

JAN 29 2019

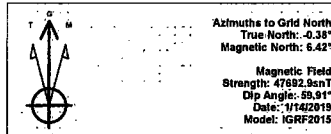
RECEIVED



Lea County, NM (NAD 83 NME)

Gem 36 State Com #102H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 5.42°  
To convert a Magnetic Direction to a True Direction, Add 5.80° East  
To convert a True Direction to a Grid Direction, Subtract 0.38°

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: #102H

KB = 25 @ 3451.0usft 3426.0  
Northing 398435.00 Easting 760595.00 Latitude 32° 5' 36.235 N Longitude 103° 37' 31.127 W

## SECTION DETAILS

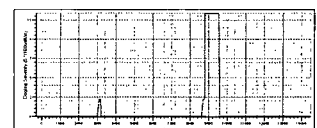
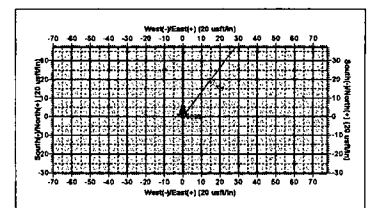
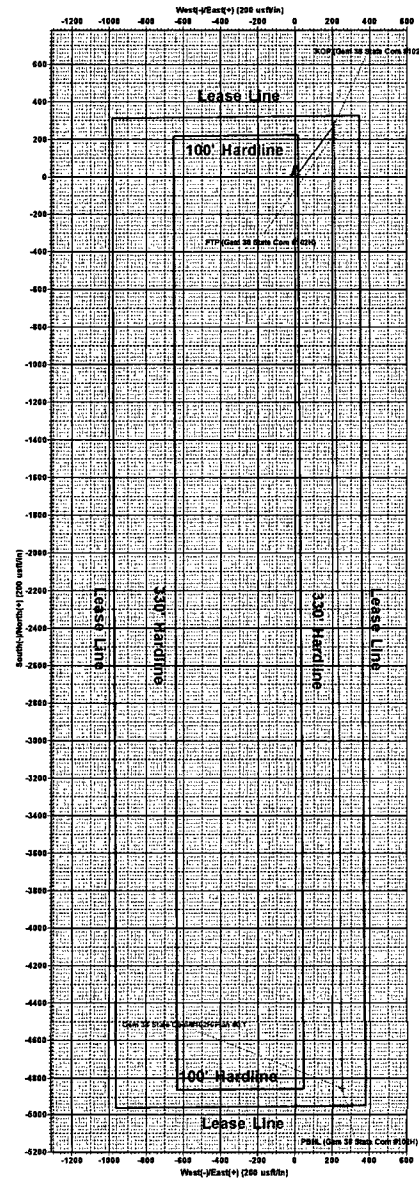
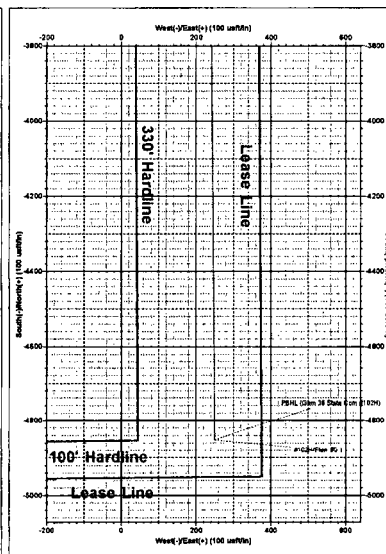
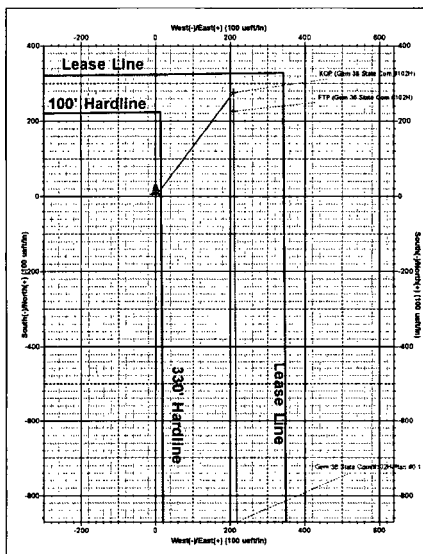
| Sec | MD      | Inc   | Azi    | TVD    | +N-S    | +E-W  | Dlog  | TFace  | VSeal  | Target | Annotation                    |
|-----|---------|-------|--------|--------|---------|-------|-------|--------|--------|--------|-------------------------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0    | 0.0     | 0.00  | 0.00  | 0.00   | 0.0    |        |                               |
| 2   | 3000.0  | 0.00  | 0.00   | 3000.0 | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |        |                               |
| 3   | 3178.6  | 3.63  | 37.13  | 3178.6 | 4.9     | 3.3   | 2.00  | 37.13  | -3.7   |        |                               |
| 4   | 8619.5  | 3.53  | 37.13  | 8609.0 | 271.7   | 205.7 | 0.00  | 0.00   | -233.2 |        |                               |
| 5   | 8798.1  | 0.00  | 0.00   | 8785.5 | 276.0   | 209.0 | 2.00  | 180.00 | -236.9 |        | KOP (Gem 36 State Com #102H)  |
| 6   | 8646.1  | 80.00 | 179.54 | 9263.0 | -201.4  | 212.8 | 12.00 | 179.54 | 236.4  |        |                               |
| 7   | 14195.8 | 90.00 | 179.54 | 9263.0 | -4851.0 | 250.0 | 0.00  | 0.00   | 4823.9 |        | PBHL (Gem 36 State Com #102H) |

## CASING DETAILS

No casing data is available

## WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name                          | TVD    | +N-S    | +E-W  | Northing  | Easting   |
|-------------------------------|--------|---------|-------|-----------|-----------|
| KOP (Gem 36 State Com #102H)  | 8785.5 | 276.0   | 209.0 | 398711.00 | 760804.00 |
| PBHL (Gem 36 State Com #102H) | 9263.0 | -4851.0 | 250.0 | 393584.00 | 760846.00 |
| FTP (Gem 36 State Com #102H)  | 9263.0 | 226.0   | 209.0 | 398661.00 | 760804.00 |



Lea County, NM (NAD 83 NME)  
Gem 36 State Com #102H  
Plan #0.1  
Date: 1/14/2019  
Model: IGRF2015



## **EOG Resources - Midland**

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

**Gem 36 State Com**

**#102H**

**OH**

**Plan: Plan #0.1**

## **Standard Planning Report**

**14 January, 2019**

|                  |                             |                                     |                      |
|------------------|-----------------------------|-------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                 | <b>Local Co-ordinate Reference:</b> | Well #102H           |
| <b>Company:</b>  | EOG Resources - Midland     | <b>TVD Reference:</b>               | KB = 25 @ 3451.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB = 25 @ 3451.0usft |
| <b>Site:</b>     | Gem 36 State Com            | <b>North Reference:</b>             | Grid                 |
| <b>Well:</b>     | #102H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature    |
| <b>Wellbore:</b> | OH                          |                                     |                      |
| <b>Design:</b>   | Plan #0.1                   |                                     |                      |

|                    |                             |                      |                |
|--------------------|-----------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD 83 NME) |                      |                |
| <b>Map System:</b> | US State Plane 1983         | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983   |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone     |                      |                |

|                       |          |                  |                 |                   |                   |
|-----------------------|----------|------------------|-----------------|-------------------|-------------------|
| Site                  |          | Gem 36 State Com |                 |                   |                   |
| Site Position:        |          | Northing:        | 393,686.00 usft | Latitude:         | 32° 4' 49.331 N   |
| From:                 | Map      | Easting:         | 759,213.00 usft | Longitude:        | 103° 37' 47.552 W |
| Position Uncertainty: | 0.0 usft | Slot Radius:     | 13-3/16 "       | Grid Convergence: | 0.37 °            |

|                      |       |              |                     |                 |               |                   |
|----------------------|-------|--------------|---------------------|-----------------|---------------|-------------------|
| Well                 | #102H |              |                     |                 |               |                   |
| Well Position        | +N/-S | 4,749.0 usft | Northing:           | 398,435.00 usft | Latitude:     | 32° 5' 36.235 N   |
|                      | +E/-W | 1,382.0 usft | Easting:            | 760,595.00 usft | Longitude:    | 103° 37' 31.127 W |
| Position Uncertainty |       | 0.0 usft     | Wellhead Elevation: |                 | Ground Level: | 3,426.0 usft      |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | OH                |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2015          | 1/14/2019          | 6.80               | 59.91            | 47,692.86567729       |

|                          |                         |              |                      |                  |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| <b>Design</b>            | Plan #0.1               |              |                      |                  |
| <b>Audit Notes:</b>      |                         |              |                      |                  |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN         | <b>Tie On Depth:</b> | 0.0              |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         | <b>Direction</b> |
|                          | (usft)                  | (usft)       | (usft)               | (°)              |
|                          | 0.0                     | 0.0          | 0.0                  | 170.32           |

|                                 |                       |                          |                     |                |
|---------------------------------|-----------------------|--------------------------|---------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b> 1/14/2019 |                          |                     |                |
| <b>Depth From</b>               | <b>Depth To</b>       | <b>Survey (Wellbore)</b> | <b>Tool Name</b>    | <b>Remarks</b> |
| (usft)                          | (usft)                |                          |                     |                |
| 1                               | 0.0                   | 14,195.8 Plan #0.1 (OH)  | MWD                 |                |
|                                 |                       |                          | OWSG MWD - Standard |                |

|                      |                 |               |              |             |            |               |       |       |        |                     |
|----------------------|-----------------|---------------|--------------|-------------|------------|---------------|-------|-------|--------|---------------------|
| <b>Plan Sections</b> |                 |               |              |             |            |               |       |       |        |                     |
| <b>Measured</b>      | <b>Vertical</b> | <b>Dogleg</b> | <b>Build</b> | <b>Turn</b> | <b>TFO</b> | <b>Target</b> |       |       |        |                     |
| <b>Depth</b>         | <b>Depth</b>    | <b>Rate</b>   | <b>Rate</b>  | <b>Rate</b> | <b>(°)</b> |               |       |       |        |                     |
| (usft)               | (usft)          | (°/100usft)   | (°/100usft)  | (°/100usft) |            |               |       |       |        |                     |
|                      |                 |               |              |             |            |               |       |       |        |                     |
| 0.0                  | 0.0             | 0.0           | 0.0          | 0.0         | 0.0        |               |       |       |        |                     |
| 3,000.0              | 0.0             | 0.0           | 0.0          | 0.0         | 0.0        |               |       |       |        |                     |
| 3,176.6              | 3.53            | 37.13         | 3,176.5      | 4.3         | 3.3        | 2.00          | 2.00  | 0.00  | 37.13  |                     |
| 8,619.5              | 3.53            | 37.13         | 8,609.0      | 271.7       | 205.7      | 0.00          | 0.00  | 0.00  | 0.00   |                     |
| 8,796.1              | 0.00            | 0.00          | 8,785.5      | 276.0       | 209.0      | 2.00          | -2.00 | 0.00  | 180.00 | KOP (Gem 36 State C |
| 9,546.1              | 90.00           | 179.54        | 9,263.0      | -201.4      | 212.8      | 12.00         | 12.00 | 23.94 | 179.54 |                     |
| 14,195.8             | 90.00           | 179.54        | 9,263.0      | -4,851.0    | 250.0      | 0.00          | 0.00  | 0.00  | 0.00   | PBHL (Gem 36 State  |

|                  |                             |                                     |                      |
|------------------|-----------------------------|-------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                 | <b>Local Co-ordinate Reference:</b> | Well #102H           |
| <b>Company:</b>  | EOG Resources - Midland     | <b>TVD Reference:</b>               | KB = 25 @ 3451.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB = 25 @ 3451.0usft |
| <b>Site:</b>     | Gem 36 State Com            | <b>North Reference:</b>             | Grid                 |
| <b>Well:</b>     | #102H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature    |
| <b>Wellbore:</b> | OH                          |                                     |                      |
| <b>Design:</b>   | Plan #0.1                   |                                     |                      |

| 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) |
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 100.0                 | 0.00            | 0.00        | 100.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 200.0                 | 0.00            | 0.00        | 200.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 300.0                 | 0.00            | 0.00        | 300.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 400.0                 | 0.00            | 0.00        | 400.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 500.0                 | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 600.0                 | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 700.0                 | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 800.0                 | 0.00            | 0.00        | 800.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 900.0                 | 0.00            | 0.00        | 900.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,000.0               | 0.00            | 0.00        | 1,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,100.0               | 0.00            | 0.00        | 1,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,200.0               | 0.00            | 0.00        | 1,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,300.0               | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,400.0               | 0.00            | 0.00        | 1,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,500.0               | 0.00            | 0.00        | 1,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,600.0               | 0.00            | 0.00        | 1,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0               | 0.00            | 0.00        | 1,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,800.0               | 0.00            | 0.00        | 1,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,900.0               | 0.00            | 0.00        | 1,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0               | 0.00            | 0.00        | 2,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,100.0               | 0.00            | 0.00        | 2,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0               | 0.00            | 0.00        | 2,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0               | 0.00            | 0.00        | 2,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0               | 0.00            | 0.00        | 2,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0               | 0.00            | 0.00        | 2,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0               | 0.00            | 0.00        | 2,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0               | 0.00            | 0.00        | 2,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0               | 0.00            | 0.00        | 2,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0               | 0.00            | 0.00        | 2,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0               | 0.00            | 0.00        | 3,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0               | 2.00            | 37.13       | 3,100.0               | 1.4          | 1.1          | -1.2                    | 2.00                    | 2.00                   | 0.00                  |
| 3,176.6               | 3.53            | 37.13       | 3,176.5               | 4.3          | 3.3          | -3.7                    | 2.00                    | 2.00                   | 0.00                  |
| 3,200.0               | 3.53            | 37.13       | 3,199.8               | 5.5          | 4.2          | -4.7                    | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0               | 3.53            | 37.13       | 3,299.7               | 10.4         | 7.9          | -8.9                    | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0               | 3.53            | 37.13       | 3,399.5               | 15.3         | 11.6         | -13.1                   | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0               | 3.53            | 37.13       | 3,499.3               | 20.2         | 15.3         | -17.4                   | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0               | 3.53            | 37.13       | 3,599.1               | 25.1         | 19.0         | -21.6                   | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0               | 3.53            | 37.13       | 3,698.9               | 30.0         | 22.8         | -25.8                   | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0               | 3.53            | 37.13       | 3,798.7               | 35.0         | 26.5         | -30.0                   | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0               | 3.53            | 37.13       | 3,898.5               | 39.9         | 30.2         | -34.2                   | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0               | 3.53            | 37.13       | 3,998.3               | 44.8         | 33.9         | -38.4                   | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0               | 3.53            | 37.13       | 4,098.1               | 49.7         | 37.6         | -42.7                   | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0               | 3.53            | 37.13       | 4,197.9               | 54.6         | 41.3         | -46.9                   | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0               | 3.53            | 37.13       | 4,297.8               | 59.5         | 45.1         | -51.1                   | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0               | 3.53            | 37.13       | 4,397.6               | 64.4         | 48.8         | -55.3                   | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0               | 3.53            | 37.13       | 4,497.4               | 69.3         | 52.5         | -59.5                   | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0               | 3.53            | 37.13       | 4,597.2               | 74.2         | 56.2         | -63.7                   | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0               | 3.53            | 37.13       | 4,697.0               | 79.2         | 59.9         | -67.9                   | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0               | 3.53            | 37.13       | 4,796.8               | 84.1         | 63.7         | -72.2                   | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0               | 3.53            | 37.13       | 4,896.6               | 89.0         | 67.4         | -76.4                   | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0               | 3.53            | 37.13       | 4,996.4               | 93.9         | 71.1         | -80.6                   | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0               | 3.53            | 37.13       | 5,096.2               | 98.8         | 74.8         | -84.8                   | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0               | 3.53            | 37.13       | 5,196.0               | 103.7        | 78.5         | -89.0                   | 0.00                    | 0.00                   | 0.00                  |

|                  |                             |                                     |                      |
|------------------|-----------------------------|-------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                 | <b>Local Co-ordinate Reference:</b> | Well #102H           |
| <b>Company:</b>  | EOG Resources - Midland     | <b>TVD Reference:</b>               | KB = 25 @ 3451.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB = 25 @ 3451.0usft |
| <b>Site:</b>     | Gem 36 State Com            | <b>North Reference:</b>             | Grid                 |
| <b>Well:</b>     | #102H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature    |
| <b>Wellbore:</b> | OH                          |                                     |                      |
| <b>Design:</b>   | Plan #0.1                   |                                     |                      |

| 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) |
| 5,300.0                      | 3.53            | 37.13       | 5,295.9               | 108.6        | 82.3         | -93.2                   | 0.00                    | 0.00                   | 0.00                  |
| 5,400.0                      | 3.53            | 37.13       | 5,395.7               | 113.5        | 86.0         | -97.5                   | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                      | 3.53            | 37.13       | 5,495.5               | 118.5        | 89.7         | -101.7                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                      | 3.53            | 37.13       | 5,595.3               | 123.4        | 93.4         | -105.9                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                      | 3.53            | 37.13       | 5,695.1               | 128.3        | 97.1         | -110.1                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                      | 3.53            | 37.13       | 5,794.9               | 133.2        | 100.9        | -114.3                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                      | 3.53            | 37.13       | 5,894.7               | 138.1        | 104.6        | -118.5                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                      | 3.53            | 37.13       | 5,994.5               | 143.0        | 108.3        | -122.8                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.0                      | 3.53            | 37.13       | 6,094.3               | 147.9        | 112.0        | -127.0                  | 0.00                    | 0.00                   | 0.00                  |
| 6,200.0                      | 3.53            | 37.13       | 6,194.1               | 152.8        | 115.7        | -131.2                  | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                      | 3.53            | 37.13       | 6,294.0               | 157.7        | 119.4        | -135.4                  | 0.00                    | 0.00                   | 0.00                  |
| 6,400.0                      | 3.53            | 37.13       | 6,393.8               | 162.7        | 123.2        | -139.6                  | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                      | 3.53            | 37.13       | 6,493.6               | 167.6        | 126.9        | -143.8                  | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                      | 3.53            | 37.13       | 6,593.4               | 172.5        | 130.6        | -148.1                  | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                      | 3.53            | 37.13       | 6,693.2               | 177.4        | 134.3        | -152.3                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.0                      | 3.53            | 37.13       | 6,793.0               | 182.3        | 138.0        | -156.5                  | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                      | 3.53            | 37.13       | 6,892.8               | 187.2        | 141.8        | -160.7                  | 0.00                    | 0.00                   | 0.00                  |
| 7,000.0                      | 3.53            | 37.13       | 6,992.6               | 192.1        | 145.5        | -164.9                  | 0.00                    | 0.00                   | 0.00                  |
| 7,100.0                      | 3.53            | 37.13       | 7,092.4               | 197.0        | 149.2        | -169.1                  | 0.00                    | 0.00                   | 0.00                  |
| 7,200.0                      | 3.53            | 37.13       | 7,192.2               | 201.9        | 152.9        | -173.3                  | 0.00                    | 0.00                   | 0.00                  |
| 7,300.0                      | 3.53            | 37.13       | 7,292.1               | 206.9        | 156.6        | -177.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,400.0                      | 3.53            | 37.13       | 7,391.9               | 211.8        | 160.4        | -181.8                  | 0.00                    | 0.00                   | 0.00                  |
| 7,500.0                      | 3.53            | 37.13       | 7,491.7               | 216.7        | 164.1        | -186.0                  | 0.00                    | 0.00                   | 0.00                  |
| 7,600.0                      | 3.53            | 37.13       | 7,591.5               | 221.6        | 167.8        | -190.2                  | 0.00                    | 0.00                   | 0.00                  |
| 7,700.0                      | 3.53            | 37.13       | 7,691.3               | 226.5        | 171.5        | -194.4                  | 0.00                    | 0.00                   | 0.00                  |
| 7,800.0                      | 3.53            | 37.13       | 7,791.1               | 231.4        | 175.2        | -198.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,900.0                      | 3.53            | 37.13       | 7,890.9               | 236.3        | 179.0        | -202.9                  | 0.00                    | 0.00                   | 0.00                  |
| 8,000.0                      | 3.53            | 37.13       | 7,990.7               | 241.2        | 182.7        | -207.1                  | 0.00                    | 0.00                   | 0.00                  |
| 8,100.0                      | 3.53            | 37.13       | 8,090.5               | 246.1        | 186.4        | -211.3                  | 0.00                    | 0.00                   | 0.00                  |
| 8,200.0                      | 3.53            | 37.13       | 8,190.3               | 251.1        | 190.1        | -215.5                  | 0.00                    | 0.00                   | 0.00                  |
| 8,300.0                      | 3.53            | 37.13       | 8,290.2               | 256.0        | 193.8        | -219.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,400.0                      | 3.53            | 37.13       | 8,390.0               | 260.9        | 197.6        | -223.9                  | 0.00                    | 0.00                   | 0.00                  |
| 8,500.0                      | 3.53            | 37.13       | 8,489.8               | 265.8        | 201.3        | -228.2                  | 0.00                    | 0.00                   | 0.00                  |
| 8,600.0                      | 3.53            | 37.13       | 8,589.6               | 270.7        | 205.0        | -232.4                  | 0.00                    | 0.00                   | 0.00                  |
| 8,619.5                      | 3.53            | 37.13       | 8,609.0               | 271.7        | 205.7        | -233.2                  | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                      | 1.92            | 37.13       | 8,689.5               | 274.7        | 208.0        | -235.8                  | 2.00                    | -2.00                  | 0.00                  |
| 8,796.1                      | 0.00            | 0.00        | 8,785.5               | 276.0        | 209.0        | -236.9                  | 2.00                    | -2.00                  | 0.00                  |
| KOP (Gem 36 State Com #102H) |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,800.0                      | 0.47            | 179.54      | 8,789.4               | 276.0        | 209.0        | -236.9                  | 12.00                   | 12.00                  | 0.00                  |
| 8,825.0                      | 3.47            | 179.54      | 8,814.4               | 275.1        | 209.0        | -236.1                  | 12.00                   | 12.00                  | 0.00                  |
| 8,850.0                      | 6.47            | 179.54      | 8,839.3               | 273.0        | 209.0        | -233.9                  | 12.00                   | 12.00                  | 0.00                  |
| 8,875.0                      | 9.47            | 179.54      | 8,864.1               | 269.5        | 209.1        | -230.5                  | 12.00                   | 12.00                  | 0.00                  |
| 8,900.0                      | 12.47           | 179.54      | 8,888.6               | 264.7        | 209.1        | -225.8                  | 12.00                   | 12.00                  | 0.00                  |
| 8,925.0                      | 15.47           | 179.54      | 8,912.9               | 258.7        | 209.1        | -219.8                  | 12.00                   | 12.00                  | 0.00                  |
| 8,950.0                      | 18.47           | 179.54      | 8,936.8               | 251.4        | 209.2        | -212.6                  | 12.00                   | 12.00                  | 0.00                  |
| 8,975.0                      | 21.47           | 179.54      | 8,960.3               | 242.9        | 209.3        | -204.2                  | 12.00                   | 12.00                  | 0.00                  |
| 9,000.0                      | 24.47           | 179.54      | 8,983.3               | 233.1        | 209.3        | -194.6                  | 12.00                   | 12.00                  | 0.00                  |
| 9,025.0                      | 27.47           | 179.54      | 9,005.8               | 222.2        | 209.4        | -183.8                  | 12.00                   | 12.00                  | 0.00                  |
| 9,050.0                      | 30.47           | 179.54      | 9,027.6               | 210.1        | 209.5        | -171.8                  | 12.00                   | 12.00                  | 0.00                  |
| 9,075.0                      | 33.47           | 179.54      | 9,048.8               | 196.8        | 209.6        | -158.8                  | 12.00                   | 12.00                  | 0.00                  |
| 9,100.0                      | 36.47           | 179.54      | 9,069.3               | 182.5        | 209.7        | -144.6                  | 12.00                   | 12.00                  | 0.00                  |
| 9,125.0                      | 39.47           | 179.54      | 9,089.0               | 167.1        | 209.9        | -129.4                  | 12.00                   | 12.00                  | 0.00                  |
| 9,150.0                      | 42.47           | 179.54      | 9,107.9               | 150.7        | 210.0        | -113.3                  | 12.00                   | 12.00                  | 0.00                  |

|                  |                             |                                     |                      |
|------------------|-----------------------------|-------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                 | <b>Local Co-ordinate Reference:</b> | Well #102H           |
| <b>Company:</b>  | EOG Resources - Midland     | <b>TVD Reference:</b>               | KB = 25 @ 3451.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB = 25 @ 3451.0usft |
| <b>Site:</b>     | Gem 36 State Com            | <b>North Reference:</b>             | Grid                 |
| <b>Well:</b>     | #102H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature    |
| <b>Wellbore:</b> | OH                          |                                     |                      |
| <b>Design:</b>   | Plan #0.1                   |                                     |                      |

| Planned Survey               |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|------------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft)  | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 9,175.0                      | 45.47              | 179.54         | 9,125.9                     | 133.4           | 210.1           | -96.1                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,200.0                      | 48.47              | 179.54         | 9,142.9                     | 115.1           | 210.3           | -78.1                         | 12.00                         | 12.00                        | 0.00                        |  |
| FTP (Gem 36 State Com #102H) |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
| 9,225.0                      | 51.47              | 179.54         | 9,159.0                     | 95.9            | 210.4           | -59.2                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,250.0                      | 54.47              | 179.54         | 9,174.1                     | 76.0            | 210.6           | -39.5                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,275.0                      | 57.47              | 179.54         | 9,188.1                     | 55.3            | 210.8           | -19.0                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,300.0                      | 60.47              | 179.54         | 9,201.0                     | 33.9            | 210.9           | 2.1                           | 12.00                         | 12.00                        | 0.00                        |  |
| 9,325.0                      | 63.47              | 179.54         | 9,212.7                     | 11.8            | 211.1           | 23.9                          | 12.00                         | 12.00                        | 0.00                        |  |
| 9,350.0                      | 66.47              | 179.54         | 9,223.3                     | -10.9           | 211.3           | 46.2                          | 12.00                         | 12.00                        | 0.00                        |  |
| 9,375.0                      | 69.47              | 179.54         | 9,232.6                     | -34.0           | 211.5           | 69.1                          | 12.00                         | 12.00                        | 0.00                        |  |
| 9,400.0                      | 72.47              | 179.54         | 9,240.8                     | -57.7           | 211.7           | 92.4                          | 12.00                         | 12.00                        | 0.00                        |  |
| 9,425.0                      | 75.47              | 179.54         | 9,247.7                     | -81.7           | 211.9           | 116.2                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,450.0                      | 78.47              | 179.54         | 9,253.3                     | -106.0          | 212.1           | 140.2                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,475.0                      | 81.47              | 179.54         | 9,257.7                     | -130.7          | 212.3           | 164.5                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,500.0                      | 84.47              | 179.54         | 9,260.7                     | -155.5          | 212.5           | 189.0                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,525.0                      | 87.47              | 179.54         | 9,262.5                     | -180.4          | 212.6           | 213.6                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,546.1                      | 90.00              | 179.54         | 9,263.0                     | -201.4          | 212.8           | 234.4                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,600.0                      | 90.00              | 179.54         | 9,263.0                     | -255.4          | 213.2           | 287.6                         | 0.00                          | 0.00                         | 0.00                        |  |
| 9,700.0                      | 90.00              | 179.54         | 9,263.0                     | -355.4          | 214.0           | 386.3                         | 0.00                          | 0.00                         | 0.00                        |  |
| 9,800.0                      | 90.00              | 179.54         | 9,263.0                     | -455.4          | 214.8           | 485.0                         | 0.00                          | 0.00                         | 0.00                        |  |
| 9,900.0                      | 90.00              | 179.54         | 9,263.0                     | -555.4          | 215.6           | 583.7                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,000.0                     | 90.00              | 179.54         | 9,263.0                     | -655.4          | 216.4           | 682.4                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,100.0                     | 90.00              | 179.54         | 9,263.0                     | -755.4          | 217.2           | 781.1                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,200.0                     | 90.00              | 179.54         | 9,263.0                     | -855.4          | 218.0           | 879.9                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,300.0                     | 90.00              | 179.54         | 9,263.0                     | -955.4          | 218.8           | 978.6                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,400.0                     | 90.00              | 179.54         | 9,263.0                     | -1,055.4        | 219.6           | 1,077.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 10,500.0                     | 90.00              | 179.54         | 9,263.0                     | -1,155.4        | 220.4           | 1,176.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 10,600.0                     | 90.00              | 179.54         | 9,263.0                     | -1,255.4        | 221.2           | 1,274.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 10,700.0                     | 90.00              | 179.54         | 9,263.0                     | -1,355.4        | 222.0           | 1,373.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 10,800.0                     | 90.00              | 179.54         | 9,263.0                     | -1,455.3        | 222.8           | 1,472.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 10,900.0                     | 90.00              | 179.54         | 9,263.0                     | -1,555.3        | 223.6           | 1,570.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,000.0                     | 90.00              | 179.54         | 9,263.0                     | -1,655.3        | 224.4           | 1,669.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,100.0                     | 90.00              | 179.54         | 9,263.0                     | -1,755.3        | 225.2           | 1,768.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,200.0                     | 90.00              | 179.54         | 9,263.0                     | -1,855.3        | 226.0           | 1,866.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,300.0                     | 90.00              | 179.54         | 9,263.0                     | -1,955.3        | 226.8           | 1,965.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,400.0                     | 90.00              | 179.54         | 9,263.0                     | -2,055.3        | 227.6           | 2,064.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,500.0                     | 90.00              | 179.54         | 9,263.0                     | -2,155.3        | 228.4           | 2,163.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,600.0                     | 90.00              | 179.54         | 9,263.0                     | -2,255.3        | 229.2           | 2,261.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,700.0                     | 90.00              | 179.54         | 9,263.0                     | -2,355.3        | 230.0           | 2,360.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,800.0                     | 90.00              | 179.54         | 9,263.0                     | -2,455.3        | 230.8           | 2,459.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,900.0                     | 90.00              | 179.54         | 9,263.0                     | -2,555.3        | 231.6           | 2,557.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,000.0                     | 90.00              | 179.54         | 9,263.0                     | -2,655.3        | 232.4           | 2,656.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,100.0                     | 90.00              | 179.54         | 9,263.0                     | -2,755.3        | 233.2           | 2,755.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,200.0                     | 90.00              | 179.54         | 9,263.0                     | -2,855.3        | 234.0           | 2,854.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,300.0                     | 90.00              | 179.54         | 9,263.0                     | -2,955.3        | 234.8           | 2,952.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,400.0                     | 90.00              | 179.54         | 9,263.0                     | -3,055.3        | 235.6           | 3,051.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,500.0                     | 90.00              | 179.54         | 9,263.0                     | -3,155.3        | 236.4           | 3,150.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,600.0                     | 90.00              | 179.54         | 9,263.0                     | -3,255.3        | 237.2           | 3,248.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,700.0                     | 90.00              | 179.54         | 9,263.0                     | -3,355.3        | 238.0           | 3,347.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,800.0                     | 90.00              | 179.54         | 9,263.0                     | -3,455.3        | 238.8           | 3,446.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,900.0                     | 90.00              | 179.54         | 9,263.0                     | -3,555.3        | 239.6           | 3,544.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,000.0                     | 90.00              | 179.54         | 9,263.0                     | -3,655.3        | 240.4           | 3,643.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,100.0                     | 90.00              | 179.54         | 9,263.0                     | -3,755.3        | 241.2           | 3,742.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,200.0                     | 90.00              | 179.54         | 9,263.0                     | -3,855.3        | 242.0           | 3,841.1                       | 0.00                          | 0.00                         | 0.00                        |  |

|                  |                             |                                     |                      |
|------------------|-----------------------------|-------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                 | <b>Local Co-ordinate Reference:</b> | Well #102H           |
| <b>Company:</b>  | EOG Resources - Midland     | <b>TVD Reference:</b>               | KB = 25 @ 3451.0usft |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB = 25 @ 3451.0usft |
| <b>Site:</b>     | Gem 36 State Com            | <b>North Reference:</b>             | Grid                 |
| <b>Well:</b>     | #102H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature    |
| <b>Wellbore:</b> | OH                          |                                     |                      |
| <b>Design:</b>   | Plan #0.1                   |                                     |                      |

| 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) |
| 13,300.0                      | 90.00           | 179.54      | 9,263.0               | -3,955.3     | 242.8        | 3,939.8                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0                      | 90.00           | 179.54      | 9,263.0               | -4,055.3     | 243.6        | 4,038.5                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0                      | 90.00           | 179.54      | 9,263.0               | -4,155.3     | 244.4        | 4,137.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0                      | 90.00           | 179.54      | 9,263.0               | -4,255.3     | 245.2        | 4,235.9                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0                      | 90.00           | 179.54      | 9,263.0               | -4,355.3     | 246.0        | 4,334.6                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0                      | 90.00           | 179.54      | 9,263.0               | -4,455.3     | 246.8        | 4,433.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0                      | 90.00           | 179.54      | 9,263.0               | -4,555.2     | 247.6        | 4,532.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0                      | 90.00           | 179.54      | 9,263.0               | -4,655.2     | 248.4        | 4,630.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0                      | 90.00           | 179.54      | 9,263.0               | -4,755.2     | 249.2        | 4,729.4                 | 0.00                    | 0.00                   | 0.00                  |
| 14,195.8                      | 90.00           | 179.54      | 9,263.0               | -4,851.0     | 250.0        | 4,823.9                 | 0.00                    | 0.00                   | 0.00                  |
| PBHL (Gem 36 State Com #102H) |                 |             |                       |              |              |                         |                         |                        |                       |

| Design Targets                                                                                                               |               |              |            |              |              |                 |                |                 |                   |
|------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-----------------|-------------------|
| Target Name                                                                                                                  | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude        | Longitude         |
| KOP (Gem 36 State Cor<br>- hit/miss target<br>- Shape<br>- Point                                                             | 0.00          | 0.00         | 8,785.5    | 276.0        | 209.0        | 398,711.00      | 760,804.00     | 32° 5' 38.953 N | 103° 37' 28.677 W |
| FTP (Gem 36 State Cor<br>- plan misses target center by 163.4usft at 9200.0usft MD (9142.9 TVD, 115.1 N, 210.3 E)<br>- Point | 0.00          | 0.00         | 9,263.0    | 226.0        | 209.0        | 398,661.00      | 760,804.00     | 32° 5' 38.458 N | 103° 37' 28.680 W |
| PBHL (Gem 36 State Co<br>- plan hits target center<br>- Point                                                                | 0.00          | 0.00         | 9,263.0    | -4,851.0     | 250.0        | 393,584.00      | 760,845.00     | 32° 4' 48.216 N | 103° 37' 28.592 W |