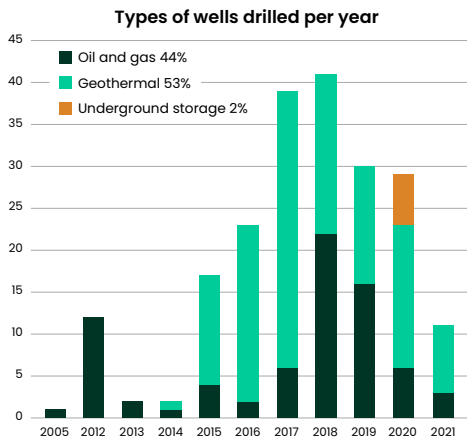


# Baker Hughes leads geothermal operations in Turkey

## Primed for significant growth in the next decade

Turkey is one of the largest geothermal electricity producers in the world. In 2019, Turkey ranked fourth in installed geothermal power with 1347 megawatts (MW). By 2020, that number had increased to 2000 MW. As the oil and gas industry transitions energy forward to more renewable, environmentally friendly sources of power, Baker Hughes stands proudly with the geothermal operators in Turkey. With 40 years of geothermal experience and field-proven technology,



we have established Baker Hughes as the geothermal industry's premier provider of wellbore construction services and strive to redefine the possibilities in the geothermal market.

### Efficient operations deliver predictable performance

- Difficult rock formations (quartz-schist and mica-schist beds)
- High temperatures (circulating temperature of 150°C (302°F) and static temperatures of 225 to 294°C (437 to 561°F))
- Harsh well conditions (high vibrations with formation pressures ranging from 172 to 275 MPa (25,000 to 40,000 psi))

All of these circumstances increase risk and potentially send costs spiraling out of control.

Our dedicated geothermal team draws on over 40 years of expertise to help our customers evaluate their reservoirs and choose the right technology for each well across the

## 14,793 ft

Deepest geothermal well drilled in Turkey

## 300°C

at 11,896 ft is the hottest geothermal well drilled in Turkey

## 12,073 ft in 36 days

Fastest interval drilled

project lifecycle—from exploration and planning to drilling, production, and heat utilization—to deliver safe, renewable geothermal energy.

Our team is nothing without the advanced technology engineered specifically to overcome the unique challenges associated with geothermal energy. Our portfolio of time- and application- tested products—from drill bits to rotary steerable systems—are designed especially for high-temperature, harsh conditions. The Navi-Drill™ X-treme™ Series motors withstand the toughest drilling conditions, maximize rates of penetration (ROP), and offer performance unattainable with conventional motors. The AutoTrak™ rotary steerable drilling system efficiently drills a high-quality wellbore and places it in the most productive zone—consistently and with confidence. Our Vulcanix™ geothermal tricone drill bits, featuring the patented metal-face seal with high-temperature elastomer components specifically designed for continuous drilling up to 400°F (204°C), reduce bit trips by staying in-hole longer to improve drilling economics.

### Proven results with milestone accomplishments in Turkey

Since 2011, Baker Hughes has partnered with 14 geothermal operators to drill 129 high-temperature geothermal wells in established fields, totaling over 2.3 million m (7.5 million ft). The first drilling service company to deploy rotary steerable system (RSS) technology in the country, Baker Hughes has completed 984 runs in 314 sections with 65,000 circulating hours,

all with no recordable health, safety and environmental (HSE) incidents.

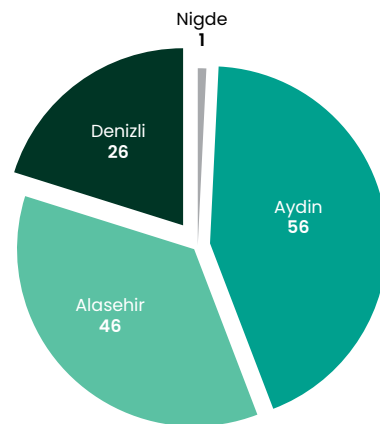
Among the highlights of our ten-year investment in the Turkish geothermal market is in the Alasehir region. Using only using one Navi-Drill X-treme extreme high-performance drilling motor, we drilled 901 m (2,956 ft) and completed the 17 ½-in. section with 256 circulation hours.



In Nigde, Baker Hughes drilled from a starting depth of 600 m (1,968 ft) to a total depth of 3626 m (11,896 ft) in the hottest geothermal well in the country, with a static temperature of 294°C (561°F).

Together with our customer in Halilbeyli, Baker Hughes set the new depth record for geothermal wells in Turkey, reaching 509 m (1,669 ft). We currently hold the record for geothermal wells by drilling 3680 m (12,073 ft) in 36 days with drill bits and drilling services combined.

By bringing the most advanced technology in the market backed with decades of field experience to Turkey, Baker Hughes delivers improved drilling efficiency, exact wellbore placement, reduced development costs, and extended well life.



Distribution of operations per geothermal field