

**Core Library Conditions, Proposal, and Viewing Instructions**  
**North Dakota Geological Survey (NDGS)**  
**Wilson M. Laird Core and Sampling Library**  
**(701) 777-2231**

**Contacts:**

**Core Library Manager:** Timothy Nesheim, [tonesheim@nd.gov](mailto:tonesheim@nd.gov)

**Engineering Technician:** Kent Hollands, [khollands@nd.gov](mailto:khollands@nd.gov)

**Material Available:**

Cores and/or drill cuttings from the Wilson M. Laird Core and Sampling Library (Core Library) can be laid out for sampling/viewing with a minimum of 48 hours' notice. Advance booking is the only requirement for core viewing. Sampling requests during core viewing will be handled on a case-by-case basis for a limited number of samples only. More complex sampling will require a proposal, as described below.

**Conditions Governing Use of the Core Library**

- Hours of business are from Monday to Friday, 8:00 am to 12:00 pm, and 1:00 pm to 5:00 pm. After-hours visits must be approved and scheduled by Timothy Nesheim at least two-weeks in advance of the visit, to allow Core Library staff to schedule accordingly. After-hours work time is not guaranteed and will be evaluated on a case-by-case basis. Customers are restricted to the office, and laboratory areas, unless on business with staff members. A Visitor Office is available for use on the 2<sup>nd</sup> floor with Wi-Fi service.
- For all intents and purposes, core does not leave the Core Library; however, exceptions may be made for conference core workshops and companies that generated the core. Cuttings may be sent out to companies or individuals at their own expense, but only if enough material is available for retention at the Core Library. Cores will not be sent to certified labs for routine testing.
- Visitors are required to adhere to all health and safety requirements for the facility. These include foot protection when handling core boxes, safety glasses when using acid, and hardhats when in the warehouse area, etc. Copies of the requirements are present in the Worker's Right to Know Manual located in the Core Library break room.
- A wash basin, scrub brushes, and water bottles are supplied for washing and wetting cores. Dilute hydrochloric acid (5%) is available for testing carbonates. Kits containing sample trays, tweezers, tape measures, etc. are also available. Microscopes are also available. Geological logs, forms, notebooks, etc. must be supplied by the visitor. Permission may be given for limited use of other laboratory equipment. No chemicals may be brought on-site without written permission.

**Sampling:** To sample core at the Core Library, a proposal form ([Link](#)) must be submitted to Timothy Nesheim. The proposal form is in Word format and may be modified as the user needs to provide the requested information, including expanding to an additional page. Completed forms may then be signed and returned as a Word or PDF document. Sampling includes chip/bulk samples for laboratory analysis (rock eval/TOC, XRD, etc.), billets for thin section, and small core plugs. The proposal is necessary for the NDGS to evaluate whether the project is deserving of sampling, whether core material is available, and does not duplicate a previous sampling effort. In general, everyone who collects samples from the Core Library must submit a proposal. Incomplete proposals will be returned with a request for further clarification; however, they will be re-addressed only after all previously submitted proposals have been evaluated.

**Project Scope:** A concise (brief), well-written, description of the project scope and objectives must be presented in order to assess the problem that the work is addressing. Please be clear on the specifics in this section as the NDGS may have no previous knowledge of your work. Vague and/or poorly written scopes/objectives will be returned as incomplete.

**Project Duration/Schedule:** A general project schedule is necessary so that we may track the progress of the work. The sampling schedule, analyses, results, and deliverables will be included with anticipated dates for submission of deliverables/data to the NDGS.

**Wells/Formations to be Sampled:**

- List of Wells-Please include File Number;
- List Formation(s).

**Types of Samples:**

- Describe the type of sample to be collected {e.g., chip/bulk samples for laboratory analysis (rock eval/TOC, XRD, etc.), billets for thin section, small core plugs, etc.};
- Size of the sample (e.g., grams/sample, size of core plug, billet for thin section, etc.).

**Approximate Number of Samples:**

- Include the number of samples per core;
- Be precise as possible as to the depth of the sample down to the specific footage range (e.g., five, 10-gram samples, Bakken Middle Member-9367-9407 ft); this may require a viewing of the core, if possible; otherwise, we have posted photographs of ~135,000 feet of core and photomicrographs of ~16,600 thin sections on the ND Oil and Gas Division subscription website (<https://www.dmr.nd.gov/oilgas>) for viewing prior to visiting the Core Library. This will also allow us to assess if enough core material is present for sampling and whether sample results may already be available.

**Supplemental Materials:** Previously generated documents are critical in allowing the NDGS to evaluate your proposal. Documents that describe how your results will be used and the impact of the results in the better understanding of the problem are particularly useful and include:

- Previously submitted proposal/summary for funding such as a grant or DOE proposal;
- Theses/Dissertation proposals; and
- References that describe the processes to be performed on the samples, as well as results, as necessary.

**General Sampling Procedures:** After the core has been laid out in the lab by NDGS staff, the investigator will place a labeled (depth/analysis) sample envelope along the core where they want the sample (rock eval/TOC, XRD, thin section, etc.) taken. The engineering technician will then collect the sample from the back side of the core using a diamond saw. The face of the core must always be preserved and any formation contacts or unique features shall not be destroyed or completely removed. The technician first inspects the backside of the core to see if it has already been sampled. If so, he will not resample it. In those cases, you can either check to see if there is existing data for that sampled interval, and/or check out the existing thin section from our collection. A different horizon may also be selected to sample. If small core plugs are needed, that area will need to be marked. The technician will then ship the core out for plugging at the investigator's expense to a core testing facility (e.g., Weatherford, Core Labs, etc.).

**Generated Data:** All data generated from the work described in the proposal shall be provided to the NDGS at no charge. Data will be held in confidence until investigators have time to publish results. One set of thin sections must be provided to the NDGS; therefore, duplicate sets of thin sections can be made if investigators wish to keep one set. The investigator and/or advisor will be responsible for supplying data and/or thin sections to the NDGS. Failure to do so will result in advisor reprimand and potential revocation of Core Library privileges to the advisor and future students, as applicable. We request acknowledgment of the Core Library and the NDGS be made in all publications resulting from the use of the facilities and/or samples collected.