

## Magnetic Multishot Survey Tool



Magnetic Multishot Survey Tool (MMT) successfully run in Larderello geothermal field for four years, proving its reliability and delivering optimal results.

### Background

Larderello geothermal field is considered to have been produced by a granite intrusion at 4-9 km depth about 4000 years ago. Regarded as the world's first industrial geothermal energy source dating from 1904, temperatures reach 350° Celsius between 2000-3500m depth.

### Challenge

The objective was to take borehole surveys in the hot downhole environment to control the well trajectory where the standard LWD cannot be used. The MMT was run inside its thermal shield as a 'drop survey' on slickline.

### Summary

Surveys were taken to control the well trajectory and the MMT has always been deployed with slickline.

- Inclination range: 0° to 39°
- Max depth: 3876m MD
- Maximum time in hole to take the survey: 1.5 hours
- The MMT has also been used for whipstock and mud motor orientation (UBHO in the string) in deviated wells using gravity toolface as reference.

### Results

- Successful surveys were obtained.
- The client was satisfied with the data acquisition.
- Thanks to the enhanced rugged oilfield design, the MMT has proven its reliability over the years with minimum maintenance required.

