

# Capture™ Camera on E-Line

## Case Study - Sidetrack Re-Entry on Ghost Hole/Casing

The operator contacted DHVI after multiple days of milling and getting formation returns on a post fracture treatment operation. The camera was deployed through the 3 ½” tubing from surface down to the area of interest with 3 hole volumes of 12-20 NTU water from nearby source. The video was livestreamed to the client to their smartphones and computers from the remote location.

**Scope of interest:** As the camera reached the area of interest, the extent of the issue becomes apparent. The camera is able to verify that the casing was originally collapsed, and that the client had milled through the collapse into the open hole creating a Ghost Hole on the backside of the casing. The camera exited the casing revealing the extent of the Ghost Hole and with the sideview camera was able to verify the severity of the issue. The camera determined that both casing strings were parted and off to the side creating an alignment issue from the top to the bottom of the well. The client needed to re-enter the lower section to save the well and resume production but needed to find the top off the lower section to attempt.



The 360 rotating sideview camera was able to create a full image of the separation as well the client was able to formulate a plan with the fishing company. It was determined that the upper restriction would be milled out further and that a small spoon would be used to initiate time drilling into the lower section.



Sideview of the casing over the area of interest



Panoramic sideview of the area of interest

The camera was used to verify and identify the progress of the sidetrack into the lower casing with multiple trips and the well was able to be re-entered after 3 days. The damaged area was patched, an isolation packer was utilized to isolate the damaged area and production was resumed within 7-8 days from the initial discovery of the casing failure.

**Conclusions:** The casing failure had occurred due to trapped pressure on the backside of the casing and when the flowback of the well occurred the reduced pressure inside created the perfect conditions to create the internal collapse. The client was not aware of the extent of the collapse and chose traditional methods as recommended by the service company to re-drift the existing wellbore. When milling the client encountered metal shavings and lost circulation thinking that they had gone through the impairment and were charging the open perforations. When they started to see formation returns to surface with the clean out on coil and the depths were not increasing dramatically they realized that they had an issue. With the camera the client was able to verify, formulate a plan with the fishing services, adapt the program and re-enter the wellbore below, saving the well and eliminate the outcome of abandoning the well!