

Holly J. Stein

Affiliations -

Professor, University of Oslo, Norway

PGP Centre of Excellence –

Physics of Geological Processes

CEED Centre of Excellence –

Earth Evolution and Dynamics

Senior Research Scientist and Professor

AIRIE Program, Founder and Director

Department of Geosciences

Colorado State University, USA



AIRIE Program website → www.airieprogram.org

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Innovation and Expertise

- ✦ **Re-Os isotope geochemistry** – shales and hydrocarbons, sulfides and ore deposits
- ✦ **Source rocks, release and migration of metals and hydrocarbons** – crust and mantle influence, fluid and volatile migration
- ✦ **Global metallogeny and ore geology** – deep and shallow processes for metal enrichment pinned in time, beyond the traditional ore deposit model for exploration

Career Minutes

B.S. Western Illinois University, M.S. and Ph.D. University of North Carolina at Chapel Hill, early career in mineral industry, 15 years at USGS, development of Re-Os technology for ore geology and mineral exploration, 11 years with Geological Survey of Norway in Trondheim, ore geologist turned petroleum geologist, invited to join **PGP** (Physics of Geological Processes Centre of Excellence) in 2012 at University of Oslo, invited to join **CEED** (Earth Evolution and Dynamics, a new Centre of Excellence) at University of Oslo in 2013. Twelve research grants U.S. National Science Foundation (lead PI on 8, second PI on 3), Scientific Leader for Norwegian Research Council Petromaks grant “Re-Os Isotopic Tracing of Hydrocarbon Systems in Arctic Regions” (2007-2011), Project Manager and Lead Principal Investigator (Judith Hannah, co-PI) for **CHRONOS** (2012-2017), supported by the Norwegian petroleum industry.

Career Moments

Vetenskapen Varld – Swedish TV Science Channel (broadcast twice in 2012), Helmholtz-Humboldt Research Prize (2008), SEG Silver Medal for excellence and original work in the geology of ore deposits (2005), Fulbright Research Scholar (Geological Survey of Norway, 2000), selected for U.S. National

Science Foundation “*Women in Science and Mathematics*” (broadcast 1994), Gilbert Fellowship – USGS (1992-1993), selected as the “*Outstanding Women Alumna*” (Western Illinois University, 1992).

Norway and the AIRIE Program

The AIRIE Program at Colorado State University began a relationship with Norway in 2000 through a Fulbright award, bringing expertise in Re-Os chronology to ore geology in the Baltic region. Several years later, the Norwegian petroleum industry began to develop an interest in the AIRIE Program. We are grateful to Arne Bjørlykke, former director of the Geological Survey of Norway for his support of an AIRIE-NGU partnership, and starting in 2012 we are honored to join hands with the University of Oslo, and thank especially Trond Torsvik, Bjørn Jamtveit, and Carmen Gaina for creating the opportunity to bring **CHRONOS** to **PGP** and **CEED**.

The hallmark of the AIRIE Program is their priority on geologic understanding when sampling, acquiring, and interpreting Re-Os isotopic data. The AIRIE Program maintains a staff of five full-time research associates and post-docs and two professors. Sixteen years after its inception, the AIRIE Program remains 100% supported on external grants and contracts, including all salaries and operating expenses. This existence requires a scientific vitality and leadership that is relevant and continually tuned to the needs of those investing in the research. For more on the AIRIE Program see www.airieprogram.org.



Photo credit, Ruth Hannah.

Favorite Reviewer’s Comment – Fund these people – they’re like the Microsoft guys in their early years, working out of a garage. (NSF reviewer, 2005).