

High temperature logging

- description of logging methods used to evaluate high temperature boreholes

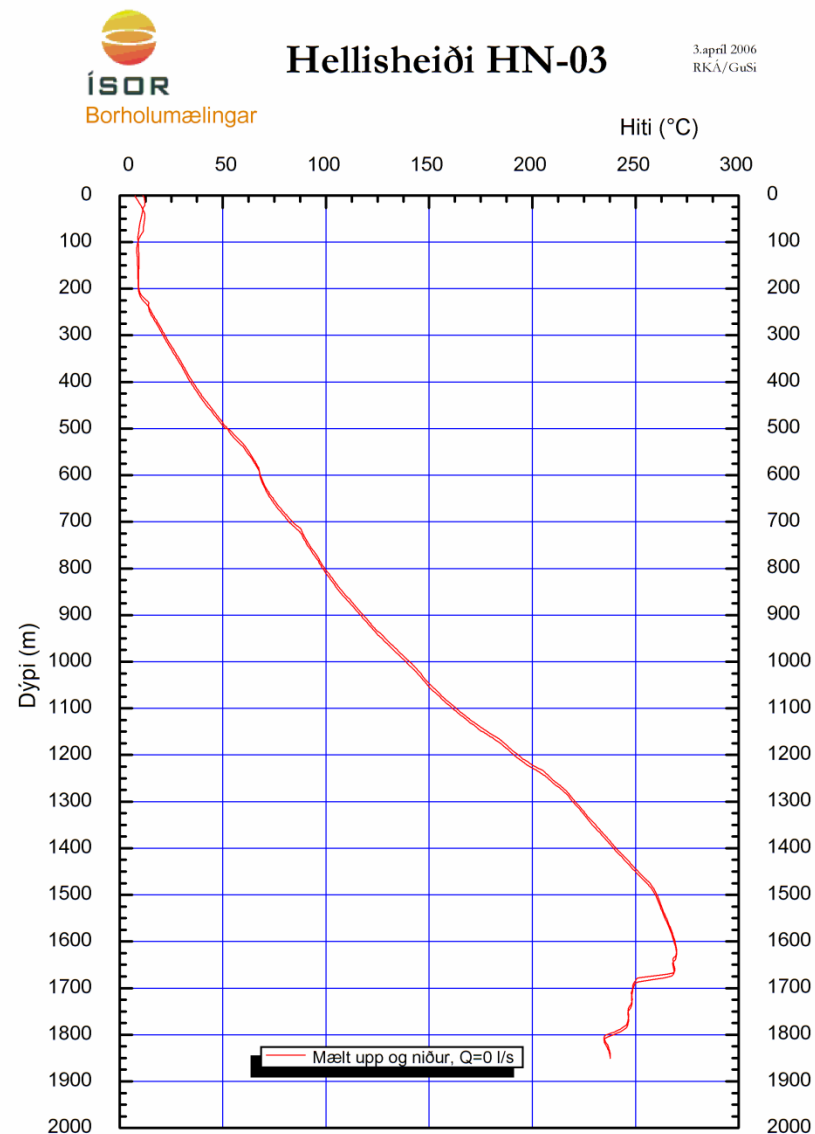
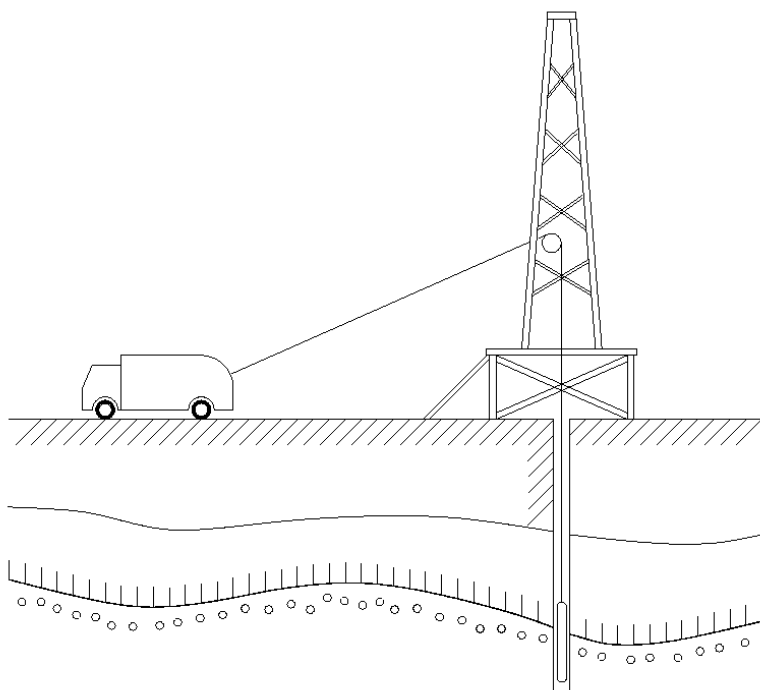
Dr. Ragnar K. Ásmundsson, ÍSOR

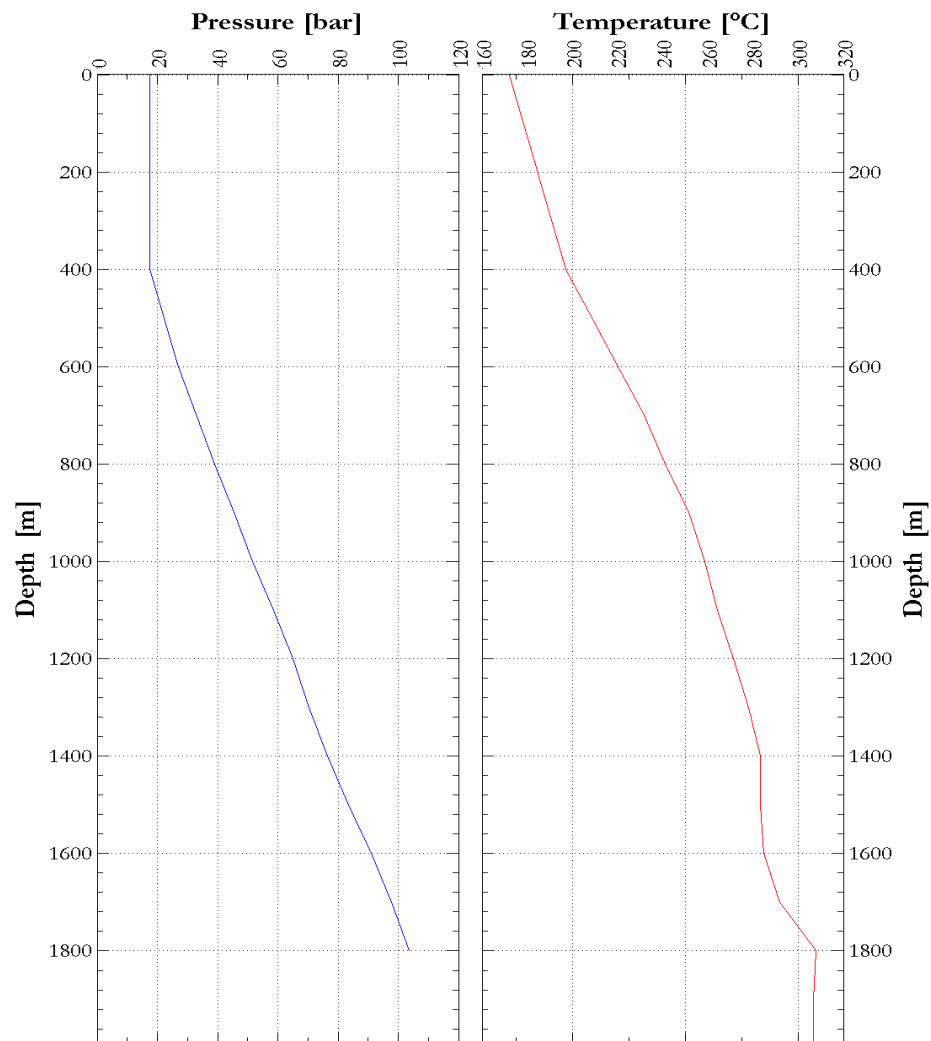
Presentation for ENGINE Workshop 4., Reykjavík July 2007

Temperature and pressure

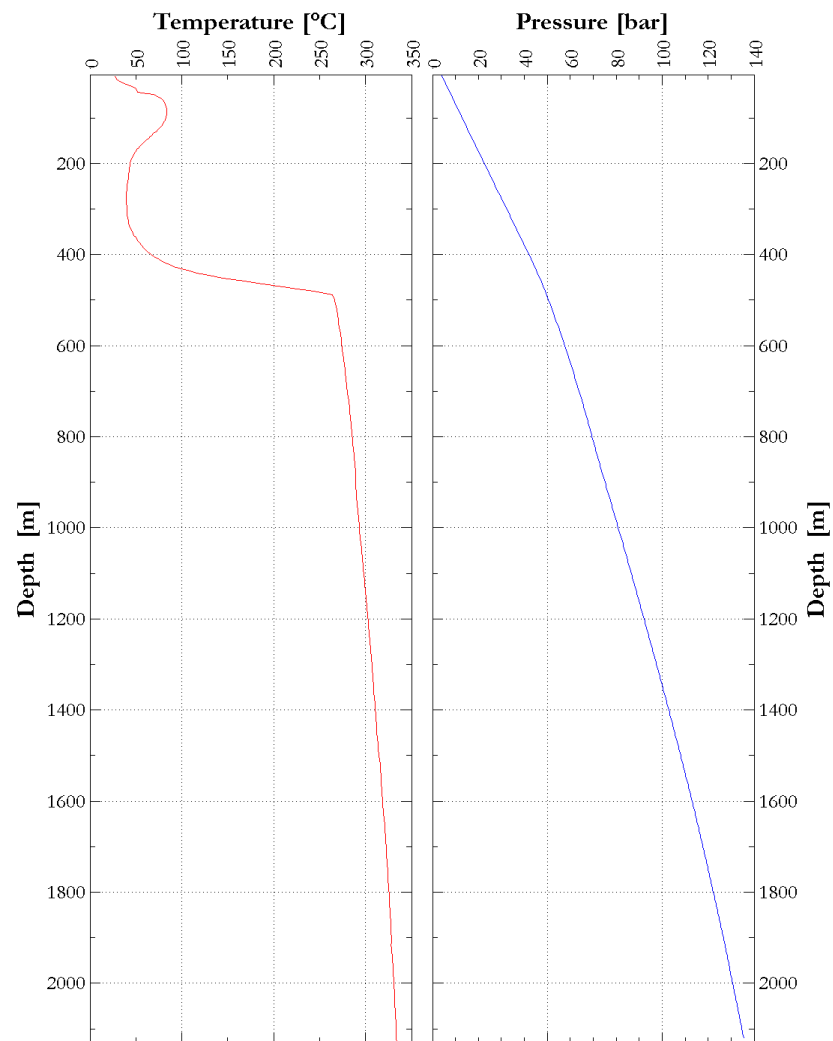
- The three important parameters for production evaluation of high temperature wells are temperature, pressure and flow rate.
- Temperature and pressure are measured directly, while flow rate is more often inferred or measured at wellhead.

The act of logging

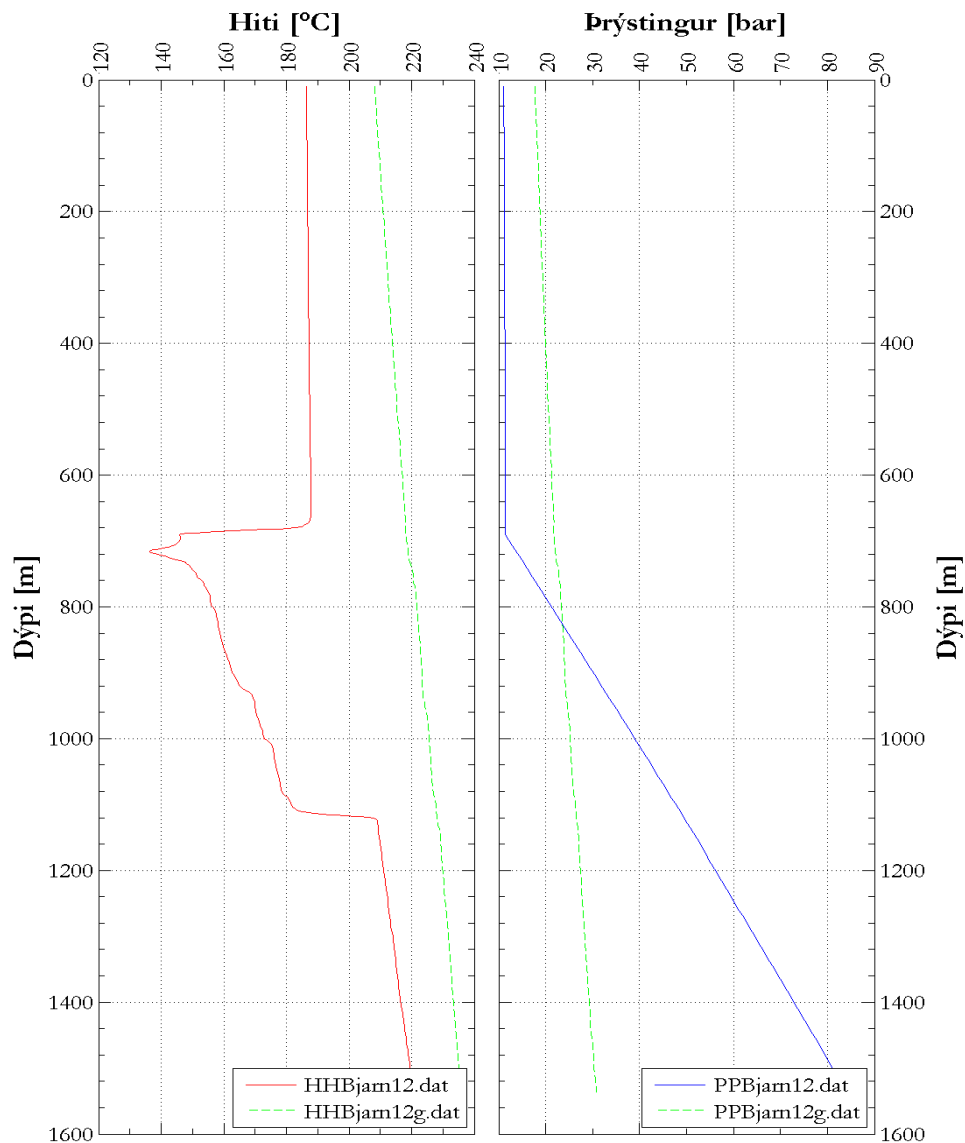




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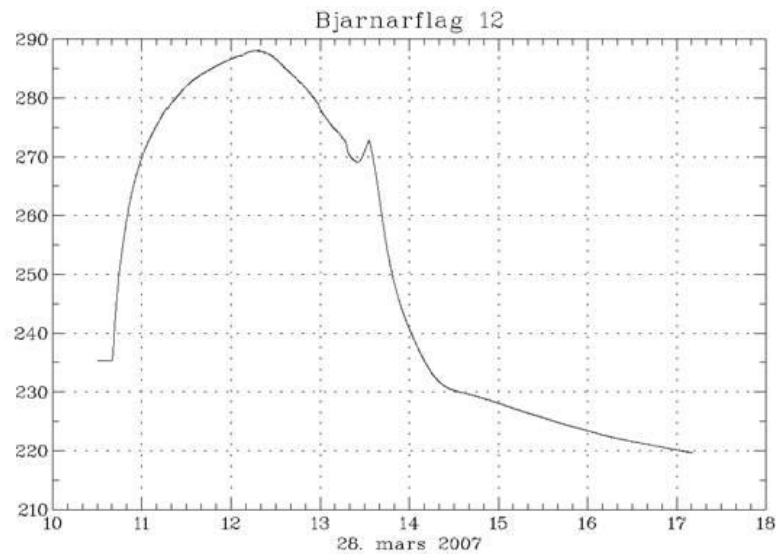


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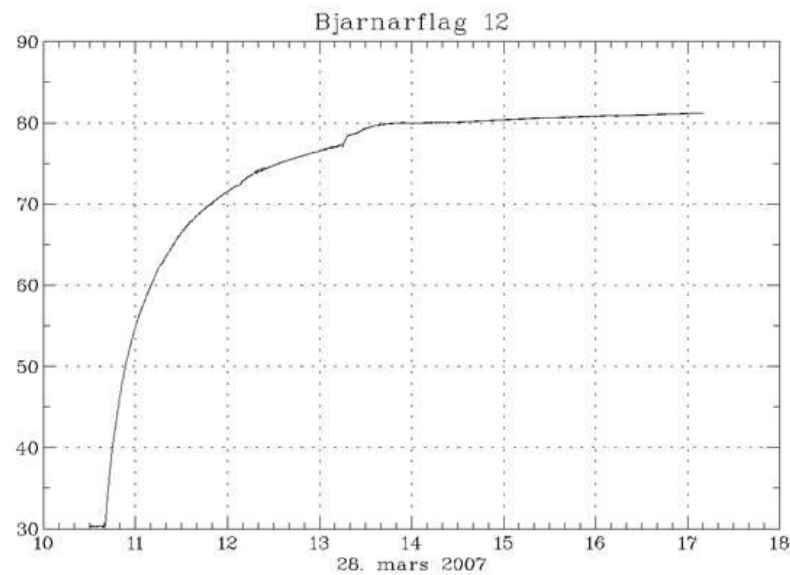


Búið til með BORA

Events same day
2007-03-28



Temp (°C) versus time (h)



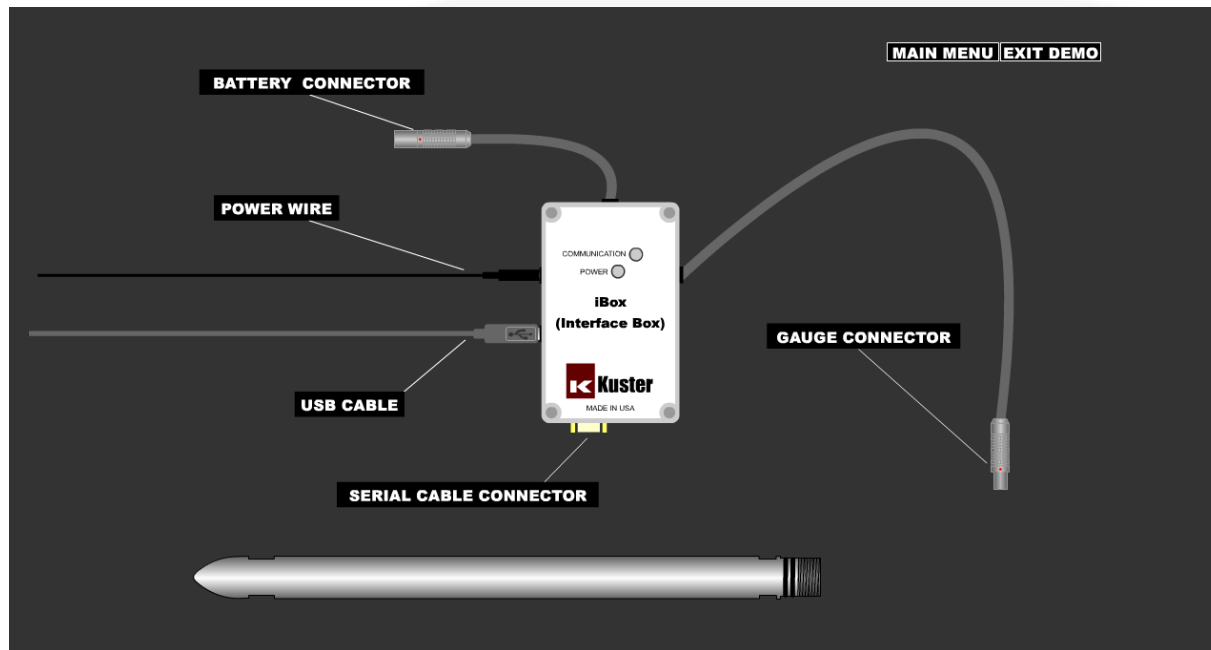
Pressure (bar) versus time (h)

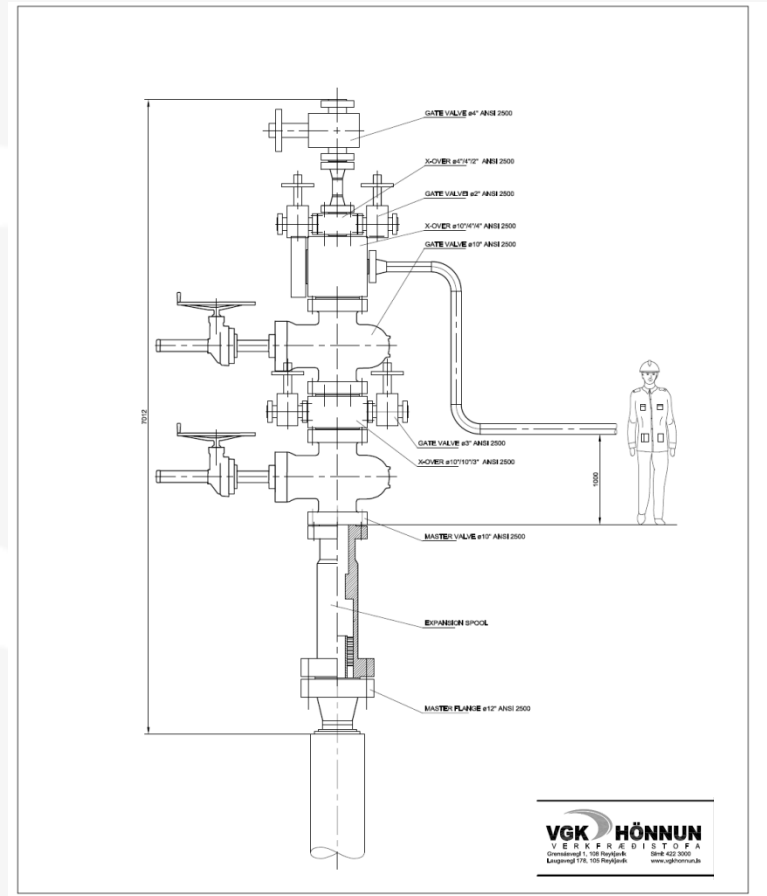
CHECK LIST



THE Instruments

- Memory tools on slick-line (non-communication wire) attached
- Mechanical tools on slick-line.





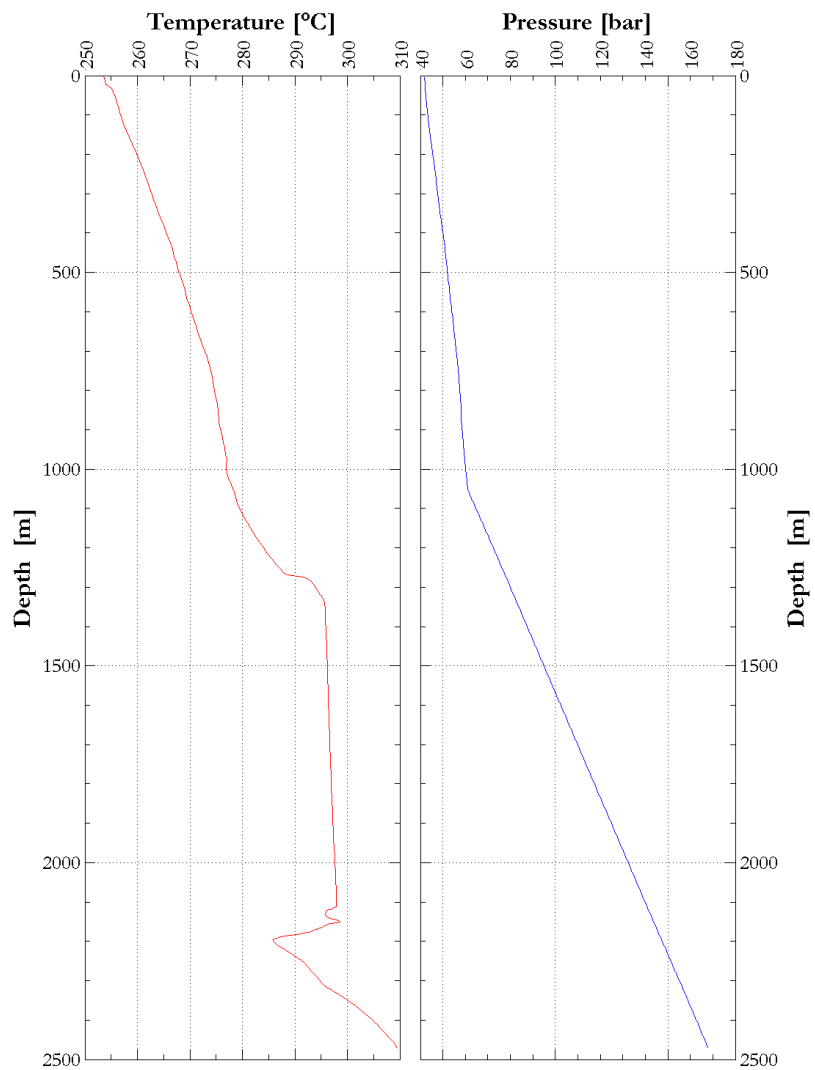


Reykjanes RN-12





Ready to go!



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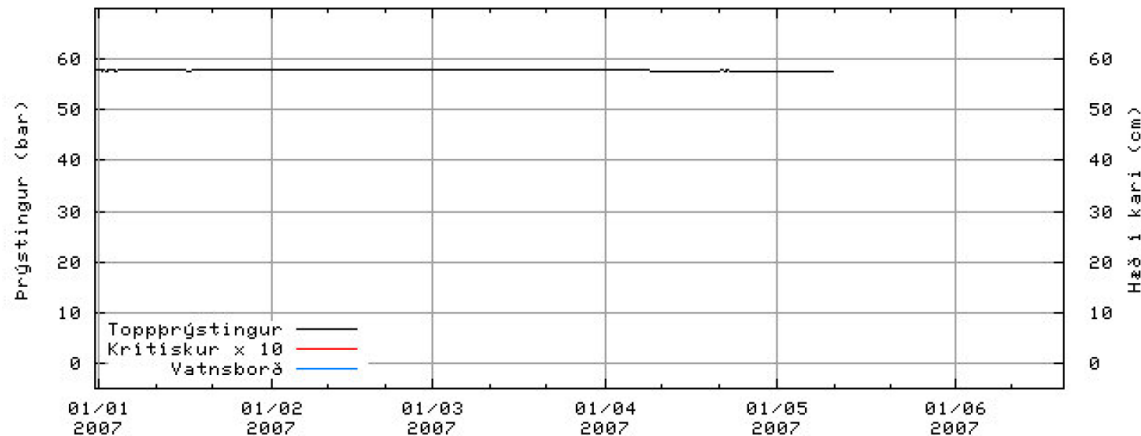


Eftirlit með borholum

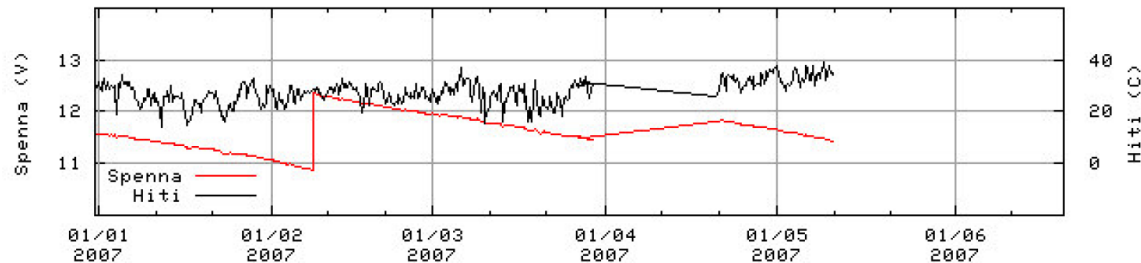
Borhola: Frá byrjun: Til loka:

☐ birta gögn ☒ birta myndir ☐ upplýsingar um mælistað

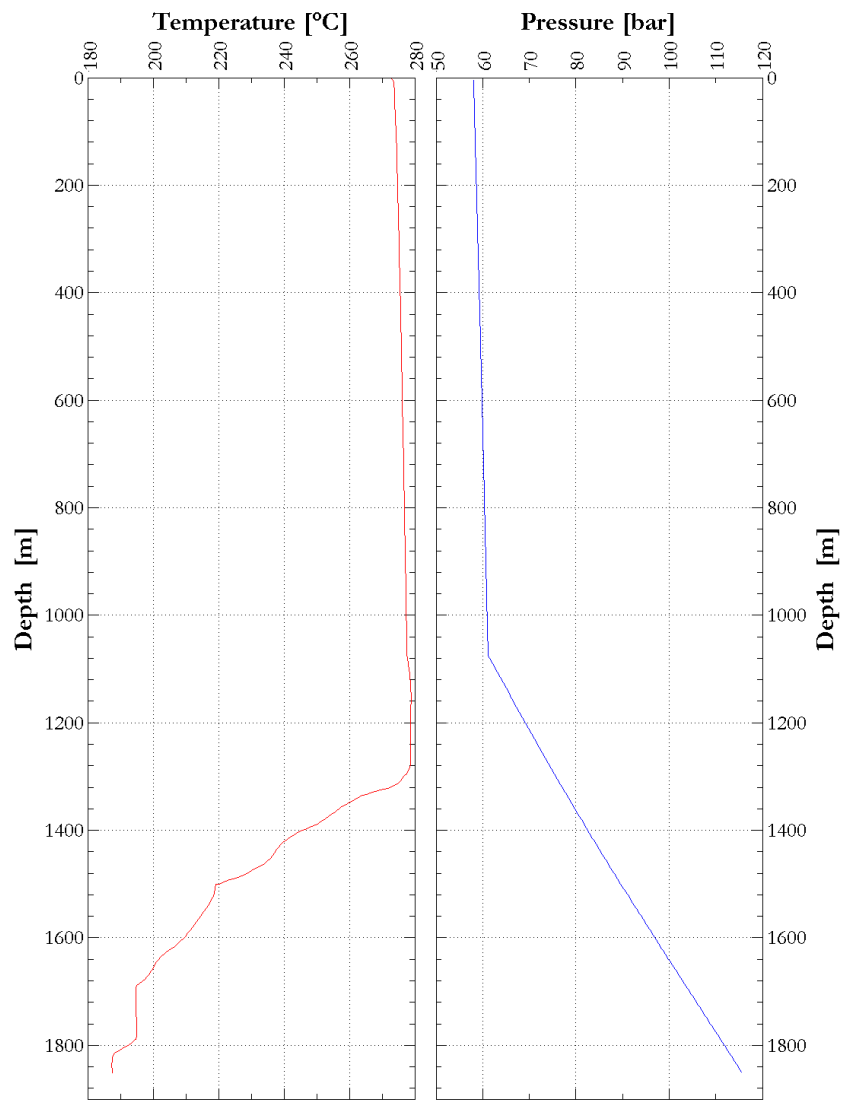
HE16 Hellisheiði. Þrýstingur og vatnsborð



Söfnunartæki



Live web based
pressure
monitoring system



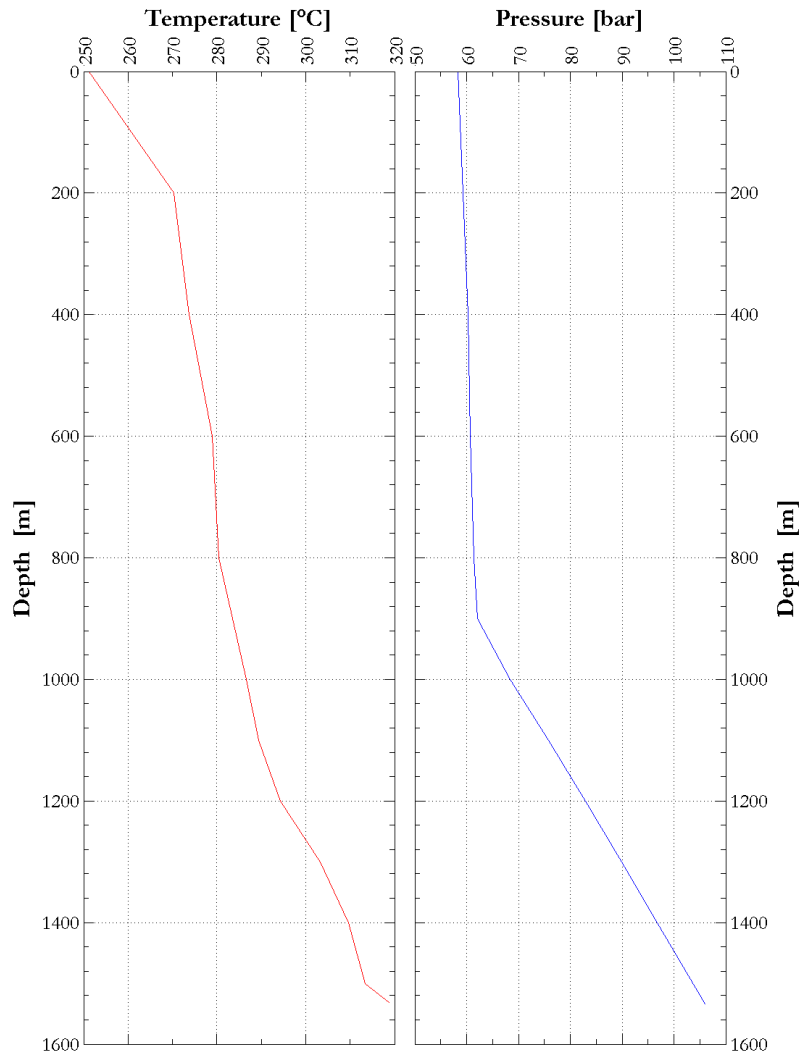
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From 1998

Innocent looking well?

Future improvements?

- Develop sensor with higher temperature and pressure tolerance and more resistance to corrosion
- Not only temperature and pressure sensors
- Fluid chemistry, lithology, porosity, alterations, tracer testing, flow changes, resistivity, fractures, stress state, conductivity, etc.
- Logging at non-cooled conditions at any well head pressure.
- In some cases, permanent installments can be beneficial.