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ICDP Workshop: Coring Magma and Related Investigations, Krafla Caldera, Iceland

Drilling to magma has for decades been a lofty but elusive goal. In 2009, the Iceland Deep Drilling Project (IDDP) serendipitously hit rhyolite magma at 2100 m depth under Krafla Caldera. Chips of quenched glass and variably crystallized magma were recovered, although the spatial relationships of these lithologies could not be answered because the drilling was not designed for this purpose. The possibility exists to return to this magmatic intrusion, where uniquely the position of the target and drilling conditions are already known.

The Krafla Magma Drilling Project (KMDP) will define characteristics of "magma geothermal", perhaps an order of magnitude more powerful than conventional geothermal, and understand intra-caldera intrusions, the main source of caldera unrest. High-temperature engineering, core and fluid studies, borehole measurements, plus surface geophysical and geochemical observations to measure responses to flow and injection experiments will be included.

A workshop to formulate KMDP will be held September 15-19, 2014 at Landsvirkjun Company at Krafla. To participate, please submit a 1-page application describing intended contributions. Representatives of existing Krafla projects and high temperature drilling experts are needed. Attendance is limited with preference for scientists from ICDP-member countries. Travel support is available. Applications should be sent to jceichelberger@alaska.edu with "KMDP" in the subject line by July 27.