

GUIDELINE FOR SAMPLING OF CORE AND CUTTINGS FROM CROWN MINERALS' CORE STORE

Why the new guideline's were necessary

The new guidelines were made to ensure that use of the limited core and cuttings resource of the Core Store is maximised for the benefit of advancing understanding of the petroleum and mineral prospectivity of New Zealand.

Previously sampling was occurring:

- Where very similar sampling had previously occurred.
- On core and cuttings with very limited remaining material. In these cases further sampling will only be approved where new and relevant petroleum prospectivity information may be gained.

In addition, reports on the analysis undertaken were not submitted, and unused or prepared samples (eg thin sections) were not returned. Thin sections and Paleo slides and concentrates need to be lodged with GNS for addition to the national collections that they are responsible for.

Step 1 Requesting samples to laid out at the Core Store

The first step in gaining access to core or cuttings at the core store is to complete and forward to Crown Minerals "National Core Store sampling/viewing access form" which is available on the Crown Minerals website <http://www.crownminerals.govt.nz/cms/minerals/core-store>.

Note:

- At least 48 hours notice will be required except in special circumstances.
- Indicate as clearly as possible the number, type and planned analyses of samples to be removed, and whether or not the samples will be destroyed. Also, where the samples will be taken for analysis.
- If samples are planned to be taken and this is not indicated on the form, samples may not be approved for removal on the day. If the scope of sampling contemplated is clearly communicated, pre approval of the sampling will be given.
- Justification for the analysis in relation to advancing the prospectivity of New Zealand will be need to be given (note that sampling for other reasons may not be approved).
- Sampling restrictions are enforced on some core and cuttings (see attached Sampling Restrictions Guideline)

- Nearly all core has been photographed and is available via Crown Minerals online technical database.

Step 2: Sampling at the Core Store

Sampling can only occur where pre-approval has been granted ***It is in your own best interests to be as specific as possible regarding your proposed sampling at the time of requesting the core to be laid out.***

- In the case of particularly valuable or limited core i.e. sidewall cores, a Crown Minerals geologist may be required to be present to supervise the sampling.
- All sampling will be undertaken in accordance with the following Sampling Restrictions attached at the end of this document.
- Because of the possibility of serious consequences for non-compliance in reporting, application for approval to sample by students must be made on their behalf by the student's supervisor or another employee of the University. As the University employee will be held responsible for the sampling and reporting, it is advisable that the student's supervisor also be present at the time of sample removal.
- In most cases conditions on the sampling will be imposed - eg for thin sections, it will be a requirement that the thin sections as well as the offcuts be submitted with the report for archiving at Crown Minerals.
- If cuttings samples are taken, the applicant must record both the weight of the sample taken, and the weight remaining in the bag ***after*** the sample has been removed

Step 3: Submission of Report and prepared samples or residues

The applicant **will be required to submit a report** on the analyses and return any samples within 6 months of removal of the samples from the core library.

Note:

- The time for submission of this report may be extended beyond 6 months with Crown Minerals approval, but this will only be given if it can be demonstrated that the analyses could not reasonably be conducted in under 6 months.
- Unless otherwise approved, the analyses actually conducted must be as originally approved.
- The reporting requirements will be strictly enforced.
- Reports must be submitted in digital form either as WORD or PDF documents any tabular data within the report must be submitted as a

delimited ASCII file. Further details of digital submission requirements can be found on the Crown Minerals website for petroleum and minerals and coal data.

- Reports submitted that are not related to a specific permit will be held confidential by Crown Minerals for 2 years from the date of sampling. It is a mandatory condition of sampling that the applicant relinquish any claim of confidentiality rights on the report after that date. Data may be released publicly by the applicant prior to that date, provided that the well is open file.
- All reports must state what has happened to any residues or prepared slides ie. either when they were returned to the Core Store or when they are planned to be returned, or if they were destroyed in the analysis process. Prepared slides (thin section and Paleo) should be submitted to Crown Minerals or GNS for archiving.

SAMPLING RESTRICTIONS

Core

1. $\frac{1}{4}$ continuous linear length must be retained for long term archive.
2. Rubble from the core tray must be used first.
3. If more material is needed slivers may be taken along the length of the core provided more than $\frac{1}{4}$ is left. Samples may not be taken across the width of the core.
4. If core plugs are required these must be as small as possible and not intersect the $\frac{1}{4}$ of continuous linear length core that is to be retained.
5. These restrictions apply to sidewall core as well.
6. Any material not destroyed during analysis must be returned to the core store.

Cuttings (washed)

1. Samples must be 10g or 1 teaspoon unless prior approval has been given. Combination of adjacent samples may be necessary if a certain volume is needed.
2. A minimum of 100grams must be retained for long term archive.
3. Bags may be reduced to 50g with the specific approval of the Chief Geologist.
4. Any material not destroyed during analysis must be returned to the core store.

Cuttings (unwashed)

1. No more than 20% of the holding can be taken
2. A minimum of 100grams must be retained for long term archive.
3. Any material not destroyed during analysis must be returned to the core store.
4. Paleo concentrates must also be returned to either the core store or GNS.