



NM OIL CONSERVATION  
ARTESIA DISTRICT

OCT 15 2018

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## **EOG Resources - Artesia**

Eddy County (NAD83)

Boyd

Boyd X State Com #18H

30-013-45320

**Lateral**

**Plan: Plan #1**

## **Standard Planning Report**

**10 October, 2018**



## Planning Report

**Database:** EDM 5000.14  
**Company:** EOG Resources - Artesia  
**Project:** Eddy County (NAD83)  
**Site:** Boyd  
**Well:** Boyd X State Com #18H  
**Wellbore:** Lateral  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Boyd X State Com #18H  
**TVD Reference:** KB @ 3526.000usft (Planning Rlg)  
**MD Reference:** KB @ 3526.000usft (Planning Rlg)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County (NAD83)       |                      |                |
| <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   |                      |                |

|                              |            |                     |                 |                                     |
|------------------------------|------------|---------------------|-----------------|-------------------------------------|
| <b>Site</b>                  | Boyd       |                     |                 |                                     |
| <b>Site Position:</b>        |            | <b>Northing:</b>    | 604,833.30 usft | <b>Latitude:</b> 32° 39' 45.475 N   |
| <b>From:</b>                 | Map        | <b>Easting:</b>     | 492,327.60 usft | <b>Longitude:</b> 104° 29' 33.330 W |
| <b>Position Uncertainty:</b> | 0.000 usft | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> -0.09 °    |

|                             |                       |                            |                  |                                     |
|-----------------------------|-----------------------|----------------------------|------------------|-------------------------------------|
| <b>Well</b>                 | Boyd X State Com #18H |                            |                  |                                     |
| <b>Well Position</b>        | +N/-S                 | -2,860.300 usft            | <b>Northing:</b> | 601,973.00 usft                     |
|                             | +E/-W                 | -2,282.600 usft            | <b>Easting:</b>  | 490,045.00 usft                     |
| <b>Position Uncertainty</b> | 0.000 usft            | <b>Wellhead Elevation:</b> | 3,526.000 usft   | <b>Ground Level:</b> 3,508.000 usft |

|                  |                   |                    |                            |                          |                                |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| <b>Wellbore</b>  | Lateral           |                    |                            |                          |                                |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination<br/>(°)</b> | <b>Dip Angle<br/>(°)</b> | <b>Field Strength<br/>(nT)</b> |
|                  | IGRF2015          | 10/10/2018         | 7.27                       | 60.29                    | 47,956.80311547                |

|                          |                                    |                         |                         |                          |
|--------------------------|------------------------------------|-------------------------|-------------------------|--------------------------|
| <b>Design</b>            | Plan #1                            |                         |                         |                          |
| <b>Audit Notes:</b>      |                                    |                         |                         |                          |
| <b>Version:</b>          | <b>Phase:</b>                      | PROTOTYPE               | <b>Tie On Depth:</b>    | 0.000                    |
| <b>Vertical Section:</b> | <b>Depth From (TVD)<br/>(usft)</b> | <b>+N/-S<br/>(usft)</b> | <b>+E/-W<br/>(usft)</b> | <b>Direction<br/>(°)</b> |
|                          | 0.000                              | 0.000                   | 0.000                   | 90.312                   |

|                                 |                            |                             |                     |                |
|---------------------------------|----------------------------|-----------------------------|---------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>                | 10/10/2018                  |                     |                |
| <b>Depth From<br/>(usft)</b>    | <b>Depth To<br/>(usft)</b> | <b>Survey (Wellbore)</b>    | <b>Tool Name</b>    | <b>Remarks</b> |
| 1                               | 0.000                      | 7,955.829 Plan #1 (Lateral) | MWD                 |                |
|                                 |                            |                             | OWSG MWD - Standard |                |

| 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       |
| 0.000                       | 0.00               | 0.000          | 0.000                       | 0.000           | 0.000           | 0.00                          | 0.00                         | 0.00                        | 0.00       |              |
| 1,250.000                   | 0.00               | 0.000          | 1,250.000                   | 0.000           | 0.000           | 0.00                          | 0.00                         | 0.00                        | 0.00       |              |
| 1,897.701                   | 0.00               | 0.000          | 1,897.701                   | 0.000           | 0.000           | 0.00                          | 0.00                         | 0.00                        | 0.00       |              |
| 2,564.368                   | 60.00              | 89.798         | 2,449.030                   | 1.122           | 318.308         | 9.00                          | 9.00                         | 0.00                        | 89.80      |              |
| 2,639.368                   | 60.00              | 89.798         | 2,466.530                   | 1.351           | 383.259         | 0.00                          | 0.00                         | 0.00                        | 0.00       |              |
| 2,883.805                   | 89.33              | 90.361         | 2,550.476                   | 0.946           | 616.426         | 12.00                         | 12.00                        | 0.23                        | 1.15       |              |
| 7,955.829                   | 89.33              | 90.361         | 2,610.000                   | -31.000         | 5,688.000       | 0.00                          | 0.00                         | 0.00                        | 0.00       | [BSC#18H]BHL |



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 Design: Plan #1

Local Co-ordinate Reference: Wall Boyd X State Com #18H  
 TVD Reference: KB @ 3526.000usft (Planning Rig)  
 MD Reference: KB @ 3526.000usft (Planning Rig)  
 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) |
|------------------------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.000                              | 0.00            | 0.000       | 0.000                 | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 100.000                            | 0.00            | 0.000       | 100.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 200.000                            | 0.00            | 0.000       | 200.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 300.000                            | 0.00            | 0.000       | 300.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 400.000                            | 0.00            | 0.000       | 400.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 500.000                            | 0.00            | 0.000       | 500.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 600.000                            | 0.00            | 0.000       | 600.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 700.000                            | 0.00            | 0.000       | 700.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 800.000                            | 0.00            | 0.000       | 800.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 900.000                            | 0.00            | 0.000       | 900.000               | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,000.000                          | 0.00            | 0.000       | 1,000.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,100.000                          | 0.00            | 0.000       | 1,100.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,200.000                          | 0.00            | 0.000       | 1,200.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,250.000                          | 0.00            | 0.000       | 1,250.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,300.000                          | 0.00            | 0.000       | 1,300.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,400.000                          | 0.00            | 0.000       | 1,400.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,500.000                          | 0.00            | 0.000       | 1,500.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,600.000                          | 0.00            | 0.000       | 1,600.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,700.000                          | 0.00            | 0.000       | 1,700.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,800.000                          | 0.00            | 0.000       | 1,800.000             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| 1,897.701                          | 0.00            | 0.000       | 1,897.701             | 0.000       | 0.000       | 0.000                   | 0.00                    | 0.00                   | 0.00                  |
| START KOP 9°/100' BUILD RATE       |                 |             |                       |             |             |                         |                         |                        |                       |
| 1,900.000                          | 0.21            | 89.798      | 1,800.000             | 0.000       | 0.004       | 0.004                   | 9.00                    | 9.00                   | 0.00                  |
| 1,950.000                          | 4.71            | 89.798      | 1,949.941             | 0.008       | 2.147       | 2.147                   | 9.00                    | 9.00                   | 0.00                  |
| 2,000.000                          | 9.21            | 89.798      | 1,999.560             | 0.029       | 8.202       | 8.201                   | 9.00                    | 9.00                   | 0.00                  |
| 2,050.000                          | 13.71           | 89.798      | 2,048.651             | 0.064       | 18.130      | 18.130                  | 9.00                    | 9.00                   | 0.00                  |
| 2,100.000                          | 18.21           | 89.798      | 2,098.612             | 0.112       | 31.873      | 31.871                  | 9.00                    | 9.00                   | 0.00                  |
| 2,150.000                          | 22.71           | 89.798      | 2,143.447             | 0.174       | 49.343      | 49.341                  | 9.00                    | 9.00                   | 0.00                  |
| 2,200.000                          | 27.21           | 89.798      | 2,188.787             | 0.248       | 70.434      | 70.432                  | 9.00                    | 9.00                   | 0.00                  |
| 2,250.000                          | 31.71           | 89.798      | 2,232.282             | 0.335       | 95.016      | 95.013                  | 9.00                    | 9.00                   | 0.00                  |
| 2,300.000                          | 36.21           | 89.798      | 2,273.754             | 0.433       | 122.937     | 122.933                 | 9.00                    | 9.00                   | 0.00                  |
| 2,350.000                          | 40.71           | 89.798      | 2,312.898             | 0.543       | 154.028     | 154.020                 | 9.00                    | 9.00                   | 0.00                  |
| 2,400.000                          | 45.21           | 89.798      | 2,349.482             | 0.663       | 188.089     | 188.083                 | 9.00                    | 9.00                   | 0.00                  |
| 2,450.000                          | 49.71           | 89.798      | 2,383.280             | 0.793       | 224.918     | 224.910                 | 9.00                    | 9.00                   | 0.00                  |
| 2,500.000                          | 54.21           | 89.798      | 2,414.085             | 0.932       | 264.285     | 264.278                 | 9.00                    | 9.00                   | 0.00                  |
| 2,550.000                          | 58.71           | 89.798      | 2,441.706             | 1.079       | 305.947     | 305.937                 | 9.00                    | 9.00                   | 0.00                  |
| 2,564.388                          | 60.00           | 89.798      | 2,449.030             | 1.122       | 318.308     | 318.297                 | 9.00                    | 9.00                   | 0.00                  |
| START 78° TANGENT                  |                 |             |                       |             |             |                         |                         |                        |                       |
| 2,600.000                          | 60.00           | 89.798      | 2,466.846             | 1.231       | 349.166     | 349.154                 | 0.00                    | 0.00                   | 0.00                  |
| 2,639.368                          | 60.00           | 89.798      | 2,486.530             | 1.351       | 383.260     | 383.247                 | 0.00                    | 0.00                   | 0.00                  |
| END 60° TANGENT/START 12°/100' BR  |                 |             |                       |             |             |                         |                         |                        |                       |
| 2,650.000                          | 61.28           | 89.827      | 2,491.743             | 1.382       | 392.526     | 392.512                 | 12.00                   | 12.00                  | 0.27                  |
| 2,675.000                          | 64.28           | 89.893      | 2,503.179             | 1.436       | 414.754     | 414.740                 | 12.00                   | 12.00                  | 0.28                  |
| 2,700.000                          | 67.27           | 89.958      | 2,513.438             | 1.468       | 437.549     | 437.535                 | 12.00                   | 12.00                  | 0.25                  |
| 2,725.000                          | 70.27           | 90.016      | 2,522.486             | 1.471       | 460.851     | 460.836                 | 12.00                   | 12.00                  | 0.24                  |
| 2,750.000                          | 73.27           | 90.074      | 2,530.304             | 1.453       | 484.594     | 484.578                 | 12.00                   | 12.00                  | 0.23                  |
| 2,775.000                          | 76.27           | 90.129      | 2,538.869             | 1.410       | 508.713     | 508.698                 | 12.00                   | 12.00                  | 0.22                  |
| 2,800.000                          | 79.27           | 90.184      | 2,542.163             | 1.343       | 533.143     | 533.128                 | 12.00                   | 12.00                  | 0.22                  |
| 2,825.000                          | 82.27           | 90.238      | 2,546.172             | 1.252       | 557.817     | 557.802                 | 12.00                   | 12.00                  | 0.21                  |
| 2,850.000                          | 85.27           | 90.290      | 2,548.884             | 1.138       | 582.668     | 582.651                 | 12.00                   | 12.00                  | 0.21                  |
| 2,867.372                          | 87.36           | 90.327      | 2,550.001             | 1.044       | 600.001     | 599.986                 | 12.00                   | 12.00                  | 0.21                  |
| [BSC#18H]UMP1 2867' MD (2560' TVD) |                 |             |                       |             |             |                         |                         |                        |                       |
| 2,875.000                          | 88.27           | 90.343      | 2,550.292             | 1.000       | 607.623     | 607.609                 | 12.00                   | 12.00                  | 0.21                  |



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Local Co-ordinate Reference: Well Boyd X State Com #18H  
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MD Reference: KB @ 3526.000usft (Planning Rig)  
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) |
|------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 2,883.805                          | 89.33           | 90.361      | 2,550.478             | 0.946        | 616.426      | 616.412                 | 12.00                   | 12.00                  | 0.21                  |
| [BSC#18H]EOC1 2884' MD (2650' TVD) |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,900.000                          | 89.33           | 90.361      | 2,550.666             | 0.844        | 632.620      | 632.606                 | 0.00                    | 0.00                   | 0.00                  |
| 3,000.000                          | 89.33           | 90.361      | 2,551.840             | 0.214        | 732.611      | 732.599                 | 0.00                    | 0.00                   | 0.00                  |
| 3,100.000                          | 89.33           | 90.361      | 2,553.013             | -0.416       | 832.602      | 832.592                 | 0.00                    | 0.00                   | 0.00                  |
| 3,200.000                          | 89.33           | 90.361      | 2,554.187             | -1.046       | 932.593      | 932.585                 | 0.00                    | 0.00                   | 0.00                  |
| 3,300.000                          | 89.33           | 90.361      | 2,555.361             | -1.676       | 1,032.584    | 1,032.578               | 0.00                    | 0.00                   | 0.00                  |
| 3,400.000                          | 89.33           | 90.361      | 2,556.534             | -2.306       | 1,132.575    | 1,132.571               | 0.00                    | 0.00                   | 0.00                  |
| 3,500.000                          | 89.33           | 90.361      | 2,557.708             | -2.935       | 1,232.566    | 1,232.564               | 0.00                    | 0.00                   | 0.00                  |
| 3,600.000                          | 89.33           | 90.361      | 2,558.881             | -3.565       | 1,332.557    | 1,332.557               | 0.00                    | 0.00                   | 0.00                  |
| 3,700.000                          | 89.33           | 90.361      | 2,560.055             | -4.195       | 1,432.549    | 1,432.550               | 0.00                    | 0.00                   | 0.00                  |
| 3,800.000                          | 89.33           | 90.361      | 2,561.228             | -4.825       | 1,532.540    | 1,532.543               | 0.00                    | 0.00                   | 0.00                  |
| 3,900.000                          | 89.33           | 90.361      | 2,562.402             | -5.455       | 1,632.531    | 1,632.538               | 0.00                    | 0.00                   | 0.00                  |
| 4,000.000                          | 89.33           | 90.361      | 2,563.576             | -6.085       | 1,732.522    | 1,732.529               | 0.00                    | 0.00                   | 0.00                  |
| 4,100.000                          | 89.33           | 90.361      | 2,564.749             | -6.714       | 1,832.513    | 1,832.522               | 0.00                    | 0.00                   | 0.00                  |
| 4,200.000                          | 89.33           | 90.361      | 2,565.923             | -7.344       | 1,932.504    | 1,932.515               | 0.00                    | 0.00                   | 0.00                  |
| 4,300.000                          | 89.33           | 90.361      | 2,567.096             | -7.974       | 2,032.495    | 2,032.509               | 0.00                    | 0.00                   | 0.00                  |
| 4,400.000                          | 89.33           | 90.361      | 2,568.270             | -8.604       | 2,132.486    | 2,132.502               | 0.00                    | 0.00                   | 0.00                  |
| 4,500.000                          | 89.33           | 90.361      | 2,569.443             | -9.234       | 2,232.478    | 2,232.495               | 0.00                    | 0.00                   | 0.00                  |
| 4,600.000                          | 89.33           | 90.361      | 2,570.617             | -9.864       | 2,332.469    | 2,332.488               | 0.00                    | 0.00                   | 0.00                  |
| 4,700.000                          | 89.33           | 90.361      | 2,571.790             | -10.493      | 2,432.460    | 2,432.481               | 0.00                    | 0.00                   | 0.00                  |
| 4,800.000                          | 89.33           | 90.361      | 2,572.964             | -11.123      | 2,532.451    | 2,532.474               | 0.00                    | 0.00                   | 0.00                  |
| 4,900.000                          | 89.33           | 90.361      | 2,574.138             | -11.753      | 2,632.442    | 2,632.467               | 0.00                    | 0.00                   | 0.00                  |
| 5,000.000                          | 89.33           | 90.361      | 2,575.311             | -12.383      | 2,732.433    | 2,732.460               | 0.00                    | 0.00                   | 0.00                  |
| 5,100.000                          | 89.33           | 90.361      | 2,576.485             | -13.013      | 2,832.424    | 2,832.453               | 0.00                    | 0.00                   | 0.00                  |
| 5,200.000                          | 89.33           | 90.361      | 2,577.658             | -13.643      | 2,932.415    | 2,932.448               | 0.00                    | 0.00                   | 0.00                  |
| 5,300.000                          | 89.33           | 90.361      | 2,578.832             | -14.272      | 3,032.407    | 3,032.439               | 0.00                    | 0.00                   | 0.00                  |
| 5,400.000                          | 89.33           | 90.361      | 2,580.005             | -14.902      | 3,132.398    | 3,132.432               | 0.00                    | 0.00                   | 0.00                  |
| 5,500.000                          | 89.33           | 90.361      | 2,581.179             | -15.532      | 3,232.389    | 3,232.425               | 0.00                    | 0.00                   | 0.00                  |
| 5,600.000                          | 89.33           | 90.361      | 2,582.353             | -16.162      | 3,332.380    | 3,332.419               | 0.00                    | 0.00                   | 0.00                  |
| 5,700.000                          | 89.33           | 90.361      | 2,583.526             | -16.792      | 3,432.371    | 3,432.412               | 0.00                    | 0.00                   | 0.00                  |
| 5,800.000                          | 89.33           | 90.361      | 2,584.700             | -17.422      | 3,532.362    | 3,532.405               | 0.00                    | 0.00                   | 0.00                  |
| 5,900.000                          | 89.33           | 90.361      | 2,585.873             | -18.052      | 3,632.353    | 3,632.398               | 0.00                    | 0.00                   | 0.00                  |
| 6,000.000                          | 89.33           | 90.361      | 2,587.047             | -18.681      | 3,732.344    | 3,732.391               | 0.00                    | 0.00                   | 0.00                  |
| 6,100.000                          | 89.33           | 90.361      | 2,588.220             | -19.311      | 3,832.336    | 3,832.384               | 0.00                    | 0.00                   | 0.00                  |
| 6,200.000                          | 89.33           | 90.361      | 2,589.394             | -19.941      | 3,932.327    | 3,932.377               | 0.00                    | 0.00                   | 0.00                  |
| 6,300.000                          | 89.33           | 90.361      | 2,590.568             | -20.571      | 4,032.318    | 4,032.370               | 0.00                    | 0.00                   | 0.00                  |
| 6,400.000                          | 89.33           | 90.361      | 2,591.741             | -21.201      | 4,132.309    | 4,132.363               | 0.00                    | 0.00                   | 0.00                  |
| 6,500.000                          | 89.33           | 90.361      | 2,592.915             | -21.831      | 4,232.300    | 4,232.356               | 0.00                    | 0.00                   | 0.00                  |
| 6,600.000                          | 89.33           | 90.361      | 2,594.088             | -22.460      | 4,332.291    | 4,332.348               | 0.00                    | 0.00                   | 0.00                  |
| 6,700.000                          | 89.33           | 90.361      | 2,595.262             | -23.090      | 4,432.282    | 4,432.342               | 0.00                    | 0.00                   | 0.00                  |
| 6,800.000                          | 89.33           | 90.361      | 2,596.435             | -23.720      | 4,532.273    | 4,532.335               | 0.00                    | 0.00                   | 0.00                  |
| 6,900.000                          | 89.33           | 90.361      | 2,597.609             | -24.350      | 4,632.265    | 4,632.328               | 0.00                    | 0.00                   | 0.00                  |
| 7,000.000                          | 89.33           | 90.361      | 2,598.783             | -24.980      | 4,732.256    | 4,732.322               | 0.00                    | 0.00                   | 0.00                  |
| 7,100.000                          | 89.33           | 90.361      | 2,599.956             | -25.610      | 4,832.247    | 4,832.315               | 0.00                    | 0.00                   | 0.00                  |
| 7,200.000                          | 89.33           | 90.361      | 2,601.130             | -26.239      | 4,932.238    | 4,932.308               | 0.00                    | 0.00                   | 0.00                  |
| 7,300.000                          | 89.33           | 90.361      | 2,602.303             | -26.869      | 5,032.229    | 5,032.301               | 0.00                    | 0.00                   | 0.00                  |
| 7,400.000                          | 89.33           | 90.361      | 2,603.477             | -27.499      | 5,132.220    | 5,132.294               | 0.00                    | 0.00                   | 0.00                  |
| 7,500.000                          | 89.33           | 90.361      | 2,604.650             | -28.129      | 5,232.211    | 5,232.287               | 0.00                    | 0.00                   | 0.00                  |
| 7,600.000                          | 89.33           | 90.361      | 2,605.824             | -28.759      | 5,332.202    | 5,332.280               | 0.00                    | 0.00                   | 0.00                  |
| 7,700.000                          | 89.33           | 90.361      | 2,606.998             | -29.389      | 5,432.194    | 5,432.273               | 0.00                    | 0.00                   | 0.00                  |
| 7,800.000                          | 89.33           | 90.361      | 2,608.171             | -30.019      | 5,532.185    | 5,532.266               | 0.00                    | 0.00                   | 0.00                  |
| 7,900.000                          | 89.33           | 90.361      | 2,609.345             | -30.648      | 5,632.176    | 5,632.259               | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

**Database:** EDM 5000.14  
**Company:** EOG Resources - Artesia  
**Project:** Eddy County (NAD83)  
**Site:** Boyd  
**Well:** Boyd X State Com #18H  
**Wellbore:** Lateral  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Boyd X State Com #18H  
**TVD Reference:** KB @ 3526.000usft (Planning Rig)  
**MD Reference:** KB @ 3526.000usft (Planning Rig)  
**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) |
|------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,955.829                          | 89.33           | 90.361      | 2,610.000             | -31.000      | 5,888.000    | 5,688.084               | 0.00                    | 0.00                   | 0.00                  |
| [BSC#18H]BHL1 7956' MD (2610' TVD) |                 |             |                       |              |              |                         |                         |                        |                       |

### Design Targets

| Target Name                                                                                                   | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|---------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| [BSC#18H]JUMP1                                                                                                | 0.00          | 0.000        | 2,550.000  | 1.000        | 600.000      | 601,974.00      | 490,845.00     | 32° 39' 17.156 N | 104° 29' 52.962 W |
| - hit/miss target                                                                                             |               |              |            |              |              |                 |                |                  |                   |
| - Shape                                                                                                       |               |              |            |              |              |                 |                |                  |                   |
| [BSC#18H]JUMP1 - plan misses target center by 0.044usft at 2867.371usft MD (2550.001 TVD, 1.044 N, 600.000 E) |               |              |            |              |              |                 |                |                  |                   |
| - Point                                                                                                       |               |              |            |              |              |                 |                |                  |                   |
| [BSC#18H]BHL                                                                                                  | 0.00          | 0.000        | 2,610.000  | -31.000      | 5,688.000    | 601,942.00      | 495,733.00     | 32° 39' 18.914 N | 104° 28' 53.446 W |
| - plan hits target center                                                                                     |               |              |            |              |              |                 |                |                  |                   |
| - Point                                                                                                       |               |              |            |              |              |                 |                |                  |                   |

### Plan Annotations

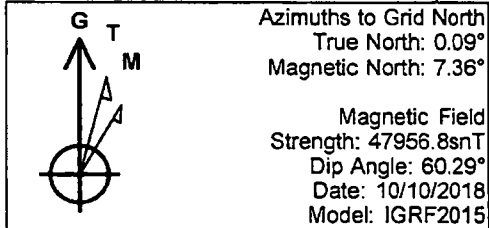
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                             |
|-----------------------|-----------------------|-------------------|--------------|-------------------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                     |
| 1,897.701             | 1,897.701             | 0.000             | 0.000        | START KOP 8°/100' BUILD RATE        |
| 2,584.368             | 2,449.030             | 1.122             | 318.308      | START 75' TANGENT                   |
| 2,639.368             | 2,486.530             | 1.351             | 383.260      | END 60° TANGENT/START 12°/100' BR   |
| 2,667.372             | 2,550.001             | 1.044             | 600.001      | [BSC#18H]JUMP1 2867' MD (2550' TVD) |
| 2,883.805             | 2,550.476             | 0.946             | 616.426      | [BSC#18H]EOC1 2884' MD (2550' TVD)  |
| 7,955.829             | 2,610.000             | -31.000           | 5,688.000    | [BSC#18H]BHL1 7956' MD (2610' TVD)  |

Project: Eddy County (NAD83)  
 Site: Boyd  
 Well: Boyd X State Com #18H  
 Wellbore: Lateral  
 Design: Plan #1  
 Ground Elevation 3508.000  
 Northing 601973.00  
 Easting 490045.00

# PROJECT DETAILS: Eddy County (NAD83)

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

System Datum: Mean Sea Level



## SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD      | +N/-S  | +E/-W    | Dleg  | TFace | VSect    |
|-----|----------|-------|--------|----------|--------|----------|-------|-------|----------|
| 1   | 0.000    | 0.00  | 0.000  | 0.000    | 0.000  | 0.000    | 0.00  | 0.00  | 0.000    |
| 2   | 1250.000 | 0.00  | 0.000  | 1250.000 | 0.000  | 0.000    | 0.00  | 0.00  | 0.000    |
| 3   | 1897.701 | 0.00  | 0.000  | 1897.701 | 0.000  | 0.000    | 0.00  | 0.00  | 0.000    |
| 4   | 2564.368 | 60.00 | 89.798 | 2449.030 | 1.122  | 318.308  | 9.00  | 89.80 | 318.297  |
| 5   | 2639.368 | 60.00 | 89.798 | 2486.530 | 1.351  | 383.259  | 0.00  | 0.00  | 383.246  |
| 6   | 2883.805 | 89.33 | 90.361 | 2550.476 | 0.946  | 616.426  | 12.00 | 1.15  | 616.412  |
| 7   | 2955.829 | 89.33 | 90.361 | 2610.000 | 31.000 | 5688.000 | 0.00  | 0.00  | 5688.084 |

## DESIGN TARGET DETAILS

| Name                                                                                         | TVD      | +N/-S   | +E/-W    | Northing  | Easting   |
|----------------------------------------------------------------------------------------------|----------|---------|----------|-----------|-----------|
| [BSC#18H]JUMP1                                                                               | 2550.000 | 1.000   | 600.000  | 601974.00 | 490645.00 |
| plan misses target center by 0.044usft at 2867.372usft MD (2550.001 TVD, 1.044 N, 600.001 E) |          |         |          |           |           |
| [BSC#18H]BHL                                                                                 | 2610.000 | -31.000 | 5688.000 | 601942.00 | 495733.00 |
| - plan hits target center                                                                    |          |         |          |           |           |

