

The Geophysics Program at the Department of Earth Sciences at Uppsala University is interested in participating in the ERA-MIN program as a partner. We have expertise in the following areas:

- * Hard rock seismic exploration
- * Shallow and deep EM exploration methods
- * Scientific drilling

Current relevant projects include

* Geoinfra (2013-2016): Development of two unique geophysical data acquisition systems. A nine-component (9C) land steamer seismic system comprised of 3C receivers and a 3C vibrator will be designed and developed in collaboration with industry partners. By combining the land steamer with our existing broadband wireless acquisition system we will also analyze surface-wave data using active and passive seismic signals. The second system, a radio-magnetotelluric one, will be upgraded and refined to function as a marine system in areas where construction will be performed under a lake or river. We also intend to assess the stability of large underground open spaces and stopes through borehole-tunnel-surface measurements using surface and ground-based seismic, radar and radio-wave methods.

* Seismic reflection surveying at a copper deposit in Zambia: Data will be acquired and processed during 2013-2014.

* COSC: A major drilling project has been approved and funded by the International Continental Scientific Drilling Program (ICDP) and the Swedish Research Council (Vetenskapsrådet – VR) for investigating the structure and composition of the Swedish mountains. Start of the scientific drilling is expected in Spring 2014. Main objectives of the project, officially called Collisional Orogeny in the Scandinavian Caledonides (COSC), include (i) improved understanding of mountain building processes (orogeny), (ii) investigating the geothermal gradient and its response to paleoclimatic influences along with the hydrogeological-hydrochemical state of the mountain belt and the deep biosphere in the metamorphic rocks and crystalline basement, and (iii) calibration of surface geophysics and geology. The COSC research program is being developed by five working groups, geology, geophysics, geothermics, hydrogeology and microbiology. It has direct relevance for improving our understanding of mountain building processes, hydrological-hydrochemical regimes in mountain areas and Precambrian shields, deep subsurface conditions for underground engineering, ore genesis and assessment of geothermal potential.

See www.ssdp.se/projects/cosc.html

Interested parties should feel free to contact me at

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