

## CASE HISTORY

# MagTraC MWD RANGING™ BYPASSES FISH AND RECOVERS WELLBORE

### APPLICATION

Wellbore Intercept  
Fish Bypass

### TECHNOLOGY

MagTraC MWD Ranging™  
and EM gyroMWD

### LOCATION

North Dakota

### CUSTOMER CHALLENGE

Detect the fish and reenter the open hole below the fish so that pipe could be run and the well completed. Only low-accuracy magnetic survey data was available on the original well.

### SCIENTIFIC SOLUTION

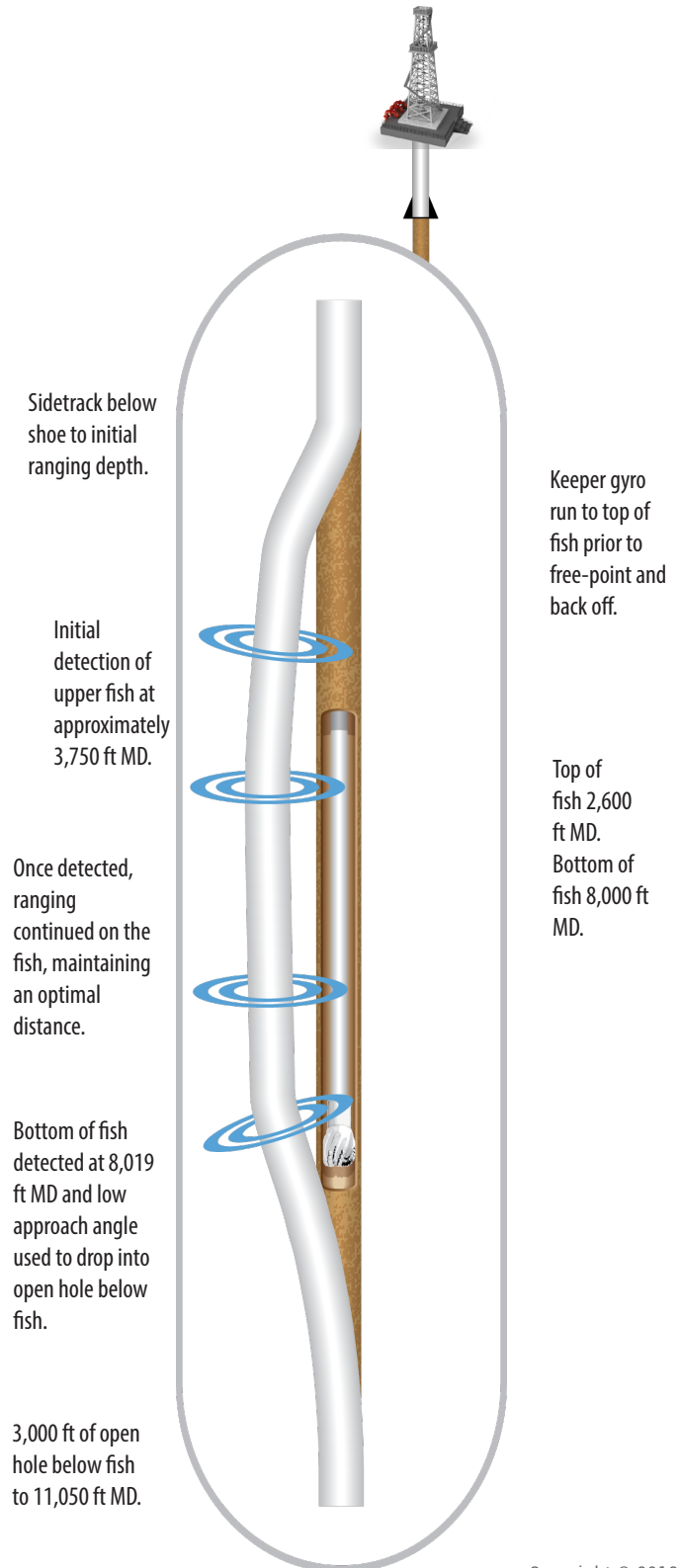
A high-accuracy Keeper gyro survey was run prior to running the free point and back off in order to well define the wellbore position. Using EM gyroMWD and MagTraC, the well was sidetracked just below the shoe until the upper part of the fish was detected at approximately 3,750 ft.

MWD ranging detected the fish (4.5" drill pipe) at approximately 3,750 ft MD. Drilling continued parallel to the fish, for over 4,000 ft closing proximity as the bottom of the fish (bit) neared. Finally tagged up on the fish, working the toolface and continued to drill approximately 4 ft. Repeated torquing up was observed, so the toolface was worked while drilling  $\pm 1$  ft and then drilled into the open hole below the base of the fish (bit). It appeared initially that the fish was tagged. The crew was able to run the casing to bottom (11,000 ft MD).

### CUSTOMER VALUE

The customer recovered a significant portion (cost) of the original wellbore: location, top hole, surface casing, production interval below bottom of fish.

Customer was able to complete the "lost" well. The bypass well drilled significantly smoother (less torque and drag). A positive cost benefit during the production life of the well.



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