

HELGI ARNAR ALFREÐSSON

Geochemist, PhD
Geochemý Ltd - Geology office
Hlíðarvegi 6, IS-660 Mývatn, Iceland.



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

RELATIONSHIP Married to Júlía Katrín Björke.

CHILDREN Halldór, b. 2007, Alfreð, b. 2014 and 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

2018-PRES. Board member of the School and social system committee of Skútustaðahreppur community, Mývatn.

2013-PRES. Consultant in geochemistry and co-owner at Geochemý Ltd. at 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

2019 Downhole sampling and temperature logging of geothermal production wells.

2017 Monitoring the water chemistry and dissolved nutrients in Lake Mývatn, Iceland.

2014 Geothermal borehole production measurements (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 and methanol.

2010 Field work during a fissure eruption Fimmvörðuháls 2010; and the sub-glacial eruption of Eyjafjallajökull, incl. sampling of ash, surface waters and *jökulhlaups*.

2010-11 Construction and testing of a downhole sampler for CO₂ rich fluids and tracers for the CarbFix project, Hellisheiði, SW-Iceland

2008-11 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.

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)
- Clean-lab experience

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 the WATCH program.
- Basics in encodings: i.e. HTML, XML.

TEACHING

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

2010-11 Teaching undergraduate students in geochemistry at the Institute of Earth Sciences, University of Iceland, daily operation and maintenance of ICP-OES.

SOCIETIES

- The European Association for Geochemistry
- Iceland Geological Society
- The Glaciology Society of Iceland (JÖRFÍ)

OTHER

2017 Member of a committee for school system policy making at Skútustaðahreppur, Iceland.

2008-09 President of FOLDA, Society of Graduate Students in Earth Sciences, Uni. of Iceland

2001 Iceland Driving license, category B.