

PRESS RELEASE

Lavey-Morcles, 26 September 2022

AGEPP: Lavey geothermal development reaches depth of 2,956m but water flowrate falls short of expectations

The drilling operation in Lavey-les-Bains has ended. Despite the hard crystalline rock and the instability in the wall of the hole, the 3,000-metre-deep shaft was dug without incident or causing seismic activity. The temperatures sampled at the bottom of the borehole significantly exceeded forecasts. Contrary to expectations, however, the drilling operation has not produced a sufficiently powerful water flowrate to generate electricity. The Lavey-Morcles water-source geothermal project has therefore been placed on hold.

The AGEPP Lavey-Morcles deep geothermal project was designed to extract water at a temperature of 110°C with the aim of supplying power to 900 households and heat to the Lavey natural spa.

Technical hurdles successfully overcome

Drilling began on 26 January this year and ended on 17 September, and took place in several stages of vertical drilling, followed by drilling at an angle – a practice known as directional drilling. The resulting borehole, measuring 3,220 metres, represented a depth of 2,956 metres.

The whole operation symbolised a huge technical challenge because the rock – quartz-rich gneiss that despite its hardness is at times unstable – considerably slowed the advancement of drilling. In addition, the seismicity monitoring network, set up jointly by the Swiss Seismological Office and the project's seismologists, did not record the slightest seismic activity stemming specifically from the operation within its vicinity.

Technically speaking, the drilling operation was a success. The project proved the feasibility of directional drilling into hard crystalline rock, despite the risk of instability in the shaft.

The particularly high temperatures obtained for the depths reached confirmed the existence of deep hydrothermal fluids. The data gathered during the drilling will enhance knowledge of subsoil typology in mountainous regions, which will be extremely valuable for similar projects in the future.

Insufficient water flowrate

Despite the potentially productive fractures found, the borehole does not currently produce enough hot water to generate electricity or be used for other purposes. The borehole is not operable as things stand, and the project has been placed on hold. The site has been fully secured.

AGEPP working with geologists will be analysing the data collected in detail to understand the reasons behind the low yield and explore various avenues for using the geothermal energy obtainable from the borehole.

The drilling rig will be dismantled shortly and transferred to the next drilling site in Vinzel (Vaud canton). As promised, AGEPP will rehabilitate the site in due course.

AGEPP SA (*Alpine Geothermal Power Production*)

AGEPP SA was founded on 12 June 2017 to develop water-source geothermal resources in the Lavey-les-Bains area. Its shareholders, from the public and private sectors, are SI-REN SA, Holdigaz SA, EOS Holding SA, Romande Energie Holding SA and CESLA SA, and the municipalities of Lavey-Morcles (Vaud) and Saint-Maurice (Valais).

For more information, visit www.agepp.ch

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