Hephae Technology Enables Drilling of World's Hottest Next-Generation Geothermal Well

Pandora210® reaches 210°C circulating temperature in the field, demonstrating directional drilling capability as geothermal pushes toward hotter, deeper targets

HOUSTON, TX, UNITED STATES, September 16, 2026 /EINPresswire.com/ -- Hephae Energy Technology Corp. ("Hephae"), a developer of ultra-high temperature drilling technologies for next-generation geothermal energy, today announced a major field milestone for its Pandora210® Measurement-While-Drilling (MWD) system. The technology successfully operated at circulating temperatures of 210°C (410°F) while enabling the drilling of the hottest next-generation geothermal well globally to date.

MWD Systems are critical for the precise placement of next-generation geothermal wells miles beneath the surface of the earth. This achievement represents a step-change in performance over existing systems available from the oil and gas drilling industry. The availability of this technology removes a major hurdle as the industry pushes deeper into superhot rock, targeting resources above 374°C (705°F), where water can reach supercritical conditions.

"Superhot rock changes the economics of geothermal, but only if we have the drilling technology capable of reliably reaching it," said Steve Krase, CEO of Hephae Energy Technology. "This milestone demonstrates what is possible when drilling innovation, operational execution, and high temperature technology come together to drive down costs."

Designed specifically for the extreme downhole conditions of superhot geothermal, Hephae's proprietary Pandora210® technology is engineered to protect critical electronics and sensors from both accelerated degradation at high temperatures and the excessive shock and vibration associated with drilling the hard crystalline rock targeted by many superhot rock projects. By providing reliable directional measurements and drilling data in these demanding environments, Pandora210® helps reduce tool failures that can result in trips out of hole, temperature staging, and costly drilling delays.

"Chillers, low heat coefficient coatings, insulated pipe and diverter subs are all expensive rental items," said Tony Pink of Pink Granite Consulting. "Geothermal operators want to build the most cost-effective high temperature drilling system, and running high temperature tools can reduce costs in operational time and across the overall drilling system."

Pandora210® is the first product in a broader toolbox of drilling, measurement, completions, production, and intervention. The company's technology roadmap is focused on progressively extending reliable drilling capabilities to improve project economics.

John Clegg, CTO of Hephae Energy Technology states that "drilling at higher temperatures can unlock greater energy production per well, reducing drilling costs per megawatt and ultimately lowering the levelized cost of electricity. Reaching superhot rock resources will depend on drilling technologies capable of performing reliably in these extreme shock, vibration, and high temperature environments."

"Hotter is better, but only if you can reliably drill it," added Krase. "The progress being demonstrated shows how quickly this industry is moving. Our role is to make sure drilling technology keeps pace."

About Hephae Energy Technology
Hephae Energy Technology is a next-generation geothermal technology company developing ultra-high temperature robotics, including drilling systems that enable the precise wellbore placement required by the industry. By overcoming the temperature and reliability limits of conventional drilling tools, Hephae is unlocking access to deeper and hotter rock to support the future of firm, sustainable energy.

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