Innovative materials and designs for long-life high-temperature geothermal wells

Fact Sheet

Project Information

GeoWell

Grant agreement ID: 654497

Project website

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H2020-EU.3.3.2.4.
H2020-EU.3.3.2.2.
H2020-EU.3.3.2.1.

Start date 1 February 2016
End date 31 January 2019

Overall budget € 4 704 913,75
EU contribution € 4 704 913,75

Coordinated by
ISLENSKAR ORKURANNSOKNIR
Iceland

This project is featured in...

RESULTS PACK
Geothermal Energy: A new and viable alternative energy source to help achieve Europe’s climate ambitions

27 March 2020

Objective
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New concepts for high-temperature geothermal well technologies are strongly needed to accelerate the development of geothermal resources for power generation in Europe and worldwide in a cost effective and environmentally friendly way. The GeoWell project will address the major bottlenecks like high investment and maintenance costs by developing innovative materials and designs that are superior to the state of the art concepts. The lifetime of a well often determines the economic viability of a geothermal project. Therefore, keeping the geothermal system in operation for several decades is key to the economic success. The objective of GeoWell is to develop reliable, cost effective and environmentally safe well completion and monitoring technologies. This includes:

- Reducing down time by optimised well design involving corrosion resistant materials.
- Optimisation of cementing procedures that require less time for curing.
- Compensate thermal strains between the casing and the well.
- Provide a comprehensive database with selective ranking of materials to prevent corrosion, based on environmental conditions for liners, casings and wellhead equipment, up to very high temperatures.
- To develop methods to increase the lifetime of the well by analysing the wellbore integrity using novel distributed fiber optic monitoring techniques.
- To develop advanced risk analysis tools and risk management procedures for geothermal wells.

The proposed work will significantly enhance the current technology position of constructing and operating a geothermal well. GeoWell aims to put Europe in the lead regarding development of deep geothermal energy. The consortium behind GeoWell constitutes a combination of experienced geothermal developers, leading academic institutions, major oil&gas research institutions and an SME. These have access to world-class research facilities including test wells for validation of innovative technologies and laboratories for material testing.

Field of science

/engineering and technology/environmental engineering/energy and fuels/renewable energy/geothermal energy

Programme(s)

Topic(s)
Call for proposal

H2020-LCE-2015-1-two-stage

Funding Scheme

RIA - Research and Innovation action

Coordinator

ISLENSKAR ORKURANNSOKNIR

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Grensasvegi 9
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Iceland

Activity type
Research Organisations

EU contribution
€ 1 105 750

Website
Contact the organisation

Participants (8)

NORCE NORWEGIAN RESEARCH CENTRE AS

Norway

EU contribution
€ 611 612,50

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5838 Bergen

Activity type
Research Organisations

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HELMHOLTZ ZENTRUM POTSDAM DEUTSCHESGEOFORSCHUNGSZENTRUM GFZ

Germany

EU contribution
€ 561 257,50

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Telegrafenberg 17
14473 Potsdam

Activity type
Research Organisations

Website
Contact the organisation
NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO

Netherlands

EU contribution

€ 730 747,50

Address

Anna Van Buerenplein 1
2595 DA Den Haag

Activity type

Research Organisations

Website

Contact the organisation

BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES

France

EU contribution

€ 270 500

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45060 Orleans

Activity type

Research Organisations

Website

Contact the organisation

EQUINOR ENERGY AS

Norway

EU contribution

€ 653 000

Address

Forusbeen 50
4035 Stavanger

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Website

Contact the organisation

HS ORKA HF

Iceland

EU contribution

€ 345 883,75

Address

Orkubraut 3

Activity type

Private for-profit entities
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<td>HUISMAN WELL TECHNOLOGY BV</td>
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