



August 9, 2017

NM OIL CONSERVATION  
ARTESIA DISTRICT  
MAR 16 2018  
RECEIVED

Devon Energy Production Company, LP

Well: Agate PWU 21-22 62H

County/Parish: Eddy County, NM

30-015-44201

LEAM MWD: (OH) from 243' MD – 19,388' MD  
Projection: 19,476'

This Borehole Survey taken between 07/16/2017 and 08/02/ 2017 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: August 9, 2017



## Survey Certification Form

State of New Mexico

Eddy County

I, Randy W. Rakowitz, certify that; I am employed by LEAM Drilling Services, that I did on the day(s) of 07/16/2017 through 08/02/2017, conduct or supervise the taking of MWD Survey from a depth of 243' MD to 19,476' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production Company, LP for the Agate PWU 21-22 62H in Eddy County, New Mexico; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Services.

A handwritten signature in black ink, appearing to read 'Randy W. Rakowitz', is written over a horizontal line.

Randy W. Rakowitz  
MWD Operations Coordinator

# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

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

|                       |  |  |           |  |  |                 |  |  |                 |  |  |                   |  |  |                  |  |  |
|-----------------------|--|--|-----------|--|--|-----------------|--|--|-----------------|--|--|-------------------|--|--|------------------|--|--|
| Site                  |  |  |           |  |  | Agate PWU 21-22 |  |  |                 |  |  |                   |  |  |                  |  |  |
| Site Position:        |  |  | Northing: |  |  | 601,009.77 usft |  |  | Latitude:       |  |  | 32° 39' 7.149 N   |  |  |                  |  |  |
| From:                 |  |  | Map       |  |  | Easting:        |  |  | 616,495.30 usft |  |  | Longitude:        |  |  | 104° 5' 20.890 W |  |  |
| Position Uncertainty: |  |  | 0.00 usft |  |  | Slot Radius:    |  |  | 13-3/16 "       |  |  | Grid Convergence: |  |  | 0.13 °           |  |  |

|                      |       |           |                     |                 |               |                  |
|----------------------|-------|-----------|---------------------|-----------------|---------------|------------------|
| Well                 | 62H   |           |                     |                 |               |                  |
| Well Position        | +N/-S | 0.00 usft | Northing:           | 597,701.49 usft | Latitude:     | 32° 38' 34.419 N |
|                      | +E/-W | 0.00 usft | Easting:            | 616,181.24 usft | Longitude:    | 104° 5' 24.652 W |
| Position Uncertainty |       | 0.00 usft | Wellhead Elevation: | 0.00 usft       | Ground Level: | 3,323.70 usft    |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | OH                |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | HDGM              | 5/1/2017           | 7.47               | 60.52            | 48,222                |

|                          |                         |               |              |                      |      |
|--------------------------|-------------------------|---------------|--------------|----------------------|------|
| <b>Design</b>            | OH                      |               |              |                      |      |
| <b>Audit Notes:</b>      |                         |               |              |                      |      |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b> | ACTUAL       | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>     |      |
|                          | (usft)                  | (usft)        | (usft)       | (°)                  |      |
|                          | 0.00                    | 0.00          | 0.00         | 90.00                |      |

|                       |                      |                          |                  |                                       |
|-----------------------|----------------------|--------------------------|------------------|---------------------------------------|
| <b>Survey Program</b> | <b>Date</b> 8/9/2017 |                          |                  |                                       |
| <b>From</b>           | <b>To</b>            | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>                    |
| (usft)                | (usft)               |                          |                  |                                       |
| 140.00                | 140.00               | Survey #1 - Gyro (OH)    | VES GyroFlex V2  |                                       |
| 243.00                | 8,294.00             | Survey #2 (OH)           | LEAM MWD+HDGM    | MWD+HDGM                              |
| 8,331.00              | 19,388.00            | Survey #3 (OH)           | MWD+IFR1+MS      | MWD + IFR1 + Multi-Station Correction |
| 19,476.00             | 19,476.00            | Survey #4 (OH)           | Project          | Projection                            |

|                 |                    |                |                 |               |               |                 |                    |                    |                    |  |
|-----------------|--------------------|----------------|-----------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|--|
| <b>Survey</b>   |                    |                |                 |               |               |                 |                    |                    |                    |  |
| <b>Measured</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b>  | <b>+E/-W</b>  | <b>Vertical</b> | <b>Dogleg</b>      | <b>Build</b>       | <b>Turn</b>        |  |
| <b>Depth</b>    | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b>    | <b>(usft)</b> | <b>(usft)</b> | <b>Section</b>  | <b>Rate</b>        | <b>Rate</b>        | <b>Rate</b>        |  |
| <b>(usft)</b>   |                    |                | <b>(usft)</b>   |               |               | <b>(usft)</b>   | <b>(°/100usft)</b> | <b>(°/100usft)</b> | <b>(°/100usft)</b> |  |
| 0.00            | 0.00               | 0.00           | 0.00            | 0.00          | 0.00          | 0.00            | 0.00               | 0.00               | 0.00               |  |
| 140.00          | 0.58               | 342.86         | 140.00          | 0.68          | -0.21         | -0.21           | 0.41               | 0.41               | 0.00               |  |
| 243.00          | 0.50               | 346.60         | 242.99          | 1.61          | -0.47         | -0.47           | 0.08               | -0.08              | 3.63               |  |
| 335.00          | 0.90               | 15.40          | 334.99          | 2.70          | -0.37         | -0.37           | 0.57               | 0.43               | 31.30              |  |
| 433.00          | 1.00               | 1.00           | 432.97          | 4.30          | -0.15         | -0.15           | 0.26               | 0.10               | -14.69             |  |
| 524.00          | 1.10               | 4.70           | 523.96          | 5.96          | -0.06         | -0.06           | 0.13               | 0.11               | 4.07               |  |
| 615.00          | 1.30               | 13.50          | 614.94          | 7.84          | 0.25          | 0.25            | 0.30               | 0.22               | 9.67               |  |
| 707.00          | 1.40               | 32.50          | 706.91          | 9.80          | 1.10          | 1.10            | 0.50               | 0.11               | 20.65              |  |

# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

| 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) |  |
| 798.00                | 1.50            | 28.40       | 797.88                | 11.78        | 2.26         | 2.26                    | 0.16                    | 0.11                   | -4.51                 |  |
| 889.00                | 1.30            | 47.90       | 888.86                | 13.52        | 3.59         | 3.59                    | 0.56                    | -0.22                  | 21.43                 |  |
| 981.00                | 1.40            | 65.00       | 980.83                | 14.70        | 5.39         | 5.39                    | 0.45                    | 0.11                   | 18.59                 |  |
| 1,072.00              | 1.60            | 57.40       | 1,071.80              | 15.85        | 7.46         | 7.46                    | 0.31                    | 0.22                   | -8.35                 |  |
| 1,163.00              | 1.20            | 53.00       | 1,162.77              | 17.11        | 9.30         | 9.30                    | 0.45                    | -0.44                  | -4.84                 |  |
| 1,255.00              | 1.20            | 45.80       | 1,254.75              | 18.36        | 10.76        | 10.76                   | 0.16                    | 0.00                   | -7.83                 |  |
| 1,347.00              | 1.20            | 37.60       | 1,346.73              | 19.80        | 12.03        | 12.03                   | 0.19                    | 0.00                   | -8.91                 |  |
| 1,442.00              | 1.30            | 54.60       | 1,441.71              | 21.21        | 13.52        | 13.52                   | 0.40                    | 0.11                   | 17.89                 |  |
| 1,538.00              | 1.30            | 35.10       | 1,537.69              | 22.73        | 15.03        | 15.03                   | 0.46                    | 0.00                   | -20.31                |  |
| 1,633.00              | 1.20            | 38.50       | 1,632.66              | 24.39        | 16.27        | 16.27                   | 0.13                    | -0.11                  | 3.58                  |  |
| 1,729.00              | 1.00            | 49.90       | 1,728.65              | 25.72        | 17.54        | 17.54                   | 0.31                    | -0.21                  | 11.88                 |  |
| 1,825.00              | 0.40            | 42.80       | 1,824.64              | 26.50        | 18.41        | 18.41                   | 0.63                    | -0.63                  | -7.40                 |  |
| 1,920.00              | 0.50            | 49.90       | 1,919.64              | 27.01        | 18.95        | 18.95                   | 0.12                    | 0.11                   | 7.47                  |  |
| 2,016.00              | 0.60            | 40.40       | 2,015.63              | 27.67        | 19.60        | 19.60                   | 0.14                    | 0.10                   | -9.90                 |  |
| 2,112.00              | 0.60            | 42.10       | 2,111.63              | 28.42        | 20.26        | 20.26                   | 0.02                    | 0.00                   | 1.77                  |  |
| 2,207.00              | 0.40            | 109.10      | 2,206.62              | 28.68        | 20.91        | 20.91                   | 0.61                    | -0.21                  | 70.53                 |  |
| 2,303.00              | 0.30            | 102.60      | 2,302.62              | 28.52        | 21.47        | 21.47                   | 0.11                    | -0.10                  | -6.77                 |  |
| 2,398.00              | 0.30            | 206.50      | 2,397.62              | 28.24        | 21.60        | 21.60                   | 0.50                    | 0.00                   | 109.37                |  |
| 2,494.00              | 0.00            | 6.50        | 2,493.62              | 28.02        | 21.49        | 21.49                   | 0.31                    | -0.31                  | 0.00                  |  |
| 2,589.00              | 0.10            | 7.70        | 2,588.62              | 28.10        | 21.50        | 21.50                   | 0.11                    | 0.11                   | 0.00                  |  |
| 2,685.00              | 0.40            | 212.10      | 2,684.62              | 27.90        | 21.33        | 21.33                   | 0.51                    | 0.31                   | -162.08               |  |
| 2,781.00              | 0.40            | 152.90      | 2,780.62              | 27.31        | 21.31        | 21.31                   | 0.41                    | 0.00                   | -61.67                |  |
| 2,876.00              | 0.40            | 192.80      | 2,875.62              | 26.70        | 21.38        | 21.38                   | 0.29                    | 0.00                   | 42.00                 |  |
| 2,972.00              | 0.40            | 160.30      | 2,971.61              | 26.05        | 21.42        | 21.42                   | 0.23                    | 0.00                   | -33.85                |  |
| 3,067.00              | 0.40            | 188.20      | 3,066.61              | 25.41        | 21.49        | 21.49                   | 0.20                    | 0.00                   | 29.37                 |  |
| 3,163.00              | 0.10            | 357.00      | 3,162.61              | 25.17        | 21.43        | 21.43                   | 0.52                    | -0.31                  | 175.83                |  |
| 3,258.00              | 0.20            | 159.40      | 3,257.61              | 25.09        | 21.49        | 21.49                   | 0.31                    | 0.11                   | 170.95                |  |
| 3,350.00              | 0.20            | 280.70      | 3,349.61              | 24.97        | 21.39        | 21.39                   | 0.38                    | 0.00                   | 131.85                |  |
| 3,445.00              | 0.60            | 355.70      | 3,444.61              | 25.50        | 21.19        | 21.19                   | 0.61                    | 0.42                   | 78.95                 |  |
| 3,541.00              | 0.70            | 342.60      | 3,540.60              | 26.56        | 20.97        | 20.97                   | 0.19                    | 0.10                   | -13.65                |  |
| 3,636.00              | 1.30            | 1.70        | 3,635.59              | 28.19        | 20.83        | 20.83                   | 0.71                    | 0.63                   | 20.11                 |  |
| 3,731.00              | 1.80            | 1.40        | 3,730.55              | 30.76        | 20.90        | 20.90                   | 0.53                    | 0.53                   | -0.32                 |  |
| 3,827.00              | 1.60            | 350.60      | 3,826.51              | 33.59        | 20.72        | 20.72                   | 0.39                    | -0.21                  | -11.25                |  |
| 3,922.00              | 0.30            | 268.20      | 3,921.50              | 34.89        | 20.25        | 20.25                   | 1.67                    | -1.37                  | -86.74                |  |
| 4,018.00              | 0.80            | 226.20      | 4,017.49              | 34.42        | 19.52        | 19.52                   | 0.64                    | 0.52                   | -43.75                |  |
| 4,113.00              | 1.10            | 248.50      | 4,112.48              | 33.62        | 18.19        | 18.19                   | 0.50                    | 0.32                   | 23.47                 |  |
| 4,209.00              | 1.40            | 258.70      | 4,208.46              | 33.06        | 16.18        | 16.18                   | 0.39                    | 0.31                   | 10.63                 |  |
| 4,305.00              | 1.20            | 272.60      | 4,304.43              | 32.87        | 14.03        | 14.03                   | 0.39                    | -0.21                  | 14.48                 |  |
| 4,400.00              | 1.20            | 290.70      | 4,399.41              | 33.27        | 12.11        | 12.11                   | 0.40                    | 0.00                   | 19.05                 |  |
| 4,496.00              | 1.50            | 307.80      | 4,495.39              | 34.40        | 10.17        | 10.17                   | 0.52                    | 0.31                   | 17.81                 |  |
| 4,591.00              | 1.60            | 322.70      | 4,590.35              | 36.21        | 8.39         | 8.39                    | 0.44                    | 0.11                   | 15.68                 |  |
| 4,687.00              | 1.90            | 330.40      | 4,686.31              | 38.66        | 6.79         | 6.79                    | 0.40                    | 0.31                   | 8.02                  |  |
| 4,783.00              | 0.80            | 305.60      | 4,782.28              | 40.44        | 5.46         | 5.46                    | 1.27                    | -1.15                  | -25.83                |  |

# LEAM Drilling Systems LLC

## Survey Report

**Company:** Devon Energy  
**Project:** Eddy County, NM (NAD-83)  
**Site:** Agate PWU 21-22  
**Well:** 62H  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well 62H  
**TVD Reference:** 3323.7' GE + 25' KB @ 3348.70usft  
**MD Reference:** 3323.7' GE + 25' KB @ 3348.70usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 MULTI User DB

### 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,878.00              | 0.50            | 299.30      | 4,877.27              | 41.03        | 4.56         | 4.56                    | 0.32                    | -0.32                  | -6.63                 |
| 4,974.00              | 0.60            | 147.30      | 4,973.27              | 40.81        | 4.46         | 4.46                    | 1.11                    | 0.10                   | -158.33               |
| 5,069.00              | 0.60            | 139.90      | 5,068.27              | 40.01        | 5.05         | 5.05                    | 0.08                    | 0.00                   | -7.79                 |
| 5,165.00              | 1.00            | 180.80      | 5,164.26              | 38.79        | 5.36         | 5.36                    | 0.70                    | 0.42                   | 42.60                 |
| 5,261.00              | 2.00            | 187.70      | 5,260.22              | 36.29        | 5.13         | 5.13                    | 1.06                    | 1.04                   | 7.19                  |
| 5,356.00              | 1.40            | 185.40      | 5,355.18              | 33.49        | 4.80         | 4.80                    | 0.64                    | -0.63                  | -2.42                 |
| 5,451.00              | 1.10            | 192.10      | 5,450.16              | 31.44        | 4.50         | 4.50                    | 0.35                    | -0.32                  | 7.05                  |
| 5,547.00              | 0.50            | 206.90      | 5,546.15              | 30.17        | 4.11         | 4.11                    | 0.66                    | -0.63                  | 15.42                 |
| 5,643.00              | 0.90            | 237.60      | 5,642.14              | 29.39        | 3.29         | 3.29                    | 0.56                    | 0.42                   | 31.98                 |
| 5,737.00              | 1.00            | 208.40      | 5,736.13              | 28.27        | 2.27         | 2.27                    | 0.52                    | 0.11                   | -31.06                |
| 5,833.00              | 1.20            | 180.00      | 5,832.11              | 26.53        | 1.87         | 1.87                    | 0.60                    | 0.21                   | -29.58                |
| 5,929.00              | 1.50            | 153.90      | 5,928.09              | 24.40        | 2.43         | 2.43                    | 0.70                    | 0.31                   | -27.19                |
| 6,024.00              | 2.60            | 142.20      | 6,023.02              | 21.58        | 4.30         | 4.30                    | 1.23                    | 1.16                   | -12.32                |
| 6,120.00              | 4.10            | 144.80      | 6,118.86              | 17.05        | 7.61         | 7.61                    | 1.57                    | 1.56                   | 2.71                  |
| 6,215.00              | 4.80            | 144.10      | 6,213.57              | 11.06        | 11.90        | 11.90                   | 0.74                    | 0.74                   | -0.74                 |
| 6,311.00              | 4.10            | 144.80      | 6,309.28              | 5.00         | 16.23        | 16.23                   | 0.73                    | -0.73                  | 0.73                  |
| 6,406.00              | 4.80            | 141.50      | 6,403.99              | -0.88        | 20.66        | 20.66                   | 0.78                    | 0.74                   | -3.47                 |
| 6,527.00              | 8.00            | 147.10      | 6,524.22              | -11.92       | 28.39        | 28.39                   | 2.69                    | 2.64                   | 4.63                  |
| 6,626.00              | 4.70            | 146.60      | 6,622.60              | -21.09       | 34.37        | 34.37                   | 3.33                    | -3.33                  | -0.51                 |
| 6,693.00              | 4.30            | 147.60      | 6,689.40              | -25.50       | 37.22        | 37.22                   | 0.61                    | -0.60                  | 1.49                  |
| 6,789.00              | 4.70            | 151.80      | 6,785.10              | -32.01       | 41.01        | 41.01                   | 0.54                    | 0.42                   | 4.38                  |
| 6,885.00              | 4.40            | 144.60      | 6,880.80              | -38.48       | 45.00        | 45.00                   | 0.67                    | -0.31                  | -7.50                 |
| 6,980.00              | 5.10            | 139.00      | 6,975.47              | -44.63       | 49.88        | 49.88                   | 0.88                    | 0.74                   | -5.89                 |
| 7,076.00              | 4.00            | 121.10      | 7,071.17              | -49.59       | 55.55        | 55.55                   | 1.86                    | -1.15                  | -18.65                |
| 7,171.00              | 5.50            | 136.50      | 7,165.85              | -54.60       | 61.52        | 61.52                   | 2.06                    | 1.58                   | 16.21                 |
| 7,267.00              | 4.40            | 142.30      | 7,261.49              | -60.85       | 66.94        | 66.94                   | 1.26                    | -1.15                  | 6.04                  |
| 7,362.00              | 4.00            | 123.90      | 7,356.24              | -65.58       | 71.92        | 71.92                   | 1.47                    | -0.42                  | -19.37                |
| 7,458.00              | 5.90            | 121.40      | 7,451.88              | -70.02       | 78.91        | 78.91                   | 1.99                    | 1.98                   | -2.60                 |
| 7,554.00              | 6.20            | 127.80      | 7,547.34              | -75.77       | 87.22        | 87.22                   | 0.77                    | 0.31                   | 6.67                  |
| 7,649.00              | 5.80            | 149.70      | 7,641.83              | -83.06       | 93.69        | 93.69                   | 2.43                    | -0.42                  | 23.05                 |
| 7,745.00              | 5.50            | 175.40      | 7,737.38              | -91.83       | 96.51        | 96.51                   | 2.63                    | -0.31                  | 26.77                 |
| 7,840.00              | 4.00            | 174.50      | 7,832.05              | -99.67       | 97.19        | 97.19                   | 1.58                    | -1.58                  | -0.95                 |
| 7,936.00              | 3.20            | 157.10      | 7,927.87              | -105.47      | 98.56        | 98.56                   | 1.40                    | -0.83                  | -18.13                |
| 8,031.00              | 1.60            | 183.60      | 8,022.78              | -109.24      | 99.51        | 99.51                   | 2.01                    | -1.68                  | 27.89                 |
| 8,127.00              | 1.30            | 165.50      | 8,118.75              | -111.63      | 99.69        | 99.69                   | 0.57                    | -0.31                  | -18.85                |
| 8,223.00              | 0.90            | 154.50      | 8,214.74              | -113.37      | 100.29       | 100.29                  | 0.47                    | -0.42                  | -11.46                |
| 8,294.00              | 1.60            | 163.60      | 8,285.72              | -114.82      | 100.81       | 100.81                  | 1.02                    | 0.99                   | 12.82                 |
| 8,331.00              | 1.58            | 177.46      | 8,322.70              | -115.82      | 100.98       | 100.98                  | 1.04                    | -0.05                  | 37.46                 |
| 8,379.00              | 4.31            | 76.22       | 8,370.66              | -116.06      | 102.76       | 102.76                  | 10.15                   | 5.69                   | -210.92               |
| 8,427.00              | 9.27            | 68.69       | 8,418.30              | -114.22      | 108.12       | 108.12                  | 10.48                   | 10.33                  | -15.69                |
| 8,476.00              | 14.58           | 68.55       | 8,466.23              | -110.53      | 117.54       | 117.54                  | 10.84                   | 10.84                  | -0.29                 |
| 8,522.00              | 19.80           | 69.10       | 8,510.16              | -105.63      | 130.22       | 130.22                  | 11.35                   | 11.35                  | 1.20                  |
| 8,570.00              | 24.27           | 68.59       | 8,554.64              | -99.12       | 147.01       | 147.01                  | 9.32                    | 9.31                   | -1.06                 |
| 8,618.00              | 28.26           | 69.76       | 8,597.68              | -91.59       | 166.86       | 166.86                  | 8.38                    | 8.31                   | 2.44                  |

# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

| 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) |
| 8,666.00              | 32.49           | 72.47       | 8,639.08              | -83.77       | 189.83       | 189.83                  | 9.26                    | 8.81                   | 5.65                  |
| 8,714.00              | 38.41           | 71.33       | 8,678.17              | -75.11       | 216.27       | 216.27                  | 12.41                   | 12.33                  | -2.38                 |
| 8,762.00              | 44.48           | 72.69       | 8,714.13              | -65.32       | 246.48       | 246.48                  | 12.78                   | 12.65                  | 2.83                  |
| 8,809.00              | 49.30           | 74.16       | 8,746.24              | -55.55       | 279.36       | 279.36                  | 10.51                   | 10.26                  | 3.13                  |
| 8,857.00              | 56.23           | 76.09       | 8,775.27              | -45.78       | 316.28       | 316.28                  | 14.79                   | 14.44                  | 4.02                  |
| 8,905.00              | 61.16           | 77.44       | 8,800.20              | -36.40       | 356.19       | 356.19                  | 10.55                   | 10.27                  | 2.81                  |
| 8,953.00              | 67.37           | 80.10       | 8,821.04              | -28.01       | 398.58       | 398.58                  | 13.87                   | 12.94                  | 5.54                  |
| 9,000.00              | 73.18           | 80.63       | 8,836.90              | -20.62       | 442.18       | 442.18                  | 12.41                   | 12.36                  | 1.13                  |
| 9,048.00              | 80.01           | 81.97       | 8,848.02              | -13.56       | 488.30       | 488.30                  | 14.49                   | 14.23                  | 2.79                  |
| 9,126.00              | 87.32           | 87.35       | 8,856.62              | -6.38        | 565.41       | 565.41                  | 11.61                   | 9.37                   | 6.90                  |
| 9,221.00              | 87.19           | 88.37       | 8,861.17              | -2.84        | 660.24       | 660.24                  | 1.08                    | -0.14                  | 1.07                  |
| 9,317.00              | 85.85           | 89.65       | 8,867.00              | -1.18        | 756.04       | 756.04                  | 1.93                    | -1.40                  | 1.33                  |
| 9,413.00              | 85.20           | 90.92       | 8,874.49              | -1.66        | 851.74       | 851.74                  | 1.48                    | -0.68                  | 1.32                  |
| 9,508.00              | 85.81           | 91.36       | 8,881.94              | -3.54        | 946.43       | 946.43                  | 0.79                    | 0.64                   | 0.46                  |
| 9,604.00              | 85.98           | 91.82       | 8,888.81              | -6.20        | 1,042.15     | 1,042.15                | 0.51                    | 0.18                   | 0.48                  |
| 9,699.00              | 87.15           | 91.64       | 8,894.50              | -9.06        | 1,136.93     | 1,136.93                | 1.25                    | 1.23                   | -0.19                 |
| 9,795.00              | 88.33           | 91.15       | 8,898.29              | -11.40       | 1,232.83     | 1,232.83                | 1.33                    | 1.23                   | -0.51                 |
| 9,890.00              | 91.05           | 91.00       | 8,898.80              | -13.18       | 1,327.80     | 1,327.80                | 2.87                    | 2.86                   | -0.16                 |
| 9,986.00              | 91.35           | 90.30       | 8,896.79              | -14.27       | 1,423.77     | 1,423.77                | 0.79                    | 0.31                   | -0.73                 |
| 10,082.00             | 91.53           | 91.09       | 8,894.38              | -15.43       | 1,519.74     | 1,519.74                | 0.84                    | 0.19                   | 0.82                  |
| 10,177.00             | 91.53           | 91.20       | 8,891.84              | -17.33       | 1,614.68     | 1,614.68                | 0.12                    | 0.00                   | 0.12                  |
| 10,273.00             | 91.26           | 91.39       | 8,889.50              | -19.50       | 1,710.63     | 1,710.63                | 0.34                    | -0.28                  | 0.20                  |
| 10,369.00             | 90.69           | 93.10       | 8,887.87              | -23.26       | 1,806.54     | 1,806.54                | 1.88                    | -0.59                  | 1.78                  |
| 10,464.00             | 90.05           | 91.67       | 8,887.26              | -27.21       | 1,901.45     | 1,901.45                | 1.65                    | -0.67                  | -1.51                 |
| 10,560.00             | 89.65           | 91.30       | 8,887.51              | -29.70       | 1,997.42     | 1,997.42                | 0.57                    | -0.42                  | -0.39                 |
| 10,655.00             | 89.38           | 90.81       | 8,888.31              | -31.45       | 2,092.40     | 2,092.40                | 0.59                    | -0.28                  | -0.52                 |
| 10,751.00             | 88.95           | 91.03       | 8,889.71              | -32.99       | 2,188.38     | 2,188.38                | 0.50                    | -0.45                  | 0.23                  |
| 10,847.00             | 88.79           | 89.99       | 8,891.61              | -33.85       | 2,284.35     | 2,284.35                | 1.10                    | -0.17                  | -1.08                 |
| 10,942.00             | 88.91           | 90.13       | 8,893.51              | -33.94       | 2,379.33     | 2,379.33                | 0.19                    | 0.13                   | 0.15                  |
| 11,038.00             | 87.80           | 89.48       | 8,896.27              | -33.62       | 2,475.29     | 2,475.29                | 1.34                    | -1.16                  | -0.68                 |
| 11,133.00             | 87.76           | 90.54       | 8,899.95              | -33.63       | 2,570.22     | 2,570.22                | 1.12                    | -0.04                  | 1.12                  |
| 11,226.00             | 88.59           | 89.09       | 8,902.91              | -33.33       | 2,663.17     | 2,663.17                | 1.80                    | 0.89                   | -1.56                 |
| 11,317.00             | 90.07           | 91.00       | 8,903.97              | -33.41       | 2,754.15     | 2,754.15                | 2.66                    | 1.63                   | 2.10                  |
| 11,409.00             | 92.46           | 90.50       | 8,901.94              | -34.61       | 2,846.12     | 2,846.12                | 2.65                    | 2.60                   | -0.54                 |
| 11,500.00             | 93.66           | 92.19       | 8,897.09              | -36.74       | 2,936.96     | 2,936.96                | 2.28                    | 1.32                   | 1.86                  |
| 11,591.00             | 94.75           | 93.28       | 8,890.41              | -41.07       | 3,027.61     | 3,027.61                | 1.69                    | 1.20                   | 1.20                  |
| 11,683.00             | 95.21           | 95.45       | 8,882.43              | -48.05       | 3,118.99     | 3,118.99                | 2.40                    | 0.50                   | 2.36                  |
| 11,775.00             | 93.43           | 97.13       | 8,875.49              | -58.10       | 3,210.17     | 3,210.17                | 2.66                    | -1.93                  | 1.83                  |
| 11,866.00             | 92.56           | 96.04       | 8,870.74              | -68.52       | 3,300.44     | 3,300.44                | 1.53                    | -0.96                  | -1.20                 |
| 11,896.00             | 92.11           | 95.94       | 8,869.52              | -71.65       | 3,330.25     | 3,330.25                | 1.54                    | -1.50                  | -0.33                 |
| 11,927.00             | 90.43           | 95.83       | 8,868.83              | -74.82       | 3,361.08     | 3,361.08                | 5.43                    | -5.42                  | -0.35                 |
| 11,957.00             | 90.03           | 95.58       | 8,868.71              | -77.81       | 3,390.93     | 3,390.93                | 1.57                    | -1.33                  | -0.83                 |
| 11,987.00             | 89.15           | 94.85       | 8,868.93              | -80.53       | 3,420.80     | 3,420.80                | 3.81                    | -2.93                  | -2.43                 |

# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

| 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) |
| 12,017.00             | 88.75           | 95.07       | 8,869.47              | -83.13       | 3,450.69     | 3,450.69                | 1.52                    | -1.33                  | 0.73                  |
| 12,049.00             | 88.25           | 94.69       | 8,870.31              | -85.85       | 3,482.56     | 3,482.56                | 1.96                    | -1.56                  | -1.19                 |
| 12,079.00             | 87.79           | 93.39       | 8,871.35              | -87.96       | 3,512.47     | 3,512.47                | 4.59                    | -1.53                  | -4.33                 |
| 12,110.00             | 87.60           | 91.93       | 8,872.60              | -89.40       | 3,543.41     | 3,543.41                | 4.75                    | -0.61                  | -4.71                 |
| 12,140.00             | 87.43           | 90.54       | 8,873.90              | -90.04       | 3,573.37     | 3,573.37                | 4.66                    | -0.57                  | -4.63                 |
| 12,185.00             | 86.23           | 89.18       | 8,876.39              | -89.93       | 3,618.30     | 3,618.30                | 4.03                    | -2.67                  | -3.02                 |
| 12,233.00             | 84.89           | 88.43       | 8,880.10              | -88.94       | 3,666.15     | 3,666.15                | 3.20                    | -2.79                  | -1.56                 |
| 12,278.00             | 84.81           | 88.91       | 8,884.14              | -87.90       | 3,710.95     | 3,710.95                | 1.08                    | -0.18                  | 1.07                  |
| 12,324.00             | 85.58           | 89.28       | 8,887.99              | -87.17       | 3,756.78     | 3,756.78                | 1.86                    | 1.67                   | 0.80                  |
| 12,416.00             | 87.24           | 89.98       | 8,893.75              | -86.58       | 3,848.60     | 3,848.60                | 1.96                    | 1.80                   | 0.76                  |
| 12,462.00             | 88.02           | 90.54       | 8,895.66              | -86.79       | 3,894.56     | 3,894.56                | 2.09                    | 1.70                   | 1.22                  |
| 12,509.00             | 87.50           | 90.59       | 8,897.49              | -87.25       | 3,941.52     | 3,941.52                | 1.11                    | -1.11                  | 0.11                  |
| 12,573.00             | 85.44           | 91.15       | 8,901.43              | -88.22       | 4,005.39     | 4,005.39                | 3.34                    | -3.22                  | 0.88                  |
| 12,605.00             | 84.15           | 92.71       | 8,904.34              | -89.29       | 4,037.23     | 4,037.23                | 6.31                    | -4.03                  | 4.88                  |
| 12,657.00             | 84.76           | 92.70       | 8,909.36              | -91.74       | 4,088.93     | 4,088.93                | 1.17                    | 1.17                   | -0.02                 |
| 12,701.00             | 85.70           | 92.96       | 8,913.02              | -93.90       | 4,132.73     | 4,132.73                | 2.22                    | 2.14                   | 0.59                  |
| 12,748.00             | 86.16           | 91.69       | 8,916.36              | -95.80       | 4,179.57     | 4,179.57                | 2.87                    | 0.98                   | -2.70                 |
| 12,796.00             | 85.77           | 90.90       | 8,919.73              | -96.89       | 4,227.44     | 4,227.44                | 1.83                    | -0.81                  | -1.65                 |
| 12,843.00             | 86.17           | 91.38       | 8,923.04              | -97.82       | 4,274.31     | 4,274.31                | 1.33                    | 0.85                   | 1.02                  |
| 12,892.00             | 85.70           | 91.55       | 8,926.51              | -99.07       | 4,323.17     | 4,323.17                | 1.02                    | -0.96                  | 0.35                  |
| 12,988.00             | 87.28           | 92.61       | 8,932.39              | -102.55      | 4,418.92     | 4,418.92                | 1.98                    | 1.65                   | 1.10                  |
| 13,083.00             | 87.52           | 94.22       | 8,936.70              | -108.20      | 4,513.65     | 4,513.65                | 1.71                    | 0.25                   | 1.69                  |
| 13,179.00             | 87.62           | 93.70       | 8,940.77              | -114.82      | 4,609.34     | 4,609.34                | 0.55                    | 0.10                   | -0.54                 |
| 13,274.00             | 88.85           | 91.45       | 8,943.69              | -119.09      | 4,704.19     | 4,704.19                | 2.70                    | 1.29                   | -2.37                 |
| 13,369.00             | 87.75           | 92.12       | 8,946.51              | -122.05      | 4,799.10     | 4,799.10                | 1.36                    | -1.16                  | 0.71                  |
| 13,465.00             | 87.85           | 92.24       | 8,950.20              | -125.69      | 4,894.96     | 4,894.96                | 0.16                    | 0.10                   | 0.13                  |
| 13,561.00             | 89.23           | 93.72       | 8,952.64              | -130.68      | 4,990.79     | 4,990.79                | 2.11                    | 1.44                   | 1.54                  |
| 13,656.00             | 90.64           | 95.19       | 8,952.75              | -138.06      | 5,085.50     | 5,085.50                | 2.14                    | 1.48                   | 1.55                  |
| 13,752.00             | 91.92           | 96.37       | 8,950.61              | -147.73      | 5,180.99     | 5,180.99                | 1.81                    | 1.33                   | 1.23                  |
| 13,848.00             | 90.58           | 94.93       | 8,948.51              | -157.18      | 5,276.49     | 5,276.49                | 2.05                    | -1.40                  | -1.50                 |
| 13,943.00             | 89.37           | 95.82       | 8,948.55              | -166.08      | 5,371.07     | 5,371.07                | 1.58                    | -1.27                  | 0.94                  |
| 14,039.00             | 90.47           | 96.52       | 8,948.69              | -176.39      | 5,466.51     | 5,466.51                | 1.36                    | 1.15                   | 0.73                  |
| 14,134.00             | 89.97           | 96.45       | 8,948.32              | -187.12      | 5,560.91     | 5,560.91                | 0.53                    | -0.53                  | -0.07                 |
| 14,230.00             | 88.89           | 95.12       | 8,949.28              | -196.80      | 5,656.41     | 5,656.41                | 1.78                    | -1.13                  | -1.39                 |
| 14,326.00             | 90.48           | 97.46       | 8,949.81              | -207.31      | 5,751.82     | 5,751.82                | 2.95                    | 1.66                   | 2.44                  |
| 14,421.00             | 89.97           | 97.90       | 8,949.43              | -220.01      | 5,845.97     | 5,845.97                | 0.71                    | -0.54                  | 0.46                  |
| 14,517.00             | 89.64           | 97.03       | 8,949.76              | -232.48      | 5,941.15     | 5,941.15                | 0.97                    | -0.34                  | -0.91                 |
| 14,613.00             | 89.40           | 97.13       | 8,950.56              | -244.31      | 6,036.41     | 6,036.41                | 0.27                    | -0.25                  | 0.10                  |
| 14,708.00             | 90.15           | 96.07       | 8,950.94              | -255.23      | 6,130.78     | 6,130.78                | 1.37                    | 0.79                   | -1.12                 |
| 14,804.00             | 89.97           | 94.08       | 8,950.84              | -263.73      | 6,226.40     | 6,226.40                | 2.08                    | -0.19                  | -2.07                 |
| 14,899.00             | 90.75           | 95.41       | 8,950.24              | -271.58      | 6,321.07     | 6,321.07                | 1.62                    | 0.82                   | 1.40                  |
| 14,995.00             | 89.23           | 94.49       | 8,950.26              | -279.87      | 6,416.71     | 6,416.71                | 1.85                    | -1.58                  | -0.96                 |
| 15,090.00             | 89.97           | 94.87       | 8,950.92              | -287.62      | 6,511.39     | 6,511.39                | 0.88                    | 0.78                   | 0.40                  |

# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

| 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) |
| 15,186.00             | 89.14           | 97.38       | 8,951.67              | -297.86      | 6,606.83     | 6,606.83                | 2.75                    | -0.86                  | 2.61                  |
| 15,282.00             | 90.08           | 96.27       | 8,952.32              | -309.27      | 6,702.14     | 6,702.14                | 1.52                    | 0.98                   | -1.16                 |
| 15,377.00             | 89.42           | 94.48       | 8,952.73              | -318.17      | 6,796.72     | 6,796.72                | 2.01                    | -0.69                  | -1.88                 |
| 15,473.00             | 90.18           | 97.19       | 8,953.07              | -327.92      | 6,892.21     | 6,892.21                | 2.93                    | 0.79                   | 2.82                  |
| 15,569.00             | 89.54           | 96.95       | 8,953.30              | -339.74      | 6,987.48     | 6,987.48                | 0.71                    | -0.67                  | -0.25                 |
| 15,664.00             | 88.80           | 95.82       | 8,954.68              | -350.30      | 7,081.88     | 7,081.88                | 1.42                    | -0.78                  | -1.19                 |
| 15,760.00             | 88.56           | 95.30       | 8,956.89              | -359.60      | 7,177.40     | 7,177.40                | 0.60                    | -0.25                  | -0.54                 |
| 15,855.00             | 89.54           | 95.67       | 8,958.47              | -368.68      | 7,271.96     | 7,271.96                | 1.10                    | 1.03                   | 0.39                  |
| 15,951.00             | 90.24           | 96.56       | 8,958.65              | -378.91      | 7,367.41     | 7,367.41                | 1.18                    | 0.73                   | 0.93                  |
| 16,047.00             | 91.33           | 95.99       | 8,957.34              | -389.40      | 7,462.82     | 7,462.82                | 1.28                    | 1.14                   | -0.59                 |
| 16,142.00             | 90.52           | 96.21       | 8,955.80              | -399.49      | 7,557.27     | 7,557.27                | 0.88                    | -0.85                  | 0.23                  |
| 16,238.00             | 89.92           | 95.36       | 8,955.43              | -409.17      | 7,652.78     | 7,652.78                | 1.08                    | -0.63                  | -0.89                 |
| 16,334.00             | 90.08           | 96.05       | 8,955.43              | -418.71      | 7,748.30     | 7,748.30                | 0.74                    | 0.17                   | 0.72                  |
| 16,429.00             | 89.28           | 96.74       | 8,955.96              | -429.29      | 7,842.71     | 7,842.71                | 1.11                    | -0.84                  | 0.73                  |
| 16,524.00             | 88.61           | 95.76       | 8,957.71              | -439.63      | 7,937.13     | 7,937.13                | 1.25                    | -0.71                  | -1.03                 |
| 16,619.00             | 87.63           | 94.99       | 8,960.83              | -448.53      | 8,031.66     | 8,031.66                | 1.31                    | -1.03                  | -0.81                 |
| 16,715.00             | 87.77           | 95.35       | 8,964.68              | -457.17      | 8,127.19     | 8,127.19                | 0.40                    | 0.15                   | 0.38                  |
| 16,811.00             | 87.77           | 96.78       | 8,968.42              | -467.31      | 8,222.58     | 8,222.58                | 1.49                    | 0.00                   | 1.49                  |
| 16,906.00             | 88.74           | 96.05       | 8,971.31              | -477.92      | 8,316.94     | 8,316.94                | 1.28                    | 1.02                   | -0.77                 |
| 17,002.00             | 90.19           | 96.27       | 8,972.21              | -488.22      | 8,412.38     | 8,412.38                | 1.53                    | 1.51                   | 0.23                  |
| 17,097.00             | 91.43           | 96.33       | 8,970.86              | -498.64      | 8,506.79     | 8,506.79                | 1.31                    | 1.31                   | 0.06                  |
| 17,193.00             | 89.98           | 97.50       | 8,969.68              | -510.20      | 8,602.08     | 8,602.08                | 1.94                    | -1.51                  | 1.22                  |
| 17,289.00             | 89.14           | 96.76       | 8,970.42              | -522.11      | 8,697.33     | 8,697.33                | 1.17                    | -0.88                  | -0.77                 |
| 17,385.00             | 87.53           | 97.78       | 8,973.21              | -534.25      | 8,792.52     | 8,792.52                | 1.99                    | -1.68                  | 1.06                  |
| 17,480.00             | 87.59           | 98.50       | 8,977.25              | -547.69      | 8,886.47     | 8,886.47                | 0.76                    | 0.06                   | 0.76                  |
| 17,575.00             | 88.24           | 99.62       | 8,980.71              | -562.64      | 8,980.23     | 8,980.23                | 1.36                    | 0.68                   | 1.18                  |
| 17,671.00             | 86.86           | 98.61       | 8,984.81              | -577.84      | 9,074.92     | 9,074.92                | 1.78                    | -1.44                  | -1.05                 |
| 17,766.00             | 85.34           | 98.65       | 8,991.28              | -592.06      | 9,168.63     | 9,168.63                | 1.60                    | -1.60                  | 0.04                  |
| 17,862.00             | 85.98           | 97.64       | 8,998.54              | -605.62      | 9,263.38     | 9,263.38                | 1.24                    | 0.67                   | -1.05                 |
| 17,958.00             | 86.11           | 95.35       | 9,005.16              | -616.45      | 9,358.53     | 9,358.53                | 2.38                    | 0.14                   | -2.39                 |
| 18,053.00             | 86.72           | 97.32       | 9,011.10              | -626.91      | 9,452.76     | 9,452.76                | 2.17                    | 0.64                   | 2.07                  |
| 18,144.00             | 86.57           | 97.50       | 9,016.43              | -638.63      | 9,542.85     | 9,542.85                | 0.26                    | -0.16                  | 0.20                  |
| 18,240.00             | 86.65           | 98.57       | 9,022.11              | -652.02      | 9,637.74     | 9,637.74                | 1.12                    | 0.08                   | 1.11                  |
| 18,336.00             | 87.34           | 99.21       | 9,027.14              | -666.84      | 9,732.45     | 9,732.45                | 0.98                    | 0.72                   | 0.67                  |
| 18,431.00             | 88.40           | 98.47       | 9,030.67              | -681.43      | 9,826.26     | 9,826.26                | 1.36                    | 1.12                   | -0.78                 |
| 18,527.00             | 89.00           | 99.28       | 9,032.85              | -696.24      | 9,921.08     | 9,921.08                | 1.05                    | 0.63                   | 0.84                  |
| 18,623.00             | 90.78           | 97.89       | 9,033.03              | -710.57      | 10,016.00    | 10,016.00               | 2.35                    | 1.85                   | -1.45                 |
| 18,718.00             | 90.10           | 98.14       | 9,032.30              | -723.81      | 10,110.07    | 10,110.07               | 0.76                    | -0.72                  | 0.26                  |
| 18,814.00             | 89.54           | 98.58       | 9,032.60              | -737.77      | 10,205.05    | 10,205.05               | 0.74                    | -0.58                  | 0.46                  |
| 18,909.00             | 89.54           | 99.05       | 9,033.37              | -752.33      | 10,298.92    | 10,298.92               | 0.49                    | 0.00                   | 0.49                  |
| 19,005.00             | 89.83           | 98.30       | 9,033.89              | -766.81      | 10,393.82    | 10,393.82               | 0.84                    | 0.30                   | -0.78                 |
| 19,101.00             | 90.55           | 96.40       | 9,033.58              | -779.09      | 10,489.03    | 10,489.03               | 2.12                    | 0.75                   | -1.98                 |
| 19,196.00             | 91.02           | 96.09       | 9,032.27              | -789.42      | 10,583.46    | 10,583.46               | 0.59                    | 0.49                   | -0.33                 |
| 19,292.00             | 90.82           | 96.91       | 9,030.73              | -800.29      | 10,678.83    | 10,678.83               | 0.88                    | -0.21                  | 0.85                  |



# LEAM Drilling Systems LLC

## Survey Report

|                  |                          |                                     |                                   |
|------------------|--------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy             | <b>Local Co-ordinate Reference:</b> | Well 62H                          |
| <b>Project:</b>  | Eddy County, NM (NAD-83) | <b>TVD Reference:</b>               | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Site:</b>     | Agate PWU 21-22          | <b>MD Reference:</b>                | 3323.7' GE + 25' KB @ 3348.70usft |
| <b>Well:</b>     | 62H                      | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                       | <b>Database:</b>                    | EDM 5000.1 MULTI User DB          |

| 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) |
| 19,388.00                   | 90.68              | 97.46          | 9,029.48                    | -812.29         | 10,774.06       | 10,774.06                     | 0.59                          | -0.15                        | 0.57                        |
| 19,476.00                   | 90.68              | 97.46          | 9,028.43                    | -823.72         | 10,861.31       | 10,861.31                     | 0.00                          | 0.00                         | 0.00                        |
| Projection                  |                    |                |                             |                 |                 |                               |                               |                              |                             |

# Devon Energy

Project: Eddy County, NM (NAD-83)  
 Site: Agate PWU 21-22  
 Well: 62H  
 Wellbore: OH  
 Design: OH



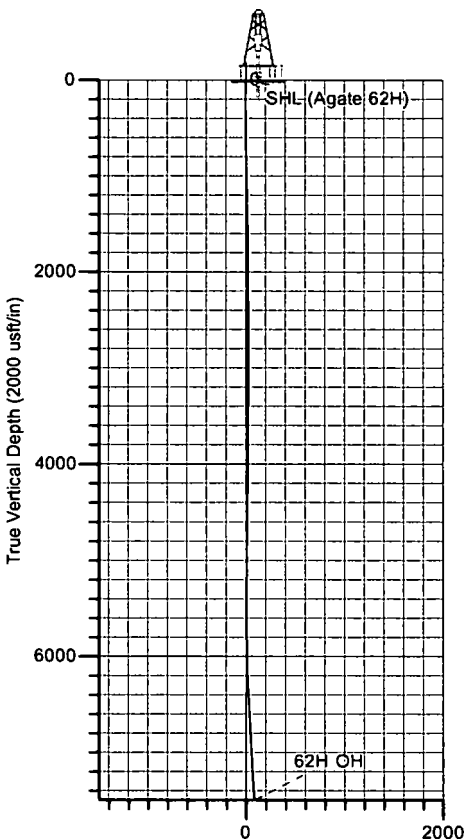
**Azimuths to Grid**  
 True North: -0.13°  
 Magnetic: 7.34°  
**Magnetic Field**  
 Strength: 48221.5nT  
 Dip Angle: 60.52°  
 Date: 5/1/2017  
 Model: HDGM

JECT DI S: Eddy , -83)

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

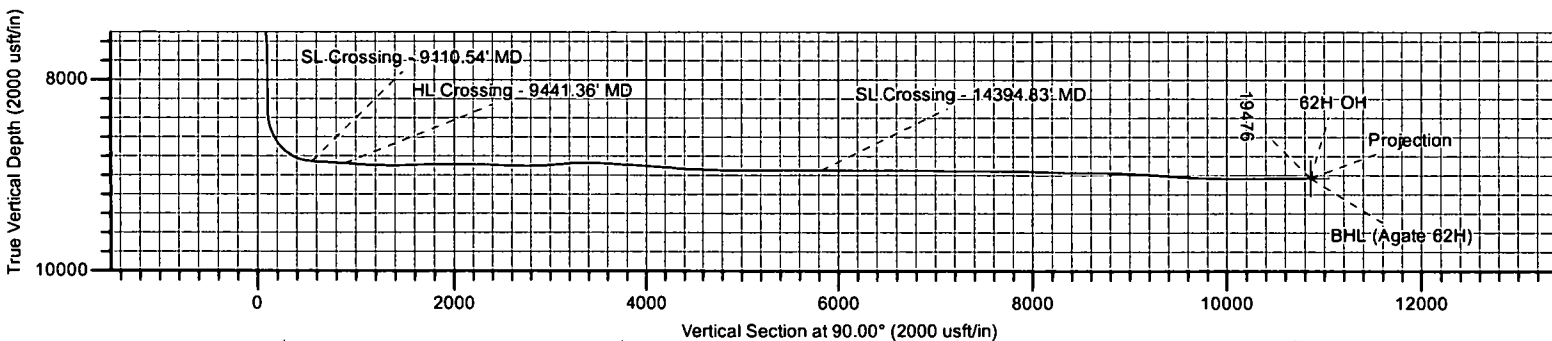
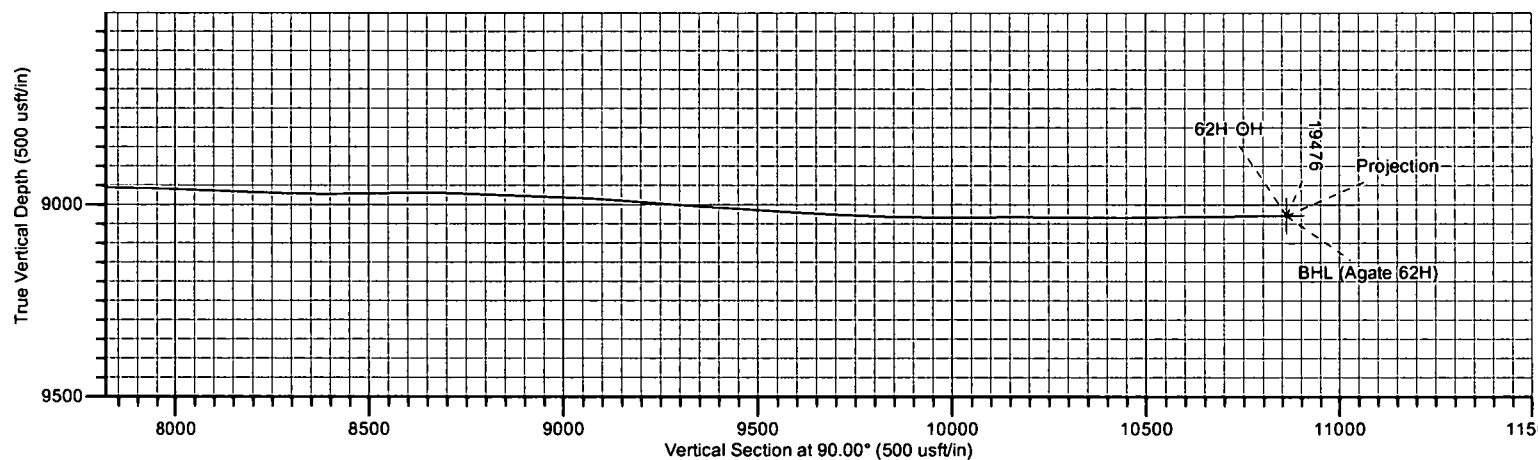


3323.7' GE + 25' KB @ 3348.70usft  
 Ground Level: 3323.70



## DESIGN TARGET DETAILS

| Name            | TVD     | +N/-S   | +E/-W    | Latitude         | Longitude        |
|-----------------|---------|---------|----------|------------------|------------------|
| BHL (Agate 62H) | 9028.43 | -823.72 | 10861.31 | 32° 38' 26.004 N | 104° 3' 17.648 W |
| SHL (Agate 62H) | 0.00    | 0.00    | 0.00     | 32° 38' 34.419 N | 104° 5' 24.652 W |



**DRILLING SYSTEMS LLC**  
 East Davis, Conroe, 77301  
 936/756-7577, Fax: 936/756-

Design: OH (62H/OH)  
 Agate PWU 21-22  
 Created By: Dustin Ault  
 Date: 14:58, August 15 2017  
 Approved: \_\_\_\_\_  
 Date: \_\_\_\_\_

# Devon Energy

Project: Eddy County, NM (NAD-83)  
 Site: Agate PWU 21-22  
 Well: 62H  
 Wellbore: OH  
 Design: OH

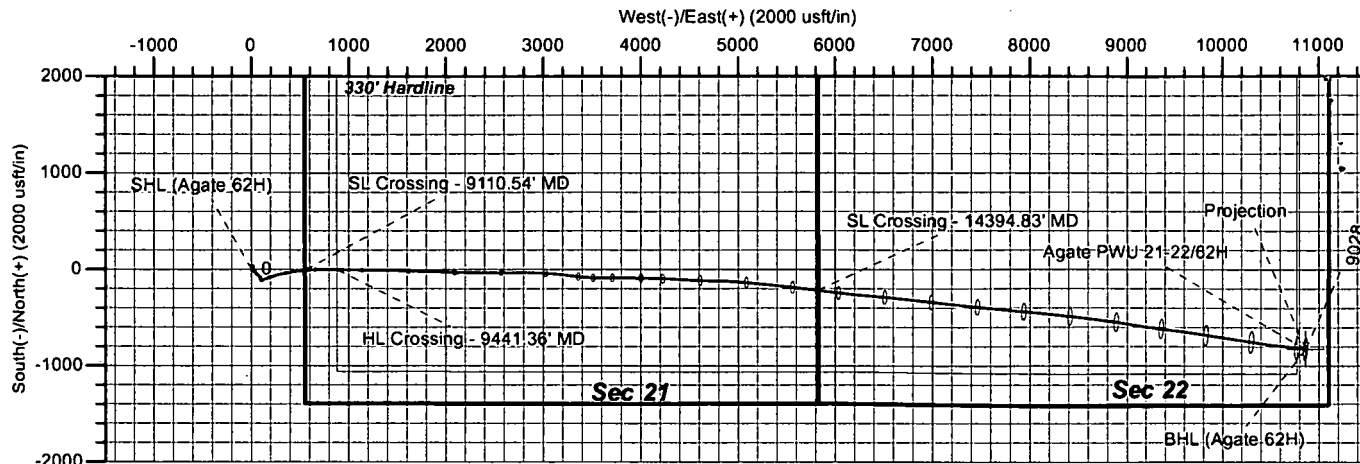
# devon



Azimuths to Grid North  
 True North: -0.13°  
 Magnetic North: 7.34°

Magnetic Field  
 Strength: 48221.5snT  
 Dip Angle: 60.52°  
 Date: 5/1/2017  
 Model: HDGM

PROJECT DETAILS: Eddy County, NM (NAD-83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone



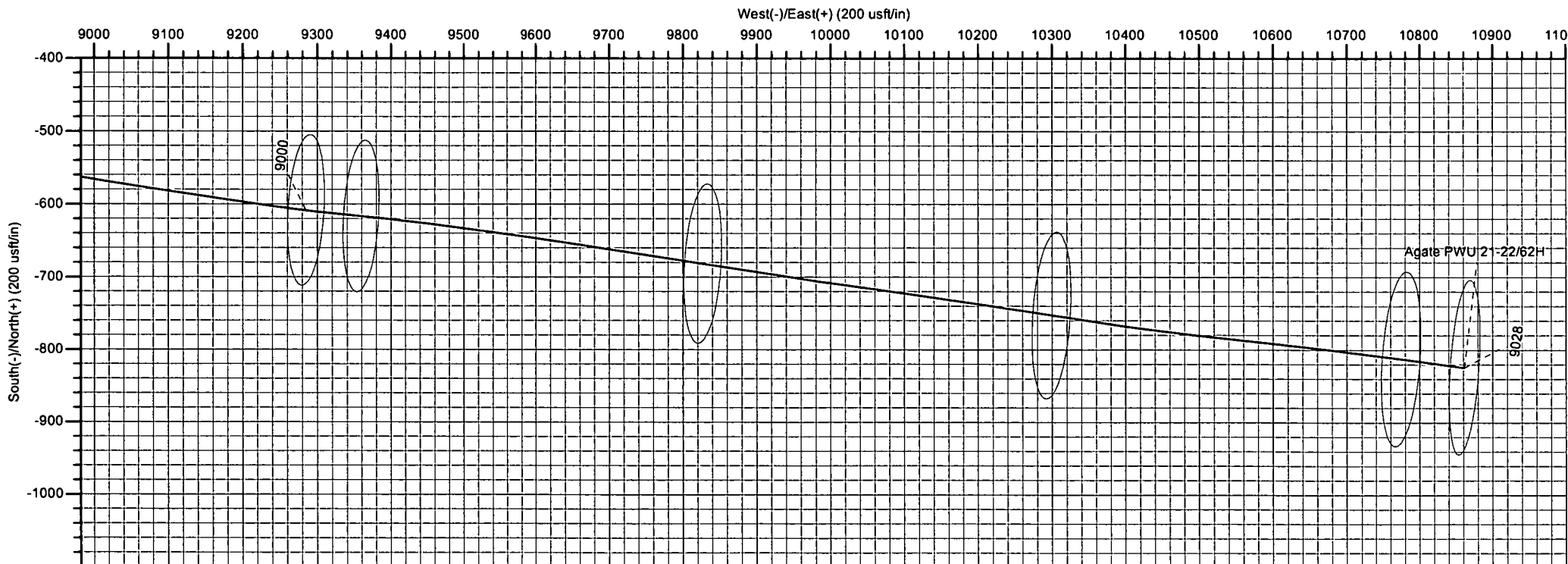
## DESIGN TARGET DETAILS

| Name            | TVD     | +N/-S   | +E/-W    | Northing  | Easting   | Latitude         | Longitude        |
|-----------------|---------|---------|----------|-----------|-----------|------------------|------------------|
| SHL (Agate 62H) | 0.00    | 0.00    | 0.00     | 597701.49 | 616181.24 | 32° 38' 34.419 N | 104° 5' 24.652 W |
| BHL (Agate 62H) | 9028.43 | -823.72 | 10861.31 | 596877.77 | 627042.55 | 32° 38' 26.004 N | 104° 3' 17.648 W |

## ACTUAL LINE CALLS

SHL: 550' FEL, 1390' FSL of Sec 20

BHL: 238' FEL, 590' FSL of Sec 22



LEAM DRILLING SYSTEMS LLC  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936/756-7577. Fax 936/756-7595

Design: OH (62H/OH)  
 Agate PWU 21-22  
 Created By: Dustin Ault  
 Date: 14:57, August 15 2017  
 Approved: \_\_\_\_\_  
 Date: \_\_\_\_\_