

Helgi Arnar Alfreðsson

Geochemist, PhD

ORIGIN Born 9th July 1984, Sauðárkrókur, N-Iceland.

FAMILY Wife: Júlía Katrín Björke, children: Halldór, b. 2007, Alfreð, b. 2014, Viktoría, b. 2017

EDUCATION

2015 PhD degree in geology (geochemistry) at the University of Iceland
2007 B.Sc. degree in geology at the University of Iceland

CAREER

2013-pres. Consultant in geochemistry and co-owner at Geochemý ehf, Mývatn.
2011 Academic visitor at the Dep. of Earth Science, Oxford University, UK.
2007 Part time borehole geologist at the Iceland GeoSurvey, Reykjavik.
2006 Part time assistant driller at the Iceland Drilling company, Reykjavik.

FIELD WORK EXPERIENCE

2017 Monitoring the water chemistry and dissolved nutrients in Lake Mývatn, N-Iceland.
2014 Geothermal borehole production measurements (i.e. enthalpy and flow)
2014 Field work during the Holuhraun eruption in Bárðabunga volcano, Iceland.
2013 High temperature borehole sampling for gases, steam and brine chemistry.
2013 High temperature well monitoring for tracers, including PFTs, NDS, methanol/ethanol
2010 Field work during a fissure eruption volcanism - Fimmvörðuháls 2010; and a sub-glacial volcanism - Eyjafjallajökull 2010, incl. sampling of ash, contaminated surface waters and glacial outburst floods.
2010-2011 Construction and testing of a downhole sampler for CO₂ rich fluids and tracers for the CarbFix project, Hellisheiði, SW-Iceland
2008-2011 Low temperature well-head monitoring of aqueous chemistry for the CarbFix project, Hellisheiði, SW-Iceland.
2007 Borehole geologist; sampling and on-site analyst of primary and secondary minerals of drill cuttings during drilling of high- and low-temperature wells in Iceland.

2006 Assistant driller at the Hellisheiði geothermal site, Iceland.

TEACHING

2009 Assistant teacher in a field sampling short course in aqueous geochemistry during the International conference on CO₂ sequestration processes in Reykjavik, Iceland.

2010-2011 Teaching undergraduate students in geochemistry at the Institute of Earth Sciences, Uni. of Iceland, daily operation and maintenance of ICP-OES.

LABORATORY EXPERIENCE

X-ray Diffraction analysis

X-ray Fluorescence analysis

Ion chromatography (preparation and analysis)

Gas chromatography (sampling, preparation and analysis)

Inductively Coupled Plasma analysis (including prep., analysis, and maintenance)

Isotopic geochemistry (sampling, preparation, analysis)

COMPUTER SKILLS

Word processing: Microsoft Word, -Excel, -PowerPoint, Open Office, etc.

Graphical processing: Adobe Photoshop, -Dreamweaver, -Illustrator, -InDesign, -Flash,

Aqueous geochemical modelling: USGS PhreeqC program, and Iceland GeoSurvey's WATCH program.

Basics in encodings: i.e. HTML, XML.

SOCIETIES

The European Association for Geochemistry

Iceland Geological Society

The Glaciology Society of Iceland (JÖRFÍ)

OTHER

2008-2009 President of FOLDA, Society of Graduate Students in Earth Sciences, Uni. of Iceland

2001 Iceland Driving license, category B.