



**UNIVERSITÉ
DE GENÈVE**

**CENTRE UNIVERSITAIRE D'ÉTUDE
DES PROBLÈMES DE L'ÉNERGIE**

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CYCLE DE FORMATION ÉNERGIE – ENVIRONNEMENT

SÉMINAIRE

**Power production from Enhanced Geothermal Systems (EGS)
Lessons learnt from the Basel project and the future of EGS**

Markus O. Häring
Geothermal Explorers Ltd

jeudi 8 novembre 2007 à 17h.15

Auditoire D 185 - Bâtiment D – Uni Battelle
7, route de Drize
1227 Carouge

PROGRAMME DES PROCHAINES CONFÉRENCES :

Jeudi 22 novembre 2007 à 17h.15

Environnement et énergie : les défis à l'industrie de l'aluminium, C. Gentaz, Transtec.

Jeudi 6 décembre 2007 à 17h.15

Infrastructures de la Société de l'information : un gigantesque défi énergétique, B. Aebischer, CEPE, ETHZ.

Jeudi 20 décembre 2007

Visite technique : Réseau de chauffage à distance au bois, Cartigny.

*** The Conference will be given in English ***

The Speaker

*With a PhD in Earth Sciences obtained at University of Basel, **Markus O. Häring** started his professional career as an oil and gas explorationist with Shell International Petroleum Maatschappij in Peru, Australia, the Netherlands and Nigeria. Owner of consulting company Häring GeoProject, he has since the mid nineties also been CEO of Geothermal Explorers Ltd (www.geothermal.ch) and project developer of DEEP HEAT MINING Basel, as well as head of the Scientific Association DEEP HEAT MINING (ADHM).*

The Conference

The Deep Heat Mining project in Basel is one of three leading development projects for EGS in the world. In 2006 a 5000 meter well was successfully completed in hot granite rocks. The hydraulic injection to enhance the permeability of the system however produced a number of seismic events of unacceptable intensity. According to self-imposed thresholds that were approved by the authorities the injection and further operations have been suspended for the time being.

The project has the merit to have produced a unique data set with respect to the recording of microseismic activity in greatest detail from the onset of a hydraulic injection to the point of perceptible macroseismicity and well beyond that stage. The data set will provide key information in the understanding of rock mechanics under artificially increased pore pressures in geothermal systems. An independent risk analysis will decide on the future of the Basel project.

A study commissioned by the German Bundestag identifies a gross geothermal resource in Germany that covers 600 times the energy demand of the country. However, far less than 10% of the resource can be produced from hydrothermal systems. The rest can be made accessible only by EGS. This relation applies also on a worldwide scale.

Worldwide activities in developing EGS expand in an unprecedented way, since an MIT study concludes that 10% of the US power demand could be covered with EGS by 2050. The Electric Supply Industry Planning Council in Australia is forecasting a 6.8% EGS power production by 2030. Accordingly most EGS activities are now concentrating in Australia.