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UST201506-112/S.P.
09.07.01

Subject: Research permit in Hveravellir.

The Environment Agency of Iceland has received the request from the SETI Institute, dated 12th of June, 2015, regarding permits to examine hot spring silica sinter conditions in the protected area Hveravellir.

Hveravellir is protected as a natural monument. Disturbance to geological formations, vegetation and wild animal life in the protected area is prohibited without permission from the Environment Agency of Iceland. That also includes sampling for scientific research.

Description of the project:

The project will take place from the 1st of August until the 14th of August 2015, participants on location are five. The project will examine hot spring silica sinter deposits over a range of temperature, pH and oxygen conditions to assess the potential for capturing and preserving fossil biosignatures. Also, the effects of diagenesis (post depositional processes) on biosignature retention in older deposits will be assessed.

Field measurements will involve the use of hand held probes to measure the temperature, pH and oxygen conditions of hot spring outflows in relationship to major microbial communities.

A small (~30 cm x 30 cm) tray of glass slides will be placed into an outflow of a hot spring to determine the rate of silica precipitation and its ability to encase biology. The placement will be selected to avoid disturbing the outflow and to minimize the visual impact of the equipment. It will be removed in its entirety in a followup trip in the summer of 2016.

Small sinter-biofilm samples will be fixed in sample vials using 4% formalin solution in filtered spring water to preserve microbial communities present on sinter surfaces.

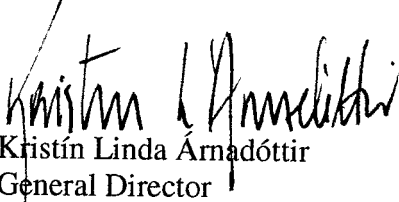
No manipulations will be performed in the field and no motorized equipment will be used for collection of samples.


The research permit is hereby granted and is subjected to the following conditions:

- This permission is granted for the period 1st to 14th of August 2015.
- The SETI Institute shall remove the research equipment in the summer of 2016 as is described in the application.
- The Environment Agency requests that the researcher will contact the ranger working in the area before field work begins and inform him on your intentions. (Please contact Linda Guðmundsdóttir +354 8224031)
- Keep the signed permit letter with you during your research.
- Sample quantity is restricted to maximum 45 cm² samples for SEM, petrographic thin sections and XRD/Laser Raman.

- Sample quantity is restricted to maximum 2 dozen vials of water sample from water outflows.
- This permit is only valid for research purposes. It does not include permit to utilize the samples for commercial purposes. The samples cannot be signed over to third party for the purpose of commercial use.
- Every measure should be taken to avoid damage to the sites and unnecessary disturbances.
- All research equipment should be placed and removed with utmost care and the natural monument left undisturbed by the process.
- It is strictly prohibited to walk on the sinter.
- The Environmental Agency of Iceland wishes to be secured, free of charge, a copy of all reports and scientific articles that result from the research project.
- Off road driving is prohibited in all circumstances.
- Please mark your equipment to inform other guests in the area about the experiment, especially if the research equipment is visible from paths.
- A separate permit from the National Energy Authority in Iceland is needed to conduct research at geothermal sites in Iceland which should also be kept with you at the research site. (www.os.is, email: os@os.is)
- If you wish to transport the samples from Iceland you will need a permission from the Icelandic Institute of Natural History (www.ni.is, e-mail: ni@ni.is)
- The Environmental Agency charges a fee of 11.200 per hour for supervision of the research. The site in question will be evaluated before and after the research and EA's advisor will be available for guidance. An estimate of less than 5 hours of supervision is needed for this research project.

Yours sincerely,


 Kristín Linda Árnadóttir
 General Director


 Svava Pétursdóttir
 Advisor