

Challenges When Applying Classic O&G flow Assurance Know-how to Geothermal Thermal Energy Harvesting Systems

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OMV E&P has decade long know-how and experience in assessing and dealing with flow assurance risks in its Oil&Gas water production, treatment, and injection systems. Application of this knowledge for geothermal applications seems obvious and easy to adopt as many analogs in both fields can be found in terms of fluid composition, production conditions and geochemistry. However, a closer look on existing and future geothermal prospects suggests that our usual approach and mitigation and remediation tool-boxes for flow assurance must be extended. Much higher requirement to geothermal asset reliability and lower inherent profitability over long lifetimes poses challenges beyond usual on-shore oil and gas production. Large water volumes from deeper and hotter formation require different modelling tools and verification for designing flow assurance concepts for lowest long-term total cost of ownership.

This presentation discusses the underlying needs and OMVs approach for on-site testing on live geothermal fluids with the aim to develop and test products and programs, making geothermal thermal energy production systems fail-safe. Our years of hand-on experience of bringing experimental set-ups from the lab to our Oil&Gas production system will help us to test novel sensors and programs for flow assurance control under field conditions for OMVs future geothermal production systems.