

# Drill Core Library Programs in 1999

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## Introduction

The departmental Core Library is based in Stellarton, Pictou County (NTS 11E/10), where a modern facility houses most of the department's drill core. Drill core and other sample materials are received from mineral exploration and development projects conducted by the private sector as well as from departmental field work. A large collection of drill core and other reference material is preserved and made available to exploration and research geologists, to enhance the knowledge of Nova Scotia's geology and mineral resources by further study and analysis of the core and other samples, in conjunction with their field, laboratory and office studies. In addition to drill core, sample media available for further work include well-cuttings from oil and gas drilling, rock slabs and geochemical samples (silt, till, soil, lake sediment and biogeochemical samples). All core is available for examination by interested parties and may be sampled subject to certain constraints. Logs, reports and maps are also available for consultation. It is recommended that all visitors give advance notice (preferably a minimum of 24 hours) of an intended visit to ensure the availability of staff, core and equipment. Staff may be contacted by phone at 902-752-4842 or 902-755-7038, by fax at 902-755-7186 or by e-mail at [corelib@fox.nstn.ca](mailto:corelib@fox.nstn.ca).

## Facilities and Services

The main Core Library facility is centrally located in Nova Scotia, 2 km off the Trans-Canada Highway at 105-109 Acheron Court in the Stellarton Industrial Park, Pictou County. Five purpose-built buildings total 4000 m<sup>2</sup>, which includes 300 m<sup>2</sup> of laboratory space and 120 m<sup>2</sup> of office space. Free parking is available at the gate. Unmanned storage buildings are located at West Paradise (the Eden Building) near Bridgetown, Annapolis County, and in the Scotia Subdivision of the Debert Industrial Park, Colchester County.

Most of the core is stored in standard wooden boxes or trays (5 ft. long) that have capacities of 15 to 25 feet of core, depending on the core diameter. Boxes of core are stored on custom-made wooden pallets which are then stacked in rows in the storage areas. The storage areas only have basic lighting and are unheated. When required, individual pallets are retrieved from storage

and transferred by fork-lift to the core examination labs, where the core boxes may be laid out for viewing, using benches, portable stands or the floor. A large paved yard also serves as a core box layout area during good weather. The Core Library is equipped with binocular microscopes, hand held UV lights, photographic equipment, scales, core-splitters and diamond saws.

A small reference library area is set up on the ground floor with tables, chairs and a microfiche reader-printer, available for the use of both clients and staff. All nonconfidential assessment reports and all open file reports, open file illustrations and open file maps are available on microfiche, and paper copies of most of the reports, papers, maps and other minerals-related Nova Scotia Department of Natural Resources (NSDNR) publications are available for reference.

Two interlinked PC-based databases contain information related to drilling done in the province and to the drill core that is held in the Core Library. These databases are maintained by staff at the Core Library, and can be searched by clients on a public access computer. Drillholes with known geographic coordinates can also be displayed as map plots (video screen or print) using the department's ArcView®-based geographic information system (GIS).

To ensure Y2K compliance, most of the Core Library desktop computers were replaced late in 1999 with the new standard desktop machines (Pentium II, 400 MHz with 64 Meg RAM). Standard software includes Corel Suite 8, Netscape Communicator and Pegasus (e-mail). The public access computer also allows clients to access the Minerals and Energy Branch GIS and the Mineral Occurrence Database and also limited use of the internet to access departmental web pages and e-mail.

The move out of the Mines Building in Stellarton was completed in 1999, with disposal of the remaining surplus furniture and equipment, and renovations to the Core Library began early in 1999. Staffing changes at the Core Library in 1999 included the transfer of Shirley Ross (clerk/receptionist) to the Stillwater office (NSDNR Regional Services) and the retirement of Jim DeWolfe. At year-end, technical and professional staff operating the Core Library programs consisted of a mineral technologist, a project geologist and a

supervising geologist. Two geology students from St. Francis Xavier University (Heather Sutherland and Andrew MacLeod) were employed from June to August.

## Holdings And New Acquisitions in 1999

Total core in storage in all locations at the end of 1999 was approximately 642 000 m. In addition to core, the Core Library maintains a set of drill cuttings (chips) from many of the wells drilled for oil and gas in Nova Scotia and its offshore areas. Also, a great variety of different types of samples and sample collections are stored in Core Library facilities, ranging from materials collected in the field by staff, including geochemical sample suites, rock slabs and till samples, to collections of soil and rock samples donated by exploration companies. Core donated to the department is sometimes delivered by the donating company, but more often the core is collected from its field location by Core Library staff using departmental vehicles.

In 1999, 2197 m of drill core from 39 drillholes were received at the Core Library. The core was generated from mineral and gas exploration work carried out by the private sector in 1988, 1998 and 1999, and from geotechnical evaluation work for a new highway carried out by the Department of Transportation and Public Works in 1999 (Table 1).

## 1999 Activity

Clients included private sector geologists working in the minerals exploration and development sectors and the oil and gas sector, as well as geologists with the Geological Survey of Canada and NSDNR (Mineral and Energy Resources Division), prospectors and academic

geoscientists. The level of client activity at the Core Library facilities during 1999 increased from 1998 and was one of the busiest years this decade.

## Core Library Databases and GIS

The Core Library maintains two databases containing information on drilling in Nova Scotia, the Drillholes Database and the Drill Core Database.

The Drillholes Database provides information on drilling related to mining, mineral or hydrocarbon exploration and development, or geological investigations. The database provides basic information on each drillhole, such as location (including claim reference map, tract and claim, latitude and longitude, and UTM co-ordinates), depth of hole, year drilled, exploration company, drilling contractor, types of mineralization, and references to assessment reports and other source documents. This database is continuously updated with information from newly released assessment reports and other sources.

The Drill Core Database provides information on all drill core that the Core Library has in its collection, including operational data such as the storage location details and a record of usage and sampling. Much of the basic drillhole information is common to both databases, so they have been linked electronically for greater efficiency.

These databases can be custom searched by any combination of fields to produce either a printed hard copy or an electronic file with the required information. For example, the databases may be searched by place name, company name, hole number, map sheet, mineralization or year, or by various combinations of

**Table 1.** Drill core received at the Core Library, January 1st to December 31st 1999.

NTS	Company	Year Drilled	Commodity or Project	Location	Holes	Hole Designation	Core Size	Total (m)	Total (ft.)
11D/13C	Nova Scotia Dept. of Transportation and Public Works	1999	sulphides (acid-generating rock)	Highway 101, 2 km east of Ellershouse	19	by grid locations	BQ	142.6	468
11E/03C	Hunt Oil Company Inc.	1999	natural gas	Alton, Colchester County	1	Hunt Alton 1-99	95 mm	6.6	21.6
11K/01C	Mount Cameron Minerals	1999	base metals	Mount Cameron, Cape Breton County	6	MC-99-01 to -06	NQ	854	2802
11K/10C	Regal Goldfields Limited	1998	gold	Faribault Brook, Inverness County	10	RG-1-98 to RG-9-98	NQ	1094	3589
20P/15C	Little Lake Gold Mines Limited	1988	gold	Broad River, Queens County	3	LL-88-01 to -03	BQ	100	328
<b>Totals</b>					<b>39</b>			<b>2197.2</b>	<b>7208.6</b>

these fields. An application has been set up on the public access computer using OpenInsight® for Workgroups software (Revelation Technologies) which facilitates information searches in the Drillholes and Drill Core Databases by the use of on-screen prompts.

The Drillholes Database is maintained and revised by Donald Weir. At the beginning of 1999 the database contained 21,314 drillhole records. During the year approximately 325 drillholes were indexed from newly released assessment reports. These records, together with 127 previously outstanding records, will be added to the database following completion of proofing and verification; this work was in progress at year end.

The Drill Core Database is updated frequently, with a total of 74 additional records added during the year. At the end of December 1999 it contained 7350 records of which 4693 are linked with the Drillholes Database. Where records are linked or related, the information in both databases on a particular drillhole can be accessed

through either database. Some records remain unlinked because the lack of documentation in assessment or open file reports precludes their inclusion in the Drillholes Database.

The Minerals and Energy Branch public access geographic information system (GIS) is in use at the Core Library and was upgraded to ArcView® version 3.1 at the end of 1999. The Drillholes and Drill Core database files have been added to ArcView® as dBASE files (tables). Drillholes can be plotted in ArcView® using Eastings and Northings as x and y co-ordinates. Digital versions of the 1:500 000 Geology Map of Nova Scotia and the 1:50 000 NTS maps are available for use with the Drillholes Database. The Drillholes Database can be searched in ArcView® from any of the fields or by geographic features on the maps. The holes of interest can be highlighted on these maps and this information and the map can be printed on a Hewlett-Packard DesignJet 250C plotter providing plots up to 22 x 34 inches.

