

## CASE HISTORY

# MagTraC MWD RANGING™ INTERCEPTS AND KILLS BLOWOUT WELL

### APPLICATION

Wellbore Intercept / Relief Well

### TECHNOLOGY

MagTraC MWD Ranging™

### LOCATION

Venezuela

### CUSTOMER CHALLENGE

A well being drilled experienced hole problems and ended up with a fish in open hole. Subsequently, the well kicked and ultimately blew out. The plan called to drill a relief well to intercept the blowing well at a depth between 5,000 and 5,475 ft MD. The intercept depth was selected to avoid hitting a charged/invaded zone. MWD Ranging™ would be used to detect and range to the target well using the fish as the source of magnetic interference.

### SCIENTIFIC SOLUTION

MagTraC MWD Ranging™ shots confirmed initial detection of target at 3,751 ft MD. A lost circulation zone was encountered forcing a pull back/sidetrack from the shoe at 1,518 ft MD. Drilling continued to 3,513 ft MD when a second lost circulation temporarily halted drilling. Several successful ranging points were acquired prior to the second lost circulation event.

To eliminate the risk of encountering another lost circulation zone, the sidetrack plan was adjusted to kick the well out approximately 71 ft from the current position and bring it back in line with the target at a deeper depth using the previous ranging data and position projections. This was done and the target well finally intercepted at approximately 5,450 ft MD and the uncontrolled well was successfully killed.

### CUSTOMER VALUE

The MWD Ranging™ service facilitated early detection of the target wellbore and good positional data allowed for detection after the wellbore trajectory was changed to avoid the lower lost circulation zones. The relief well operation was completed in 50 days.

20" surface casing set at 1,505ft MD

Initial target detection at 3,751 ft MD; 46 ft offset

Fish in open hole consisted of 5" DP, 5" HWDP, and BHA to 5,475 ft MD

Two sidetracks required due to lost circulation:  
#1 at 3, 831 ft MD  
#2 at 3,513 ft MD

After 2nd sidetrack, well was kicked out 71 ft to avoid lost circulation zones, then brought back in close proximity to the target to line up for the final intercept

