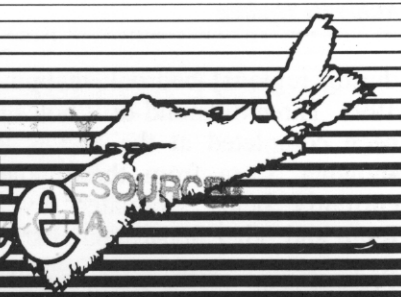


Nova Scotia

Minerals Update



Department of Natural Resources, Mines and Minerals Branch

Volume 3 / Winter 1994-5

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If you have any comments or questions about *Minerals Update*, please call or write:

The Editor, *Minerals Update*
Nova Scotia



Department of
Natural Resources

P.O. Box 698
Halifax, Nova Scotia, B3J 2T9
Phone: 902-424-2523
Fax: 902-424-7735



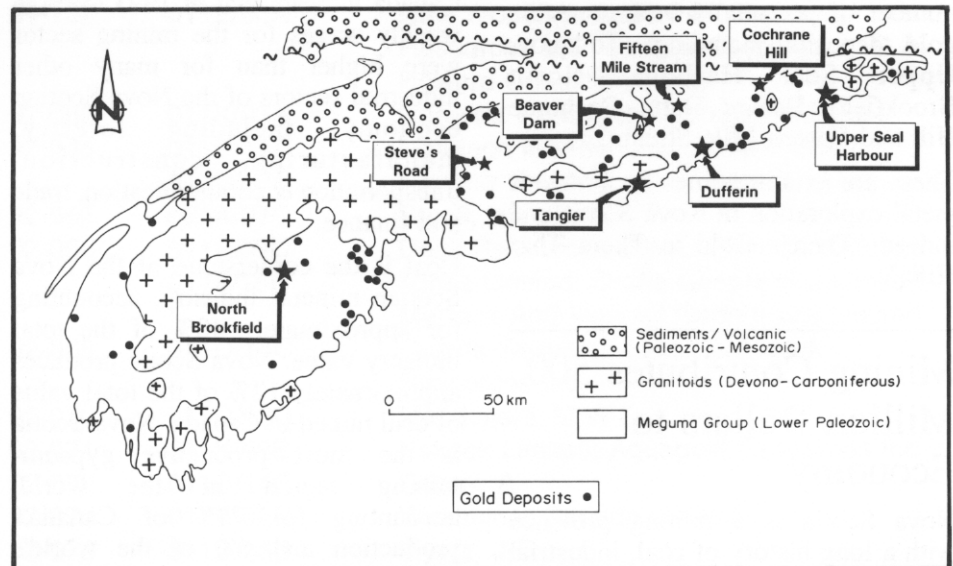
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There's Gold in Them Thar Hills

For several years Paul Smith, Dan Kontak and several other staff members of the Mineral Resources Division have been studying and promoting the gold potential of the Meguma Group metasedimentary rocks of southern Nova Scotia. These rocks are host to 60 past-producing vein-type gold deposits and private-sector work by several companies is currently underway to evaluate the feasibility of developing some of these deposits. Most notably, Dufferin Resources Inc. has been granted a mining lease and is driving a decline at the Dufferin gold deposit. In addition, Tangier Mining Inc. has been granted a permit to collect a

bulk sample of ore from underground at the former Tangier gold mine. Also, Edgar Horne continues to recover gold from his small-scale operation at the former Renfrew gold mine.

Paul Smith has been studying the bulk mining potential of disseminated gold deposits in the Meguma Group rocks for several years. Disseminated gold is known to occur in both the slate units, such as the Touquoy Zone near Moose River (≈ 2 million tonnes @ ≈ 2.2 g/t), and greywacke units, such as the North Brookfield prospect (≤ 8.6 g/t over 2 m). Seven additional occurrences of disseminated gold in greywacke have been identified at press time, including the Steves Road occurrence, near Beaverbank, which was discovered by Department staff



Geological map of southern Nova Scotia showing location of gold deposits.

during regional bedrock mapping in 1993. Three diamond-drill holes have been completed at the Steves Road showing. Core from these holes is currently being evaluated by Bob Ryan and other departmental staff.

Perhaps one of the most significant recent developments for gold exploration in the Province was the November 15th agreement between Placer Dome Canada Ltd. and Orex Exploration Inc. whereby Placer can acquire a 65% interest in the Goldboro (Upper Seal Harbour) property, Guysborough County. Orex has defined a geological resource of 20,000,000 tonnes grading 3.33 g/t of gold in a combined package of quartz veins and slate. Placer has committed to spend up to \$3,250,000 over the next three years for feasibility studies on the property.

A project to investigate sample preparation and analytical procedures for evaluating disseminated-type gold occurrences in the Meguma Zone has been initiated by Natural Resources and the Geological Survey of Canada. The project is part of the current Canada - Nova Scotia Cooperation Agreement on Mineral Development. In addition, a private consultant has been contracted to compile pertinent literature and assessment reports for a number of potentially bulk-mineable gold deposits including: Touquoy, Upper Seal Harbour, North Brookfield, Beaver Dam, Cochrane Hill and Fifteen Mile Stream.

These are exciting times for precious metal exploration in Nova Scotia and indeed "There's Gold in Them Thar Hills".

Mining Contributes 500 Million Dollars to Economy

Nova Scotia is a mining province with a long history of coal, industrial mineral, and metallic mineral production. Each year, mining contributes approximately \$500 million to the provincial economy,

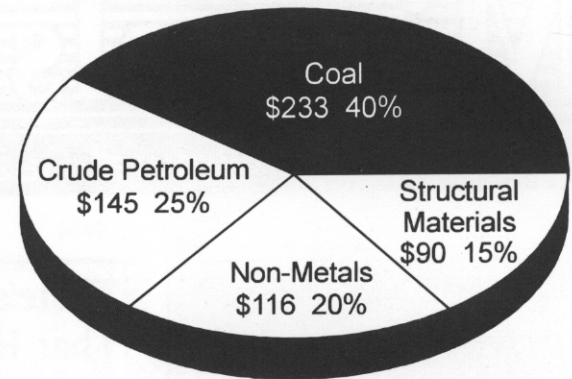
making it one of the most important sectors of our economy.

In a 1994 report, the Mining Association of Canada noted that in 1992 Nova Scotia had the highest number of producing 'mining establishments' per unit area of any province in Canada. Another report noted that Nova Scotia had the second highest average value of mineral production per square kilometre of all the provinces, with New Brunswick having the highest value. These trends

continue today and clearly signify that *Nova Scotia is a mining province!* The total value of Nova Scotia's mineral production for 1993, including secondary processing when applicable, was \$585 million. This includes coal (\$233 million), industrial minerals (\$207 million), and crude petroleum (\$145 million). A total of 4520 people were employed in mineral production in 1993, including 2360 in coal, 1710 in industrial minerals, and 450 in crude petroleum. Data from Statistics Canada indicate that in 1993 average weekly wages for the mining sector were higher than for many other industrial sectors of the Nova Scotian economy, including forestry, manufacturing, construction, transportation & communication, trade and finance.

Coal is the cornerstone of the Nova Scotian mineral industry, accounting for approximately 40% of the total industry value. Nova Scotia produces approximately 12% of the total value of coal mined in Canada. Nova Scotia is the most productive gypsum-mining region in the world, accounting for 78% of Canada's production and 6% of the world's production. Other major contributors to the provincial mineral industry include salt, aggregates, limestone and dolomite. At present there are no

Value of Nova Scotia's Mineral Production, 1993



Pie Chart showing the contribution of various commodities to the total 1993 mineral production for Nova Scotia.

metallic mineral deposits being mined; however, the Province has diverse geological environments with excellent potential for economic deposits of precious and base metals. Renewed interest in the metallic mineral potential of Nova Scotia by several major and junior mining companies is encouraging news for the local mining industry and will hopefully lead to the opening of new mines in the near future.

Parks Update

On November 30th, 1994, Don Downe, Minister of Natural Resources, announced the appointment of a six-member Public Review Committee for the proposed Parks and Protected Areas Systems Plan. The Committee members are:

John Mullally, Halifax. *Chairman.* Former Deputy Minister of the Nova Scotia Department of Natural Resources.

Pauline Himmelman, Pleasantville, Lunenburg County. A former Municipal Councillor and Deputy Warden.

Pam Matthews, Wolfville. A biologist with a longstanding interest in the wilderness and natural history.

Kathryn Heckman, Dartmouth. An environmental lawyer.

Robert Gilroy, Springhill. A retired community college vice-principal.

Jim St. Clair, Mull River, Inverness County. A local historian and instructor at the University College of Cape Breton.

The Committee's mandate is to hear and summarize public comments with respect to the proposed Parks and Protected Areas Systems Plan. The Committee will then make recommendations to the government on the contents of the final plan. A series of public meetings in January and February 1995 will be held to gather public comment and opinion. These meetings will be held from 2 to 5 pm and 7 to 9 pm on the dates shown below.

Individuals and groups are encouraged to make their views known in writing and are invited to present a written or oral submission to the Committee. Those wishing to make a presentation are asked to notify the Committee at the address below or by calling 662-3030 at least seven days prior to the

meeting date. Copies of the Proposed Parks and Protected Areas Plan may be obtained from local offices of the Department of Natural Resources, Head Office in Halifax, or at: *Parks and Recreation Division, Department of Natural Resources, RR 1, Belmont, NS, B0M 1C0.*



Local mineral industry representatives Lyndon Jensen and Doug Boddy examine specimen at the 1994 Review of Activities.

Review of Activities a Success

The Eighteenth Annual Mines and Energy Branches Review of Activities was held at the World Trade and Convention Centre on November 1 and 2, 1994. There were 342 people registered this year, which approaches the record of 346 previously set in 1993. A Special Colloquium entitled *Discovering, Defining and Developing the Mineral Resources of Nova Scotia* took place on Tuesday afternoon, November 1. Technical presentations were given by departmental staff, members of the mineral industry, and scientists from both the Geological Survey of Canada and Canada Centre for Mineral and Energy Technology (CANMET). All of the technical talks were well attended and generated much discussion among the delegates. Fifty-one posters were also presented at the Review and stimulated some lively discussion. Displays were provided by departmental staff and geoscientists from the Geological Survey of Canada and local universities. In addition, seven displays were prepared by recipients of the Prospectors Assistance Program.

Students from several junior high schools once again had the opportunity to tour the displays and learn about the importance of mining to the economy of Nova Scotia. Technical presentations on Wednesday morning, November 2, focused on specific projects and activities of the Department of Natural Resources. A Special Session entitled *New Developments in Coal and Coalbed Methane* wrapped up the morning session. The Review culminated with an address by the Honourable Don Downe, Minister of Natural Resources, to 162 luncheon-goers on November 2. Mr. Downe highlighted several departmental initiatives, summarized important developments in both the mineral and energy sectors, and conveyed the message to those in attendance that Nova Scotia is "open for business".

The Organizing Committee would like to thank all those who contributed to the success of the Review of Activities. If you have any comments or suggestions for future meetings, please forward them to the Editor.

Staff Spreading the Word!

The winter and spring of 1995 will be busy seasons for many departmental staff members. Staff of the Mines and Minerals Branch will be hitting the road to spread the message that Nova

Parks and Protected Areas Public Meetings		
2-5 pm and 7-9 pm		
Amherst	Jan 4	Amherst Fire Hall
Sherbrooke	Jan 5	Legion (Upper Floor)
Shelburne	Jan 10	Shelburne Fire Hall
Yarmouth	Jan 11	Lecture Rm, NS Community College, Burrige Campus
Digby	Jan 12	Digby East Fish and Game Hall, Haines Lake
Sydney	Jan 24	Cabot Building Auditorium, Canadian Coast Guard College
Baddeck	Jan 25	Alexander Graham Bell Museum
Port Hawkesbury	Jan 26	Port Hawkesbury Lions Den (Hall)
Halifax	Feb 7	World Trade and Convention Centre
Dartmouth	Feb 8	Cole Harbour Place
Truro	Feb 21	Keddy's Truro Inn
Wolfville	Feb 22	Beveridge Arts Centre (Rm 241), Acadia University
Bridgewater	Feb 23	Bridgewater Wandlyn Inn

Scotia is an excellent place to conduct mineral exploration and development. Their first stop will be the Geological Survey of Canada Forum '95 in Ottawa, January 16-18, followed by the Cordilleran Roundup in Vancouver, February 7-10, the Prospectors and Developers Association of Canada (PDAC) Annual Meeting in Toronto in March, and the Investing in the Americas Conference in Miami also in March.

Our chief goal at these events is to inform a wide range of potential clients about Nova Scotia's many strengths. This Province has a long tradition of mining coal, industrial and metallic minerals, and a wide range of geological environments with excellent mineral potential. The combination of a skilled workforce, superb infrastructure and easy access to deep-water ports makes Nova Scotia a very attractive place to conduct business. This fact has obviously not been overlooked by some large companies including Placer Dome Canada Ltd. and Metall Mining Corporation who are presently evaluating precious and base metal plays on mainland Nova Scotia and Cape Breton Island. Come and see our displays if you plan to attend any of the above conferences.

The editor would like to remind local prospectors that monies are available through the Travel Assistance Program for them to attend trade shows and conferences to promote their properties (see next article). The Atlantic Canada Rock Room at this year's PDAC will once again provide prospectors from Nova Scotia, New Brunswick and Newfoundland a superb forum for their work. The Department will once again be compiling a list of properties that are available for option. This list will be taken to select trade shows. All those interested should drop by the Registry of Mineral and Petroleum Titles for further information and/or application forms or contact the Registry staff at 424-4068, Fax 424-7735.

PAP Update

Over 100 projects have been funded to date under the Nova Scotia Prospectors Assistance Program (NSPAP). The program will soon be entering its third and final year of operation under the existing Canada-Nova Scotia Cooperation Agreement on Mineral Development. Early in April the NSPAP Committee will convene to assess all those applications submitted prior to the March 31, 1995, deadline. The Committee will evaluate each proposal, placing considerable emphasis on the technical merit of the intended project. The Committee will study previous NSPAP reports submitted by the applicant, but will not consult earlier filed application forms for missing information. The majority of previous applications were awarded the maximum of financial assistance available (\$5000). It is estimated that sufficient funding will be available for the best 50 or 60 applications received by March 31, 1995.

Additional modest funds have been designated for allocation under the Travel Assistance Program, which is available to Nova Scotia prospectors holding exploration licences in good standing. Reimbursement of 75% of eligible costs up to a maximum of \$1000 per person is available. Most requests are for travel to the Prospectors and Developers Association of Canada Convention slated for Toronto in March '95. Since applications will be approved on a 'first come, first served' basis, persons seeking travel assistance are advised to apply as soon as possible.

For further information and application forms contact Derek Johnston, Coordinator, NSDNR, Ph. 424-8145 or the staff of the Registry of Mineral and Petroleum Titles, Ph. 424-4068; FAX 424-7735.

Teachers Learn About Minerals and Mining

The first of seven, 1 1/2 day EdGeo workshops was presented on August 22 & 23, 1994, for grade 7, 8 and 9 science teachers from the metro region. The purpose of this and the other workshops is to emphasize the ways that earth science can be included in the junior high curriculum and to show teachers the resources available to them. Twenty-six teachers met at the Nova Scotia Museum of Natural History to learn about loan kits from the Nova Scotia Museum, including the *Mining Kit*, how to use rocks, minerals and mining in the classroom, and where to find the resources they need. Each received a personal rock and mineral kit with most of Nova Scotia's economic rocks and minerals represented. Over this past summer, almost all mining operations in the Province were asked to contribute samples to the Department. These



The Department of Natural Resources supported the August, 1994, workshops held for metro area junior high science teachers. Howard Donohoe (standing, far right) shows teachers how to use a game about mineral resources (N.S. Dept. of Education photo).

were used in the personal kits as well as for the prospecting courses.

EdGeo workshops are encouraged and partially funded by the Canadian Geoscience Council (CGC). Kind assistance was also supplied by the Geological Survey of Canada, Natural Resources Canada, Nova Scotia Department of Natural Resources, and members of the Atlantic Geoscience Society Education Committee. The teachers declared this workshop a success! The next workshop will be held during the spring of '95 at the Fundy Geological Museum, Parrsboro.

Developing the Mineral Policy

A working group consisting of Pat Phelan, Vicki Harnish and Howard Donohoe prepared an outline for the draft mineral policy document. During the fall, David Hopper wrote several drafts of the document. The latest draft has benefited from remarks and comments by senior management and the staff of the Mines and Minerals Branch.

Following the approval of the Steering Committee in early February, we expect to invite public comment on the document. At the same time, the document will be sent to stakeholders and various government agencies for their review. Completion of the mineral policy is expected in early spring '95. If you would like a copy of the document, please call Voluntary Planning at 902-424-5682.



Oct. - Dec. 1994 Open Assessment Reports

REPORT	AREA	LICENSEE
26-001	Cumberland Basin, N S Antigonish Basin, N S Cape Breton Island, N S Minas Basin, N S Stellarton Basin, N S Sydney Basin, N S Shubenacadie Basin, N S	Henry L Doherty and Company; MacKay, H
27-001	Cape Breton Island, N S	Eastern Gulf Oil Company
REPORT	NTS	LICENSEE
72-006	011E/07C	Imperial Oil Enterprises Limited
89-292	011D/15C	Hecla Mining Company of Canada Limited; Acadia Mineral Ventures Limited
89-293	011D/15C	Hecla Mining Company of Canada Limited; Acadia Mineral Ventures Limited; P Lane and Associates Limited
91-134	011E/03A,B,C,D 011E/04A,B,C,D 011E/05A,B,C,D 011E/06A,B,C,D 011E/07B,C	New World Ventures Incorporated; Far-Away Resources Limited; Bird Oil Corporation; D A Howard Consultants Ltd.
91-135	011E/05A,B,C,D 011E/04C 011E/06,A,B,C,D 011E/07B,C	New World Ventures Incorporated; Far-AwayResources Limited; Bird Oil Corporation; Tricentrol Oils Limited
91-136	011E/03B,C 011E/04/D	New World Ventures Inc.; Far-Away Resources Limited; Bird Oil Corporation
91-137	011E/03A,D	New World Ventures Inc.; Far-Away Resources Ltd.; Bird Oil Corporation; D A Howard Consultants Ltd.
92-062	011K/03A	Noranda Exploration Company Limited
92-064	011D/15D 011D/16C	Minetech International Limited; Sheet Harbour Crushed Stone Company Inc.
92-065	021A/07C	Burrill, H C; Baker, R
92-066	011F/09C 011F/16B	Deak Resources Corporation; Outokumpu Mines Limited; Crone Geophysics Limited; Mertens And Macneil Geophysics Limited
92-068	011D/14C	Cuesta Research Ltd.; Gold Bank Resources Inc.
92-070	011D/13D	Macdonald, M W
92-071	011K/08B	Kelrock Limited; Aquagold Resources Inc.
92-072	011D/14C	Debay, A
92-074	011K/02C	Westminer Canada Limited
92-075	011D/15B	Myers, J C
93-042	011F/15A	Cominco Limited
93-051	011K/03A	Noranda Exploration Company Limited
94-070	021A/09B	Cardinal, B

Charting Nova Scotia Statistics

Each quarter we will provide you with a statistical representation of Nova Scotia's mineral industry. The graphic presentations will track such things as total area under licence, reported exploration expenditures, and other subjects. From time to time we will include comparisons of the mineral industry with other sectors of the Nova Scotia economy, and between provinces and territories. A variety of statistical information is available from the departmental library, 902-424-8633.

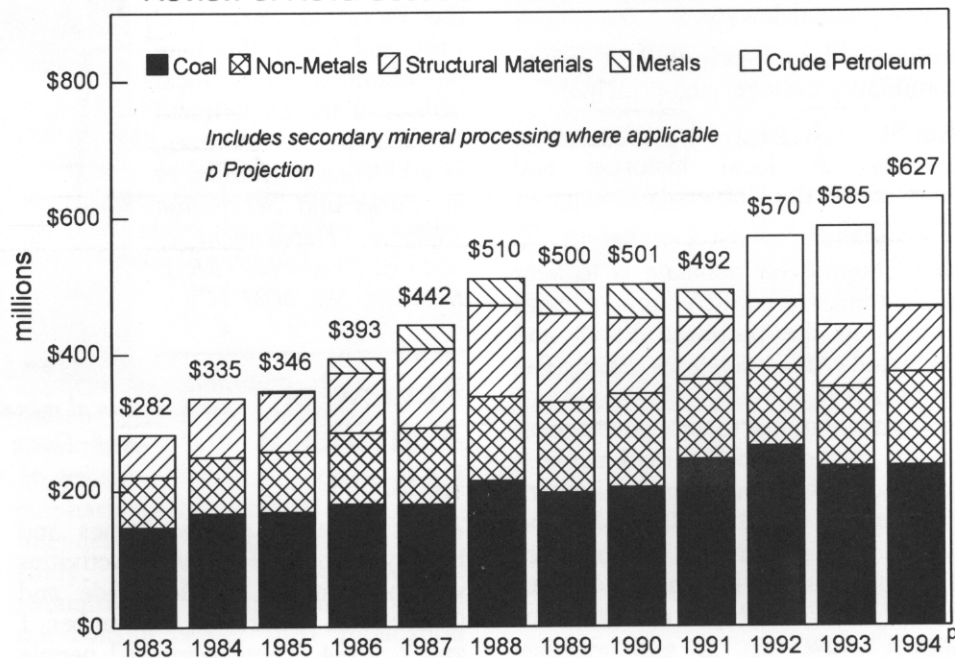
You Know What I Mean!

Conversational English is a relaxed language full of colourful mistakes that we have come to expect and even enjoy. Such mistakes in our professional writing may also be enjoyable, but not usually for the writer. Improper use of modifiers can bring a touch of the absurd to even relatively simple statements, such as these: *When fully inflated, six adults can be carried on this raft.* Imagine how many uninflated adults it could hold. *The acceleration of surface faulting is attributed to excessive use of groundwater by some geologists.* These geologists must have a serious drinking problem. *Montell was either the discoverer of dinosaurs or one of them.* I wonder if he's fossilized yet.

In many cases a well-placed hyphen would eliminate ambiguity. But then we would be spared the pleasure of reading such equivocal phrases as these: *high school teacher; heavy oil researcher; precious metals geologist; waterlogged wood expert; or the (?)provocative comic strip artist.*

Editor's note: This article was submitted by geoscience editor Doug MacDonald for whom the Branch staff owe their thanks... for without him, our collective writings might be superlatively, and more probably ambiguously, cryptic in their nature!

Review of Nova Scotia's Mineral Production 1983 - 1994



Geo - Logic

Once again Martha Devanney shares her Geo-Logic with Minerals Update readers.

Assay - A paper written on economic geology.

Diapir - A geologist's equivalent to Pampers... is your baby under the dome?

Grab sample - The impolite thing to do.

Dates to Remember

Jan. 16 to 18, 1995

Geological Survey of Canada Forum 1995, Ottawa Congress Centre, Ottawa, Ont. For more information call FORUM Secretariat 613-992-5265 (Fax 613-996-8748).

Feb. 3 to 4, 1995

Atlantic Geoscience Society Colloquium, Best Western Claymore Inn, Antigonish, N.S. For more information call Mike Melchin, 902-867-5177 (Fax 902-867-5153; E-mail mmelchin@juliet.stfx.ca).

Feb. 7 to 10, 1995

Cordilleran Roundup, Hotel Vancouver, Vancouver, B.C. For more information call the B.C. & Yukon Chamber of Mines 604-681-5328 (Fax 604-681-2363).

March 5 to 8, 1995

Annual Meeting of the Prospectors and Developers Association of Canada, Royal York Hotel, Atlantic Canada Rock Room, Toronto. For more information call the PDAC, 416-362-1969.

May 14 to 18, 1995

Annual Meeting of the Canadian Institute of Mining, Metallurgy and Petroleum, World Trade and Convention Centre, Halifax. For more information please call George O'Reilly, 902-424-2517 (Fax 902-424-7735).

May 17 to 19, 1995

Annual Meeting of the Geological Association of Canada - Mineralogical Association of Canada, University of Victoria, Victoria, B.C. For further information contact Mary O'Rourke, 604-721-8465 (Fax 604-721-6200).