



Lea County, NM (NAD 83 NME)

Ares 4 State #501H

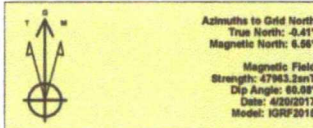
Plan #0.1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level

WELL DETAILS: #501H

Ground Level: 3583.00  
KB = 25' @ 3609.00usft  
Northing: 451993.00 Easting: 777413.00 Longitude: 103.56976184



To convert a Magnetic Direction to a Grid Direction, Add 6.64°  
To convert a Magnetic Direction to a True Direction, Add 6.67° East  
To convert a True Direction to a Grid Direction, Subtract 0.41°

SECTION DETAILS

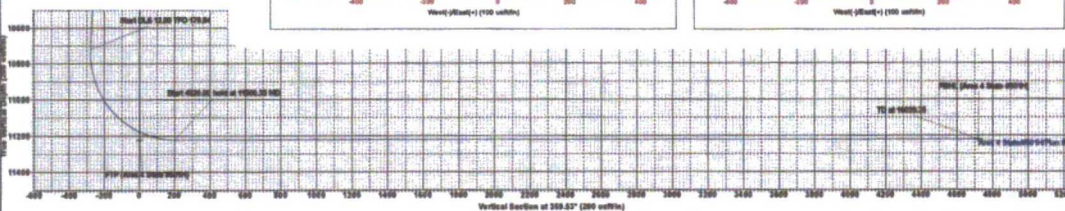
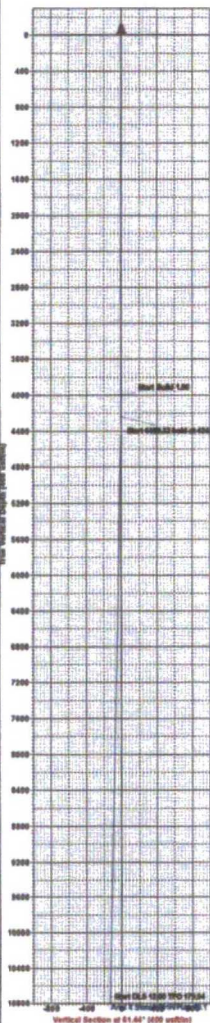
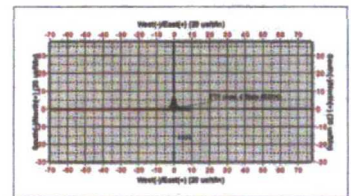
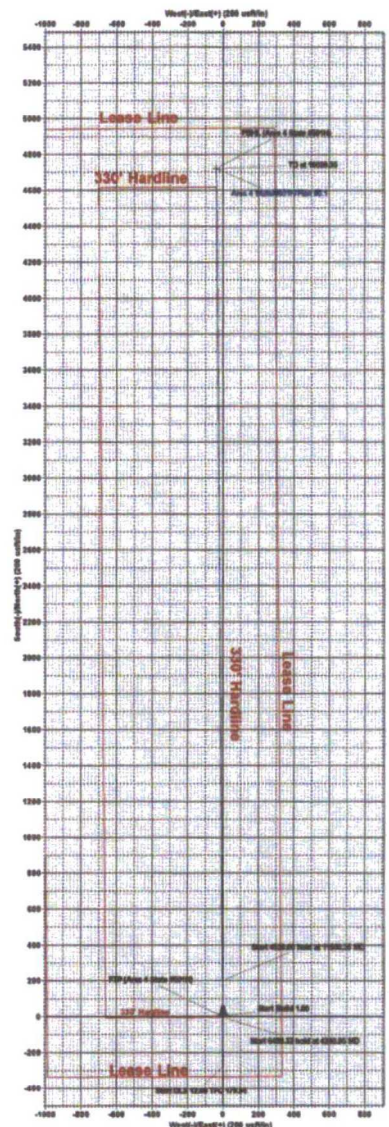
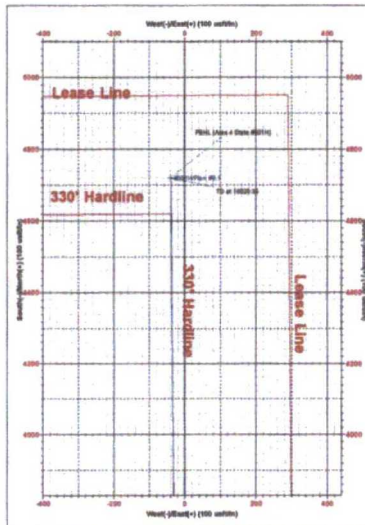
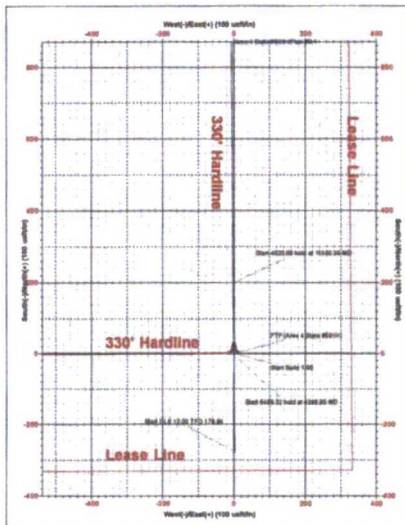
| Sec | MD       | Inc   | Adj    | TVD      | +W-S    | +E-W   | Dleg  | TFace  | VFace   | Target | Annotation                |
|-----|----------|-------|--------|----------|---------|--------|-------|--------|---------|--------|---------------------------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00     | 0.00    | 0.00   | 0.00  | 0.00   | 0.00    |        |                           |
| 2   | 4000.00  | 0.00  | 0.00   | 4000.00  | 0.00    | 0.00   | 0.00  | 0.00   | 0.00    |        |                           |
| 3   | 4240.98  | 2.41  | 179.89 | 4240.98  | -0.07   | 0.04   | 1.00  | 179.89 | -0.07   |        |                           |
| 4   | 10725.27 | 2.41  | 179.89 | 10724.46 | -277.87 | 2.01   | 0.00  | 0.00   | -277.88 |        |                           |
| 5   | 11590.35 | 90.00 | 359.83 | 11222.00 | 199.15  | -1.92  | 12.00 | 179.84 | 199.15  |        |                           |
| 6   | 16020.35 | 90.00 | 359.83 | 11222.00 | 4719.00 | -39.00 | 0.00  | 0.00   | 4719.16 |        | PBHL (Ares 4 State #501H) |

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name                      | TVD      | +W-S    | +E-W   | Northing  | Easting   |
|---------------------------|----------|---------|--------|-----------|-----------|
| PBHL (Ares 4 State #501H) | 11222.00 | 4719.00 | -39.00 | 456713.00 | 777374.00 |
| FTP (Ares 4 State #501H)  | 11222.00 | 0.00    | 0.00   | 451993.00 | 777413.00 |





## **EOG Resources - Midland**

**Lea County, NM (NAD 83 NME)**

**Ares 4 State**

**#501H**

**OH**

**Plan: Plan #0.1**

## **Standard Planning Report**

**20 April, 2017**



# EOG Resources, Inc.

## Planning Report

Database: EDM 5000.1 Single User Db  
Company: EOG Resources - Midland  
Project: Lea County, NM (NAD 83 NME)  
Site: Ares 4 State  
Well: #501H  
Wellbore: OH  
Design: Plan #0.1

Local Co-ordinate Reference: Well #501H  
TVD Reference: KB = 25' @ 3608.00usft  
MD Reference: KB = 25' @ 3608.00usft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

**Project** Lea County, NM (NAD 83 NME)

**Map System:** US State Plane 1983 **System Datum:** Mean Sea Level  
**Geo Datum:** North American Datum 1983  
**Map Zone:** New Mexico Eastern Zone

**Site** Ares 4 State

**Site Position:** Northing: 451,993.00 usft Latitude: 32.24029765  
**From:** Map Easting: 777,413.00 usft Longitude: -103.56978184  
**Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16" Grid Convergence: 0.41°

**Well** #501H

**Well Position** +N/-S 0.00 usft Northing: 451,993.00 usft Latitude: 32.24029765  
+E/-W 0.00 usft Easting: 777,413.00 usft Longitude: -103.56978184  
**Position Uncertainty** 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 3,583.00 usft

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|-----------|------------|-------------|--------------------|------------------|------------------------|
|           | IGRF2015   | 4/20/2017   | 6.97               | 60.08            | 47,963                 |

**Design** Plan #0.1

**Audit Notes:**  
**Version:** Phase: PLAN Tie On Depth: 0.00  
**Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction  
(usft) (usft) (usft) (°)  
0.00 0.00 0.00 359.53

**Plan Sections**

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) | TFO<br>(°) | Target               |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|------------------------------|-----------------------------|------------|----------------------|
| 0.00                        | 0.00               | 0.00           | 0.00                        | 0.00            | 0.00            | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 4,000.00                    | 0.00               | 0.00           | 4,000.00                    | 0.00            | 0.00            | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 4,240.95                    | 2.41               | 179.59         | 4,240.88                    | -5.07           | 0.04            | 1.00                          | 1.00                         | 0.00                        | 179.59     |                      |
| 10,730.27                   | 2.41               | 179.59         | 10,724.46                   | -277.87         | 2.01            | 0.00                          | 0.00                         | 0.00                        | 0.00       |                      |
| 11,500.35                   | 90.00              | 359.53         | 11,222.00                   | 199.15          | -1.92           | 12.00                         | 11.37                        | 23.37                       | 179.94     |                      |
| 16,020.35                   | 90.00              | 359.53         | 11,222.00                   | 4,719.00        | -39.00          | 0.00                          | 0.00                         | 0.00                        | 0.00       | PBHL (Ares 4 State # |



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 Well: #501H  
 Wellbore: OH  
 Design: Plan #0.1

Local Co-ordinate Reference: Well #501H  
 TVD Reference: KB = 25' @ 3608.00usft  
 MD Reference: KB = 25' @ 3608.00usft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 100.00                | 0.00            | 0.00        | 100.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 200.00                | 0.00            | 0.00        | 200.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 300.00                | 0.00            | 0.00        | 300.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 400.00                | 0.00            | 0.00        | 400.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 500.00                | 0.00            | 0.00        | 500.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 600.00                | 0.00            | 0.00        | 600.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 700.00                | 0.00            | 0.00        | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 800.00                | 0.00            | 0.00        | 800.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 900.00                | 0.00            | 0.00        | 900.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.00        | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00              | 0.00            | 0.00        | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00              | 0.00            | 0.00        | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.00        | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.00        | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.00        | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 0.00            | 0.00        | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 0.00            | 0.00        | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00              | 0.00            | 0.00        | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 0.00            | 0.00        | 2,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00              | 0.00            | 0.00        | 2,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00              | 0.00            | 0.00        | 2,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00              | 0.00            | 0.00        | 2,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 0.00            | 0.00        | 2,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 0.00            | 0.00        | 2,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 0.00            | 0.00        | 2,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 0.00            | 0.00        | 2,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 0.00            | 0.00        | 2,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 0.00            | 0.00        | 3,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 0.00            | 0.00        | 3,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 0.00            | 0.00        | 3,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 0.00            | 0.00        | 3,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 0.00            | 0.00        | 3,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 0.00            | 0.00        | 3,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 0.00            | 0.00        | 3,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 0.00            | 0.00        | 3,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 0.00            | 0.00        | 3,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 0.00            | 0.00        | 3,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 0.00            | 0.00        | 4,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 1.00            | 179.59      | 4,100.00              | -0.87        | 0.01         | -0.87                   | 1.00                    | 1.00                   | 0.00                  |
| 4,200.00              | 2.00            | 179.59      | 4,199.96              | -3.49        | 0.03         | -3.49                   | 1.00                    | 1.00                   | 0.00                  |
| 4,240.95              | 2.41            | 179.59      | 4,240.88              | -5.07        | 0.04         | -5.07                   | 1.00                    | 1.00                   | 0.00                  |
| 4,300.00              | 2.41            | 179.59      | 4,299.88              | -7.55        | 0.05         | -7.55                   | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00              | 2.41            | 179.59      | 4,399.79              | -11.75       | 0.09         | -11.75                  | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00              | 2.41            | 179.59      | 4,499.70              | -15.96       | 0.12         | -15.96                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00              | 2.41            | 179.59      | 4,599.61              | -20.16       | 0.15         | -20.16                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00              | 2.41            | 179.59      | 4,699.52              | -24.36       | 0.18         | -24.36                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00              | 2.41            | 179.59      | 4,799.43              | -28.57       | 0.21         | -28.57                  | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00              | 2.41            | 179.59      | 4,899.35              | -32.77       | 0.24         | -32.77                  | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00              | 2.41            | 179.59      | 4,999.26              | -36.98       | 0.27         | -36.98                  | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00              | 2.41            | 179.59      | 5,099.17              | -41.18       | 0.30         | -41.18                  | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00              | 2.41            | 179.59      | 5,199.08              | -45.38       | 0.33         | -45.38                  | 0.00                    | 0.00                   | 0.00                  |



# EOG Resources, Inc. Planning Report

Database: EDM 5000.1 Single User Db  
Company: EOG Resources - Midland  
Project: Lea County, NM (NAD 83 NME)  
Site: Ares 4 State  
Well: #501H  
Wellbore: OH  
Design: Plan #0.1

Local Co-ordinate Reference: Well #501H  
TVD Reference: KB = 25' @ 3608.00usft  
MD Reference: KB = 25' @ 3608.00usft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,300.00              | 2.41            | 179.59      | 5,298.99              | -49.59       | 0.36         | -49.59                  | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00              | 2.41            | 179.59      | 5,398.90              | -53.79       | 0.39         | -53.79                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00              | 2.41            | 179.59      | 5,498.82              | -58.00       | 0.42         | -58.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00              | 2.41            | 179.59      | 5,598.73              | -62.20       | 0.45         | -62.20                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00              | 2.41            | 179.59      | 5,698.64              | -66.40       | 0.48         | -66.41                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00              | 2.41            | 179.59      | 5,798.55              | -70.61       | 0.51         | -70.61                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00              | 2.41            | 179.59      | 5,898.46              | -74.81       | 0.54         | -74.81                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00              | 2.41            | 179.59      | 5,998.37              | -79.02       | 0.57         | -79.02                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00              | 2.41            | 179.59      | 6,098.29              | -83.22       | 0.60         | -83.22                  | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00              | 2.41            | 179.59      | 6,198.20              | -87.42       | 0.63         | -87.43                  | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00              | 2.41            | 179.59      | 6,298.11              | -91.63       | 0.66         | -91.63                  | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00              | 2.41            | 179.59      | 6,398.02              | -95.83       | 0.69         | -95.83                  | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00              | 2.41            | 179.59      | 6,497.93              | -100.04      | 0.72         | -100.04                 | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00              | 2.41            | 179.59      | 6,597.84              | -104.24      | 0.75         | -104.24                 | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00              | 2.41            | 179.59      | 6,697.76              | -108.44      | 0.78         | -108.45                 | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00              | 2.41            | 179.59      | 6,797.67              | -112.65      | 0.82         | -112.65                 | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00              | 2.41            | 179.59      | 6,897.58              | -116.85      | 0.85         | -116.85                 | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00              | 2.41            | 179.59      | 6,997.49              | -121.06      | 0.88         | -121.06                 | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00              | 2.41            | 179.59      | 7,097.40              | -125.26      | 0.91         | -125.26                 | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00              | 2.41            | 179.59      | 7,197.31              | -129.46      | 0.94         | -129.47                 | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00              | 2.41            | 179.59      | 7,297.22              | -133.67      | 0.97         | -133.67                 | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00              | 2.41            | 179.59      | 7,397.14              | -137.87      | 1.00         | -137.87                 | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00              | 2.41            | 179.59      | 7,497.05              | -142.07      | 1.03         | -142.08                 | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00              | 2.41            | 179.59      | 7,596.96              | -146.28      | 1.06         | -146.28                 | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00              | 2.41            | 179.59      | 7,696.87              | -150.48      | 1.09         | -150.49                 | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00              | 2.41            | 179.59      | 7,796.78              | -154.69      | 1.12         | -154.69                 | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00              | 2.41            | 179.59      | 7,896.69              | -158.89      | 1.15         | -158.89                 | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00              | 2.41            | 179.59      | 7,996.61              | -163.09      | 1.18         | -163.10                 | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00              | 2.41            | 179.59      | 8,096.52              | -167.30      | 1.21         | -167.30                 | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00              | 2.41            | 179.59      | 8,196.43              | -171.50      | 1.24         | -171.51                 | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00              | 2.41            | 179.59      | 8,296.34              | -175.71      | 1.27         | -175.71                 | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00              | 2.41            | 179.59      | 8,396.25              | -179.91      | 1.30         | -179.92                 | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00              | 2.41            | 179.59      | 8,496.16              | -184.11      | 1.33         | -184.12                 | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00              | 2.41            | 179.59      | 8,596.08              | -188.32      | 1.36         | -188.32                 | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00              | 2.41            | 179.59      | 8,695.99              | -192.52      | 1.39         | -192.53                 | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00              | 2.41            | 179.59      | 8,795.90              | -196.73      | 1.42         | -196.73                 | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00              | 2.41            | 179.59      | 8,895.81              | -200.93      | 1.45         | -200.94                 | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00              | 2.41            | 179.59      | 8,995.72              | -205.13      | 1.48         | -205.14                 | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00              | 2.41            | 179.59      | 9,095.63              | -209.34      | 1.51         | -209.34                 | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00              | 2.41            | 179.59      | 9,195.54              | -213.54      | 1.55         | -213.55                 | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00              | 2.41            | 179.59      | 9,295.46              | -217.75      | 1.58         | -217.75                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00              | 2.41            | 179.59      | 9,395.37              | -221.95      | 1.61         | -221.96                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00              | 2.41            | 179.59      | 9,495.28              | -226.15      | 1.64         | -226.16                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00              | 2.41            | 179.59      | 9,595.19              | -230.36      | 1.67         | -230.36                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00              | 2.41            | 179.59      | 9,695.10              | -234.56      | 1.70         | -234.57                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.00              | 2.41            | 179.59      | 9,795.01              | -238.77      | 1.73         | -238.77                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00              | 2.41            | 179.59      | 9,894.93              | -242.97      | 1.76         | -242.98                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.00             | 2.41            | 179.59      | 9,994.84              | -247.17      | 1.79         | -247.18                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.00             | 2.41            | 179.59      | 10,094.75             | -251.38      | 1.82         | -251.38                 | 0.00                    | 0.00                   | 0.00                  |
| 10,200.00             | 2.41            | 179.59      | 10,194.66             | -255.58      | 1.85         | -255.59                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00             | 2.41            | 179.59      | 10,294.57             | -259.79      | 1.88         | -259.79                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00             | 2.41            | 179.59      | 10,394.48             | -263.99      | 1.91         | -264.00                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00             | 2.41            | 179.59      | 10,494.40             | -268.19      | 1.94         | -268.20                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00             | 2.41            | 179.59      | 10,594.31             | -272.40      | 1.97         | -272.40                 | 0.00                    | 0.00                   | 0.00                  |



# EOG Resources, Inc.

## Planning Report

**Database:** EDM 5000.1 Single User Db  
**Company:** EOG Resources - Midland  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** Ares 4 State  
**Well:** #501H  
**Wellbore:** OH  
**Design:** Plan #0.1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

**Well #501H**  
 KB = 25' @ 3608.00usft  
 KB = 25' @ 3608.00usft  
 Grid  
 Minimum Curvature

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,700.00             | 2.41            | 179.59      | 10,694.22             | -276.60      | 2.00         | -276.61                 | 0.00                    | 0.00                   | 0.00                  |
| 10,730.27             | 2.41            | 179.59      | 10,724.46             | -277.87      | 2.01         | -277.88                 | 0.00                    | 0.00                   | 0.00                  |
| 10,750.00             | 0.04            | 182.71      | 10,744.19             | -278.30      | 2.01         | -278.30                 | 12.00                   | -12.00                 | 15.85                 |
| 10,775.00             | 2.96            | 359.48      | 10,769.18             | -277.66      | 2.01         | -277.67                 | 12.00                   | 11.66                  | 707.09                |
| 10,800.00             | 5.96            | 359.51      | 10,794.10             | -275.72      | 1.99         | -275.72                 | 12.00                   | 12.00                  | 0.09                  |
| 10,825.00             | 8.96            | 359.52      | 10,818.88             | -272.47      | 1.96         | -272.48                 | 12.00                   | 12.00                  | 0.03                  |
| 10,850.00             | 11.96           | 359.52      | 10,843.46             | -267.94      | 1.92         | -267.94                 | 12.00                   | 12.00                  | 0.02                  |
| 10,875.00             | 14.96           | 359.52      | 10,867.77             | -262.12      | 1.88         | -262.12                 | 12.00                   | 12.00                  | 0.01                  |
| 10,900.00             | 17.96           | 359.52      | 10,891.75             | -255.04      | 1.82         | -255.04                 | 12.00                   | 12.00                  | 0.01                  |
| 10,925.00             | 20.96           | 359.52      | 10,915.32             | -246.71      | 1.75         | -246.72                 | 12.00                   | 12.00                  | 0.00                  |
| 10,950.00             | 23.96           | 359.52      | 10,938.42             | -237.16      | 1.67         | -237.17                 | 12.00                   | 12.00                  | 0.00                  |
| 10,975.00             | 26.96           | 359.53      | 10,960.99             | -226.42      | 1.58         | -226.42                 | 12.00                   | 12.00                  | 0.00                  |
| 11,000.00             | 29.96           | 359.53      | 10,982.97             | -214.51      | 1.48         | -214.51                 | 12.00                   | 12.00                  | 0.00                  |
| 11,025.00             | 32.96           | 359.53      | 11,004.29             | -201.46      | 1.37         | -201.46                 | 12.00                   | 12.00                  | 0.00                  |
| 11,050.00             | 35.96           | 359.53      | 11,024.90             | -187.32      | 1.26         | -187.32                 | 12.00                   | 12.00                  | 0.00                  |
| 11,075.00             | 38.96           | 359.53      | 11,044.74             | -172.12      | 1.13         | -172.12                 | 12.00                   | 12.00                  | 0.00                  |
| 11,100.00             | 41.96           | 359.53      | 11,063.76             | -155.90      | 1.00         | -155.90                 | 12.00                   | 12.00                  | 0.00                  |
| 11,125.00             | 44.96           | 359.53      | 11,081.91             | -138.70      | 0.85         | -138.70                 | 12.00                   | 12.00                  | 0.00                  |
| 11,150.00             | 47.96           | 359.53      | 11,099.13             | -120.58      | 0.71         | -120.58                 | 12.00                   | 12.00                  | 0.00                  |
| 11,175.00             | 50.96           | 359.53      | 11,115.38             | -101.59      | 0.55         | -101.59                 | 12.00                   | 12.00                  | 0.00                  |
| 11,200.00             | 53.96           | 359.53      | 11,130.61             | -81.77       | 0.39         | -81.77                  | 12.00                   | 12.00                  | 0.00                  |
| 11,225.00             | 56.96           | 359.53      | 11,144.78             | -61.18       | 0.22         | -61.18                  | 12.00                   | 12.00                  | 0.00                  |
| 11,250.00             | 59.96           | 359.53      | 11,157.86             | -39.87       | 0.04         | -39.87                  | 12.00                   | 12.00                  | 0.00                  |
| 11,275.00             | 62.96           | 359.53      | 11,169.80             | -17.92       | -0.14        | -17.91                  | 12.00                   | 12.00                  | 0.00                  |
| 11,300.00             | 65.96           | 359.53      | 11,180.58             | 4.64         | -0.33        | 4.64                    | 12.00                   | 12.00                  | 0.00                  |
| 11,325.00             | 68.96           | 359.53      | 11,190.16             | 27.72        | -0.52        | 27.73                   | 12.00                   | 12.00                  | 0.00                  |
| 11,350.00             | 71.96           | 359.53      | 11,198.52             | 51.28        | -0.71        | 51.28                   | 12.00                   | 12.00                  | 0.00                  |
| 11,375.00             | 74.96           | 359.53      | 11,205.64             | 75.24        | -0.91        | 75.25                   | 12.00                   | 12.00                  | 0.00                  |
| 11,400.00             | 77.96           | 359.53      | 11,211.49             | 99.54        | -1.11        | 99.55                   | 12.00                   | 12.00                  | 0.00                  |
| 11,425.00             | 80.96           | 359.53      | 11,216.07             | 124.12       | -1.31        | 124.12                  | 12.00                   | 12.00                  | 0.00                  |
| 11,450.00             | 83.96           | 359.53      | 11,219.35             | 148.90       | -1.51        | 148.91                  | 12.00                   | 12.00                  | 0.00                  |
| 11,475.00             | 86.96           | 359.53      | 11,221.33             | 173.82       | -1.71        | 173.82                  | 12.00                   | 12.00                  | 0.00                  |
| 11,500.35             | 90.00           | 359.53      | 11,222.00             | 199.15       | -1.92        | 199.16                  | 12.00                   | 12.00                  | 0.00                  |
| 11,600.00             | 90.00           | 359.53      | 11,222.00             | 298.80       | -2.74        | 298.81                  | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00             | 90.00           | 359.53      | 11,222.00             | 398.80       | -3.56        | 398.81                  | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00             | 90.00           | 359.53      | 11,222.00             | 498.79       | -4.38        | 498.81                  | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00             | 90.00           | 359.53      | 11,222.00             | 598.79       | -5.20        | 598.81                  | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00             | 90.00           | 359.53      | 11,222.00             | 698.79       | -6.02        | 698.81                  | 0.00                    | 0.00                   | 0.00                  |
| 12,100.00             | 90.00           | 359.53      | 11,222.00             | 798.78       | -6.84        | 798.81                  | 0.00                    | 0.00                   | 0.00                  |
| 12,200.00             | 90.00           | 359.53      | 11,222.00             | 898.78       | -7.66        | 898.81                  | 0.00                    | 0.00                   | 0.00                  |
| 12,300.00             | 90.00           | 359.53      | 11,222.00             | 998.78       | -8.48        | 998.81                  | 0.00                    | 0.00                   | 0.00                  |
| 12,400.00             | 90.00           | 359.53      | 11,222.00             | 1,098.77     | -9.30        | 1,098.81                | 0.00                    | 0.00                   | 0.00                  |
| 12,500.00             | 90.00           | 359.53      | 11,222.00             | 1,198.77     | -10.12       | 1,198.81                | 0.00                    | 0.00                   | 0.00                  |
| 12,600.00             | 90.00           | 359.53      | 11,222.00             | 1,298.77     | -10.94       | 1,298.81                | 0.00                    | 0.00                   | 0.00                  |
| 12,700.00             | 90.00           | 359.53      | 11,222.00             | 1,398.76     | -11.76       | 1,398.81                | 0.00                    | 0.00                   | 0.00                  |
| 12,800.00             | 90.00           | 359.53      | 11,222.00             | 1,498.76     | -12.58       | 1,498.81                | 0.00                    | 0.00                   | 0.00                  |
| 12,900.00             | 90.00           | 359.53      | 11,222.00             | 1,598.76     | -13.40       | 1,598.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,000.00             | 90.00           | 359.53      | 11,222.00             | 1,698.75     | -14.22       | 1,698.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00             | 90.00           | 359.53      | 11,222.00             | 1,798.75     | -15.04       | 1,798.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00             | 90.00           | 359.53      | 11,222.00             | 1,898.75     | -15.86       | 1,898.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00             | 90.00           | 359.53      | 11,222.00             | 1,998.74     | -16.69       | 1,998.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00             | 90.00           | 359.53      | 11,222.00             | 2,098.74     | -17.51       | 2,098.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00             | 90.00           | 359.53      | 11,222.00             | 2,198.74     | -18.33       | 2,198.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00             | 90.00           | 359.53      | 11,222.00             | 2,298.73     | -19.15       | 2,298.81                | 0.00                    | 0.00                   | 0.00                  |



**EOG Resources, Inc.**  
Planning Report

**Database:** EDM 5000.1 Single User Db  
**Company:** EOG Resources - Midland  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** Ares 4 State  
**Well:** #501H  
**Wellbore:** OH  
**Design:** Plan #0.1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

**Well #501H**  
KB = 25' @ 3608.00usft  
KB = 25' @ 3608.00usft  
Grid  
Minimum Curvature

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,700.00             | 90.00           | 359.53      | 11,222.00             | 2,398.73     | -19.87       | 2,398.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00             | 90.00           | 359.53      | 11,222.00             | 2,498.73     | -20.79       | 2,498.81                | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00             | 90.00           | 359.53      | 11,222.00             | 2,598.72     | -21.61       | 2,598.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00             | 90.00           | 359.53      | 11,222.00             | 2,698.72     | -22.43       | 2,698.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00             | 90.00           | 359.53      | 11,222.00             | 2,798.72     | -23.25       | 2,798.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,200.00             | 90.00           | 359.53      | 11,222.00             | 2,898.71     | -24.07       | 2,898.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00             | 90.00           | 359.53      | 11,222.00             | 2,998.71     | -24.89       | 2,998.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00             | 90.00           | 359.53      | 11,222.00             | 3,098.71     | -25.71       | 3,098.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,500.00             | 90.00           | 359.53      | 11,222.00             | 3,198.70     | -26.53       | 3,198.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00             | 90.00           | 359.53      | 11,222.00             | 3,298.70     | -27.35       | 3,298.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00             | 90.00           | 359.53      | 11,222.00             | 3,398.70     | -28.17       | 3,398.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00             | 90.00           | 359.53      | 11,222.00             | 3,498.69     | -28.99       | 3,498.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00             | 90.00           | 359.53      | 11,222.00             | 3,598.69     | -29.81       | 3,598.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00             | 90.00           | 359.53      | 11,222.00             | 3,698.69     | -30.63       | 3,698.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00             | 90.00           | 359.53      | 11,222.00             | 3,798.68     | -31.45       | 3,798.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00             | 90.00           | 359.53      | 11,222.00             | 3,898.68     | -32.27       | 3,898.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00             | 90.00           | 359.53      | 11,222.00             | 3,998.67     | -33.09       | 3,998.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00             | 90.00           | 359.53      | 11,222.00             | 4,098.67     | -33.91       | 4,098.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00             | 90.00           | 359.53      | 11,222.00             | 4,198.67     | -34.73       | 4,198.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00             | 90.00           | 359.53      | 11,222.00             | 4,298.66     | -35.55       | 4,298.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00             | 90.00           | 359.53      | 11,222.00             | 4,398.66     | -36.37       | 4,398.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00             | 90.00           | 359.53      | 11,222.00             | 4,498.66     | -37.19       | 4,498.81                | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00             | 90.00           | 359.53      | 11,222.00             | 4,598.65     | -38.01       | 4,598.81                | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00             | 90.00           | 359.53      | 11,222.00             | 4,698.65     | -38.83       | 4,698.81                | 0.00                    | 0.00                   | 0.00                  |
| 16,020.35             | 90.00           | 359.53      | 11,222.00             | 4,719.00     | -39.00       | 4,719.16                | 0.00                    | 0.00                   | 0.00                  |

**Design Targets**

| Target Name<br>- hit/miss target<br>- Shape                                                                                        | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude    | Longitude     |
|------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-------------|---------------|
| PBHL (Ares 4 State #50<br>- plan hits target center<br>- Point                                                                     | 0.00          | 0.00         | 11,222.00  | 4,719.00     | -39.00       | 456,712.00      | 777,374.00     | 32.25326930 | -103.56979944 |
| FTP (Ares 4 State #501H<br>- plan misses target center by 39.87usft at 11311.60usft MD (11185.17 TVD, 15.28 N, -0.41 E)<br>- Point | 0.00          | 0.00         | 11,222.00  | 0.00         | 0.00         | 451,993.00      | 777,413.00     | 32.24029765 | -103.56978184 |