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## **EOG Resources - Midland**

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

**Jolly Roger 16 State**

**#702H**

**OH**

**Plan: Plan #0.2**

## **Standard Planning Report**

**29 October, 2018**



# Planning Report

**Database:** EDM 5000.14  
**Company:** EOG Resources - Midland  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** Jolly Roger 16 State  
**Well:** #702H  
**Wellbore:** OH  
**Design:** Plan #0.2

**Local Co-ordinate Reference:** Well #702H  
**TVD Reference:** KB= 25 @ 3581.0usft  
**MD Reference:** KB= 25 @ 3581.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

|                    |                             |                      |                |
|--------------------|-----------------------------|----------------------|----------------|
| <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     |                      |                |

|                              |                      |                     |                 |                                     |
|------------------------------|----------------------|---------------------|-----------------|-------------------------------------|
| <b>Site</b>                  | Jolly Roger 16 State |                     |                 |                                     |
| <b>Site Position:</b>        |                      | <b>Northing:</b>    | 445,511.00 usft | <b>Latitude:</b> 32° 13' 18.918 N   |
| <b>From:</b>                 | Map                  | <b>Easting:</b>     | 804,489.00 usft | <b>Longitude:</b> 103° 28' 56.577 W |
| <b>Position Uncertainty:</b> | 0.0 usft             | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> 0.45 °     |

|                             |          |                            |                  |                                   |
|-----------------------------|----------|----------------------------|------------------|-----------------------------------|
| <b>Well</b>                 | #702H    |                            |                  |                                   |
| <b>Well Position</b>        | +N/-S    | 801.0 usft                 | <b>Northing:</b> | 446,312.00 usft                   |
|                             | +E/-W    | 787.0 usft                 | <b>Easting:</b>  | 805,276.00 usft                   |
| <b>Position Uncertainty</b> | 0.0 usft | <b>Wellhead Elevation:</b> |                  | <b>Ground Level:</b> 3,556.0 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 (nT)</b> |
|                  | IGRF2015          | 10/17/2018         | 6.77                   | 60.06                | 47,809.56056840            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #0.2                      |                     |                      |                      |
| <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) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.0                            | 0.0                 | 0.0                  | 181.01               |

**Plan Survey Tool Program** Date 10/29/2018

| Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name           | Remarks |
|-------------------|-----------------|-------------------|---------------------|---------|
| 1 0.0             | 17,034.8        | Plan #0.2 (OH)    | MWD                 |         |
|                   |                 |                   | OWSG MWD - Standard |         |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target                |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-----------------------|
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 3,000.0               | 0.00            | 0.00        | 3,000.0               | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 3,083.0               | 1.66            | 327.53      | 3,083.0               | 1.0          | -0.6         | 2.00                    | 2.00                   | 0.00                  | 327.53  |                       |
| 11,551.1              | 1.66            | 327.53      | 11,547.5              | 208.0        | -132.4       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 11,634.1              | 0.00            | 0.00        | 11,630.5              | 209.0        | -133.0       | 2.00                    | -2.00                  | 0.00                  | 180.00  | KOP (Jolly Rogers 16  |
| 12,384.1              | 90.00           | 179.49      | 12,108.0              | -268.4       | -128.7       | 12.00                   | 12.00                  | 23.93                 | 179.49  |                       |
| 17,034.8              | 90.00           | 179.49      | 12,108.0              | -4,919.0     | -87.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    | PBHL (Jolly Rogers 16 |



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 Design: Plan #0.2

Local Co-ordinate Reference: Well #702H  
 TVD Reference: KB= 25 @ 3581.0usft  
 MD Reference: KB= 25 @ 3581.0usft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## 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) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 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                        |
| 3,083.0                     | 1.66               | 327.53         | 3,083.0                     | 1.0             | -0.6            | -1.0                          | 2.00                          | 2.00                         | 0.00                        |
| 3,100.0                     | 1.66               | 327.53         | 3,100.0                     | 1.4             | -0.9            | -1.4                          | 0.00                          | 0.00                         | 0.00                        |
| 3,200.0                     | 1.66               | 327.53         | 3,199.9                     | 3.9             | -2.5            | -3.8                          | 0.00                          | 0.00                         | 0.00                        |
| 3,300.0                     | 1.66               | 327.53         | 3,299.9                     | 6.3             | -4.0            | -6.2                          | 0.00                          | 0.00                         | 0.00                        |
| 3,400.0                     | 1.66               | 327.53         | 3,399.9                     | 8.8             | -5.6            | -8.7                          | 0.00                          | 0.00                         | 0.00                        |
| 3,500.0                     | 1.66               | 327.53         | 3,499.8                     | 11.2            | -7.1            | -11.1                         | 0.00                          | 0.00                         | 0.00                        |
| 3,600.0                     | 1.66               | 327.53         | 3,599.8                     | 13.7            | -8.7            | -13.5                         | 0.00                          | 0.00                         | 0.00                        |
| 3,700.0                     | 1.66               | 327.53         | 3,699.7                     | 16.1            | -10.2           | -15.9                         | 0.00                          | 0.00                         | 0.00                        |
| 3,800.0                     | 1.66               | 327.53         | 3,799.7                     | 18.5            | -11.8           | -18.3                         | 0.00                          | 0.00                         | 0.00                        |
| 3,900.0                     | 1.66               | 327.53         | 3,899.6                     | 21.0            | -13.4           | -20.7                         | 0.00                          | 0.00                         | 0.00                        |
| 4,000.0                     | 1.66               | 327.53         | 3,999.6                     | 23.4            | -14.9           | -23.2                         | 0.00                          | 0.00                         | 0.00                        |
| 4,100.0                     | 1.66               | 327.53         | 4,099.6                     | 25.9            | -16.5           | -25.6                         | 0.00                          | 0.00                         | 0.00                        |
| 4,200.0                     | 1.66               | 327.53         | 4,199.5                     | 28.3            | -18.0           | -28.0                         | 0.00                          | 0.00                         | 0.00                        |
| 4,300.0                     | 1.66               | 327.53         | 4,299.5                     | 30.8            | -19.6           | -30.4                         | 0.00                          | 0.00                         | 0.00                        |
| 4,400.0                     | 1.66               | 327.53         | 4,399.4                     | 33.2            | -21.1           | -32.8                         | 0.00                          | 0.00                         | 0.00                        |
| 4,500.0                     | 1.66               | 327.53         | 4,499.4                     | 35.6            | -22.7           | -35.2                         | 0.00                          | 0.00                         | 0.00                        |
| 4,600.0                     | 1.66               | 327.53         | 4,599.4                     | 38.1            | -24.2           | -37.7                         | 0.00                          | 0.00                         | 0.00                        |
| 4,700.0                     | 1.66               | 327.53         | 4,699.3                     | 40.5            | -25.8           | -40.1                         | 0.00                          | 0.00                         | 0.00                        |
| 4,800.0                     | 1.66               | 327.53         | 4,799.3                     | 43.0            | -27.4           | -42.5                         | 0.00                          | 0.00                         | 0.00                        |
| 4,900.0                     | 1.66               | 327.53         | 4,899.2                     | 45.4            | -28.9           | -44.9                         | 0.00                          | 0.00                         | 0.00                        |
| 5,000.0                     | 1.66               | 327.53         | 4,999.2                     | 47.9            | -30.5           | -47.3                         | 0.00                          | 0.00                         | 0.00                        |
| 5,100.0                     | 1.66               | 327.53         | 5,099.1                     | 50.3            | -32.0           | -49.7                         | 0.00                          | 0.00                         | 0.00                        |
| 5,200.0                     | 1.66               | 327.53         | 5,199.1                     | 52.8            | -33.6           | -52.2                         | 0.00                          | 0.00                         | 0.00                        |



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## 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) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 5,300.0                     | 1.66               | 327.53         | 5,299.1                     | 55.2            | -35.1           | -54.6                         | 0.00                          | 0.00                         | 0.00                        |
| 5,400.0                     | 1.66               | 327.53         | 5,399.0                     | 57.6            | -36.7           | -57.0                         | 0.00                          | 0.00                         | 0.00                        |
| 5,500.0                     | 1.66               | 327.53         | 5,499.0                     | 60.1            | -38.2           | -59.4                         | 0.00                          | 0.00                         | 0.00                        |
| 5,600.0                     | 1.66               | 327.53         | 5,598.9                     | 62.5            | -39.8           | -61.8                         | 0.00                          | 0.00                         | 0.00                        |
| 5,700.0                     | 1.66               | 327.53         | 5,698.9                     | 65.0            | -41.3           | -64.2                         | 0.00                          | 0.00                         | 0.00                        |
| 5,800.0                     | 1.66               | 327.53         | 5,798.8                     | 67.4            | -42.9           | -66.7                         | 0.00                          | 0.00                         | 0.00                        |
| 5,900.0                     | 1.66               | 327.53         | 5,898.8                     | 69.9            | -44.5           | -69.1                         | 0.00                          | 0.00                         | 0.00                        |
| 6,000.0                     | 1.66               | 327.53         | 5,998.8                     | 72.3            | -46.0           | -71.5                         | 0.00                          | 0.00                         | 0.00                        |
| 6,100.0                     | 1.66               | 327.53         | 6,098.7                     | 74.8            | -47.6           | -73.9                         | 0.00                          | 0.00                         | 0.00                        |
| 6,200.0                     | 1.66               | 327.53         | 6,198.7                     | 77.2            | -49.1           | -76.3                         | 0.00                          | 0.00                         | 0.00                        |
| 6,300.0                     | 1.66               | 327.53         | 6,298.6                     | 79.6            | -50.7           | -78.7                         | 0.00                          | 0.00                         | 0.00                        |
| 6,400.0                     | 1.66               | 327.53         | 6,398.6                     | 82.1            | -52.2           | -81.1                         | 0.00                          | 0.00                         | 0.00                        |
| 6,500.0                     | 1.66               | 327.53         | 6,498.6                     | 84.5            | -53.8           | -83.6                         | 0.00                          | 0.00                         | 0.00                        |
| 6,600.0                     | 1.66               | 327.53         | 6,598.5                     | 87.0            | -55.3           | -86.0                         | 0.00                          | 0.00                         | 0.00                        |
| 6,700.0                     | 1.66               | 327.53         | 6,698.5                     | 89.4            | -56.9           | -88.4                         | 0.00                          | 0.00                         | 0.00                        |
| 6,800.0                     | 1.66               | 327.53         | 6,798.4                     | 91.9            | -58.5           | -90.8                         | 0.00                          | 0.00                         | 0.00                        |
| 6,900.0                     | 1.66               | 327.53         | 6,898.4                     | 94.3            | -60.0           | -93.2                         | 0.00                          | 0.00                         | 0.00                        |
| 7,000.0                     | 1.66               | 327.53         | 6,998.3                     | 96.8            | -61.6           | -95.6                         | 0.00                          | 0.00                         | 0.00                        |
| 7,100.0                     | 1.66               | 327.53         | 7,098.3                     | 99.2            | -63.1           | -98.1                         | 0.00                          | 0.00                         | 0.00                        |
| 7,200.0                     | 1.66               | 327.53         | 7,198.3                     | 101.6           | -64.7           | -100.5                        | 0.00                          | 0.00                         | 0.00                        |
| 7,300.0                     | 1.66               | 327.53         | 7,298.2                     | 104.1           | -66.2           | -102.9                        | 0.00                          | 0.00                         | 0.00                        |
| 7,400.0                     | 1.66               | 327.53         | 7,398.2                     | 106.5           | -67.8           | -105.3                        | 0.00                          | 0.00                         | 0.00                        |
| 7,500.0                     | 1.66               | 327.53         | 7,498.1                     | 109.0           | -69.3           | -107.7                        | 0.00                          | 0.00                         | 0.00                        |
| 7,600.0                     | 1.66               | 327.53         | 7,598.1                     | 111.4           | -70.9           | -110.1                        | 0.00                          | 0.00                         | 0.00                        |
| 7,700.0                     | 1.66               | 327.53         | 7,698.1                     | 113.9           | -72.5           | -112.6                        | 0.00                          | 0.00                         | 0.00                        |
| 7,800.0                     | 1.66               | 327.53         | 7,798.0                     | 116.3           | -74.0           | -115.0                        | 0.00                          | 0.00                         | 0.00                        |
| 7,900.0                     | 1.66               | 327.53         | 7,898.0                     | 118.7           | -75.6           | -117.4                        | 0.00                          | 0.00                         | 0.00                        |
| 8,000.0                     | 1.66               | 327.53         | 7,997.9                     | 121.2           | -77.1           | -119.8                        | 0.00                          | 0.00                         | 0.00                        |
| 8,100.0                     | 1.66               | 327.53         | 8,097.9                     | 123.6           | -78.7           | -122.2                        | 0.00                          | 0.00                         | 0.00                        |
| 8,200.0                     | 1.66               | 327.53         | 8,197.8                     | 126.1           | -80.2           | -124.6                        | 0.00                          | 0.00                         | 0.00                        |
| 8,300.0                     | 1.66               | 327.53         | 8,297.8                     | 128.5           | -81.8           | -127.1                        | 0.00                          | 0.00                         | 0.00                        |
| 8,400.0                     | 1.66               | 327.53         | 8,397.8                     | 131.0           | -83.3           | -129.5                        | 0.00                          | 0.00                         | 0.00                        |
| 8,500.0                     | 1.66               | 327.53         | 8,497.7                     | 133.4           | -84.9           | -131.9                        | 0.00                          | 0.00                         | 0.00                        |
| 8,600.0                     | 1.66               | 327.53         | 8,597.7                     | 135.9           | -86.5           | -134.3                        | 0.00                          | 0.00                         | 0.00                        |
| 8,700.0                     | 1.66               | 327.53         | 8,697.6                     | 138.3           | -88.0           | -136.7                        | 0.00                          | 0.00                         | 0.00                        |
| 8,800.0                     | 1.66               | 327.53         | 8,797.6                     | 140.7           | -89.6           | -139.1                        | 0.00                          | 0.00                         | 0.00                        |
| 8,900.0                     | 1.66               | 327.53         | 8,897.5                     | 143.2           | -91.1           | -141.6                        | 0.00                          | 0.00                         | 0.00                        |
| 9,000.0                     | 1.66               | 327.53         | 8,997.5                     | 145.6           | -92.7           | -144.0                        | 0.00                          | 0.00                         | 0.00                        |
| 9,100.0                     | 1.66               | 327.53         | 9,097.5                     | 148.1           | -94.2           | -146.4                        | 0.00                          | 0.00                         | 0.00                        |
| 9,200.0                     | 1.66               | 327.53         | 9,197.4                     | 150.5           | -95.8           | -148.8                        | 0.00                          | 0.00                         | 0.00                        |
| 9,300.0                     | 1.66               | 327.53         | 9,297.4                     | 153.0           | -97.3           | -151.2                        | 0.00                          | 0.00                         | 0.00                        |
| 9,400.0                     | 1.66               | 327.53         | 9,397.3                     | 155.4           | -98.9           | -153.6                        | 0.00                          | 0.00                         | 0.00                        |
| 9,500.0                     | 1.66               | 327.53         | 9,497.3                     | 157.9           | -100.5          | -156.1                        | 0.00                          | 0.00                         | 0.00                        |
| 9,600.0                     | 1.66               | 327.53         | 9,597.3                     | 160.3           | -102.0          | -158.5                        | 0.00                          | 0.00                         | 0.00                        |
| 9,700.0                     | 1.66               | 327.53         | 9,697.2                     | 162.7           | -103.6          | -160.9                        | 0.00                          | 0.00                         | 0.00                        |
| 9,800.0                     | 1.66               | 327.53         | 9,797.2                     | 165.2           | -105.1          | -163.3                        | 0.00                          | 0.00                         | 0.00                        |
| 9,900.0                     | 1.66               | 327.53         | 9,897.1                     | 167.6           | -106.7          | -165.7                        | 0.00                          | 0.00                         | 0.00                        |
| 10,000.0                    | 1.66               | 327.53         | 9,997.1                     | 170.1           | -108.2          | -168.1                        | 0.00                          | 0.00                         | 0.00                        |
| 10,100.0                    | 1.66               | 327.53         | 10,097.0                    | 172.5           | -109.8          | -170.6                        | 0.00                          | 0.00                         | 0.00                        |
| 10,200.0                    | 1.66               | 327.53         | 10,197.0                    | 175.0           | -111.3          | -173.0                        | 0.00                          | 0.00                         | 0.00                        |
| 10,300.0                    | 1.66               | 327.53         | 10,297.0                    | 177.4           | -112.9          | -175.4                        | 0.00                          | 0.00                         | 0.00                        |
| 10,400.0                    | 1.66               | 327.53         | 10,396.9                    | 179.9           | -114.5          | -177.8                        | 0.00                          | 0.00                         | 0.00                        |
| 10,500.0                    | 1.66               | 327.53         | 10,496.9                    | 182.3           | -116.0          | -180.2                        | 0.00                          | 0.00                         | 0.00                        |
| 10,600.0                    | 1.66               | 327.53         | 10,596.8                    | 184.7           | -117.6          | -182.6                        | 0.00                          | 0.00                         | 0.00                        |



# Planning Report

Database: EDM 5000.14  
 Company: EOG Resources - Midland  
 Project: Lea County, NM (NAD 83 NME)  
 Site: Jolly Roger 16 State  
 Well: #702H  
 Wellbore: OH  
 Design: Plan #0.2

Local Co-ordinate Reference: Well #702H  
 TVD Reference: KB= 25 @ 3581.0usft  
 MD Reference: KB= 25 @ 3581.0usft  
 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,700.0              | 1.66            | 327.53      | 10,696.8              | 187.2        | -119.1       | -185.0                  | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0              | 1.66            | 327.53      | 10,796.7              | 189.6        | -120.7       | -187.5                  | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0              | 1.66            | 327.53      | 10,896.7              | 192.1        | -122.2       | -189.9                  | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0              | 1.66            | 327.53      | 10,996.7              | 194.5        | -123.8       | -192.3                  | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0              | 1.66            | 327.53      | 11,096.6              | 197.0        | -125.3       | -194.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0              | 1.66            | 327.53      | 11,196.6              | 199.4        | -126.9       | -197.1                  | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0              | 1.66            | 327.53      | 11,296.5              | 201.8        | -128.4       | -199.5                  | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0              | 1.66            | 327.53      | 11,396.5              | 204.3        | -130.0       | -202.0                  | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0              | 1.66            | 327.53      | 11,496.5              | 206.7        | -131.6       | -204.4                  | 0.00                    | 0.00                   | 0.00                  |
| 11,551.1              | 1.66            | 327.53      | 11,547.5              | 208.0        | -132.4       | -205.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0              | 0.68            | 327.53      | 11,596.4              | 208.8        | -132.9       | -206.4                  | 2.00                    | -2.00                  | 0.00                  |
| 11,634.1              | 0.00            | 0.00        | 11,630.5              | 209.0        | -133.0       | -206.6                  | 2.00                    | -2.00                  | 0.00                  |
| 11,650.0              | 1.91            | 179.49      | 11,646.4              | 208.7        | -133.0       | -206.4                  | 12.00                   | 12.00                  | 0.00                  |
| 11,675.0              | 4.91            | 179.49      | 11,671.4              | 207.2        | -133.0       | -204.9                  | 12.00                   | 12.00                  | 0.00                  |
| 11,700.0              | 7.91            | 179.49      | 11,696.2              | 204.5        | -133.0       | -202.1                  | 12.00                   | 12.00                  | 0.00                  |
| 11,725.0              | 10.91           | 179.49      | 11,720.9              | 200.4        | -132.9       | -198.0                  | 12.00                   | 12.00                  | 0.00                  |
| 11,750.0              | 13.91           | 179.49      | 11,745.3              | 195.0        | -132.9       | -192.6                  | 12.00                   | 12.00                  | 0.00                  |
| 11,775.0              | 16.91           | 179.49      | 11,769.4              | 188.4        | -132.8       | -186.0                  | 12.00                   | 12.00                  | 0.00                  |
| 11,800.0              | 19.91           | 179.49      | 11,793.1              | 180.5        | -132.7       | -178.1                  | 12.00                   | 12.00                  | 0.00                  |
| 11,825.0              | 22.91           | 179.49      | 11,816.4              | 171.3        | -132.7       | -169.0                  | 12.00                   | 12.00                  | 0.00                  |
| 11,850.0              | 25.91           | 179.49      | 11,839.1              | 161.0        | -132.6       | -158.6                  | 12.00                   | 12.00                  | 0.00                  |
| 11,875.0              | 28.91           | 179.49      | 11,861.3              | 149.5        | -132.5       | -147.1                  | 12.00                   | 12.00                  | 0.00                  |
| 11,900.0              | 31.91           | 179.49      | 11,882.9              | 136.8        | -132.4       | -134.5                  | 12.00                   | 12.00                  | 0.00                  |
| 11,925.0              | 34.91           | 179.49      | 11,903.8              | 123.1        | -132.2       | -120.7                  | 12.00                   | 12.00                  | 0.00                  |
| 11,950.0              | 37.91           | 179.49      | 11,923.9              | 108.2        | -132.1       | -105.9                  | 12.00                   | 12.00                  | 0.00                  |
| 11,975.0              | 40.91           | 179.49      | 11,943.2              | 92.4         | -132.0       | -90.0                   | 12.00                   | 12.00                  | 0.00                  |
| 12,000.0              | 43.91           | 179.49      | 11,961.6              | 75.5         | -131.8       | -73.2                   | 12.00                   | 12.00                  | 0.00                  |
| 12,025.0              | 46.91           | 179.49      | 11,979.2              | 57.7         | -131.6       | -55.4                   | 12.00                   | 12.00                  | 0.00                  |
| 12,050.0              | 49.91           | 179.49      | 11,995.8              | 39.0         | -131.5       | -36.7                   | 12.00                   | 12.00                  | 0.00                  |
| 12,075.0              | 52.91           | 179.49      | 12,011.4              | 19.5         | -131.3       | -17.2                   | 12.00                   | 12.00                  | 0.00                  |
| 12,100.0              | 55.91           | 179.49      | 12,025.9              | -0.8         | -131.1       | 3.2                     | 12.00                   | 12.00                  | 0.00                  |
| 12,125.0              | 58.91           | 179.49      | 12,039.4              | -21.9        | -130.9       | 24.2                    | 12.00                   | 12.00                  | 0.00                  |
| 12,150.0              | 61.91           | 179.49      | 12,051.7              | -43.6        | -130.7       | 45.9                    | 12.00                   | 12.00                  | 0.00                  |
| 12,175.0              | 64.91           | 179.49      | 12,062.9              | -66.0        | -130.5       | 68.3                    | 12.00                   | 12.00                  | 0.00                  |
| 12,200.0              | 67.91           | 179.49      | 12,072.9              | -88.9        | -130.3       | 91.2                    | 12.00                   | 12.00                  | 0.00                  |
| 12,225.0              | 70.91           | 179.49      | 12,081.7              | -112.3       | -130.1       | 114.6                   | 12.00                   | 12.00                  | 0.00                  |
| 12,250.0              | 73.91           | 179.49      | 12,089.3              | -136.1       | -129.9       | 138.4                   | 12.00                   | 12.00                  | 0.00                  |
| 12,275.0              | 76.91           | 179.49      | 12,095.6              | -160.3       | -129.7       | 162.6                   | 12.00                   | 12.00                  | 0.00                  |
| 12,300.0              | 79.91           | 179.49      | 12,100.6              | -184.8       | -129.5       | 187.1                   | 12.00                   | 12.00                  | 0.00                  |
| 12,325.0              | 82.91           | 179.49      | 12,104.3              | -209.5       | -129.2       | 211.8                   | 12.00                   | 12.00                  | 0.00                  |
| 12,350.0              | 85.91           | 179.49      | 12,106.7              | -234.4       | -129.0       | 236.6                   | 12.00                   | 12.00                  | 0.00                  |
| 12,375.0              | 88.91           | 179.49      | 12,107.9              | -259.4       | -128.8       | 261.6                   | 12.00                   | 12.00                  | 0.00                  |
| 12,384.1              | 90.00           | 179.49      | 12,108.0              | -268.4       | -128.7       | 270.7                   | 12.00                   | 12.00                  | 0.00                  |
| 12,400.0              | 90.00           | 179.49      | 12,108.0              | -284.4       | -128.6       | 286.6                   | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.00           | 179.49      | 12,108.0              | -384.4       | -127.7       | 386.6                   | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.00           | 179.49      | 12,108.0              | -484.4       | -126.8       | 486.5                   | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.00           | 179.49      | 12,108.0              | -584.4       | -125.9       | 586.5                   | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.00           | 179.49      | 12,108.0              | -684.4       | -125.0       | 686.5                   | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.00           | 179.49      | 12,108.0              | -784.3       | -124.1       | 786.4                   | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.00           | 179.49      | 12,108.0              | -884.3       | -123.2       | 886.4                   | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0              | 90.00           | 179.49      | 12,108.0              | -984.3       | -122.3       | 986.3                   | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0              | 90.00           | 179.49      | 12,108.0              | -1,084.3     | -121.4       | 1,086.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.0              | 90.00           | 179.49      | 12,108.0              | -1,184.3     | -120.5       | 1,186.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0              | 90.00           | 179.49      | 12,108.0              | -1,284.3     | -119.6       | 1,286.2                 | 0.00                    | 0.00                   | 0.00                  |



# Planning Report

Database: EDM 5000.14  
 Company: EOG Resources - Midland  
 Project: Lea County, NM (NAD 83 NME)  
 Site: Jolly Roger 16 State  
 Well: #702H  
 Wellbore: OH  
 Design: Plan #0.2

Local Co-ordinate Reference: Well #702H  
 TVD Reference: KB= 25 @ 3581.0usft  
 MD Reference: KB= 25 @ 3581.0usft  
 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,500.0              | 90.00           | 179.49      | 12,108.0              | -1,384.3     | -118.7       | 1,386.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.00           | 179.49      | 12,108.0              | -1,484.3     | -117.8       | 1,486.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.00           | 179.49      | 12,108.0              | -1,584.3     | -116.9       | 1,586.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.00           | 179.49      | 12,108.0              | -1,684.3     | -116.0       | 1,686.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.00           | 179.49      | 12,108.0              | -1,784.3     | -115.1       | 1,786.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.00           | 179.49      | 12,108.0              | -1,884.3     | -114.2       | 1,886.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.00           | 179.49      | 12,108.0              | -1,984.3     | -113.3       | 1,986.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.00           | 179.49      | 12,108.0              | -2,084.3     | -112.4       | 2,086.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.00           | 179.49      | 12,108.0              | -2,184.3     | -111.5       | 2,185.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.00           | 179.49      | 12,108.0              | -2,284.3     | -110.6       | 2,285.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0              | 90.00           | 179.49      | 12,108.0              | -2,384.3     | -109.7       | 2,385.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.00           | 179.49      | 12,108.0              | -2,484.3     | -108.8       | 2,485.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.00           | 179.49      | 12,108.0              | -2,584.3     | -107.9       | 2,585.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.00           | 179.49      | 12,108.0              | -2,684.3     | -107.0       | 2,685.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0              | 90.00           | 179.49      | 12,108.0              | -2,784.3     | -106.1       | 2,785.7                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0              | 90.00           | 179.49      | 12,108.0              | -2,884.3     | -105.3       | 2,885.7                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0              | 90.00           | 179.49      | 12,108.0              | -2,984.3     | -104.4       | 2,985.6                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0              | 90.00           | 179.49      | 12,108.0              | -3,084.3     | -103.5       | 3,085.6                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0              | 90.00           | 179.49      | 12,108.0              | -3,184.3     | -102.6       | 3,185.6                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0              | 90.00           | 179.49      | 12,108.0              | -3,284.2     | -101.7       | 3,285.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0              | 90.00           | 179.49      | 12,108.0              | -3,384.2     | -100.8       | 3,385.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0              | 90.00           | 179.49      | 12,108.0              | -3,484.2     | -99.9        | 3,485.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0              | 90.00           | 179.49      | 12,108.0              | -3,584.2     | -99.0        | 3,585.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.00           | 179.49      | 12,108.0              | -3,684.2     | -98.1        | 3,685.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.00           | 179.49      | 12,108.0              | -3,784.2     | -97.2        | 3,785.4                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.00           | 179.49      | 12,108.0              | -3,884.2     | -96.3        | 3,885.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.00           | 179.49      | 12,108.0              | -3,984.2     | -95.4        | 3,985.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.00           | 179.49      | 12,108.0              | -4,084.2     | -94.5        | 4,085.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.00           | 179.49      | 12,108.0              | -4,184.2     | -93.6        | 4,185.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.00           | 179.49      | 12,108.0              | -4,284.2     | -92.7        | 4,285.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0              | 90.00           | 179.49      | 12,108.0              | -4,384.2     | -91.8        | 4,385.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.00           | 179.49      | 12,108.0              | -4,484.2     | -90.9        | 4,485.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.00           | 179.49      | 12,108.0              | -4,584.2     | -90.0        | 4,585.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.00           | 179.49      | 12,108.0              | -4,684.2     | -89.1        | 4,685.0                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.00           | 179.49      | 12,108.0              | -4,784.2     | -88.2        | 4,785.0                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.00           | 179.49      | 12,108.0              | -4,884.2     | -87.3        | 4,885.0                 | 0.00                    | 0.00                   | 0.00                  |
| 17,034.8              | 90.00           | 179.49      | 12,108.0              | -4,919.0     | -87.0        | 4,919.8                 | 0.00                    | 0.00                   | 0.00                  |

## Design Targets

| Target Name                                                                                                                      | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|----------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| KOP (Jolly Rogers 16 St<br>- hit/miss target<br>- Shape<br>- Point                                                               | 0.00          | 0.00         | 11,630.5   | 209.0        | -133.0       | 446,521.00      | 805,143.00     | 32° 13' 28.861 N | 103° 28' 48.871 W |
| PBHL (Jolly Rogers 16 S<br>- plan hits target center<br>- Point                                                                  | 0.00          | 0.00         | 12,108.0   | -4,919.0     | -87.0        | 441,393.00      | 805,189.00     | 32° 12' 38.116 N | 103° 28' 48.809 W |
| FTP (Jolly Rogers 16 St<br>- plan misses target center by 163.4usft at 12034.7usft MD (11985.8 TVD, 50.5 N, -131.6 E)<br>- Point | 0.00          | 0.00         | 12,108.0   | 159.0        | -133.0       | 446,471.00      | 805,143.00     | 32° 13' 28.366 N | 103° 28' 48.875 W |



## Planning Report

**Database:** EDM 5000.14  
**Company:** EOG Resources - Midland  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** Jolly Roger 16 State  
**Well:** #702H  
**Wellbore:** OH  
**Design:** Plan #0.2

**Local Co-ordinate Reference:** Well #702H  
**TVD Reference:** KB= 25 @ 3581.0usft  
**MD Reference:** KB= 25 @ 3581.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature



Lea County, NM (NAD 83 NME)

Jolly Roger 16 State #702H

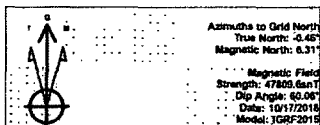
Plan #0.2

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

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

WELL DETAILS: #702H

KB= 25 @ 3581.0usft  
3556.0  
Northing 446312.00 Easting 605276.00 32° 13' 26.762 N 103° 28' 47.342 W



To convert a Magnetic Direction to a Grid Direction: Add 6.31°  
To convert a Magnetic Direction to a True Direction: Add 6.77° East  
To convert a True Direction to a Grid Direction: Subtract 0.46°

#### SECTION DETAILS

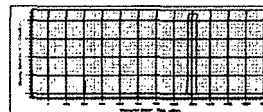
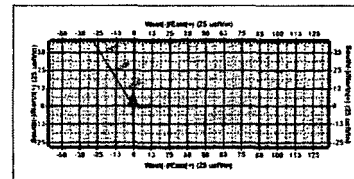
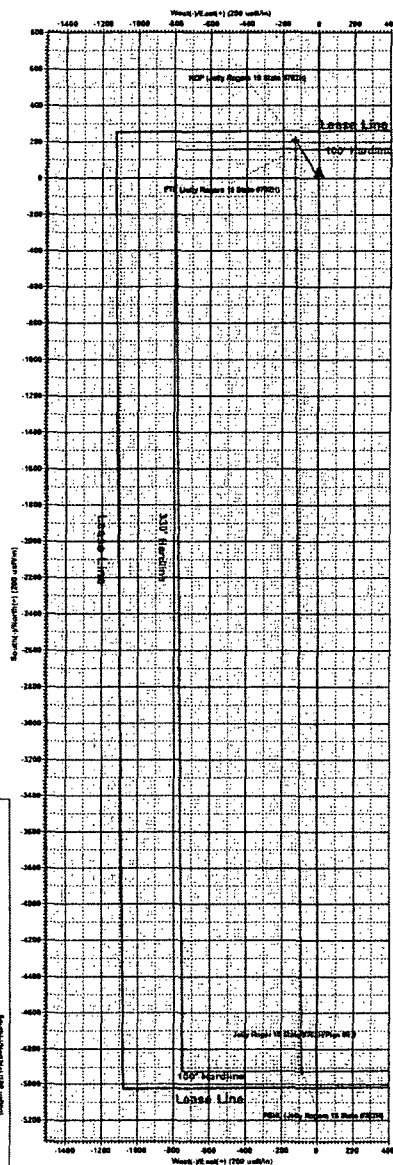
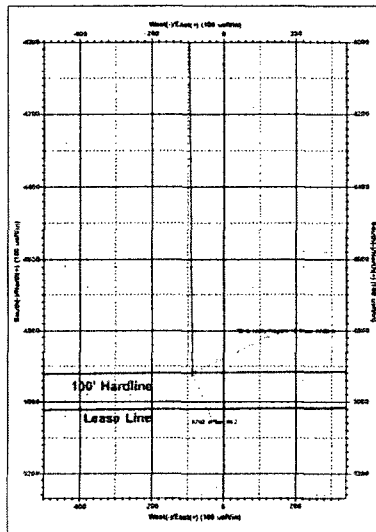
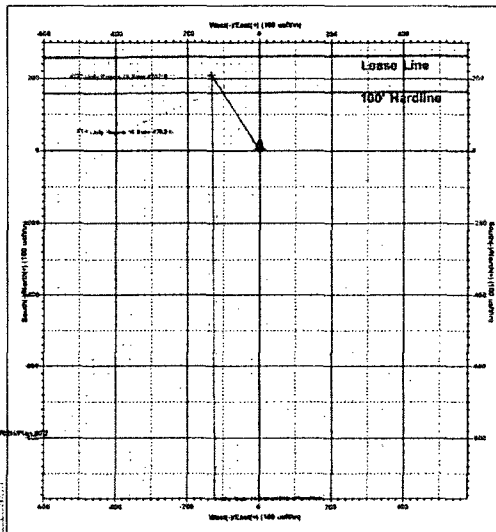
| Sec | MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W  | Diag  | TFace  | VSecl  | Target                             |
|-----|---------|-------|--------|---------|---------|--------|-------|--------|--------|------------------------------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0     | 0.0     | 0.0    | 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   | 3083.0  | 1.66  | 327.53 | 3083.0  | 1.0     | -0.6   | 2.00  | 327.53 | -1.0   |                                    |
| 4   | 11551.1 | 1.66  | 327.53 | 11547.5 | 208.0   | -132.4 | 0.00  | 0.00   | -205.6 | KOP (Jolly Rogers 16 State #702H)  |
| 5   | 11634.1 | 0.00  | 0.00   | 11630.5 | 209.0   | -133.0 | 2.00  | 189.00 | -206.6 |                                    |
| 6   | 12384.1 | 90.00 | 179.49 | 12108.0 | -208.4  | -128.7 | 12.00 | 179.49 | 270.7  |                                    |
| 7   | 17034.6 | 90.00 | 179.49 | 12108.0 | -4919.0 | -87.0  | 0.00  | 0.00   | 4919.8 | PBHL (Jolly Rogers 16 State #702H) |

#### CASING DETAILS

No casing data is available

#### WELLSOURCE TARGET DETAILS (WAP CO-ORDINATES)

| Name                               | TVD     | +N/-S   | +E/-W  | Northing  | Easting   |
|------------------------------------|---------|---------|--------|-----------|-----------|
| KOP (Jolly Rogers 16 State #702H)  | 11630.5 | 209.0   | -133.0 | 446321.00 | 605143.00 |
| FTP (Jolly Rogers 16 State #702H)  | 12108.0 | 179.0   | -133.0 | 446471.00 | 605143.00 |
| PBHL (Jolly Rogers 16 State #702H) | 12108.0 | -4919.0 | -87.0  | 441393.00 | 605189.00 |



WELL SOURCE TARGET DETAILS (WAP CO-ORDINATES)