

Freitag, 21. Februar 2025, 12.50 Uhr
Ortenauhalle Kongress 1
Tiefe Geothermie

Friday, 21 February 2025, 12.50 pm
Ortenauhalle Congress 1
Deep geothermal energy



The Geoscience behind an Eavor-Loop – Complex Geology requires special attention

Die Geowissenschaft hinter einem Eavor-Loop - Komplexe Geologie erfordert besondere Aufmerksamkeit

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Together with Enercity, a municipal heat network energy provider, Eavor is planning to build Eavor-Loops in the larger city area of Hannover. Being located in the Lower Saxony Basin the Hannover area has seen a complex geological development; experiencing graben building in the Lower Permian, salt deposition in the Zechstein and in the Triassic, burial and sediment accumulation, compression and inversion during the Cretaceous accompanied by continuous salt movement. Placing an Eavor Loop inside a relatively thin package of stable rocks that would support the open hole laterals during their anticipated more than 30 years of working life, requires good knowledge of those rock properties. Furthermore, the structural model needs to be as good as possible to guide the directional drilling of the Loops. To exactly plan the whole installation and predict the thermal output offered to the heat network, good knowledge of related thermal parameters is essential. The geoscience team of Eavor is presenting what was done by the team to best image and describe the geology surrounding the future Eavor-Loops supporting Enercity to help decarbonize their heat network in Hannover.

Subjects covered are the quest for data, integrating data, understanding the geology, conducting studies to add more information on rock properties, analyse the stress field and the well stability, and to mitigate risks related to confirmed high pore pressures in the area. The team tries to answer the question how many geoscientists it takes to build an Eavor-Loop.