# **Compact<sup>™</sup> Well Shuttle** Logs Well with Severe Washouts in 1 Run, Saves 48 Hours in Rig Time, and Reduces Costs by 75%

### **Objectives**

 Obtain high-quality formation evaluation data from a well with challenging hole conditions. The operator suspected washouts, bridges, and collapsing shales, which would make traditional wireline logging challenging.

### **Our Approach**

- Weatherford deployed several Compact logging tools via a Compact well shuttle (CWS). The CWS transports logging tools inside the drillpipe, which protects the tools from the borehole environment.
- The caliper log identified multiple washouts, bridges, and collapsing shales, which confirmed that the well could not have been logged using traditional wireline.
- To reach total depth, the wireline crew needed to rotate and circulate the Compact tool string while running it into the hole, and circulate again when tripping out. This could not have been accomplished with pipe-conveyed logging tools.
- Despite poor hole conditions, the Compact tools fully logged the well in a single run.
- The Weatherford Petroleum Consulting team identified fractures using the high-quality image logs along with interpretation and processing services.

## Value to Client

- By avoiding an attempt to log the well using traditional wireline and a subsequent wiper trip, the CWS saved the client at least 48 hours of rig time.
- The CWS enabled the operator to log a well with extremely hostile borehole conditions using wireline tools. The only alternative method for logging this well was to deploy logging-while-drilling tools, which are more costly and prone to lost-in-hole risks. By using the CWS instead of LWD tools, the cost of the logging operation was reduced by approximately 75 percent.
- The Compact tools, in combination with interpretation and processing services, provided comprehensive formation evaluation without incurring any nonproductive time.



The caliper log produced by the Compact tools showed multiple zones with washouts greater than 13 in. (33 cm).

LOCATION Diyarbakir, Turkey

WELL TYPE Exploration

FORMATION Shale and carbonate

HOLE SIZE AND ANGLE 6 in., 21°

**TOTAL DEPTH** 10,800 ft (3,292 m)

FLOW RATE 4 B/min (600 L/min)

#### PRODUCTS/SERVICES

- Compact well shuttle
- Compact microimager
  Compact microresistivity
- (MMR/MML) tool
- Compact gamma ray tool
- Compact photodensity tool
  Compact dual neutron tool
- Compact dual neutron tool
   Compact borehole-compensated sonic tool
- Compact focused-electric tool
- RtAP induction enhancement
- Petroleum Consulting
- Interpretation and processing services



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