

Nova Scotia

# Minerals Update

Department of Natural Resources, Mines and Minerals Branch

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Nova Scotia



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## 18th Annual Review of Activities

The Mines and Minerals and Energy Branches of the Nova Scotia Department of Natural Resources (DNR) will be holding their Annual Review of Activities on November 1 and 2 at the World Trade and Convention Centre in Halifax. A display area, located in the Mariner Suites, will be open from 10:00 a.m. to 11:00 p.m. November 1 and from 8:00 a.m. to 3:00 p.m. on November 2. Displays will highlight the results of work by Departmental staff and contract employees. In addition, several displays will feature the results of research by the Geological Survey of Canada (GSC), Atlantic Geoscience Centre and several local universities.

A special colloquium entitled "Discovering, Defining and Developing the Mineral Resources of Nova Scotia" will be held between 1:00 and 4:30 p.m. on November 1. Oral presentations will be given by DNR, GSC and CANMET staff along with individuals from the private sector. Topics will focus on the potential for both precious and base metals in Nova Scotia and the geochemical and geophysical techniques best suited for future exploration programs. Several presentations will also focus on estimating reserves and mining techniques for Nova Scotia's mineral resources.

An open workshop focusing on ways to increase levels of exploration and development of Nova Scotia's mineral resources will take place Tuesday evening, November 1, from 7:00 p.m.

to 8:30 p.m.. There will be several short presentations by government and industry followed by an open discussion period. All are invited to attend and share their ideas.

The overall activities of the Mines and Minerals and Energy Branches will be highlighted in the November 2 session which will be held between 8:30 and 12:00 a.m. Several presentations will highlight new developments in coalbed methane and coal mining in Nova Scotia. There will be a luncheon following the morning session with the Honourable Don Downe, Minister of the Department of Natural Resources, as guest speaker.

This year's Review of Activities promises to be an informative event that should not be missed. See you there!

## Minister Supports Whitehorse Mining Initiative

The Honourable Don Downe, Minister of the Nova Scotia Department of Natural Resources, and Pat Phelan, Executive Director of the Mines and Minerals Branch (DNR), recently attended the annual Mines Ministers Meeting in Victoria, B.C., which was held September 12<sup>th</sup> and 13<sup>th</sup>. They were accompanied by industry representatives Greg Isenor, Terry Davis and John Amirault.

A major accomplishment of this year's meeting was the signing of the Whitehorse Mining Initiative (WMI) by federal, provincial and territorial mines ministers on Tuesday, September 13. The WMI provides a strategic vision for Canada's mineral

industry and specifically addresses four areas: finance and taxation; land access and use; workplace, workforce and community; and environment. The WMI brings all parties with a stake in mining together in a cooperative manner.

Mr. Downe says he personally supports the initiative in principle and the next step will be to present it to cabinet. The Minister believes the initiative is a sound approach to mining which, for the first time in Canada, brings together all issues and interest groups to focus on developing policy that takes into consideration all areas of concern including taxation, the environment, and land use.

A new Mineral Policy for Nova Scotia, which reflects the spirit and principles of the WMI, was nearing completion at the time this newsletter went to press.

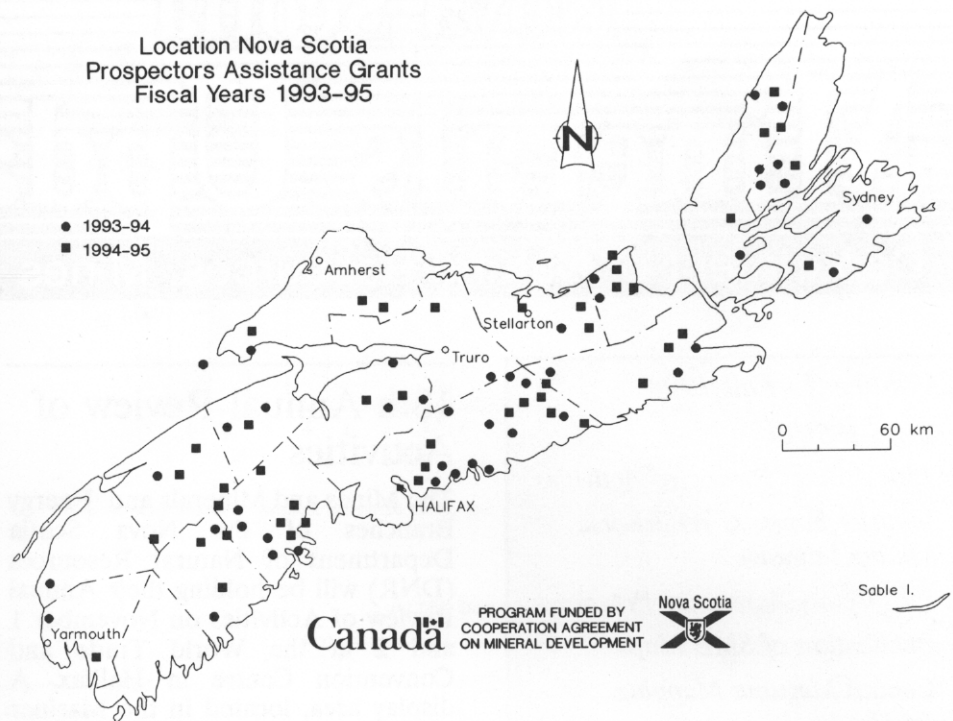
## Prospectors Assistance Program

This Federally-funded, Provincially-delivered program is designed to provide financial assistance to prospectors who submit an acceptable proposal for field work. Up to \$5,000 is available per individual per year.

The program was launched in the middle of the 1993-94 field season and saw 43 projects approved and completed during that first year. Toward the end of April 1994 the NSPAP Committee approved an initial 40 projects for the current fiscal year. Fortunately, Natural Resources Canada was able to identify an additional \$100,000 of available funding early in August and 21 other proposals were approved. This brings the total for two seasons of program operation to 104 projects assisted (accompanying map indicates the property locations).

The success of the Prospectors Assistance Program will ultimately be measured by the number of mineral properties optioned to mining companies as a result of the assistance provided. To this end,

Location Nova Scotia  
Prospectors Assistance Grants  
Fiscal Years 1993-95



DNR will provide an opportunity to program recipients to display specimens and technical data regarding their properties at the upcoming Annual Review of Activities on November 1 and 2. Applications for assistance during the 1995-96 fiscal year should be submitted prior to March 31, 1995, since the NSPAP Committee will be convened early in April to assess those submissions. Recently a number of applications have fallen short of the program requirements. Accordingly, amendments will be made to both the brochure and the application form for future applicants. In particular, the brochure will elaborate upon the aspects of the application that are most important to the evaluating committee.

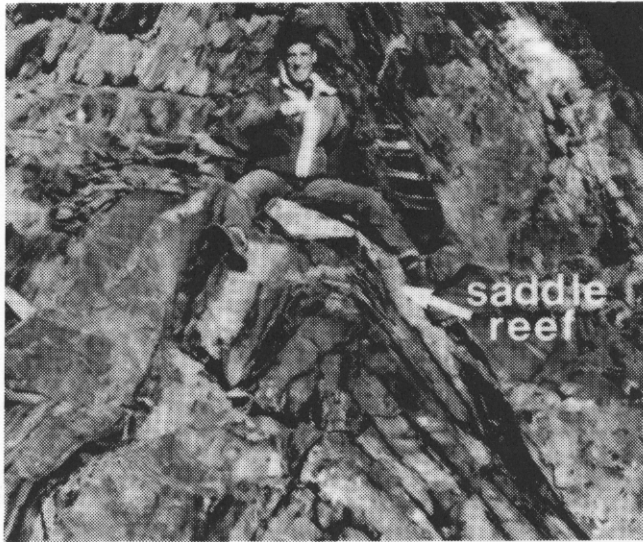
For further information and to obtain application forms, please contact Derek Johnston at 424-8145.

## Publication of SMB Maps

On June 17, 1994, seven 1:50 000 scale bedrock geological maps (DNR Maps 94-02, 03, 04, 05, 06, 07 and 08) and six 1:50 000 scale glacial and till clast geology maps (DNR Maps

94-09, 10, 11, 12, 13 and 14), covering the central and western portion of the South Mountain Batholith, were released to the public through the departmental libraries. This completes the publication of both the bedrock and glacial map series for the batholith, mapped as part of the 1984-89 Canada - Nova Scotia Mineral Development Agreement. In addition, a 1:250 000 scale compilation map of bedrock geology for the entire batholith (DNR Map 94-01) was released on the same date. This complements a previously published 1:250 000 scale compilation map of glacial geology (DNR Map 92-2) for the same area.

The bedrock geology maps illustrate the detailed distribution of the various granite units and information regarding their grain size, texture, colour and modal mineralogy. Other information includes the location of outcrops, and the presence of metallic and non-metallic mineral occurrences, dykes, veins, joints and faults. The most current geological information for the rocks surrounding the batholith was compiled for each sheet. The glacial and till clast geology maps present information about the till sheets that overlie the batholith. Till clast information,



*Saddle-reef quartz (under cowboy) in the hinge of the Ovens Anticline.*

Geological mapping was conducted by Bob Ryan in the Uniacke Syncline area (see Report 93-2), Rick Horne in the Rawdon Syncline (see Report 93-1; OFM 94-005), and by contract geologist Don Fox in the Upper Nile Mile River - Ardoise Hill area. This work has resulted in a preliminary stratigraphic subdivision, at the member and unit level, of both the Halifax and Goldenville formations. Structural data have been used to

presented as histograms of different clast types, supplies valuable information regarding the source areas for these tills.

The bedrock and glacial geological maps can be used for a multitude of purposes, including exploration for metallic and industrial mineral commodities, addressing various geotechnical issues, geoscientific research and also for use by the general public.

These new maps will be displayed at the upcoming Annual Review of Activities. Come and have a look!

## Central Meguma Mapping Project

Field and laboratory work continued on the Central Meguma Mapping Project during the '94 field season. This project is a multi-disciplinary program aimed at providing current geological maps that will define the stratigraphic, structural and metamorphic characteristics of the Meguma Group. These rocks are of particular interest since they are host to over 60 past-producing gold deposits which yielded over 1,000,000 oz. of gold, and are currently the target of exploration for both vein- and disseminated-type gold.

better define the fold geometry, which is locally characterized by minor folds and plunging hinges.

A lead-gold occurrence, referred to as Steve's Road after contract geophysicist Steve King, was discovered during mapping in North Beaverbank (Ryan and Smith, Report 93-2). Bob Ryan, in conjunction with staff of the mineral deposits and geochemistry sections, continues to study this occurrence and is presently supervising a diamond-drill project at the site.

Evaluation of geological applications for airborne magnetic data over the Meguma Group is being addressed through a Cooperation Agreement contract to Steve King. Detailed studies have demonstrated good correlation of magnetic data with geology, in both two and three dimensions (see King, OFR 94-004; OFR 94-015; Report 94-1). Processing of the magnetic data has resulted in subdivision of high amplitude anomalies corresponding to individual strata in the Halifax Formation. In addition, data enhancement has allowed the recognition of subtle, previously unknown anomalies within the Goldenville Formation.

Structural investigations have focused primarily on evaluation of the flexural-slip process. Studies of

exposures along the railway tracks in Halifax and at the Ovens in Lunenburg County indicate that the bedding-parallel flexural-slip process was a significant folding mechanism in the Meguma Group (see Horne and Culshaw, Report 94-1) resulting in bedding-parallel movement horizons, ramps, and duplexes. In addition, auriferous bedding-parallel, saddle-reef (see photo) and discordant veins in the hinge of the Ovens Anticline are interpreted to have been emplaced during flexural slip.

Preliminary results from the Central Meguma Mapping Project will be highlighted in several poster displays and an oral presentation at the Annual Review of Activities. Don't miss them!

## Registrars Meet

The annual meeting of the Provincial/Territorial Mining Rights Committee was held from September 14-17 in Whitehorse, capital of the land of the midnight sun. Provincial Registrar of Mineral and Petroleum Titles, Rick Ratcliffe, attended the meeting to discuss topics of common concern with the other registrars and to participate in collective problem resolution.

This year's meeting focused on Quebec's initiative to develop a map staking system similar to that employed in Nova Scotia. Map staking, seen by the group as the way of the future, may be in place in Quebec as early as the fall of 1995. Other discussions involved land sale auctions for the disposition of mineral rights, grouping of work credits, compensation when rights are cancelled, and dispute mechanisms.

A further commitment to the standardization of application statistics and the maintenance of a jurisdictional summary was made by the group. The jurisdictional summary will be available in graphic form by the end of 1994 and the Committee's initial release of statistics is expected by the end of January 1995. This information will be available through

DNR's registry.

Upon his return from the meeting, Rick Ratcliffe echoed the Committee's consensus that... "It is very clear, in view of the costly litigation and disputes and the transitory nature of some field-staked lines, that the map staking system is the mineral rights tenure system of the future".

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## Travel Assistance Program

The Department of Natural Resources has reserved funds on its side of the Canada-Nova Scotia Cooperation Agreement on Mineral Development for the purpose of aiding the promotion of privately-held mineral properties. Assistance is available to any Nova Scotia prospector to enable him/her to travel outside the Province to advertise the mineral potential of his/her exploration licence.

The program offers reimbursement of 75% of acceptable expenses up to a maximum of \$1,000 per person. To date 13 persons have availed themselves of this program. Most attended the Prospectors and Developers Convention in Toronto during March 1994. A successful applicant could spend three days at that convention for an out-of-pocket expense of only \$240 - this is surely quite attractive assistance!

Funds are limited and requests are evaluated on a "first-come, first-served" basis. For further information and/or to obtain an application form, drop by the Registry of Mineral and Petroleum Titles, Third Floor, 1701 Hollis Street, Halifax, or contact Derek Johnston at 424-8145, Fax 424-7735.

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## Nova Scotia's Coastal Zone

On July 28, 1994, the Province publicly released a discussion paper entitled COASTAL 2000. This document provides a preliminary

blueprint for managing Nova Scotia's coastal zone and represents the Province's first major initiative in integrated resource management. It seeks to establish a means for the multiple stakeholders, and sectoral and jurisdictional interests to participate in decision making (especially residents of coastal communities) and in developing long-lasting solutions to coastal resource issues.

Key issues addressed in the document include: environment and resource protection, socio-economics, institutional matters, environment and resource information, environment and resource degradation, public education, conflict resolution, management promotion, and access to resources. Coastal management planning will be carried out at a community or regional level and implemented through a three-group structure: a community group, a regional representatives group, and an intergovernmental / interdisciplinary group. The aim will be to bring government into equal partnership with other stakeholder groups to design strategies for economic development in the coastal zone based on the principles of sustainable resource management.

COASTAL 2000 recognizes that economic development of the Province's mineral and energy resources play an integral role in the complex land- and marine-use matrix within the coastal zone. For minerals and mining the issues range from resource potential assessments, land/marine access and tenure, and industrial uses of ports and harbours to transshipment nodes, which are all vital to the discovery, development and movement of raw materials and mineral products. Energy resources and management concerns are also important elements of the coastal zone especially with respect to oil and gas exploration, tanker movement, oil spills, the distribution of electrical energy to Nova Scotians and future energy exports. Consequently, parts of this document have been specifically designed to integrate mineral and energy resource issues

and opportunities into coastal zone strategies.

The Departments of Fisheries and Environment are now seeking public input to the discussion document. Copies of COASTAL 2000 are available from the Halifax offices of Fisheries or Environment, or contact David Hopper (424-8151) at DNR's Mines and Minerals Branch.

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## Closure Areas to be Opened

The Department of Natural Resources is currently planning to make 39 properties, presently held under closure, available for staking. These properties will be opened in conjunction with this year's Annual Review of Activities. "Closures" are areas that have been withdrawn from general staking pursuant to Section 22 (1) of the Mineral Resources Act. There are approximately 2900 claims (116,000 acres) currently held under closure in the Province for various reasons, one being to allow Department staff to conduct geoscientific investigations.

The thirty-nine closures are located throughout the Province and constitute approximately 1030 claims (41,000 acres). The properties include several former industrial mineral producers. In addition, many closure areas have previously been the focus of extensive exploration for gold, base metals and industrial minerals, and consequently represent excellent targets for future work.

An information package is being prepared and should be mailed by mid-October to licensees, registered prospectors, and other parties who express an interest. The package will include a map and description of all properties as well as the date on which closure areas will be available for staking. For further information contact the Registrar of Mineral and Petroleum Titles or his staff at (902) 424-4068.

## Mineral Policy

Over the summer the Department has continued to work on the preparation of a comprehensive mineral policy. A working committee of Pat Phelan, Vicki Harnish and Howard Donohoe developed a draft outline of the policy document based on input from the focus group meetings, the issues presented in the background paper *Mining into the Future*, and the Whitehorse Mining Initiative. The Steering Committee has approved the draft outline for the mineral policy and Pat Phelan has asked David Hopper to prepare the first draft of the text by mid-October. The Mines and Minerals Branch is working to complete the mineral policy by the end of the year.

## More Prospectors are Trained

During the summer, 84 people graduated from the basic prospecting course. Courses were held in Yarmouth, Halifax, Stellarton and Sydney. The course provides the basic skills in prospecting; these include rock and mineral identification, use of maps and airphotos, sampling techniques, government regulations, and marketing mineral properties. Some of these and other graduates will be interested in taking the advanced course. The Department hopes to have the advanced course ready for its first class in the spring of 1995. Prospecting courses are co-sponsored by the Chamber of Mineral Resources of Nova Scotia with funding assistance from the Cooperation Agreement on Mineral Development.



## July - September 1994 Open Assessment Reports

REPORT	NTS	LICENSEE
92-035	11E/03B	Westminer Canada Limited
92-036	11F/15A	Scotia Prime Minerals Incorporated; Phelps Dodge Corporation of Canada Limited; Jagodits, F L
92-037	11D/11D	Gold Bank Resources Incorporated; Cuesta Research Limited
92-038	11E/04B	Cuesta Research Limited; Gold Bank Resources Incorporated
92-039	21A/07C	Cuesta Research Limited; Gold Bank Resources Incorporated; Brayshaw, F; Bremer Technology Corporation; Lakefield Research
92-040	21A/09B	Cuesta Research Limited; Earthtech Engineering Limited; Gold Bank Resources Incorporated
92-041	11D/16C	Cuesta Research Limited; Earthtech Engineering Limited; Gold Bank Resources Incorporated
92-042	11E/02D	Mackenzie, B C
92-043	11F/15C	Westminer Canada Limited; Jubilee
92-044	11K/02B	Minerals
92-044	11E/05A	Westminer Canada Limited; Mertens And Macneil Geophysics Limited
92-047	11F/11A	Fenix And Scisson; Breton Storage
92-047	11F/11B	Technologies Limited; Nova Scotia Resources Limited
92-049	11F/15A	Scotia Prime Minerals Incorporated; Phelps Dodge Corporation of Canada Limited; Jvx Limited
92-050	11K/01B	W G Shaw and Associates Limited; Kelrock
92-050	11F/16C	Limited
92-052	11K/10B	Johnson, C G
92-054	21H/01D	Ecum Secum Enterprises Limited; Hudgins, A D
92-055	21H/01A	Ecum Secum Enterprises Limited; Hudgins, A D
92-056	11F/14C	Kelrock Limited; Aquagold Resources
92-058	11F/14D	Incorporated
92-058	21H/08D	Scotia Prime Minerals Incorporated; Phelps Dodge Corporation of Canada Limited; Jvx Limited
92-061	11F/15A	Scotia Prime Resources Incorporated; Phelps Dodge Corporation of Canada Limited; Quantech Consulting Incorporated
93-024	11F/15A	Scotia Prime Minerals Incorporated; Phelps Dodge Corporation of Canada Limited
93-025	11F/15C	Westminer Canada Limited; Jubilee
93-025	11K/02B	Minerals

## July - September 1994 Open Property Reports

92-008	11E/10A	Westray Coal; Curragh Incorporated
93-008	11E/10A	Westray Coal; Curragh Incorporated

## Core Library Expansion

A new 7000 sq ft storage building is nearing completion at the Core Library in Stellarton. Built at an overall cost of \$160,000 it is similar in style and capacity to the existing buildings, but will feature only a single aisle for forklift access rather than the two in use in the other buildings.

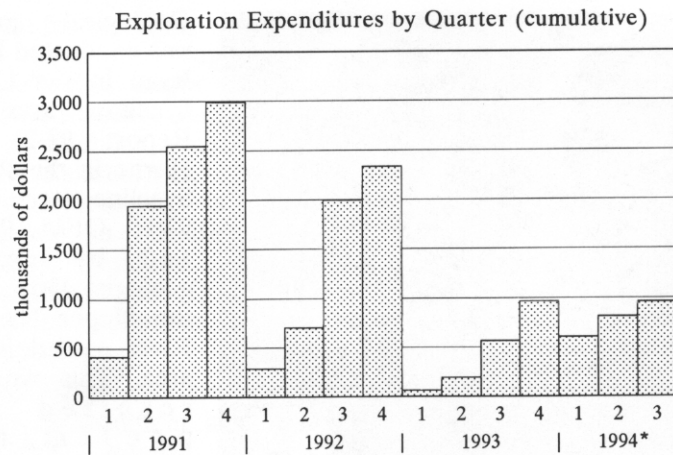
*New Core storage building in Stellarton.*

On completion of this building, some space will become available in the building which houses the offices and core examination laboratory for the Core Library. This space will permit the installation of steel pallet racks for storage of bulky sample material. Storage cabinets for rock slabs and other small samples will also be installed.

A portion of the site will be developed to provide a clean outdoor storage area for small bulk samples obtained from mineral deposits.

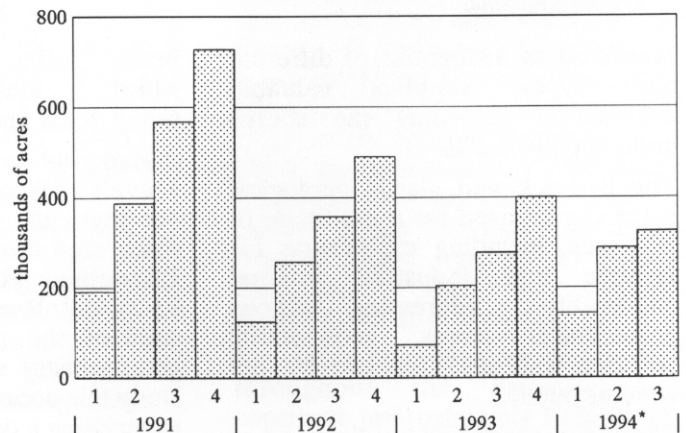
## Charting Nova Scotia Statistics

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.



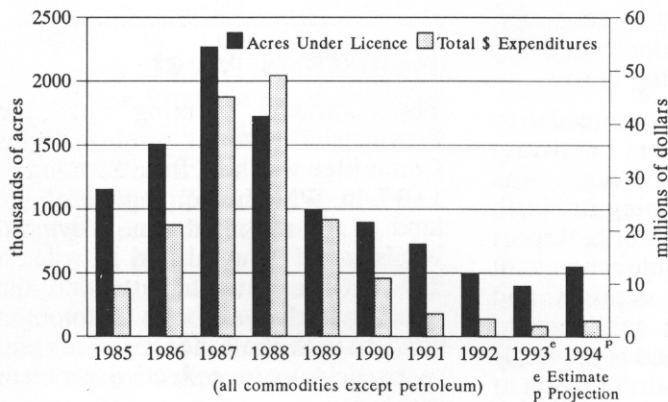
\*As at September 27, 1994  
Note: expenditures refer to those submitted during that period for assessment work purposes only.

Acres Issued/Reissued by Quarter (cumulative)



\*As at September 27, 1994

Exploration Trends 1985 to 1994



## Geo - Logic

Martha Devanney of the Nova Scotia Museum of Natural History has agreed to share some of her Geo-Logic with Minerals Update readers. Martha, formerly a geologist and pun-queen at DNR, considers Geo-Logic to be her.. "attempt to translate geologese into English". What do you think?

**Stilbite** - Something even an old dog can do!

**Needle ore** - its sew fine!

**Geophone** - An instrument geophysicists reflect on.

**Bar** - Where sedimentary geologists hang out.

## Dates to Remember

Nov. 1 to 2, 1994

Annual Mines, Minerals and Energy Branches Review of Activities; World Trade and Convention Centre, Halifax. Displays, talks, and special sessions about Nova Scotia's mineral resources, geology and mineral potential. For additional information please call Mike MacDonald, 902-424-2523 (Fax 902-424-7735).

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).