

## CASE HISTORY

# MagTraC MWD RANGING™ WORKS FLAWLESSLY TO DRILL TO TARGET RESERVOIR

### APPLICATION

Wellbore Intercept and  
Close Proximity Drilling

### TECHNOLOGY

MagTraC MWD Ranging™,  
gyroMWD, and  
Continuous Btotal™

### LOCATION

Mississippi, USA

### CUSTOMER CHALLENGE

Due to a parted 10 3/4" surface casing on an old, depleted 1940s well, it was necessary to perform a plug and abandon operation. As no azimuth surveys were available, the use of magnetic ranging was required to locate the top of the 5.5" production liner stub at 1,800' TVD, and then follow the target down to the intercept depth at 4,500' TVD.

### SCIENTIFIC SOLUTION

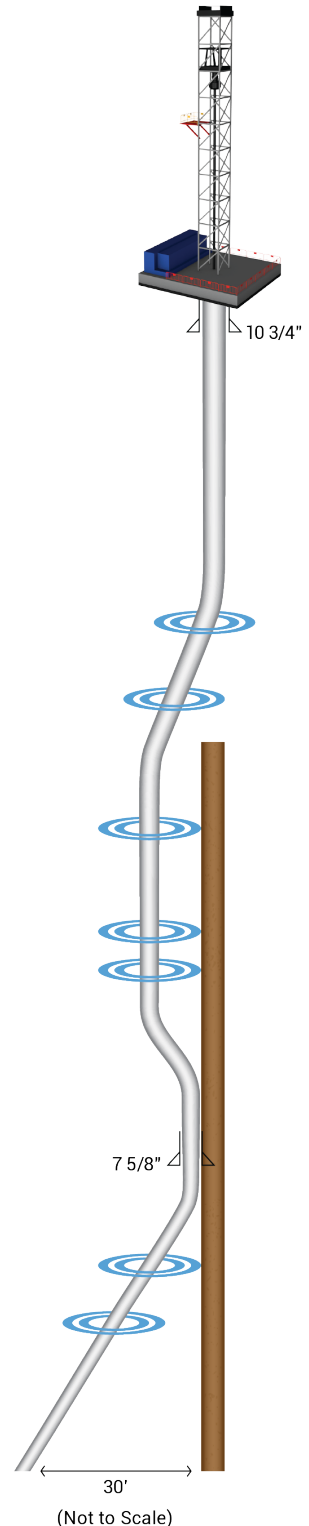
Scientific Drilling drilled the remainder of the wellpath from 3,350' MD towards the MagTraC ranged locations of the target well. With further MagTraC Ranging, SDI successfully twinned the target well down to the planned intercept near 4,500' TVD.

### CUSTOMER VALUE

Scientific Drilling's gyroMWD with Continuous Btotal™ measurements allows more efficient monitoring and ranging to offset wells. This enables continuous monitoring of magnetic interference while drilling ahead without stopping for additional surveys between connections. As the Continuous Btotal measurement also identifies the exact location of the offset collars/poles, more appropriate intervals can be selected for the MagTraC MWD Ranging process, resulting in higher accuracy and increased efficiency.

### TESTIMONIAL

Scientific Drilling's MagTraC system worked flawlessly and really kept us out of a bind. The project entailed a 1940s well with production casing cut and pulled from ~1500' and no plugging records. Several attempts to re-enter the production casing with a workover rig failed, which led us to the idea of plugging the existing well and drilling a new well. This entailed using a drilling rig to "twin" the existing well down to below the USDW (Underground Source of Drinking Water). After setting 7 5/8" casing alongside the existing well, we were successful in perforating into the old 7" casing at two specific depths and completing a suicide squeeze through the old wellbore. We then drilled through the shoe of the new 7 5/8" casing string, kicked away from the now P&A'd well, and drilled to our target reservoir to be completed as a producer. Denbury has had many similar instances in this particular Mississippi CO2 field, and we will definitely be utilizing Scientific Drilling's services in the future.



- Operations Engineer, Denbury Resources

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