

The H2020 SURE Project

Novel Productivity Enhancement Concept
for a **S**ustainable Utilization of a Geothermal **R**esource

Thomas Reinsch, Jörg Zotzmann and the SURE consortium

Helmholtz Centre Potsdam

German Research Centre for Geosciences GFZ

ETIP Workshop, Brussels

14. November 2017



The SURE project has received funding from the European Union's Horizon
2020 research and innovation programme under grant agreement No 654662





Project Consortium



Reinsch, T.; Zotzmann, J.: The H2020 SURE Project



A vertical strip on the left side of the slide shows a close-up of industrial machinery, specifically blue-painted pipes and valves with various fittings and bolts. The background is slightly blurred, suggesting an outdoor industrial setting.

Project Details

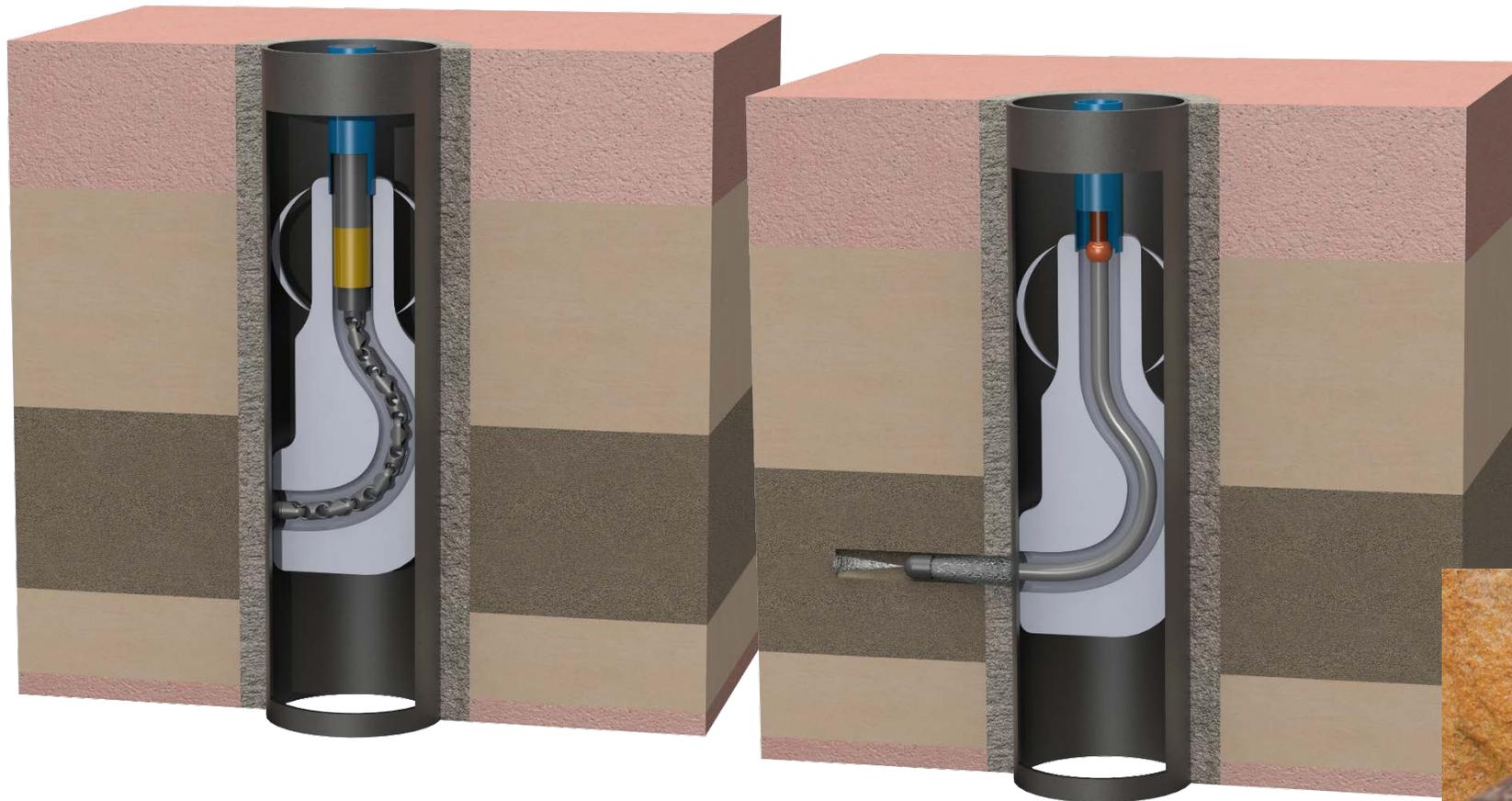
- Call: H2020-LCE2-2015-1-two-stage
- Funding Scheme: Research and Innovation Action - RIA
- Total Cost / EC contribution: 6.1M€ / 5.9M€
- Project Duration: start in March 2016, 42 months
- Technology Readiness Level: 3-4



Objectives – Main Idea

- Investigate and test the Radial Water Jet Drilling (RJD) technology for increasing the performance of geothermal wells with low productivity/injectivity across different spatial and temporal scales.
- Aim: connect high-permeable structures (faults/fractures, karst systems, high-permeable sedimentary structures) to main wellbore.

Objectives – RJD Technology



(GFZ, 2016)



(GZB, 2016)

Approach

State-of-the-Art

- Conventional stimulation technologies
- Radial water jetting technology

Micro-Scale Investigation (Sample-Scale)

- Mechanical and hydraulic sample characterization
- Fracture permeability characterization
- Stability of laterals

Meso-Scale Investigation (Rock Block-Scale)

- Jetting in lab with full scale equipment
- Jetting experiment in quarry
- Jetting at reservoir conditions

Macro-Scale Investigation (Field-Scale)

- Pre-operational survey
- Field tests
- Long term evaluation

Integration

Acknowledgement

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www.sure-h2020.eu