

The **GeneSys** - Project:

Cost Efficient Single-Well Concepts for Deep Geothermal Energy from the Northern German Basin

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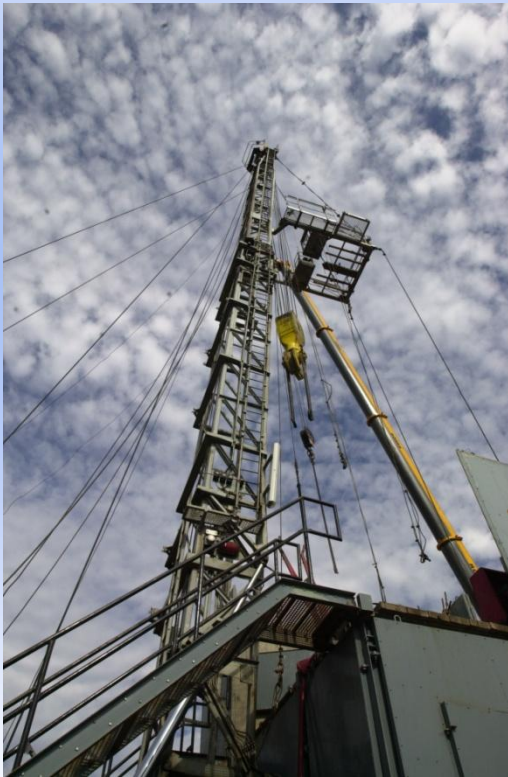
² Federal Institute for Geosciences and Natural Resources (**BGR**)



| | |
|---------------------|---------|
| Thermal power: | 2 MW |
| Flow rate: | 25 m³/h |
| Temperature: | 130°C |
| Capital investment: | 9 m€ |

Key Technologies

Single-Well Concepts & Water-Frac Technique



GeneSys - Horstberg

Objectives:

Show feasibility of single well concepts prior to start of GeneSys-Hannover

Location:

Research well Horstberg Z1 (abandoned gas well 4000 m depth)

Funding:



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

GeneSys - Hannover

Objectives:

Supply the GEOZENTRUM Hannover with geothermal heat.

Location:

GEOZENTRUM in the city of Hannover

Funding:

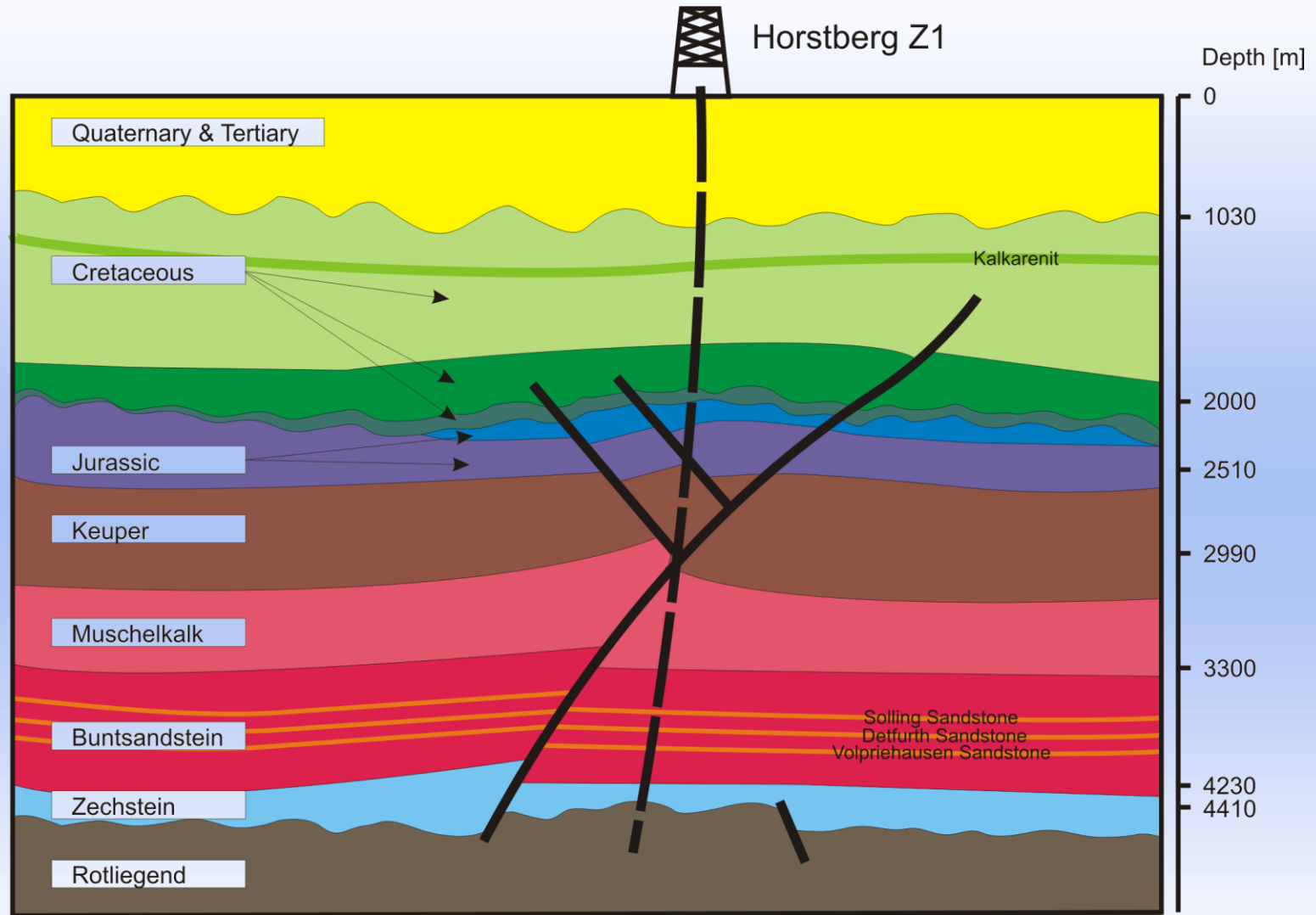


Federal Ministry
of Economics
and Technology

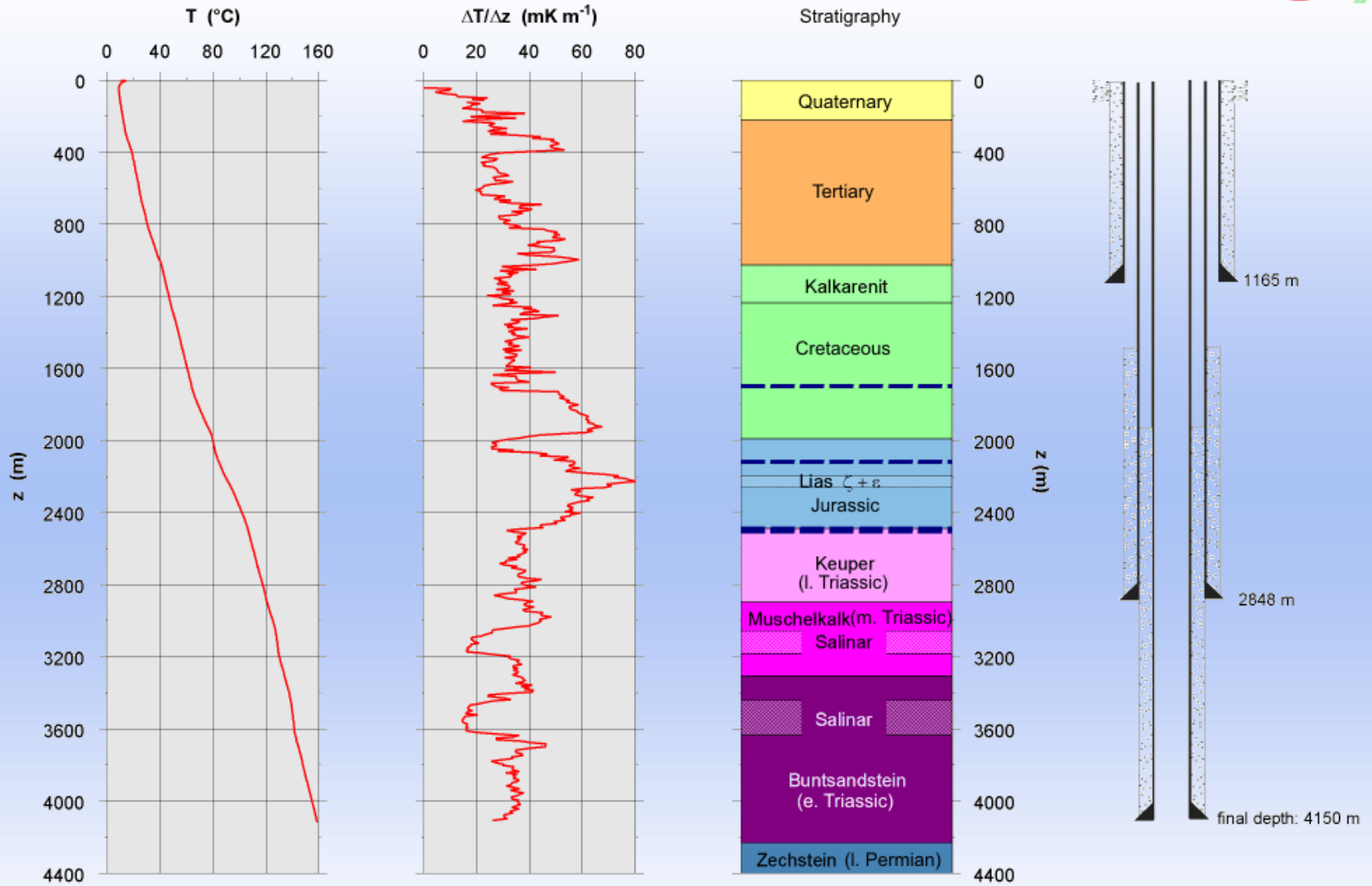
Location of Hortberg Z1



Geology of Hortberg Z1



T-Log of Hortberg Z1



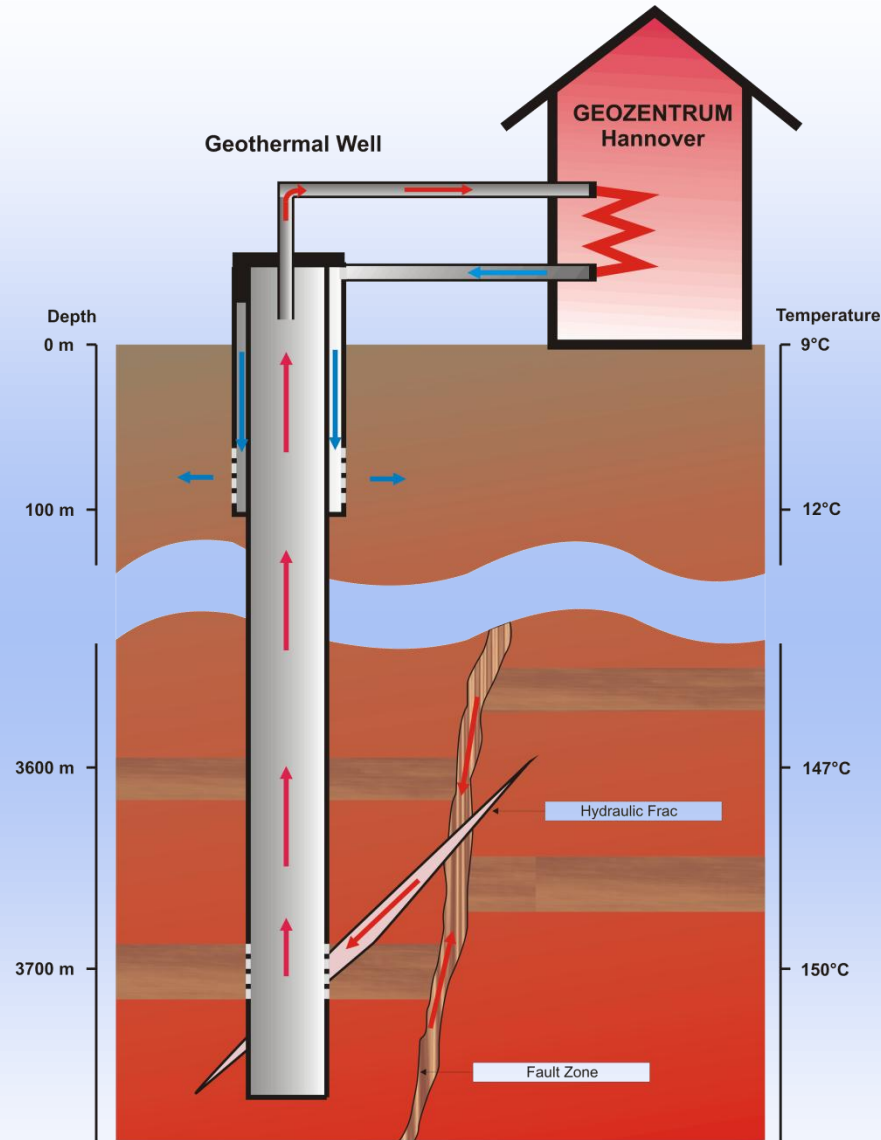
Schellschmidt, GGA

Geothermal Test-Site Hortberg Z1



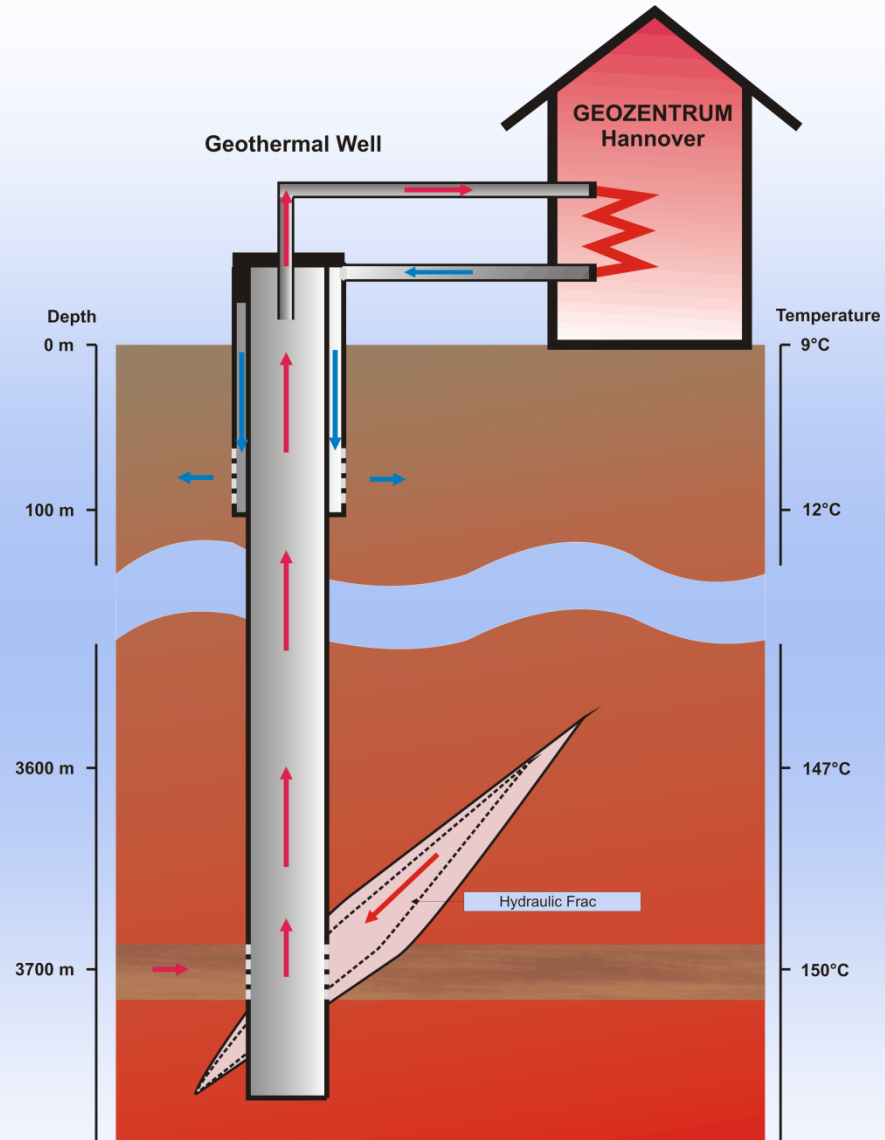
Single-Well Concepts

1. Deep Circulation
2. Huff-Puff
3. Deep Circulation – Two Strata

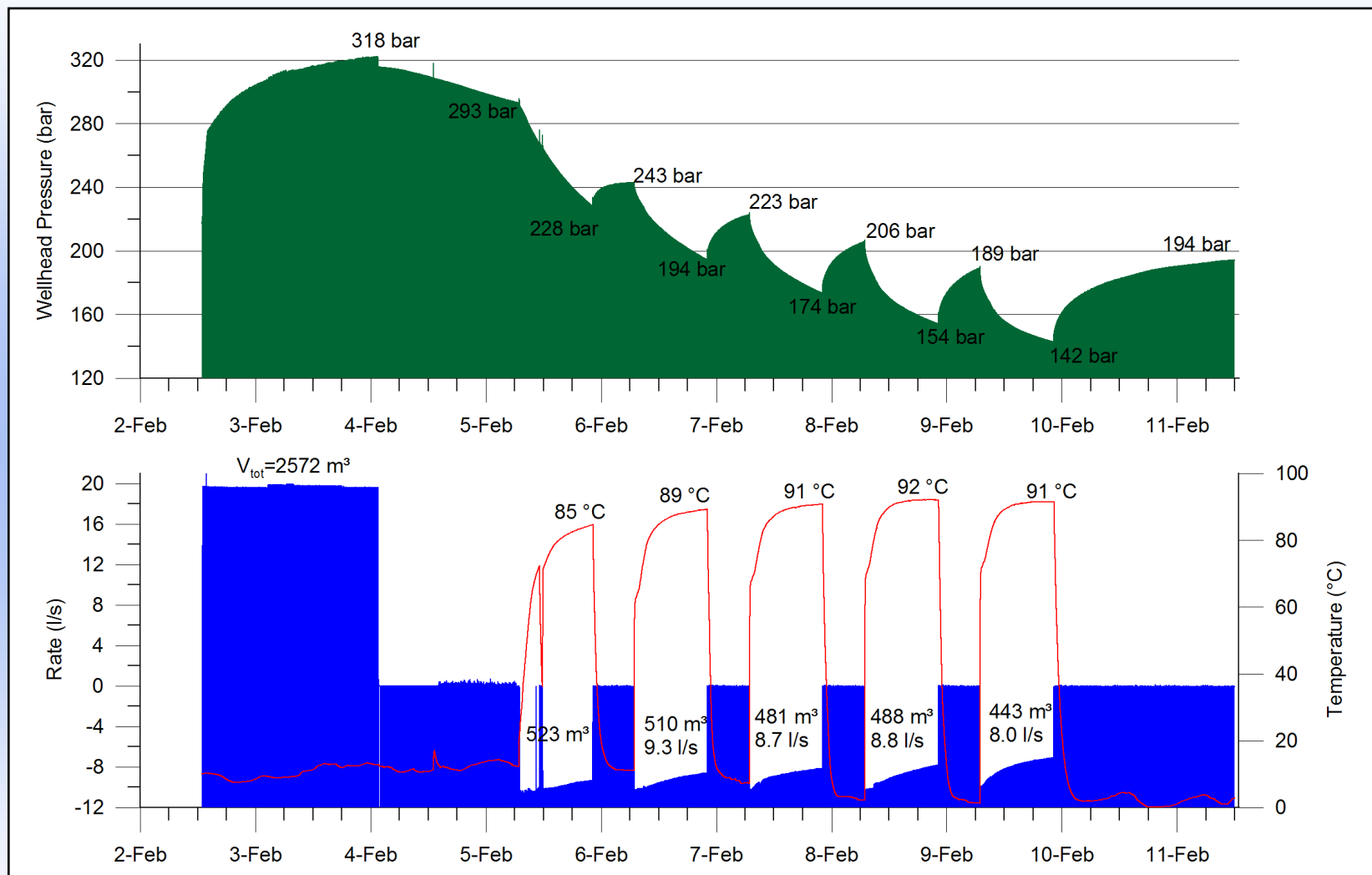


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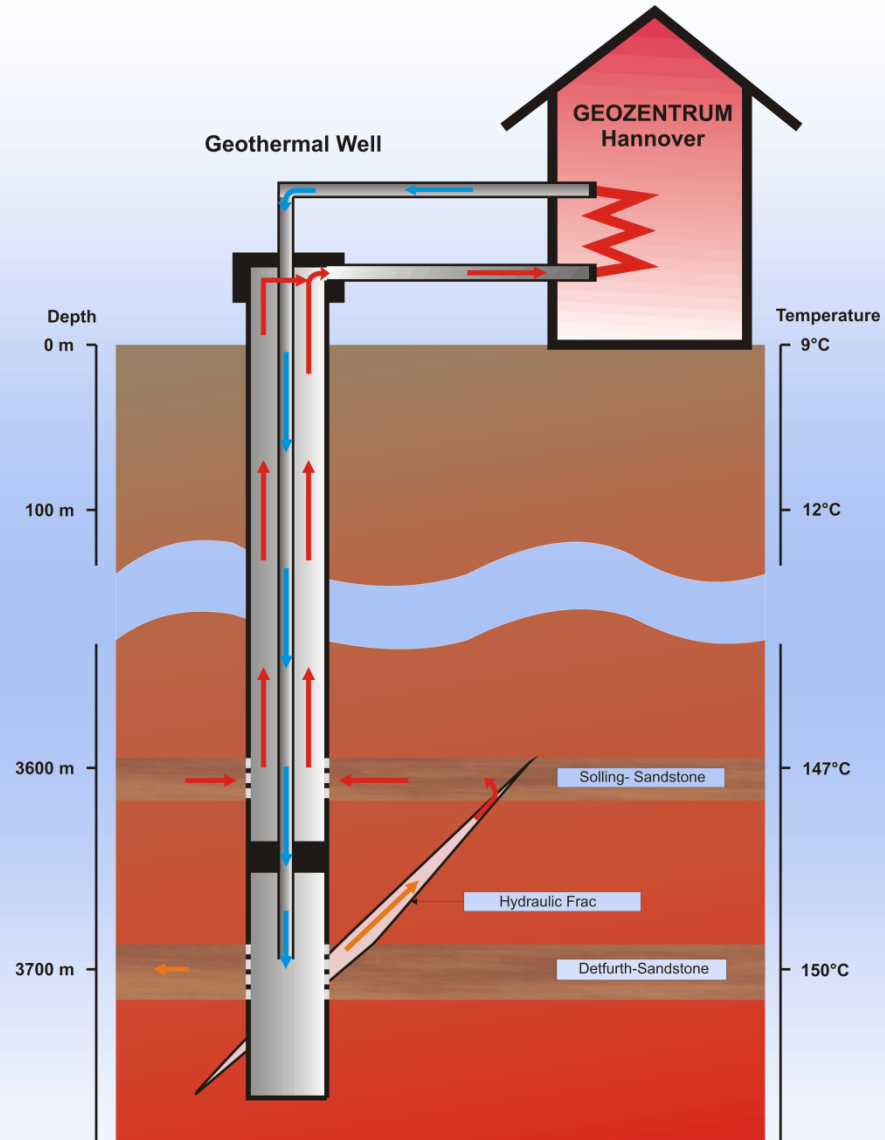


Huff Puff

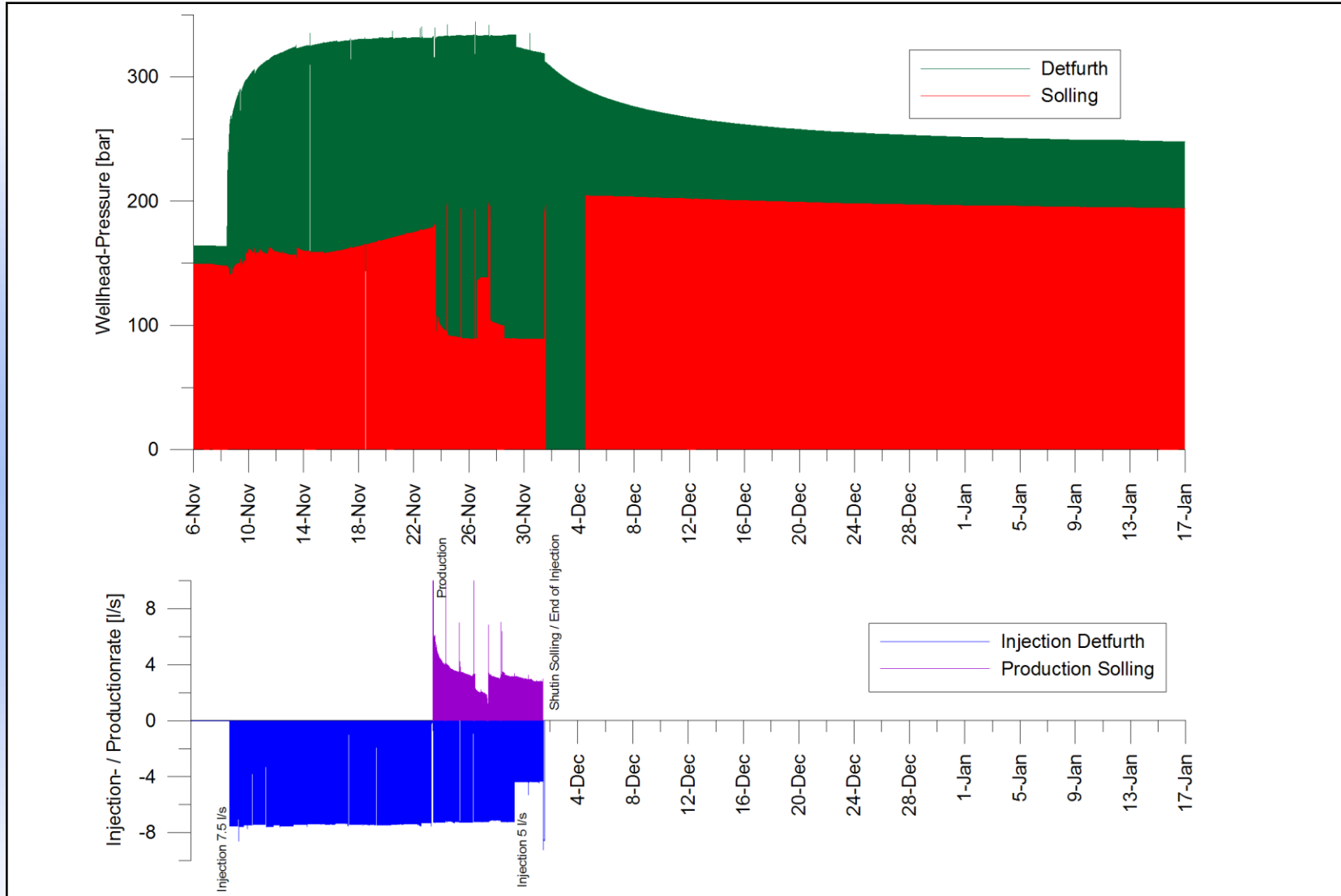


Single-Well Concepts

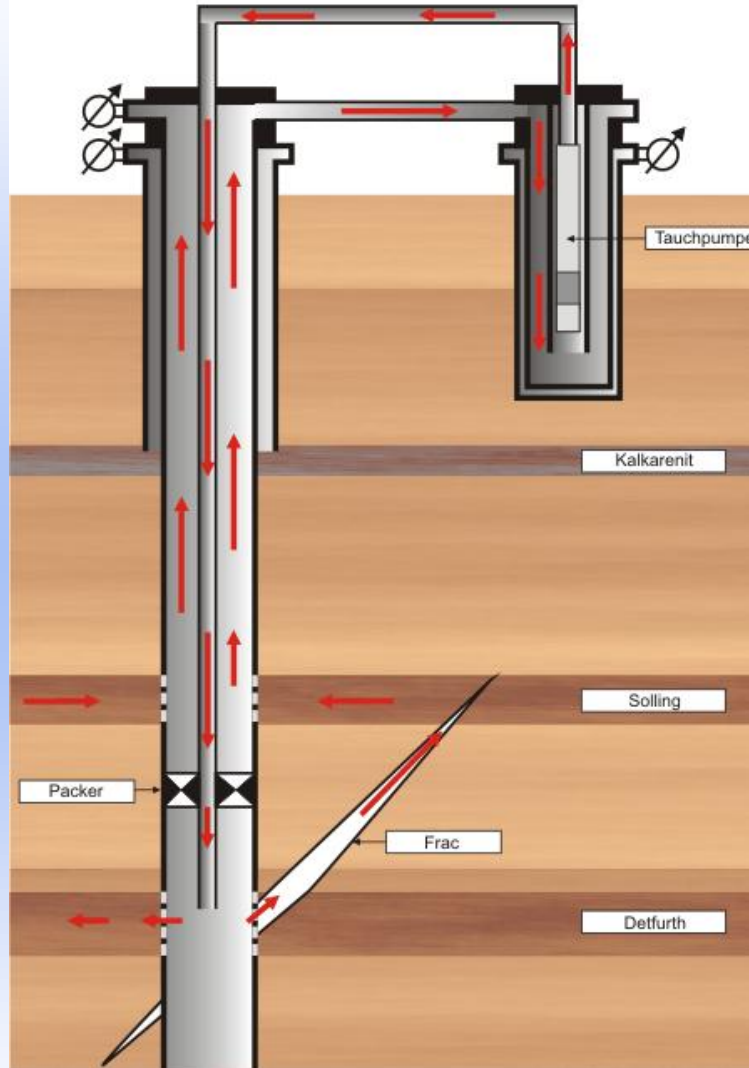
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Deep Circulation – two Strata

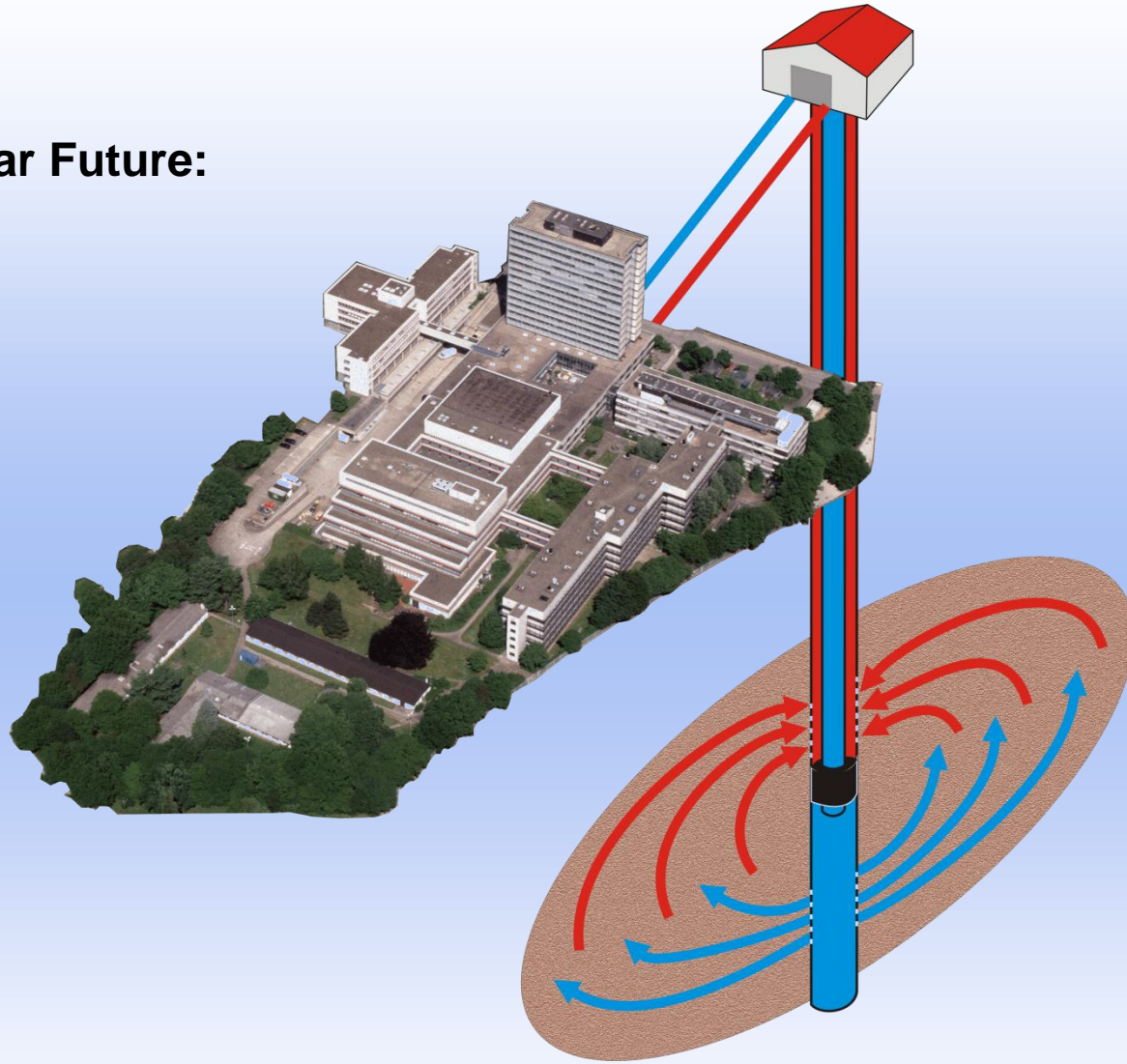


Deep Circulation – Two Strata via Fault with Submersible Pump





The Near Future:



Summary & Outlook

- The Cyclic (Huff-Puff) and Deep Circulation Two Strata concepts have been tested successfully
- Location-independent use of geothermal energy from tight sediments
- Useful solution for small to medium sized consumers
- Drilling for the Demonstration Project GeneSys in Hannover is scheduled for the end of 2007



Thank You!