

Sperry-Sun Drilling Services

Survey Report for NV ABO Unit #278 - SSDS MWD

Data Source: Actual Field Surveys



Mobil Exploration
Vacuum Field (PA/WC)

Lea County
Sec. 23-T17S-R34E

| Measured Depth (ft) | Incl. | Azim. | Vertical Depth (ft) | Northings (ft) | Eastings (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---------------------------|--------|---------|---------------------------|-------------------|------------------|-----------------------------|-----------------------------|
| 9736.00 | 89.300 | 227.401 | 8627.14 | 908.57 S | 813.78 W | 1219.73 | 1.845 |
| 9769.00 | 88.640 | 227.701 | 8627.73 | 930.84 S | 838.13 W | 1252.57 | 2.197 |

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB. Northings and Eastings are relative to 500' FSL & 650' FWL.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section is from 500' FSL & 650' FWL and calculated along an Azimuth of 222.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 9769.00ft.,
The Bottom Hole Displacement is 1252.57ft., in the Direction of 222.000° (True).

Casing details

| From | | To | | Casing Detail |
|---------------------------|---------------------------|---------------------------|---------------------------|----------------|
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | |
| <Surface> | <Surface> | 415.00 | 415.00 | 13 3/8" Casing |
| <Surface> | <Surface> | 5000.00 | 4999.89 | 8 5/8" Casing |
| 4190.00 | 4189.91 | 9769.00 | 8627.73 | 5 1/2" Casing |

Survey tool program

| From | | To | | Survey Tool Description |
|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | |
| 0.00 | 0.00 | 9769.00 | 8627.73 | Northseek Gyro |