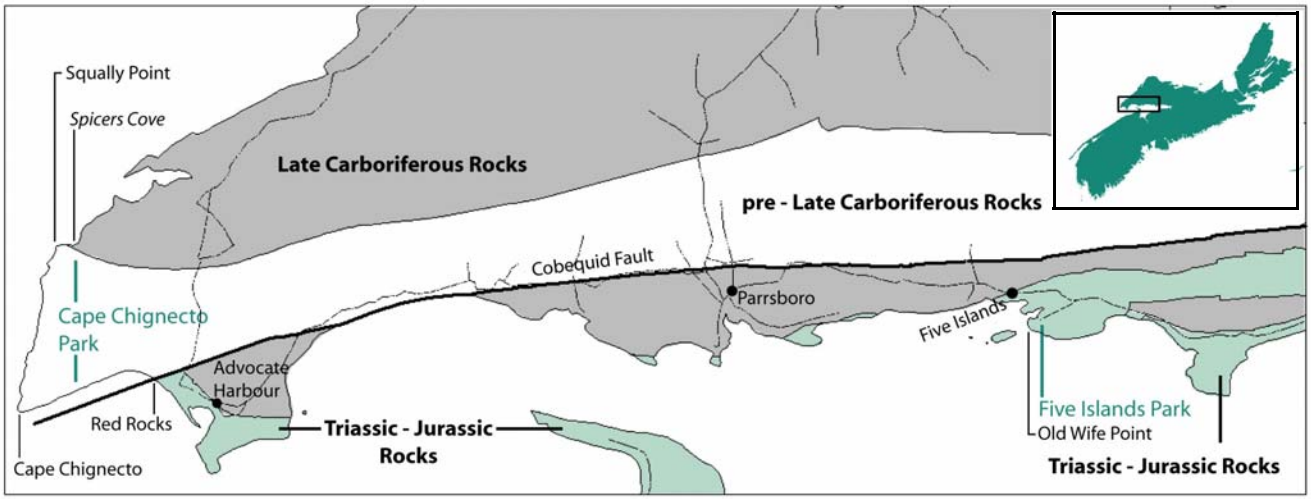
Howard Donohoe
[Reprinted from Nature's Resources, Winter-Spring 2003]

Please Use Caution!

In all areas of the Minas Basin—Bay of Fundy, anyone who walks along the beach MUST be aware of the daily tide cycle. In many areas you can be stranded by the incoming high tide. Please check the daily tide tables or ask the park staff.

Stay away from cliff edges! Cliffs create some spectacular scenery, but observe them from a distance. Loose stones and even large blocks of rock frequently break away from the cliffs.

All fossils belong to the Province of Nova Scotia and a permit is required to collect them under the authority of the Special Place Protection Act. Please report all important fossil discoveries to park staff.



2003 CANQUA-CGRG Comes to Nova Scotia

Canadian Quaternary Association-Canadian Geomorphological Research Group 2003, Dalhousie University, Halifax, Nova Scotia, and Bedford Institute of Oceanography, Dartmouth, Nova Scotia, 8-12 June 2003.

The 2003 CANQUA-CGRG conference was lively and stimulating, attended by 130 scientists from Canada, the United States, Europe and Asia. On June 9 at Dalhousie University two sessions on applied Quaternary Geology got the conference off to a great start. The first session, organized by Andrée Bolduc and Serge Paradis of Geological Survey of Canada (GSC) Québec, featured advances in computer-aided 3-D mapping with some amazing fly-throughs of digital terrain models, superimposed surficial geology and the interpreted retreat of ice sheets. The afternoon session featured techniques and case histories of mineral exploration using glacial drift as a medium, and was chaired by Bruce Broster of the University of New Brunswick, and Cliff Stanley and Ian Spooner of Acadia University.

Ralph Stea (L) explains the Lawrencetown till section with the best possible method: examination in the field.

Two special sessions were held in honour of recently deceased GSC researchers Douglas Grant and Lewis H. King. The Lewis H. King Memorial Session on the morning of June 10 featured papers on marine geology organized by Brian Todd and Gordon Fader. Presentations included the results of new multibeam and seismic mapping off the coast of southwest Nova Scotia and the Scotian Slope. The afternoon session was devoted to a series of papers on North American meltwater and floods into the Atlantic Ocean, organized by Mike Lewis and Bob Mott (GSC), and Jim Teller (University of Manitoba).

On the morning of June 11 the Doug Grant Memorial Session, organized by Ralph Stea (Nova Scotia Department of Natural Resources) and John Shaw (GSC), featured papers on the glacial history of Atlantic Canada. The session dealt with empirical evidence for ice flows and theoretical models of ice stream development and glacier inception. The afternoon sessions on June 11 focused on general themes and was chaired by Dave Sauchyn (University of Regina) and Ann Miller (Acadia University). Papers included tree-ring dating in Nova Scotia, glaciation in British Columbia, and carbon dioxide sequestration in the western Pacific. The rest of the afternoon and the June 12 session was devoted to geoarchaeology and attracted a range of excellent presentations. These sessions were organized by Dorothy Godfrey-Smith (Dalhousie University) Robert Ferguson (Parks Canada) and Pam Dickinson (University of New Brunswick). Presentations included the stratigraphy and paleoecology.of of archaeological sites and new and exciting methods of age dating. Phillip Giles (Saint Mary's University) and Antoni Lewkowicz (University of Ottawa) ran an excellent session on geomorphology which included the J. Ross MacKay lecture given by John Gosse (Dalhousie University) entitled "Cosmogenic nuclide exposure dating in Canada: new strategies, old landscapes, new questions."

The conference organizers experimented with a poster mini-talk format where presenters were given 5 minutes, 5 slides and 5 megabytes to get their message across and entice delegates to their posters. The consensus was this was a success, albeit with a need for stricter controls on timing.

The pre- and post-conference field trips, organized by Ralph Stea and John Shaw, covered much of northern mainland Nova Scotia and Cape Breton Island. The organizers, aided by Bob Mott, showcased the illuminating Quaternary sections of Nova Scotia, which could not be dimmed by occasional showers. A Halifax Harbour Boat Tour was run by Gordon Fader, who regaled delegates with geological and historical tales of the harbour while they quenched their thirst and were tossed about in 'das boat'.

Social events included Irish pub night at O'Carrolls and a banquet at the Saint Mary's Boat Club. After the banquet the CANQUA Johnston medal was awarded to Claude Hillaire-Marcel for a lifetime of achievement in Quaternary Science. Finally, awards were handed out for many excellent student presentations. Jennifer Smith (Memorial University) won the CGRG Slaymaker Award for the best student presentation in Geomorphology. Kim Wahl (Acadia University) was awarded the CGRG Best Poster Award for geomorphology. The Proudfoot Award winners for best oral presentations were 1st Alan Gontz (University of Maine) and Thian Hundert (Dalhousie University); 2nd Jessie Vincent (University of New Brunswick. The Lortie Awards for best poster presentation were 1st Sophie Baker (Dalhousie University) 2nd Andrea Nurse (University of Maine) and 3rd John Rayburn (Binghamton University, New York).

Ralph Stea

From the Mineral Inventory Files

The Kemptville Gold Mine: Meguma-hosted Gold with a Difference

I am always on the lookout for gold deposits that don't conform to the generally accepted, bedding-parallel, auriferous quartz vein model(s) usually put forth for Nova Scotia's gold deposits hosted by the Meguma Group. I concluded that the Kemptville gold mine in Yarmouth County (Fig. 1) is one of these 'dissenting deposits' when I worked in that area some 12 years ago. Current exploration of the Kemptville property by AYARCO Gold Corporation further strengthens my conclusion that the gold deposit there is related to massive hydrothermal alteration along a major, ductile shear zone.

Gold was discovered at Kemptville in 1881 and mining began in 1885 from two sites: the Kempt workings on the shore of Kempt Back Lake and the Cowan workings a short distance to the west (Fig. 1). A large swampy area separates the two mine sites, but it was always believed that both exploited the same vein system, which is likely connected under the swamp. Most mining took place between 1885 and 1888 but production continued intermittently until 1918, by which time 3,134 oz. of gold had been won from 4,418 tons of quartz.

Even in the old days, geologists noticed the dissimilarity of the geology of the Kemptville deposit compared to that of other gold districts in the province. E. R. Faribault (see *Nova Scotia Minerals Update* v. 20, no. 2) made note of the very high degree of hydrothermal alteration in the wallrock at Kemptville, and the fact that the alteration and gold-bearing veins are associated with a northeast-trending "zone of dislocation" that extends from Kemptville southwest to Carleton. He also made note of the propensity of the gold-bearing quartz veins to follow bedding along some of their trace but be clearly discordant for the remainder. In 1894, the brilliant, but under-recognized, W. H. Prest described the Yarmouth County mines, and the Kemptville mine in particular, as being a "wondering maze of angulars and cross leads and inconstant slate-bound main-leads."

My first exposure to this unique deposit was in 1990 when I visited some exploration sites of Acadia Mineral Ventures Limited, which was exploring for gold and base metals in the area between Kemptville and Carleton. I was immediately taken aback by the very high degree of deformation and alteration exhibited in rocks of the Goldenville Formation on their ground. These are easily the most deformed rocks I have seen in the Meguma Group metasediments. A bit of mapping showed that this deformation and alteration occurs over a very extensive area and represents a northeast-trending, ductile shear zone that originates somewhere in the South Mountain Batholith northeast of the former East Kemptville Tin Mine and continues southwest through the villages of Kemptville and Carleton to intersect the north-northeast-trending Deerfield Shear Zone (Fig. 1). The structure has a minimum strike length of 30 km and a width varying from 200 to 300 m.

It has been known for over a century that free gold occurs in the quartz veins at Kemptville, but what may be most exciting from the current exploration is the recognition that gold also occurs in zones of massive silica and carbonate alteration. In many places the degree of silica replacement is so complete it is difficult to determine where veins end and altered wallrock begins. All these features point to the potential at Kemptville for a mesothermal type of hydrothermal gold deposit, atypical of most Meguma goldfields. Questions remain to be answered, but given the magnitude of the shear zone and widespread association of massive alteration, the area represents an exciting exploration target.

G. A. O'Reilly

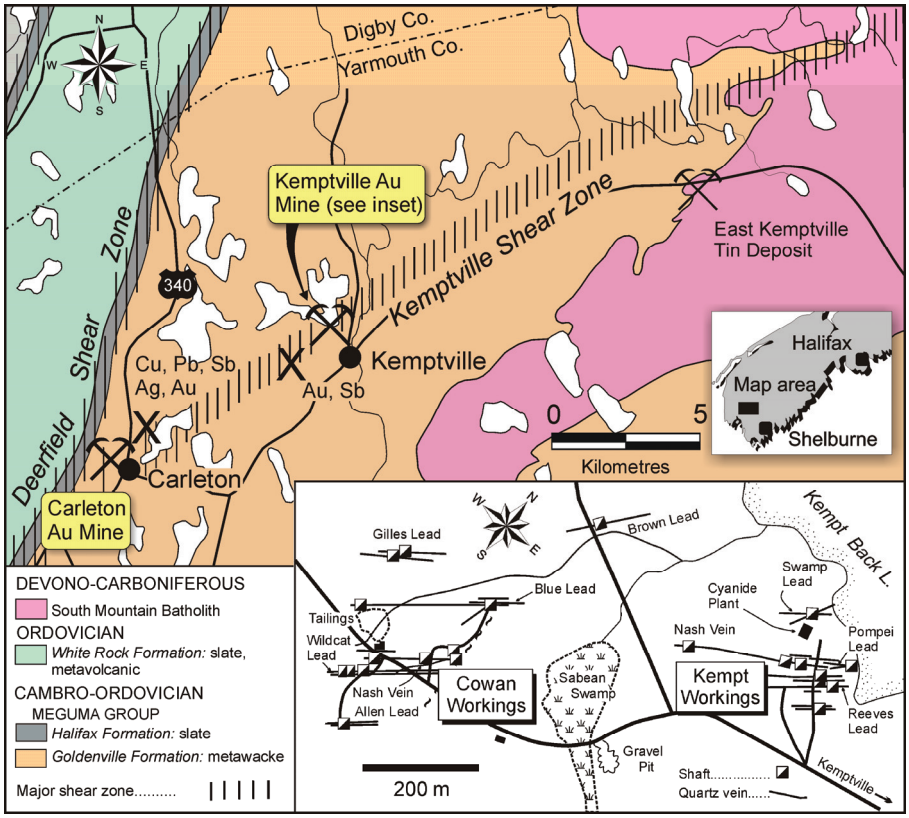


***Figure 1**. Geology map of the Kemptville area and Kemptville gold mine, Yarmouth Co.*

Exploration and Development Highlights

The following is a summary of the major mineral exploration and development projects in Nova Scotia.

New Mines

MacLeod Resources commenced operations in Autumn 2002 at its Kennedy Big Brook marble project near River Denys, Cape Breton Island. The company has completed site preparation, including the construction of a processing facility, and has extracted blocks of red and blue-grey marble for processing and market studies.

Georgia Pacific Corp. began production at its Melford surface gypsum mine in south-central Cape Breton Island in October 2002. Gypsum ore is trucked to the company's wharf in Point Tupper for shipment to markets in the northeast US. The deposit has a combined proven and probable mineable reserve of 35 million tonnes of gypsum.

Mining Development

Black Bull Resources Inc. received environmental assessment approval for its White Rock Quartz Mine on September 6, 2002. The company is acquiring the other necessary approvals and permits to proceed with development of its project, located in southern Nova Scotia near Yarmouth. The quartz-kaolin zone ranges from 100 m to 200 m in width, exceeds 100 m in depth, and extends for 1.6 km along strike. Black Bull Resources issued a press release on January 6, 2003, announcing it was in receipt of a Marketing Report prepared by Alsobrook and Company Inc. of Medford, New Jersey. The report noted positive response from several prospective end-users for white quartz material.

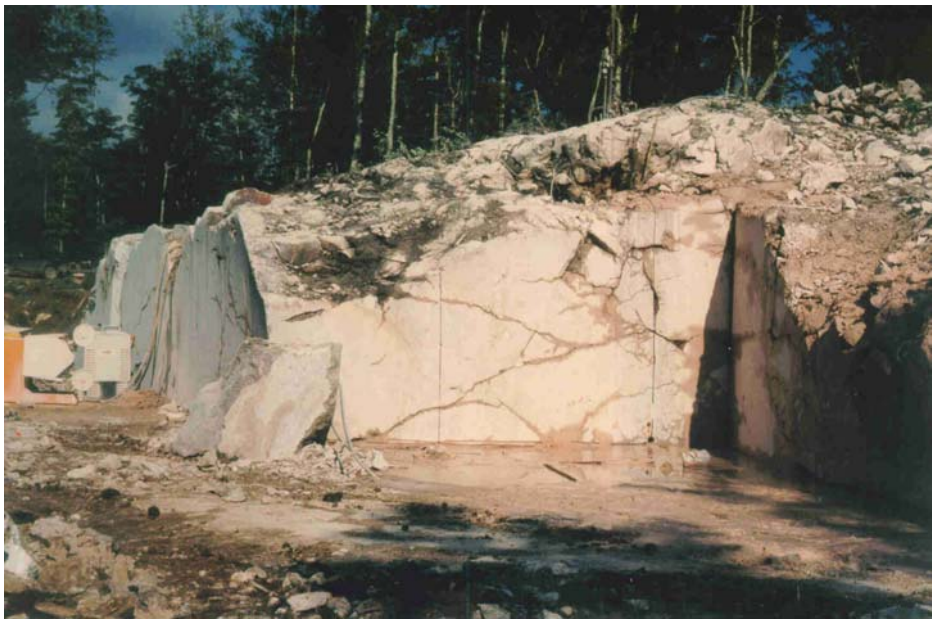
Exploration Projects

Titanium Corporation Inc. conducted additional exploration on its titanium-zirconium heavy mineral sand project located near Truro. A 42 borehole drilling program was completed in 2002, along with bulk sampling of the unconsolidated alluvial sands. On May 2, 2003, the company issued a press release announcing plans for its summer 2003 drilling program, which will focus on expanding the high-grade portion of sandbar #1 discovered during a 2001 drill program in the Cobequid Bay area. The company released highlights from previous drilling on this bar, including an 11.48 m interval containing 2.37% heavy minerals. Preliminary plans are to "step-out with a 3 km radius to extend the deposit to the northwest." Titanium Corp. continues to conduct bench tests on bulk samples at the company-funded pilot plant located in the Minerals Engineering Centre at Dalhousie University. An independent valuation report indicated a probable reserve of 330,941,945 metric tonnes of sand with an average heavy mineral grade of 1.94 %.

Diamond Ventures NL (DDV), an Australian-based mining company, announced in a press release dated May 23, 2003, that it had entered into an agreement with Moose River Resources Inc. (MRRI) to earn up to a 75% interest in the Touquoy Project (see From the Mineral Inventory Files, *Nova Scotia Minerals Update*, v. 20, no. 2). Diamond Ventures noted that a previous report on the property listed indicated resources of 3.8 million tonnes @ 2.2 g/t Au (274,000 contained ounces of gold) and inferred resources of 1.9 million tonnes @ 2.15 g/t Au (131,000 contained ounces of gold). The release also noted that the 405,000 ounce gold reserve has been outlined by 170 diamond-drill holes, many of which intersected gold mineralization from surface, with widths exceeding 100 m vertically.

Acadian Gold Corporation announced in a press release dated June 12, 2003, that it had commenced a 5000 m drilling program on its Forest Hill project in eastern Nova Scotia. Acadian is promoting the similarities between Nova Scotia gold deposits and the prolific belt in the Bendigo-Ballarat region of Australia and plans to apply the Australian 'Ribbon Model' to its Nova Scotia deposits. The company currently has six gold properties in its portfolio, including the past-producing Forest Hill and Beaverdam deposits.

Scorpio Mining Corporation issued a press release on January 16, 2003, to announce it had optioned the Cochrane Hill Gold Deposit, located in Guysborough County, from a private interest. The deposit is situated in a steeply dipping quartz vein zone (18-36 m wide) in slate, adjacent to the axis of the Cochrane Hill Anticline.



McLeod Resources marble quarry near River Denys, Inverness County.

On September 25, 2002, Globex Mining Enterprises Inc. announced that Azure Resources Corp. had obtained the right to earn a 100% interest in the Mooseland gold property located 70 km northeast of Halifax. Reports by Acadia Mineral Ventures in 1987 list an uncut drill-indicated reserve for the Mooseland deposit of 2.02 million tonnes grading 0.39 oz./ton Au over an average mining width of five feet (1.5 m) to an average depth of 1000 feet (305 m). Azure completed a preliminary six-hole drill program in the early summer of 2003.

Azure Resources Corp. issued a press release, dated June 4, 2003, reporting it had signed an option agreement with Newfoundland Goldbar Resources Inc. for the Dufferin Mine. Azure has been granted an option to earn up to 51% of the Dufferin Mine by making two property payments totalling $75,000 and spending $925,000 on the property over a one year period, after which Azure and Newfoundland Goldbar will enter into a joint venture for the exploration and development of this property. The release noted that 9788 ounces of gold were produced from the Dufferin Mine in 2001.

Coventry Charter Corporation announced in May 2002 that it had signed a letter of intent to acquire the assets of Monster Copper Resources Ltd. Monster Copper has the right to a 50% ownership in 1,282 claims in the Folly Lake area, Colchester County, through an agreement with Wallbridge Mining Company Limited. The claims are near the Cobequid-Chedabucto Fault, a major regional fault zone that hosts copper, cobalt and gold occurrences with iron-oxide copper-gold (IOCG) attributes. Initial grassroots exploration activities were carried out in 2002.

Avalon Ventures Ltd. issued a press release on March 10, 2003, reporting that it had signed a letter of intent to acquire a 60% interest in a gold prospect located in the Cobequid Highlands of northern Nova Scotia. The property consists of 1490 claims underlain by Silurian and Devonian volcanic rocks with geological and geochemical indications of an "Appalachian-type" gold environment. The area was previously explored by a major oil company for uranium; however, samples and drill core were not analyzed for gold "despite the presence of locally abundant sulphide mineralization containing highly anomalous levels of copper, zinc and silver."

Mike MacDonald

April-June Open Assessment Reports

Report Number	NTS	Licensee
AR ME 1966-2	21H/16A	Sifto Canada Incorporated
AR ME 1974-3	21H/16A	Sifto Canada Incorporated
AR ME 1980-16	11E/12A	Cominco Limited
		Wyoming Mineral Corporation
AR ME 2001-27	21A/07C	O'Brien, J
AR ME 2001-30	11E/01C	Halliday, N A
AR ME 2001-32	21H/08D	Booth, I
AR ME 2001-33	21A/04A	W G Shaw and Associates Limited
		Black Bull Resources Incorporated
AR ME 2001-34	11D/15A	Rainbow Resources Limited
		3779751 Canada Incorporated
AR ME 2001-35	11D/16C	H and E Mullen Investments Limited
AR ME 2001-38	21A/07C	Hiltz, K R
AR ME 2001-40	11E/13B	Intragaz and Company Limited Partnership
AR ME 2—2-21	11E/04A	Boyd, G F
AR ME 2002-38	11E/03C	Rainbow Resources Limited
		N S Geologic Ventures
AR ME 2002-57	11E/02B	CanGold Goldfields Incorporated
		Hudgins, A D

Susan Saunders and Norman Lyttle

Georgia-Pacific Corp.'s Melford gypsum mine, Inverness County.

The Prospector's Stake

This column of *The Prospector's Stake* has four subjects: safety, samples, professional registration and continuing education.

The reason I bring safety into the column once again is to emphasize the need to be diligent in applying safe working practices to all aspects of prospecting. Before going into the field, you should ask yourself these questions: "Do I have all of my personal protective equipment?" "Does someone know where I am and when I am expected back?" "Do I have an emergency plan in case of accident.?" "Am I physically able to undertake my prospecting activities?" The late summer and early autumn are wonderful times to be out prospecting. When you go, go safely.

Sampling is another important subject. The Council of Canadian Professional Geoscientists' (CCPG) website (http://www.ccpg.ca) has guidelines for best practices in conducting mineral exploration, which are part of the information package built into National Instrument 43-101. The concept of "...best practices has been drawn up to ensure a consistently high quality of work that will maintain public confidence." Part of the discipline of 'best practices' is sampling. We only need to remember Bre-X to know about the importance of integrity in sampling. Your reputation depends on the quality of work you carry out, and the selection, collection, handling and analysis of samples represent a vital component of quality control.

Many prospectors are geoscientists by training and prospectors by choice. Although prospectors working on their on claims are exempt from the *Geoscience Profession Act*, I recommend that all geoscientists should be professionally registered with the Association of Professional Geoscientists of Nova Scotia (APGNS). Benefits from membership include: (1) the legal right to call oneself a "professional geoscientist," (2) inter-provincial mobility of employment as a professional, (3) the ability to meet one of the major requirements for "Qualified Person" status and to legally sign documents for any of the securities commissions and/or the stock exchanges in Canada (NI 43-101), and (4) the ability to accept work in Australia, parts of the United States, and much of Europe as a professional geoscientist. For more information about the qualifications for membership, please review the material on the CCPG website cited above. The APGNS website is http://www.apgns.ns.ca.

Part of any prospector's 'bag of tricks' is continually renewing his/her ideas and skills. Remember my description of the PDAC's Prospector of the Year, Avard Hudgins, in the last issue of the *Minerals Update*? He has constantly sought new ideas and new information. Becoming a member of the Nova Scotia Prospectors Association is a good start. The twice a year field trips (see article on page 1) expose members and guests to new areas in the province with varying styles of mineralization. Monthly meetings give broad stimulation to ideas about rocks and geological processes. For more information, visit the website at http://www.prospectors.ns.ca.

Howard Donohoe

Mining Matters Conference Set for November 19-20

The 2003 Mining Matters for Nova Scotia conference will be held at the Westin Hotel, Hollis Street, Halifax, on Wednesday and Thursday, November 19th and 20th. The conference continues to provide an up-stage forum for key themes, including new geoscience investigation across the province, new and continuing mineral exploration and development activities, mineral producers and support industry activities, and general information relevent to all Nova Scotians regarding the geology and mineral wealth of Nova Scotia.

More details outlining special aspects of the conference will be included in the Fall issue of the *Nova Scotia Minerals Update*. Make sure you plan to attend!

Paul K. Smith

Special Notes

DNR Wins Premiers Cup
Congratulations to the DNR paddling team who competed in the Aliant Halifax Dragon Boat Festival on July 12, in support of the Nova Scotia Amateur Sport Fund. The team won the inaugural Premier's Cup over nine other provincial government teams. DNR Minister Tim Olive was pleased to present the cup on behalf of the Premier. Overall the DNR team earned 8th place out of 87 teams.

Howard Donohoe Cited by MSNS
DNR geologist Howard Donohoe was given the President's Citation by the Mining Society of Nova Scotia on June 5, 2003. The citation recognizes Howard's "outstanding contribution to the 'Fraternity of Mining People' for the betterment of the industry, the community and the Province of Nova Scotia."

Report of Activities 2002
The Mineral Resources Branch Report of Activities 2002 (Report ME 2003-1) is now available at the DNR Library in Halifax. The report comprises 268 pages and costs $20.

Dates to Remember

October 29-November 1, 2003
Annual Review of Activities, Geological Survey of Newfoundland and Labrador, and CIM Newfoundland Section Annual Meeting, Delta Hotel, St. John's. For information contact Norm Mercer (709-729-6193).

November 3-5, 2003
28th Annual Review of Activities, Minerals and Energy Branch, New Brunswick Department of Natural Resources and Energy, Sheraton Hotel, Fredericton. For information contact Don Carroll (506-453-6642).

November 19 and 20, 2003
Mining Matters for Nova Scotia. For more information contact Paul Smith (phone 902-424-2526 or e-mail pksmith@gov.ns.ca).