

# Drill Core Library 2008

*J. M. McMullin*

## Introduction

Based in Stellarton, Pictou County, the departmental Drill Core Library receives and stores drill cores, well cuttings and other sample materials from various exploration and development projects conducted by the private sector, as well as from departmental field work and other government or academic sources.

Many of these projects are oriented towards exploration, research and development of mineral resources and energy resources such as coal, oil and gas. The Nova Scotia Department of Natural Resources (NSDNR) Core Library is the repository for core and well cuttings obtained from drilling done under the jurisdiction of the Nova Scotia Department of Energy.

A large collection of very valuable drill core, totalling approximately 650 000 m from about 7500 holes drilled throughout Nova Scotia is preserved and made available for future geological work. In addition to drill core, the archived samples include well-cuttings (from oil and gas drilling), rock slabs, geochemical samples (such as silts, tills, soils, lake sediments and bio-geochemical samples) and large samples of various industrial commodities such as limestone, barite and building stone. All core and cuttings (unless held confidential) are available for examination by interested parties and may be sampled subject to certain constraints and conditions. Many logs, reports and maps, both published and unpublished are also available for consultation.

There is only one staff member, so all visitors are advised to make contact well in advance by phoning **902-752-4842** or by e-mailing [mcmulljm@gov.ns.ca](mailto:mcmulljm@gov.ns.ca). Clients should note that safety policies require that they bring and wear work boots when using any of the sample materials. Clients must do their own layout and pickup of core boxes, which usually involves some heavy lifting. The use of work gloves is recommended.

## Facilities and Services

The main Core Library facility is located centrally in Nova Scotia, 2 km off the Trans-Canada Highway (exit 23) at 105-109 Acheron Court in the Stellarton Industrial Park, Pictou County. Five purpose-built buildings occupy a total of 4000 m<sup>2</sup>, including 375 m<sup>2</sup> of laboratory space and 120 m<sup>2</sup> of office space. Free parking is available at the gate. Some additional core is stored in an older facility in Debert, Colchester County, 75 km west of Stellarton.

Most of the core is stored in standard 1.5 m (5 feet) long wooden boxes or trays with capacities of approximately 4.6-7.6 m (15-25 feet) of core, depending on the core diameter, each of which may weigh in the 15-35 kg range. Boxes of core are stored on custom-made wooden pallets which are then vertically stacked in rows in the storage areas. The storage areas only have basic lighting and are unheated. As needed, 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 (Fig. 1). The Core Library is equipped with a binocular microscope, a portable UV light, weigh scales, core-splitters and diamond saws.

A small reference library area with tables, chairs and a microfiche reader-printer is available for use by both clients and staff. A complete set of microfiche for assessment reports submitted up to 2004 and for open file reports and maps up to 2007 is available for use. Paper copies of many reports, papers and maps published by the Mineral Resources Branch are also available for reference. A variety of information on some specific drillholes (logs, sections, maps, reports, analyses etc) not available elsewhere from departmental sources, may be consulted at the Core Library on request.



**Figure 1.** Deep hole core layout in the Core Library yard, Stellarton, Nova Scotia.

Assessment reports released between 1987 and 2008 are now available as pdf's on the Branch website, however no public broadband internet connection is provided at the Core Library. Clients may prefer to download reports and logs for use with core examination prior to their visit.

## **New Acquisitions in 2008**

In 2008, additional core was received from two drill programs. Approximately 240 m of core, from holes FRV-04-5 and FRV-04-9 drilled in 2004 at Frenchvale, Cape Breton by Mt. Cameron Minerals Incorporated, were retrieved from a field storage location during the summer, and the first shipment of core from a deep hole drilled by Forent Energy Ltd. in the fall of 2008 near Camden, Colchester County, was received in December. Well cuttings

were received in November from three gas exploration wells drilled in Hants County by Elmworth Energy Corporation.

## **2008 Client Activity**

Clients traditionally include private sector geologists and prospectors working in the minerals exploration and development sectors or in the oil and gas sector, as well as geologists with the Geological Survey of Canada and NSDNR (Mineral Resources Branch), and university staff and students. As is frequently the case, activity levels in 2008 were unpredictable and variable.

Total client activity for the year was 209 person-days (for use of core, cuttings or other samples), with the busiest months being July, April, May and October. September and June saw

the least activity. In addition, approximately 61 visitors used the facilities for other reasons, including access to information and equipment. These figures do not include offsite activity, where core or cuttings were loaned out or used on field trips or at the Mining Matters meeting. Overall activity was comparable with, and slightly higher than, 2007. Clients accessing core, cuttings and rocks consisted primarily (75%) of mining and exploration company representatives, and academic researchers (22%).

## **Core Library Database**

The Drill Core Database provides information on all drill core in the Core Library collection, including operational data such as storage location and number of boxes per hole.

The database can be searched by single or multiple fields, for example by place name, company name, hole number, map sheet or year. The database is updated continually and at the end of December 2008 it contained approximately 7500 records. It is currently based on Advanced Revelation® database software, using OpenInsight for Windows® for querying and data entry. During the year it was redesigned for Microsoft SQL®, and integrated with the Drillholes Database. At the end of the year an online beta version was being tested inhouse. It is anticipated that public access to the online database will be available in early 2009. Until this is completed, questions should be directed to the Core Library geologist.

