

# Centerfire™ LWD - Case Study

## The Challenge

A leading directional drilling services provider requested Black Diamond to deliver an LWD solution in a southern Oklahoma well where major oilfield services providers had failed five times in succession.

## The Solution

Black Diamond deployed the Centerfire LWD system which successfully provided resistivity and gamma data in both realtime and recorded mode across the entire lateral section to well TD beyond **28,000 ft MD**.

## The Results

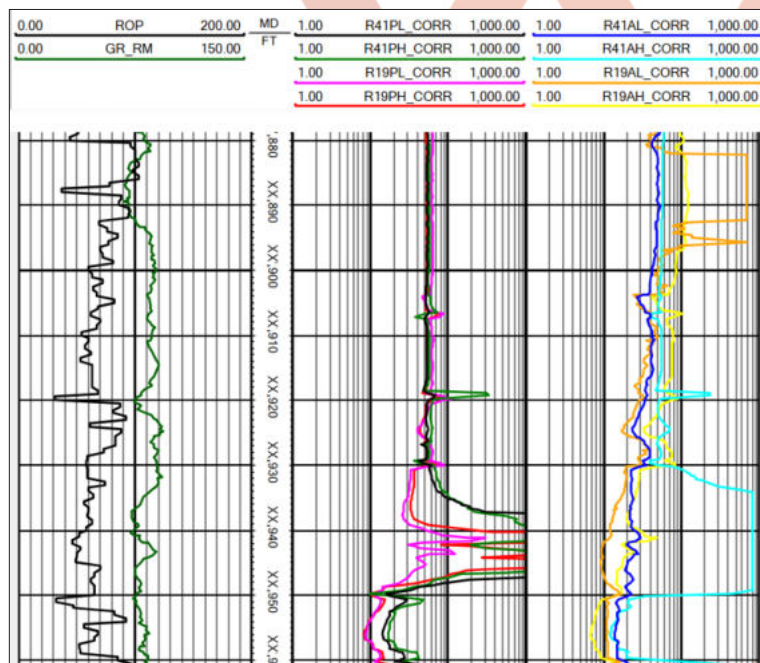
Black Diamond deployed the Centerfire LWD system at short notice providing all required downhole and surface equipment supported by experienced field specialists. The downhole system was pre-assembled in the Black Diamond workshop with the Directional and Gamma Modules below the Centerfire collar to ensure accurate directional data. The innovative pre-assembly of the Centerfire system allows the tool to be lifted to the rigfloor as a single assembly and made to the BHA with minimal rig time impact.

The tool had been configured to transmit 19" 2 MHz & 41" 400 kHz Phase Difference derived Resistivity together fine resolution Gamma measurements. By deploying the market leading Eclipse Touch surface system near perfect detection was achieved throughout the operation.

The curve section had doglegs <20° /100 ft which were believed to have contributed to the five successive failures suffered by major oilfield service providers prior to the deployment of the Centerfire solution. Despite the challenge Centerfire performed flawlessly, providing full logging coverage across the entire lateral section until TD was called due to formation change identified by the system.

The system had been assembled with 3 batteries which, due to the Centerfire's low power requirement, would have allowed for >280 hours of operation.

Operational Data					
Collar Size	Feet	BRT Hrs.	Drilling Hrs.	Circ. Hrs.	Max. Temp
6.75"	2,058	164	95	128	270 °F



Black Diamond is a leading provider of energy services, with a team of experts dedicated to delivering the best possible outcomes for our clients. Our product offering includes drill pipe, drilling tools, MWD technology, and accompanying services, and we are committed to ensuring our clients' success in every project we undertake.

Centerfire is the Black Diamond 175 °C LWD offering which is available as 4.75", 6.91" and 8.25". With over 200 collars operated across the globe the system is proven to be the reliable solution which provides market leading measurement quality while maintaining low-cost of operation. The system provides 8 depths of investigation through 19" and 41" antenna spacings with 400 kHz and 2 MHz frequencies of operation.



**LOCATIONS**



**USA**

**BLACK DIAMOND CORPORATE**

15425 N. Freeway, Suite 350  
Houston, Texas 77090  
1.281.443.0062

**BLACK DIAMOND BROUSSARD**

1173 Old Spanish Trail, Hwy 182 N  
Broussard, LA 70518  
1.337.359.1994

**BLACK DIAMOND CONROE**

4205 FM 1485  
Conroe, TX 77306  
1.936.441.1480

**BLACK DIAMOND MWD**

2418 N Frazier Street #100  
Conroe, Texas 77303

**BLACK DIAMOND WEST TEXAS**

3510 N. County Rd 1148  
Midland, TX 79705  
1.432.689.0076

**CANADA**

**BLACK DIAMOND EDMONTON**

Wenzel Downhole Tools  
3115 – 93 Street NW  
Edmonton, AB T6N 1L7  
1.780.440.4220

**GUYANA**

**BLACK DIAMOND GEORGETOWN**

Plantation "A"  
Houston District  
East Bank Demerara  
Georgetown, Guyana

**MEXICO**

**BLACK DIAMOND VILLAHERMOSA**

Avenida San Lucas Manzana 2 Bodega 3 y 4  
Parque Logistico Industrial Tabasco  
Rancheria Anacleto Canabal 4ta. Seccion.  
Centrol, Tabasco C.P. 86287  
+52 993 688 8579

**BLACK DIAMOND TAMPICO**

Carretera federal 20 de Noviembre km 18.7  
Congregacion Anahuac  
Pueblo Viejo, Ver., C.P. 92035  
+52 993 688 8579

**MIDDLE EAST**

**BLACK DIAMOND ABU DHABI**

Wenzel Downhole Tools  
Al Markaz Industrial Area  
Waha Land, LT01 B25-32  
Abu Dhabi, U.A.E.  
+971 2 585 2800