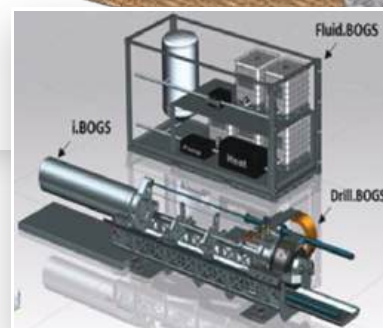


### OptiDrill Project Consortium



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# OptiDrill

Realtime Drilling Advisory System

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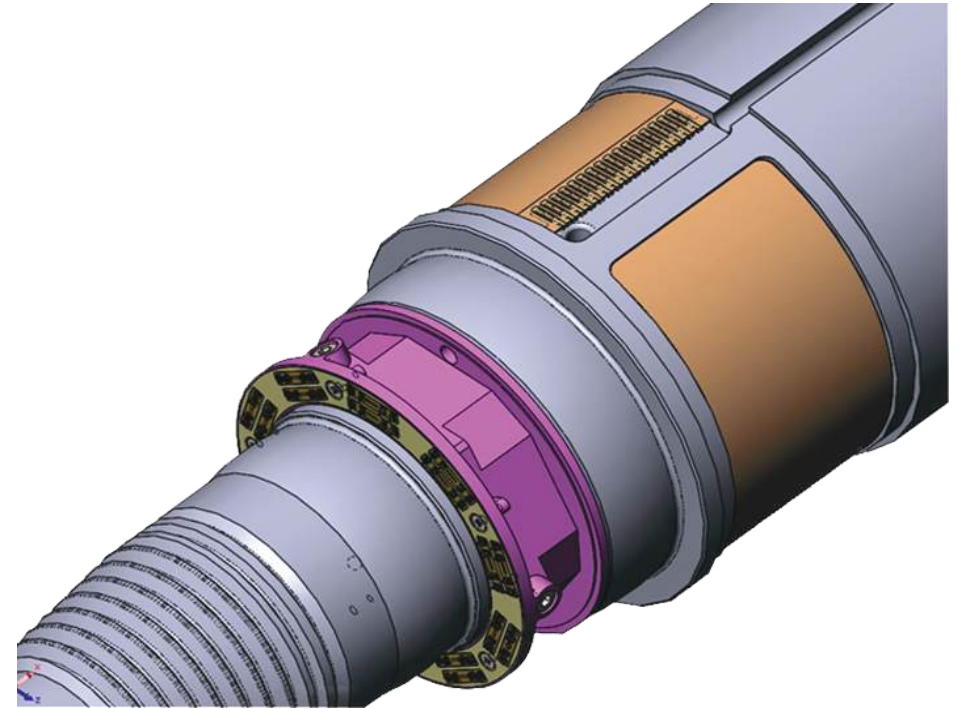
## Realtime Drilling Advisory System

OptiDrill project is developing a real-time drilling advisory system for optimising the geothermal drilling operation utilising novel sensors and Machine Learning (ML) methods.



### Features

- OptiDrill advisory system uses novel BHA drill string sensors.
- Drill string MWD and LWD drilling simulators' sensors and monitoring systems.
- OptiDrill unified data acquisition platform for multiple monitoring systems.
- Monitoring system for real-time data from drill rig and sensor string.
- Data logger control box streams data via USB to the PC and is displayed via custom software.
- Unified data acquisition platform integrated into the drilling simulator built on top of monitoring systems control unit.
- Well, drilling, stimulation and completion database.
- Real-time lithology prediction machine learning model based on drilling process parameters.
- Drilling problem detection and prediction machine learning model.



### Benefits

- Digitalisation of the manual drilling data and text based reports through NPL deep learning methods.
- Predicts and trigger detection of drilling problems through data-driven statistical and machine learning methods.
- Real-time lithology prediction of the formation.
- Optimisation for What-if scenarios when data is not available.
- Evaluate existing drilling performance.
- Advice on improving ROP by maximising drilling efficiency.