ENGINE- *Geothermal Lighthouse Projects in Europe*

Information gathered during the ENGINE co-ordination action (ENhanced Geothermal Innovative Network for Europe)
http://engine.brgm.fr/
Last update April 2008

Project Name: DEEP HEAT MINING Basel
Project Institute/Company Leader:
Client: Geopower Basel AG
Project Developer / Project Leader: Geothermal Explorers Ltd (GEL)
Contact Person: Dr. Markus O. Häring, CEO Geothermal Explorers Ltd
Web-site: www.geothermal.ch / www.geopower-basel.ch
Country: Switzerland
Location: Basel

Type(s) of resource [High/Low Enthalpy / EGS]: **EGS**
Main on-site operators [Drilling, Stimulation, Monitoring, Power plant etc.]: **GEL**
Number of wells [w. Total Depth pr. well]: **1 x 5'009 m (plus 6 Monitoring wells 325 – 2575 m)**
Type of wells [Exploration, Production, Injection]: **Exploration**
Well configuration [Single well, Doublet, Triplet]: planned Triplet
Distance between well at Depth [Horiz. Dist at Depth]:
Temperature at total depth: 200°C
Combination with other energy sources [Gas, Waste, Biomass etc.]: Gas and Waste

Potential of the geothermal resource [TJ/yr at Date]:
Average flow rate [kg/s at Date (if expected)]:

Main production [Heat or Power]: planned Heat and power
Installed/Expected capacity [MWe or MWt at Date (if expected)]:
Running/Expected capacity [MW/*time* at Date (if expected)]:

Co-generated production [Heat or Power]:
Installed/Expected capacity [MWe or MWt at Date (if expected)]:
Running/Expected capacity [MW/*time* at Date (if expected)]:

Short description of ***Exploration History*** ***(Limit this section; no more than 200 words):***

Possible keywords (non-exhaustive list):

- Objective of project
- Important dates

- Main geological context [stratigraphy, sedimentary formations, volcanism, granite intrusions, faults, graben etc.]

- Expected CO_2 emission saving

- Project funding [state, communities, private etc.]
- Distribution network

Reservoir Characteristics ***(Limit this section; no more than 200 words):***

Possible keywords (non-exhaustive list):

- Type of reservoir [fractured, porous or both]
- Hosted lithology/rock/mineralogy/fluids [composition]
- Fracture system
- Stress field
- Temperature range or temperature profile

- Main reservoir characteristics [porosity, (natural) permeability etc.]
- Occurrence of natural brines
- Stimulation types [hydraulic, thermal, chemical]
- Wells characteristics [injectivity, productivity etc.]
- Connectivity between wells

- Storage capacity

Exploitation (Limit this section; no more than 200 words):

Possible keywords (non-exhaustive list):

- Type of exploitation/power plant [direct, binary or combined cycle]
- Type of binary cycle [ORC, Kalina cycle etc.]
- Nature of working fluid
- Cooling system [water, air]
- Injection fluid [water, salty water etc.]

- Annual production [GWh_e or GWh_t at Date (if expected)]
- Seasonal production
- Capacity factor (%)

- Need for special tools [pumps, turbine etc.]
- Development/improvement of methods (chemical fracturing, new tracers, seismic etc..)
- Monitoring and optimising of field/area using computer models
- Assessment of environmental impact

On-going or future works planes (Limit this section; no more than 200 words):

Possible keywords (non-exhaustive list):

- Next important event [major hydraulic test, new geophysical measurements etc.]
- Future plans? e.g.:
    - New wells
    - Optimizing of existing or building new power plants..
    - Implementation of new tools..
    - Implementation of new methods..
    - New exploration phase..

ENGINE partners involved in the Project:

- Use list of partners from ENGINE Web-site http://engine.brgm.fr/partners.asp

Main References *(no more than 5 references):*

NB: Please provide a site picture, - and if possible, a few relevant figures would be appreciated