

State of New Mexico  
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham  
Governor

Sarah Cottrell Propst  
Cabinet Secretary

Todd E. Leahy, JD, PhD  
Deputy Secretary

Adrienne Sandoval, Division Director  
Oil Conservation Division



## Notice of C-104 Denial and Request for Information

OCD denies your C-104 – *Request for Allowable and Authorization to Transport* because it is incomplete or conflicts with other information provided to OCD.

The sale or transport of product without a C-104 approved by OCD violates the Oil and Gas Act and the implementing rules, including 19.15.7.15 and 19.15.16.19 NMAC.

To avoid an enforcement action, you must submit the indicated information no later than 30 days after receipt of this notice.

### Test Allowable New Well and Recompleted Well

*Amend C-104*

*30-015-45486*

- ☐ C-103 (or BLM equivalent) for all casing strings
  - ☐ Spud Notice
  - ☐ Surface Casing
  - ☐ Intermediate Casing (if applicable)
  - ☐ Additional Intermediate Casing (if applicable)
  - ☒ Production Casing or Liner *See C-104 & revise Csg Sundry.*
- ☐ Applicable Order (NSL, NSP, Other \_\_\_\_\_)
- ☐ Deviation Survey for Vertical Wells
- ☐ Directional Survey
  - ☒ C-102 (As-Drilled Plat for Horizontal Well)

### New Well and Recompleted Well Only

- ☒ C-103 Completion Sundry (or BLM equivalent) *file BLM sundry - Submit*
- ☒ C-105 Completion Report (or BLM equivalent) *APPROVED COPY ONLY*  
*APPROVED BLM COPY*
- ☐ All Logs Run on Well

**If you have any questions please contact the local OCD District Office**

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SEP 12 2019

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Artesia, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources ~~DISTRICT/ARTESIA/O.C.D.~~  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                         |                                                                     |                                                         |
|-----------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------|
| <sup>1</sup> API Number<br>30-015-45486 | <sup>2</sup> Pool Code<br>39350                                     | <sup>3</sup> Pool Name<br>Livingston Ridge; Bone Spring |
| <sup>4</sup> Property Code              | <sup>5</sup> Property Name<br>TOMB RAIDER 12-1 FED                  | <sup>6</sup> Well Number<br>516H                        |
| <sup>7</sup> OGRID No.<br>6137          | <sup>8</sup> Operator Name<br>DEVON ENERGY PRODUCTION COMPANY, L.P. | <sup>9</sup> Elevation<br>3502.3                        |

<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| O             | 12      | 23 S     | 31 E  |         | 50            | SOUTH            | 1420          | EAST           | EDDY   |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| P             | 36      | 22 S     | 31 E  |         | 27            | SOUTH            | 1179          | EAST           | EDDY   |

|                                      |                               |                                  |                         |
|--------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br>640 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|--------------------------------------|-------------------------------|----------------------------------|-------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>NW CORNER SEC. 36<br/>LAT. = 32.3552397°N<br/>LONG. = 103.7400617°W<br/>NMSP EAST (FT)<br/>N = 493475.63<br/>E = 724533.44</p> <p>W/4 CORNER SEC. 36<br/>LAT. = 32.3479770°N<br/>LONG. = 103.7400589°W<br/>NMSP EAST (FT)<br/>N = 490833.46<br/>E = 724548.94</p> <p>NW CORNER SEC. 1<br/>LAT. = 32.3407245°N<br/>LONG. = 103.7400556°W<br/>NMSP EAST (FT)<br/>N = 488195.03<br/>E = 724564.59</p> <p>W/4 CORNER SEC. 1<br/>LAT. = 32.3334649°N<br/>LONG. = 103.7400345°W<br/>NMSP EAST (FT)<br/>N = 485554.08<br/>E = 724585.72</p> <p>NW CORNER SEC. 12<br/>LAT. = 32.3262057°N<br/>LONG. = 103.7400123°W<br/>NMSP EAST (FT)<br/>N = 482913.26<br/>E = 724607.20</p> <p>W/4 CORNER SEC. 12<br/>LAT. = 32.3189531°N<br/>LONG. = 103.7400200°W<br/>NMSP EAST (FT)<br/>N = 480274.75<br/>E = 724619.44</p> <p>SW CORNER SEC. 12<br/>LAT. = 32.3116999°N<br/>LONG. = 103.7400280°W<br/>NMSP EAST (FT)<br/>N = 477636.10<br/>E = 724631.57</p> | <p>NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83)-LISTED NEW MEXICO-STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD83.</p> <p>AS-DRILLED<br/>BOTTOM OF HOLE<br/>LAT. = 32.3407875°N<br/>LONG. = 103.7267720°W<br/>NMSP EAST (FT)<br/>N = 488240.95<br/>E = 728667.02</p> <p>AS-DRILLED<br/>LAST TAKE POINT<br/>110' FSL, 1182' FEL<br/>LAT. = 32.3404117°N<br/>LONG. = 103.7267803°W<br/>NMSP EAST (FT)<br/>N = 488104.22<br/>E = 728665.20</p> <p>N/4 CORNER SEC. 1<br/>LAT. = 32.3407180°N<br/>LONG. = 103.7315040°W<br/>NMSP EAST (FT)<br/>N = 488407.42<br/>E = 727805.71</p> <p>S/4 CORNER SEC. 1<br/>LAT. = 32.3262026°N<br/>LONG. = 103.7314852°W<br/>NMSP EAST (FT)<br/>N = 482826.80<br/>E = 727241.16</p> <p>TOMB RAIDER 12-1 FED 516H<br/>LAT. = 3502.3'<br/>LAT. = 32.3118332°N (NAD83)<br/>LONG. = 103.7275650°W<br/>NMSP EAST (FT)<br/>N = 477706.24<br/>E = 728484.73</p> <p>S/4 CORNER SEC. 12<br/>LAT. = 32.3116988°N<br/>LONG. = 103.7314958°W<br/>NMSP EAST (FT)<br/>N = 477650.42<br/>E = 727267.52</p> | <p>NE CORNER SEC. 36<br/>LAT. = 32.3551764°N<br/>LONG. = 103.7229288°W<br/>NMSP EAST (FT)<br/>N = 493482.33<br/>E = 729824.11</p> <p>E/4 CORNER SEC. 36<br/>LAT. = 32.3479616°N<br/>LONG. = 103.7229560°W<br/>NMSP EAST (FT)<br/>N = 490857.56<br/>E = 729830.67</p> <p>NE CORNER SEC. 1<br/>LAT. = 32.3407105°N<br/>LONG. = 103.7229557°W<br/>NMSP EAST (FT)<br/>N = 488219.63<br/>E = 729845.81</p> <p>E/4 CORNER SEC. 1<br/>LAT. = 32.3334554°N<br/>LONG. = 103.7229555°W<br/>NMSP EAST (FT)<br/>N = 485580.24<br/>E = 729860.91</p> <p>NE CORNER SEC. 12<br/>LAT. = 32.3262014°N<br/>LONG. = 103.7229554°W<br/>NMSP EAST (FT)<br/>N = 482941.27<br/>E = 729875.98</p> <p>E/4 CORNER SEC. 12<br/>LAT. = 32.3189486°N<br/>LONG. = 103.7229585°W<br/>NMSP EAST (FT)<br/>N = 480302.72<br/>E = 729890.06</p> <p>SE CORNER SEC. 12<br/>LAT. = 32.3116930°N<br/>LONG. = 103.7229555°W<br/>NMSP EAST (FT)<br/>N = 477663.17<br/>E = 729904.77</p> <p>AS-DRILLED<br/>FIRST TAKE POINT<br/>679' FSL, 1175' FEL<br/>LAT. = 32.3135629°N<br/>LONG. = 103.7267624°W<br/>NMSP EAST (FT)<br/>N = 478336.78<br/>E = 728726.05</p> <p>AS-DRILLED<br/>240' FSL, 1163' FEL<br/>LAT. = 32.3123545°N<br/>LONG. = 103.7267230°W<br/>NMSP EAST (FT)<br/>N = 477897.27<br/>E = 728740.71</p> | <p><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Jenny Harms</i> 9-11-2019<br/>Signature Date</p> <p>Jenny Harms<br/>Printed Name<br/>Jenny.harms@dmv.com<br/>E-mail Address</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>AUGUST 21, 2019<br/>Date of Survey</p> <p><i>William F. Jaramillo</i><br/>Signature and Seal of Surveyor</p> <p>Certificate Number 12782<br/>WILLIAM F. JARAMILLO, R.S. 166<br/>REGISTERED PROFESSIONAL SURVEYOR</p> |
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SEP 12 2019

Intent ☐ As Drilled ☒

DISTRICT/ARTESIAO.C.D.

|                                   |                      |             |
|-----------------------------------|----------------------|-------------|
| API #                             |                      |             |
| Operator Name:                    | Property Name:       | Well Number |
| DEVON ENERGY PRODUCTION CO., L.P. | TOMB RAIDER 12-1 FED | 516H        |

Kick Off Point (KOP)

|                        |               |                 |              |     |                          |                   |              |                  |                |
|------------------------|---------------|-----------------|--------------|-----|--------------------------|-------------------|--------------|------------------|----------------|
| UL<br>P                | Section<br>12 | Township<br>23S | Range<br>31E | Lot | Feet<br>240              | From N/S<br>SOUTH | Feet<br>1163 | From E/W<br>EAST | County<br>EDDY |
| Latitude<br>32.3123546 |               |                 |              |     | Longitude<br>103.7267230 |                   |              | NAD<br>83        |                |

First Take Point (FTP)

|                        |               |                 |              |     |                          |                   |              |                  |                |
|------------------------|---------------|-----------------|--------------|-----|--------------------------|-------------------|--------------|------------------|----------------|
| UL<br>P                | Section<br>12 | Township<br>23S | Range<br>31E | Lot | Feet<br>679              | From N/S<br>SOUTH | Feet<br>1175 | From E/W<br>EAST | County<br>EDDY |
| Latitude<br>32.3135629 |               |                 |              |     | Longitude<br>103.7267624 |                   |              | NAD<br>83        |                |

Last Take Point (LTP)

|                        |              |                 |              |          |                          |                   |              |                  |                |
|------------------------|--------------|-----------------|--------------|----------|--------------------------|-------------------|--------------|------------------|----------------|
| UL                     | Section<br>1 | Township<br>23S | Range<br>31E | Lot<br>1 | Feet<br>110              | From N/S<br>NORTH | Feet<br>1182 | From E/W<br>EAST | County<br>EDDY |
| Latitude<br>32.3404117 |              |                 |              |          | Longitude<br>103.7267803 |                   |              | NAD<br>83        |                |

Is this well the defining well for the Horizontal Spacing Unit?

no

Is this well an infill well?

yes

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |
|                |                |             |

KZ 06/29/2018



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SEP 12 2019

DISTRICT 7 - ARTESIA O.C.D.

February 19, 2019

Devon Energy Production Company, LP  
Well: Tomb Raider 12-1 Fed 516H  
County/Parish: Eddy County, NM

LEAM MWD: (OH) from 0' MD – 6,144' MD  
Projection: 6,216' MD

This Borehole Survey taken between 01/26/19 and 01/27/19 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: February 19, 2019



## 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 01/26/2019 through 01/27/2019, conduct or supervise the taking of MWD Survey from a depth of 0' MD to 6,216' 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 Tomb Raider 12-1 Fed 516H (OH) 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

## Survey Report

|           |                           |                              |                                   |
|-----------|---------------------------|------------------------------|-----------------------------------|
| Company:  | Devon Energy              | Local Co-ordinate Reference: | Well Tomb Raider 12-1 Fed 516H    |
| Project:  | Eddy County, NM (NAD-83)  | TVD Reference:               | 3502.3' GE + 32' KB @ 3534.30usft |
| Site:     | Tomb Raider 1-12 Fed Com  | MD Reference:                | 3502.3' GE + 32' KB @ 3534.30usft |
| Well:     | Tomb Raider 12-1 Fed 516H | North Reference:             | Grid                              |
| Wellbore: | OH                        | Survey Calculation Method:   | Minimum Curvature                 |
| Design:   | OH                        | Database:                    | LEAM Multi_User Db                |

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

|                       |                          |                   |                    |
|-----------------------|--------------------------|-------------------|--------------------|
| Site                  | Tomb Raider 1-12 Fed Com |                   |                    |
| Site Position:        | Map                      | Northing:         | 487,854.70 usft    |
| From:                 |                          | Easting:          | 728,777.94 usft    |
| Position Uncertainty: | 0.00 usft                | Slot Radius:      | 13-3/16 "          |
|                       |                          | Latitude:         | 32° 20' 23.0068 N  |
|                       |                          | Longitude:        | 103° 43' 35.1116 W |
|                       |                          | Grid Convergence: | 0.32 °             |

|                      |                           |                     |                    |
|----------------------|---------------------------|---------------------|--------------------|
| Well                 | Tomb Raider 12-1 Fed 516H |                     |                    |
| Well Position        | +N/-S                     | 0.00 usft           | Northing:          |
|                      | +E/-W                     | 0.00 usft           | Easting:           |
| Position Uncertainty | 0.00 usft                 | Wellhead Elevation: | 0.00 usft          |
|                      |                           | Latitude:           | 32° 18' 42.6006 N  |
|                      |                           | Longitude:          | 103° 43' 39.1980 W |
|                      |                           | Ground Level:       | 3,502.30 usft      |

|           |            |             |                 |
|-----------|------------|-------------|-----------------|
| Wellbore  | OH         |             |                 |
| Magnetics | Model Name | Sample Date | Declination     |
|           |            |             | (°)             |
|           | HDGM       | 12/18/2018  | 6.83            |
|           |            |             | Dip Angle       |
|           |            |             | (°)             |
|           |            |             | Field Strength  |
|           |            |             | (nT)            |
|           |            |             | 60.05           |
|           |            |             | 48,030.80000000 |

|                   |                  |               |           |
|-------------------|------------------|---------------|-----------|
| Design            | OH               |               |           |
| Audit Notes:      |                  |               |           |
| Version:          | 1.0              | Phase:        | ACTUAL    |
|                   |                  | Tie On Depth: | 0.00      |
| Vertical Section: | Depth From (TVD) | +N/-S         | +E/-W     |
|                   | (usft)           | (usft)        | (usft)    |
|                   | 0.00             | 0.00          | 0.00      |
|                   |                  |               | Direction |
|                   |                  |               | (°)       |
|                   |                  |               | 359.69    |

|                |                |                      |               |
|----------------|----------------|----------------------|---------------|
| Survey Program | Date 2/27/2019 |                      |               |
| From           | To             | Survey (Wellbore)    | Tool Name     |
| (usft)         | (usft)         |                      |               |
| 109.00         | 6,144.00       | Survey #1 - MWD (OH) | LEAM MWD+HDGM |
| 6,216.00       | 6,216.00       | Projection (OH)      | Project       |
|                |                |                      | Description   |
|                |                |                      | MWD+HDGM      |
|                |                |                      | Projection    |

|          |             |         |          |        |        |          |             |             |             |  |
|----------|-------------|---------|----------|--------|--------|----------|-------------|-------------|-------------|--|
| Survey   |             |         |          |        |        |          |             |             |             |  |
| Measured | Inclination | Azimuth | Vertical | +N/-S  | +E/-W  | Vertical | Dogleg      | Build       | Turn        |  |
| Depth    | (°)         | (°)     | Depth    | (usft) | (usft) | Section  | Rate        | Rate        | Rate        |  |
| (usft)   |             |         | (usft)   |        |        | (usft)   | (°/100usft) | (°/100usft) | (°/100usft) |  |
| 0.00     | 0.00        | 0.00    | 0.00     | 0.00   | 0.00   | 0.00     | 0.00        | 0.00        | 0.00        |  |
| 109.00   | 0.40        | 316.40  | 109.00   | 0.28   | -0.26  | 0.28     | 0.37        | 0.37        | 0.00        |  |
| 241.00   | 0.40        | 309.90  | 241.00   | 0.90   | -0.93  | 0.91     | 0.03        | 0.00        | -4.92       |  |
| 332.00   | 1.00        | 325.20  | 331.99   | 1.76   | -1.63  | 1.77     | 0.68        | 0.66        | 16.81       |  |
| 424.00   | 0.90        | 333.80  | 423.98   | 3.07   | -2.41  | 3.08     | 0.19        | -0.11       | 9.35        |  |
| 514.00   | 0.90        | 337.50  | 513.97   | 4.36   | -2.99  | 4.37     | 0.06        | 0.00        | 4.11        |  |
| 606.00   | 1.00        | 357.00  | 605.95   | 5.82   | -3.31  | 5.84     | 0.37        | 0.11        | 21.20       |  |
| 697.00   | 0.90        | 345.80  | 696.94   | 7.31   | -3.53  | 7.33     | 0.23        | -0.11       | -12.31      |  |
| 789.00   | 1.00        | 345.40  | 788.93   | 8.79   | -3.91  | 8.81     | 0.11        | 0.11        | -0.43       |  |
| 842.00   | 1.10        | 342.30  | 841.92   | 9.72   | -4.18  | 9.74     | 0.22        | 0.19        | -5.85       |  |

# LEAM Drilling Systems

## Survey Report

|           |                           |                              |                                   |
|-----------|---------------------------|------------------------------|-----------------------------------|
| Company:  | Devon Energy              | Local Co-ordinate Reference: | Well Tomb Raider 12-1 Fed 516H    |
| Project:  | Eddy County, NM (NAD-83)  | TVD Reference:               | 3502.3' GE + 32' KB @ 3534.30usft |
| Site:     | Tomb Raider 1-12 Fed Com  | MD Reference:                | 3502.3' GE + 32' KB @ 3534.30usft |
| Well:     | Tomb Raider 12-1 Fed 516H | North Reference:             | Grid                              |
| Wellbore: | OH                        | Survey Calculation Method:   | Minimum Curvature                 |
| Design:   | OH                        | Database:                    | LEAM 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) |
| 973.00                | 1.41            | 346.12      | 972.89                | 12.48        | -4.95        | 12.51                   | 0.24                    | 0.24                   | 2.92                  |
| 1,064.00              | 1.32            | 7.21        | 1,063.86              | 14.61        | -5.08        | 14.64                   | 0.56                    | -0.10                  | 23.18                 |
| 1,156.00              | 1.14            | 8.80        | 1,155.84              | 16.57        | -4.81        | 16.59                   | 0.20                    | -0.20                  | 1.73                  |
| 1,248.00              | 0.70            | 17.41       | 1,247.83              | 18.01        | -4.50        | 18.03                   | 0.50                    | -0.48                  | 9.36                  |
| 1,340.00              | 0.79            | 1.94        | 1,339.82              | 19.18        | -4.31        | 19.20                   | 0.24                    | 0.10                   | -16.82                |
| 1,430.00              | 0.79            | 1.24        | 1,429.81              | 20.42        | -4.28        | 20.44                   | 0.01                    | 0.00                   | -0.78                 |
| 1,523.00              | 0.53            | 19.17       | 1,522.81              | 21.46        | -4.12        | 21.49                   | 0.35                    | -0.28                  | 19.28                 |
| 1,616.00              | 0.40            | 20.22       | 1,615.80              | 22.17        | -3.87        | 22.20                   | 0.14                    | -0.14                  | 1.13                  |
| 1,706.00              | 0.35            | 348.76      | 1,705.80              | 22.74        | -3.81        | 22.76                   | 0.23                    | -0.06                  | -34.96                |
| 1,799.00              | 0.18            | 37.45       | 1,798.80              | 23.13        | -3.78        | 23.15                   | 0.29                    | -0.18                  | 52.35                 |
| 1,894.00              | 0.26            | 324.10      | 1,893.80              | 23.43        | -3.82        | 23.45                   | 0.28                    | 0.08                   | -77.21                |
| 1,989.00              | 0.09            | 308.15      | 1,988.80              | 23.65        | -4.00        | 23.67                   | 0.18                    | -0.18                  | -16.79                |
| 2,084.00              | 0.26            | 3.52        | 2,083.80              | 23.91        | -4.05        | 23.93                   | 0.23                    | 0.18                   | 58.28                 |
| 2,176.00              | 0.18            | 287.94      | 2,175.80              | 24.16        | -4.17        | 24.18                   | 0.30                    | -0.09                  | -82.15                |
| 2,272.00              | 0.18            | 198.81      | 2,271.80              | 24.06        | -4.36        | 24.09                   | 0.26                    | 0.00                   | -92.84                |
| 2,366.00              | 0.26            | 53.80       | 2,365.80              | 24.05        | -4.24        | 24.07                   | 0.45                    | 0.09                   | -154.27               |
| 2,459.00              | 0.35            | 71.02       | 2,458.80              | 24.27        | -3.80        | 24.29                   | 0.14                    | 0.10                   | -18.52                |
| 2,553.00              | 0.53            | 60.83       | 2,552.79              | 24.57        | -3.15        | 24.59                   | 0.21                    | 0.19                   | -10.84                |
| 2,648.00              | 0.44            | 77.53       | 2,647.79              | 24.87        | -2.41        | 24.88                   | 0.18                    | -0.09                  | 17.58                 |
| 2,742.00              | 0.70            | 54.15       | 2,741.79              | 25.28        | -1.59        | 25.29                   | 0.37                    | 0.28                   | -24.87                |
| 2,837.00              | 0.70            | 56.78       | 2,836.78              | 25.94        | -0.64        | 25.94                   | 0.03                    | 0.00                   | 2.77                  |
| 2,932.00              | 1.06            | 77.88       | 2,931.77              | 26.44        | 0.71         | 26.44                   | 0.50                    | 0.38                   | 22.21                 |
| 3,025.00              | 1.58            | 86.31       | 3,024.74              | 26.70        | 2.83         | 26.69                   | 0.60                    | 0.56                   | 9.06                  |
| 3,119.00              | 2.20            | 84.21       | 3,118.69              | 26.97        | 5.92         | 26.94                   | 0.66                    | 0.66                   | -2.23                 |
| 3,214.00              | 3.08            | 88.07       | 3,213.59              | 27.24        | 10.28        | 27.18                   | 0.94                    | 0.93                   | 4.06                  |
| 3,309.00              | 3.08            | 91.76       | 3,308.45              | 27.25        | 15.38        | 27.16                   | 0.21                    | 0.00                   | 3.88                  |
| 3,404.00              | 3.08            | 93.17       | 3,403.31              | 27.03        | 20.48        | 26.92                   | 0.08                    | 0.00                   | 1.48                  |
| 3,499.00              | 2.99            | 93.35       | 3,498.18              | 26.74        | 25.51        | 26.60                   | 0.10                    | -0.09                  | 0.19                  |
| 3,593.00              | 3.08            | 90.01       | 3,592.05              | 26.60        | 30.48        | 26.43                   | 0.21                    | 0.10                   | -3.55                 |
| 3,687.00              | 3.61            | 88.07       | 3,685.89              | 26.70        | 35.96        | 26.50                   | 0.58                    | 0.56                   | -2.06                 |
| 3,781.00              | 3.96            | 104.24      | 3,779.69              | 26.00        | 42.07        | 25.77                   | 1.19                    | 0.37                   | 17.20                 |
| 3,876.00              | 4.04            | 106.00      | 3,874.46              | 24.27        | 48.46        | 24.01                   | 0.15                    | 0.08                   | 1.85                  |
| 3,971.00              | 3.78            | 110.40      | 3,969.23              | 22.25        | 54.61        | 21.96                   | 0.42                    | -0.27                  | 4.63                  |
| 4,066.00              | 4.22            | 109.34      | 4,064.00              | 20.01        | 60.85        | 19.68                   | 0.47                    | 0.46                   | -1.12                 |
| 4,163.00              | 4.40            | 107.23      | 4,160.73              | 17.72        | 67.77        | 17.35                   | 0.25                    | 0.19                   | -2.18                 |
| 4,257.00              | 4.75            | 114.09      | 4,254.43              | 15.06        | 74.77        | 14.66                   | 0.69                    | 0.37                   | 7.30                  |
| 4,350.00              | 4.04            | 104.24      | 4,347.16              | 12.69        | 81.46        | 12.25                   | 1.11                    | -0.76                  | -10.59                |
| 4,444.00              | 3.96            | 93.35       | 4,440.93              | 11.68        | 87.91        | 11.21                   | 0.81                    | -0.09                  | -11.59                |
| 4,538.00              | 3.69            | 91.41       | 4,534.72              | 11.42        | 94.17        | 10.91                   | 0.32                    | -0.29                  | -2.06                 |
| 4,633.00              | 4.04            | 90.01       | 4,629.50              | 11.34        | 100.57       | 10.80                   | 0.38                    | 0.37                   | -1.47                 |
| 4,727.00              | 5.36            | 89.30       | 4,723.19              | 11.40        | 108.28       | 10.81                   | 1.41                    | 1.40                   | -0.76                 |
| 4,822.00              | 5.63            | 90.18       | 4,817.75              | 11.44        | 117.37       | 10.80                   | 0.30                    | 0.28                   | 0.93                  |
| 4,917.00              | 5.28            | 91.41       | 4,912.32              | 11.31        | 126.40       | 10.63                   | 0.39                    | -0.37                  | 1.29                  |

# LEAM Drilling Systems

## Survey Report

|                  |                           |                                     |                                   |
|------------------|---------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy              | <b>Local Co-ordinate Reference:</b> | Well Tomb Raider 12-1 Fed 516H    |
| <b>Project:</b>  | Eddy County, NM (NAD-83)  | <b>TVD Reference:</b>               | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Site:</b>     | Tomb Raider 1-12 Fed Com  | <b>MD Reference:</b>                | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Well:</b>     | Tomb Raider 12-1 Fed 516H | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | LEAM 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) |  |
| 5,012.00                    | 5.01               | 89.83          | 5,006.94                    | 11.22           | 134.92          | 10.49                         | 0.32                          | -0.28                        | -1.66                       |  |
| 5,106.00                    | 4.75               | 89.65          | 5,100.60                    | 11.25           | 142.92          | 10.48                         | 0.28                          | -0.28                        | -0.19                       |  |
| 5,201.00                    | 5.10               | 96.86          | 5,195.25                    | 10.77           | 151.04          | 9.96                          | 0.75                          | 0.37                         | 7.59                        |  |
| 5,295.00                    | 5.28               | 101.78         | 5,288.86                    | 9.39            | 159.42          | 8.53                          | 0.51                          | 0.19                         | 5.23                        |  |
| 5,390.00                    | 4.75               | 103.01         | 5,383.50                    | 7.61            | 167.54          | 6.71                          | 0.57                          | -0.56                        | 1.29                        |  |
| 5,484.00                    | 4.31               | 101.96         | 5,477.20                    | 6.01            | 174.78          | 5.06                          | 0.48                          | -0.47                        | -1.12                       |  |
| 5,578.00                    | 4.13               | 103.72         | 5,570.95                    | 4.47            | 181.53          | 3.49                          | 0.24                          | -0.19                        | 1.87                        |  |
| 5,672.00                    | 3.52               | 102.66         | 5,664.74                    | 3.04            | 187.63          | 2.02                          | 0.65                          | -0.65                        | -1.13                       |  |
| 5,767.00                    | 3.43               | 103.54         | 5,759.56                    | 1.73            | 193.24          | 0.69                          | 0.11                          | -0.09                        | 0.93                        |  |
| 5,862.00                    | 3.17               | 104.77         | 5,854.41                    | 0.40            | 198.54          | -0.68                         | 0.28                          | -0.27                        | 1.29                        |  |
| 5,957.00                    | 2.81               | 102.84         | 5,949.28                    | -0.79           | 203.35          | -1.89                         | 0.39                          | -0.38                        | -2.03                       |  |
| 6,050.00                    | 2.55               | 104.95         | 6,042.17                    | -1.83           | 207.57          | -2.95                         | 0.30                          | -0.28                        | 2.27                        |  |
| 6,144.00                    | 2.29               | 108.11         | 6,136.09                    | -2.95           | 211.38          | -4.10                         | 0.31                          | -0.28                        | 3.36                        |  |
| 6,216.00                    | 2.29               | 108.11         | 6,208.03                    | -3.85           | 214.11          | -5.01                         | 0.00                          | 0.00                         | 0.00                        |  |
| Projection                  |                    |                |                             |                 |                 |                               |                               |                              |                             |  |



RECEIVED

SEP 12 2019

DISTRICT 7 - ARTESIA O.C.D.

February 19, 2019

Devon Energy Production Company, LP  
Well: Tomb Raider 12-1 Fed 516H  
County/Parish: Eddy County, NM

LEAM MWD: (ST01) from 4,964' MD – 19,055' MD  
Projection: 19,116' MD

This Borehole Survey taken between 02/02/19 and 02/18/19 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: February 19, 2019



## 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 02/02/2019 through 02/18/2019, conduct or supervise the taking of MWD Survey from a depth of 4,964' MD to 19,116' 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 Tomb Raider 12-1 Fed 516H (ST01) 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', written over a solid horizontal line.

Randy W. Rakowitz  
MWD Operations Coordinator

# LEAM Drilling Systems

## Survey Report

|           |                           |                              |                                   |
|-----------|---------------------------|------------------------------|-----------------------------------|
| Company:  | Devon Energy              | Local Co-ordinate Reference: | Well Tomb Raider 12-1 Fed 516H    |
| Project:  | Eddy County, NM (NAD-83)  | TVD Reference:               | 3502.3' GE + 32' KB @ 3534.30usft |
| Site:     | Tomb Raider 1-12 Fed Com  | MD Reference:                | 3502.3' GE + 32' KB @ 3534.30usft |
| Well:     | Tomb Raider 12-1 Fed 516H | North Reference:             | Grid                              |
| Wellbore: | ST01                      | Survey Calculation Method:   | Minimum Curvature                 |
| Design:   | ST01                      | Database:                    | LEAM Multi_User Db                |

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

|                       |  |                          |  |                    |  |
|-----------------------|--|--------------------------|--|--------------------|--|
| Site:                 |  | Tomb Raider 1-12 Fed Com |  |                    |  |
| Site Position:        |  | Northing:                |  | 487,854.70 usft    |  |
| From:                 |  | Easting:                 |  | 728,777.94 usft    |  |
| Position Uncertainty: |  | Slot Radius:             |  | 13-3/16 "          |  |
| Map                   |  | Latitude:                |  | 32° 20' 23.0068 N  |  |
|                       |  | Longitude:               |  | 103° 43' 35.1116 W |  |
| 0.00 usft             |  | Grid Convergence:        |  | 0.32 °             |  |

|                      |                           |           |                     |                 |               |                    |
|----------------------|---------------------------|-----------|---------------------|-----------------|---------------|--------------------|
| Well                 | Tomb Raider 12-1 Fed 516H |           |                     |                 |               |                    |
| Well Position        | +N/-S                     | 0.00 usft | Northing:           | 477,706.24 usft | Latitude:     | 32° 18' 42.6006 N  |
|                      | +E/-W                     | 0.00 usft | Easting:            | 728,484.73 usft | Longitude:    | 103° 43' 39.1980 W |
| Position Uncertainty |                           | 0.00 usft | Wellhead Elevation: | 0.00 usft       | Ground Level: | 3,502.30 usft      |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  |            | ST01        |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | HDGM       | 12/31/2018  | 6.85               | 60.07            | 48,020.60000000        |

|                   |  |                            |  |                |        |                |          |                  |
|-------------------|--|----------------------------|--|----------------|--------|----------------|----------|------------------|
| Design            |  | ST01                       |  |                |        |                |          |                  |
| Audit Notes:      |  |                            |  |                |        |                |          |                  |
| Version:          |  | 1.0                        |  | Phase:         | ACTUAL | Tie On Depth:  | 4,822.00 |                  |
| Vertical Section: |  | Depth From (TVD)<br>(usft) |  | +N-S<br>(usft) |        | +E-W<br>(usft) |          | Direction<br>(°) |
|                   |  | 0.00                       |  | 0.00           |        | 0.00           |          | 359.69           |

| Survey Program |              | Date                   | 2/22/2019     |             |  |
|----------------|--------------|------------------------|---------------|-------------|--|
| From<br>(usft) | To<br>(usft) | Survey (Wellbore)      | Tool Name     | Description |  |
| 109.00         | 4,822.00     | Survey #1 - MWD (OH)   | LEAM MWD+HDGM | MWD+HDGM    |  |
| 4,964.00       | 19,055.00    | Survey #1 - MWD (ST01) | LEAM MWD+HDGM | MWD+HDGM    |  |
| 19,116.00      | 19,116.00    | Projection (ST01)      | Project       | Projection  |  |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 109.00                | 0.40            | 316.40      | 109.00                | 0.28         | -0.26        | 0.28                    | 0.37                    | 0.37                   | 0.00                  |
| 241.00                | 0.40            | 309.90      | 241.00                | 0.90         | -0.93        | 0.91                    | 0.03                    | 0.00                   | -4.92                 |
| 332.00                | 1.00            | 325.20      | 331.99                | 1.76         | -1.63        | 1.77                    | 0.68                    | 0.66                   | 16.81                 |
| 424.00                | 0.90            | 333.80      | 423.98                | 3.07         | -2.41        | 3.08                    | 0.19                    | -0.11                  | 9.35                  |
| 514.00                | 0.90            | 337.50      | 513.97                | 4.36         | -2.99        | 4.37                    | 0.06                    | 0.00                   | 4.11                  |
| 606.00                | 1.00            | 357.00      | 605.95                | 5.82         | -3.31        | 5.84                    | 0.37                    | 0.11                   | 21.20                 |
| 697.00                | 0.90            | 345.80      | 696.94                | 7.31         | -3.53        | 7.33                    | 0.23                    | -0.11                  | -12.31                |
| 789.00                | 1.00            | 345.40      | 788.93                | 8.79         | -3.91        | 8.81                    | 0.11                    | 0.11                   | -0.43                 |

# LEAM Drilling Systems

## Survey Report

|                  |                           |                                     |                                   |
|------------------|---------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy              | <b>Local Co-ordinate Reference:</b> | Well Tomb Raider 12-1 Fed 516H    |
| <b>Project:</b>  | Eddy County, NM (NAD-83)  | <b>TVD Reference:</b>               | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Site:</b>     | Tomb Raider 12-1 Fed Com  | <b>MD Reference:</b>                | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Well:</b>     | Tomb Raider 12-1 Fed 516H | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | ST01                      | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | ST01                      | <b>Database:</b>                    | LEAM 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) |
| 842.00                | 1.10            | 342.30      | 841.92                | 9.72         | -4.18        | 9.74                    | 0.22                    | 0.19                   | -5.85                 |
| 973.00                | 1.41            | 346.12      | 972.89                | 12.48        | -4.95        | 12.51                   | 0.24                    | 0.24                   | 2.92                  |
| 1,064.00              | 1.32            | 7.21        | 1,063.86              | 14.61        | -5.08        | 14.64                   | 0.56                    | -0.10                  | 23.18                 |
| 1,156.00              | 1.14            | 8.80        | 1,155.84              | 16.57        | -4.81        | 16.59                   | 0.20                    | -0.20                  | 1.73                  |
| 1,248.00              | 0.70            | 17.41       | 1,247.83              | 18.01        | -4.50        | 18.03                   | 0.50                    | -0.48                  | 9.36                  |
| 1,340.00              | 0.79            | 1.94        | 1,339.82              | 19.18        | -4.31        | 19.20                   | 0.24                    | 0.10                   | -16.82                |
| 1,430.00              | 0.79            | 1.24        | 1,429.81              | 20.42        | -4.28        | 20.44                   | 0.01                    | 0.00                   | -0.78                 |
| 1,523.00              | 0.53            | 19.17       | 1,522.81              | 21.46        | -4.12        | 21.49                   | 0.35                    | -0.28                  | 19.28                 |
| 1,616.00              | 0.40            | 20.22       | 1,615.80              | 22.17        | -3.87        | 22.20                   | 0.14                    | -0.14                  | 1.13                  |
| 1,706.00              | 0.35            | 348.76      | 1,705.80              | 22.74        | -3.81        | 22.76                   | 0.23                    | -0.06                  | -34.96                |
| 1,799.00              | 0.18            | 37.45       | 1,798.80              | 23.13        | -3.78        | 23.15                   | 0.29                    | -0.18                  | 52.35                 |
| 1,894.00              | 0.26            | 324.10      | 1,893.80              | 23.43        | -3.82        | 23.45                   | 0.28                    | 0.08                   | -77.21                |
| 1,989.00              | 0.09            | 308.15      | 1,988.80              | 23.65        | -4.00        | 23.67                   | 0.18                    | -0.18                  | -16.79                |
| 2,084.00              | 0.26            | 3.52        | 2,083.80              | 23.91        | -4.05        | 23.93                   | 0.23                    | 0.18                   | 58.28                 |
| 2,176.00              | 0.18            | 287.94      | 2,175.80              | 24.16        | -4.17        | 24.18                   | 0.30                    | -0.09                  | -82.15                |
| 2,272.00              | 0.18            | 198.81      | 2,271.80              | 24.06        | -4.36        | 24.09                   | 0.26                    | 0.00                   | -92.84                |
| 2,366.00              | 0.26            | 53.80       | 2,365.80              | 24.05        | -4.24        | 24.07                   | 0.45                    | 0.09                   | -154.27               |
| 2,459.00              | 0.35            | 71.02       | 2,458.80              | 24.27        | -3.80        | 24.29                   | 0.14                    | 0.10                   | 18.52                 |
| 2,553.00              | 0.53            | 60.83       | 2,552.79              | 24.57        | -3.15        | 24.59                   | 0.21                    | 0.19                   | -10.84                |
| 2,648.00              | 0.44            | 77.53       | 2,647.79              | 24.87        | -2.41        | 24.88                   | 0.18                    | -0.09                  | 17.58                 |
| 2,742.00              | 0.70            | 54.15       | 2,741.79              | 25.28        | -1.59        | 25.29                   | 0.37                    | 0.28                   | -24.87                |
| 2,837.00              | 0.70            | 56.78       | 2,836.78              | 25.94        | -0.64        | 25.94                   | 0.03                    | 0.00                   | 2.77                  |
| 2,932.00              | 1.06            | 77.88       | 2,931.77              | 26.44        | 0.71         | 26.44                   | 0.50                    | 0.38                   | 22.21                 |
| 3,025.00              | 1.58            | 86.31       | 3,024.74              | 26.70        | 2.83         | 26.69                   | 0.60                    | 0.56                   | 9.06                  |
| 3,119.00              | 2.20            | 84.21       | 3,118.69              | 26.97        | 5.92         | 26.94                   | 0.66                    | 0.66                   | -2.23                 |
| 3,214.00              | 3.08            | 88.07       | 3,213.59              | 27.24        | 10.28        | 27.18                   | 0.94                    | 0.93                   | 4.06                  |
| 3,309.00              | 3.08            | 91.76       | 3,308.45              | 27.25        | 15.38        | 27.16                   | 0.21                    | 0.00                   | 3.88                  |
| 3,404.00              | 3.08            | 93.17       | 3,403.31              | 27.03        | 20.48        | 26.92                   | 0.08                    | 0.00                   | 1.48                  |
| 3,499.00              | 2.99            | 93.35       | 3,498.18              | 26.74        | 25.51        | 26.60                   | 0.10                    | -0.09                  | 0.19                  |
| 3,593.00              | 3.08            | 90.01       | 3,592.05              | 26.60        | 30.48        | 26.43                   | 0.21                    | 0.10                   | -3.55                 |
| 3,687.00              | 3.61            | 88.07       | 3,685.89              | 26.70        | 35.96        | 26.50                   | 0.58                    | 0.56                   | -2.06                 |
| 3,781.00              | 3.96            | 104.24      | 3,779.69              | 26.00        | 42.07        | 25.77                   | 1.19                    | 0.37                   | 17.20                 |
| 3,876.00              | 4.04            | 106.00      | 3,874.46              | 24.27        | 48.46        | 24.01                   | 0.15                    | 0.08                   | 1.85                  |
| 3,971.00              | 3.78            | 110.40      | 3,969.23              | 22.25        | 54.61        | 21.96                   | 0.42                    | -0.27                  | 4.63                  |
| 4,066.00              | 4.22            | 109.34      | 4,064.00              | 20.01        | 60.85        | 19.68                   | 0.47                    | 0.46                   | -1.12                 |
| 4,163.00              | 4.40            | 107.23      | 4,160.73              | 17.72        | 67.77        | 17.35                   | 0.25                    | 0.19                   | -2.18                 |
| 4,257.00              | 4.75            | 114.09      | 4,254.43              | 15.06        | 74.77        | 14.66                   | 0.69                    | 0.37                   | 7.30                  |
| 4,350.00              | 4.04            | 104.24      | 4,347.16              | 12.69        | 81.46        | 12.25                   | 1.11                    | -0.76                  | -10.59                |
| 4,444.00              | 3.96            | 93.35       | 4,440.93              | 11.68        | 87.91        | 11.21                   | 0.81                    | -0.09                  | -11.59                |
| 4,538.00              | 3.69            | 91.41       | 4,534.72              | 11.42        | 94.17        | 10.91                   | 0.32                    | -0.29                  | -2.06                 |
| 4,633.00              | 4.04            | 90.01       | 4,629.50              | 11.34        | 100.57       | 10.80                   | 0.38                    | 0.37                   | -1.47                 |
| 4,727.00              | 5.36            | 89.30       | 4,723.19              | 11.40        | 108.28       | 10.81                   | 1.41                    | 1.40                   | -0.76                 |
| 4,822.00              | 5.63            | 90.18       | 4,817.75              | 11.44        | 117.37       | 10.80                   | 0.30                    | 0.28                   | 0.93                  |

# LEAM Drilling Systems

## Survey Report

|           |                           |                              |                                   |
|-----------|---------------------------|------------------------------|-----------------------------------|
| Company:  | Devon Energy              | Local Co-ordinate Reference: | Well Tomb Raider 12-1 Fed 516H    |
| Project:  | Eddy County, NM (NAD-83)  | TVD Reference:               | 3502.3' GE + 32' KB @ 3534.30usft |
| Site:     | Tomb Raider 1-12 Fed Com  | MD Reference:                | 3502.3' GE + 32' KB @ 3534.30usft |
| Well:     | Tomb Raider 12-1 Fed 516H | North Reference:             | Grid                              |
| Wellbore: | ST01                      | Survey Calculation Method:   | Minimum Curvature                 |
| Design:   | ST01                      | Database:                    | LEAM 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) |  |
| 4,964.00              | 4.84            | 85.44       | 4,959.16              | 11.89        | 130.31       | 11.18                   | 0.63                    | -0.56                  | -3.34                 |  |
| 5,011.00              | 4.92            | 80.16       | 5,005.99              | 12.39        | 134.27       | 11.67                   | 0.97                    | 0.17                   | -11.23                |  |
| 5,058.00              | 5.01            | 74.19       | 5,052.81              | 13.30        | 138.23       | 12.55                   | 1.12                    | 0.19                   | -12.70                |  |
| 5,105.00              | 5.10            | 65.75       | 5,099.63              | 14.71        | 142.11       | 13.94                   | 1.59                    | 0.19                   | -17.96                |  |
| 5,152.00              | 5.36            | 59.07       | 5,146.43              | 16.70        | 145.90       | 15.91                   | 1.41                    | 0.55                   | -14.21                |  |
| 5,199.00              | 5.54            | 52.04       | 5,193.22              | 19.22        | 149.57       | 18.41                   | 1.47                    | 0.38                   | -14.96                |  |
| 5,247.00              | 5.89            | 46.06       | 5,240.98              | 22.36        | 153.17       | 21.53                   | 1.44                    | 0.73                   | -12.46                |  |
| 5,294.00              | 6.42            | 41.31       | 5,287.71              | 26.00        | 156.64       | 25.16                   | 1.56                    | 1.13                   | -10.11                |  |
| 5,342.00              | 6.95            | 38.85       | 5,335.39              | 30.28        | 160.24       | 29.41                   | 1.25                    | 1.10                   | -5.13                 |  |
| 5,437.00              | 6.95            | 37.10       | 5,429.69              | 39.34        | 167.31       | 38.44                   | 0.22                    | 0.00                   | -1.84                 |  |
| 5,530.00              | 7.30            | 37.62       | 5,521.97              | 48.51        | 174.31       | 47.57                   | 0.38                    | 0.38                   | 0.56                  |  |
| 5,624.00              | 7.56            | 37.97       | 5,615.18              | 58.12        | 181.76       | 57.13                   | 0.28                    | 0.28                   | 0.37                  |  |
| 5,718.00              | 8.35            | 38.50       | 5,708.27              | 68.33        | 189.81       | 67.30                   | 0.84                    | 0.84                   | 0.56                  |  |
| 5,813.00              | 7.56            | 36.57       | 5,802.36              | 78.75        | 197.83       | 77.68                   | 0.88                    | -0.83                  | -2.03                 |  |
| 5,908.00              | 6.24            | 32.00       | 5,896.67              | 88.15        | 204.29       | 87.04                   | 1.50                    | -1.39                  | -4.81                 |  |
| 6,002.00              | 6.07            | 30.06       | 5,990.13              | 96.78        | 209.49       | 95.65                   | 0.29                    | -0.18                  | -2.06                 |  |
| 6,096.00              | 5.45            | 25.67       | 6,083.65              | 105.11       | 213.91       | 103.95                  | 0.81                    | -0.66                  | -4.67                 |  |
| 6,191.00              | 4.22            | 23.71       | 6,178.31              | 112.37       | 217.27       | 111.20                  | 1.31                    | -1.29                  | -2.06                 |  |
| 6,285.00              | 3.78            | 23.21       | 6,272.08              | 118.39       | 219.88       | 117.20                  | 0.47                    | -0.47                  | -0.53                 |  |
| 6,379.00              | 3.17            | 20.75       | 6,365.91              | 123.67       | 222.02       | 122.46                  | 0.67                    | -0.65                  | -2.62                 |  |
| 6,474.00              | 3.08            | 24.62       | 6,460.77              | 128.44       | 224.02       | 127.23                  | 0.24                    | -0.09                  | 4.07                  |  |
| 6,568.00              | 2.64            | 23.03       | 6,554.65              | 132.73       | 225.92       | 131.51                  | 0.48                    | -0.47                  | -1.69                 |  |
| 6,663.00              | 1.85            | 20.57       | 6,649.58              | 136.18       | 227.31       | 134.95                  | 0.84                    | -0.83                  | -2.59                 |  |
| 6,758.00              | 1.32            | 2.47        | 6,744.54              | 138.71       | 227.90       | 137.47                  | 0.76                    | -0.56                  | -19.05                |  |
| 7,041.00              | 1.06            | 11.78       | 7,027.48              | 144.53       | 228.57       | 143.29                  | 0.11                    | -0.09                  | 3.29                  |  |
| 7,231.00              | 0.88            | 38.85       | 7,217.46              | 147.38       | 229.85       | 146.14                  | 0.26                    | -0.09                  | 14.25                 |  |
| 7,325.00              | 0.70            | 26.55       | 7,311.45              | 148.46       | 230.55       | 147.21                  | 0.26                    | -0.19                  | -13.09                |  |
| 7,420.00              | 0.53            | 13.89       | 7,406.44              | 149.41       | 230.92       | 148.15                  | 0.23                    | -0.18                  | -13.33                |  |
| 7,515.00              | 0.35            | 21.80       | 7,501.44              | 150.10       | 231.13       | 148.85                  | 0.20                    | -0.19                  | 8.33                  |  |
| 7,609.00              | 0.35            | 37.62       | 7,595.44              | 150.60       | 231.41       | 149.34                  | 0.10                    | 0.00                   | 16.83                 |  |
| 7,703.00              | 0.26            | 135.18      | 7,689.44              | 150.67       | 231.74       | 149.42                  | 0.49                    | -0.10                  | 103.79                |  |
| 7,797.00              | 0.26            | 157.86      | 7,783.44              | 150.32       | 231.97       | 149.07                  | 0.11                    | 0.00                   | 24.13                 |  |
| 7,892.00              | 0.53            | 211.82      | 7,878.43              | 149.75       | 231.82       | 148.49                  | 0.45                    | 0.28                   | 56.80                 |  |
| 7,986.00              | 0.70            | 209.01      | 7,972.43              | 148.88       | 231.31       | 147.62                  | 0.18                    | 0.18                   | -2.99                 |  |
| 8,081.00              | 0.79            | 217.45      | 8,067.42              | 147.85       | 230.63       | 146.60                  | 0.15                    | 0.09                   | 8.88                  |  |
| 8,175.00              | 0.97            | 188.44      | 8,161.41              | 146.55       | 230.12       | 145.30                  | 0.50                    | 0.19                   | -30.86                |  |
| 8,270.00              | 0.97            | 182.12      | 8,256.40              | 144.95       | 229.97       | 143.70                  | 0.11                    | 0.00                   | -6.65                 |  |
| 8,362.00              | 1.32            | 188.62      | 8,348.38              | 143.12       | 229.79       | 141.88                  | 0.41                    | 0.38                   | 7.07                  |  |
| 8,427.00              | 0.97            | 197.20      | 8,413.36              | 141.86       | 229.51       | 140.61                  | 0.60                    | -0.54                  | 13.20                 |  |
| 8,508.00              | 0.88            | 306.30      | 8,494.36              | 141.57       | 228.81       | 140.33                  | 1.86                    | -0.11                  | 134.69                |  |
| 8,602.00              | 14.68           | 352.62      | 8,587.29              | 153.87       | 226.69       | 152.64                  | 14.99                   | 14.68                  | 49.28                 |  |
| 8,650.00              | 22.69           | 355.96      | 8,632.72              | 169.17       | 225.25       | 167.94                  | 16.83                   | 16.69                  | 6.96                  |  |
| 8,698.00              | 29.81           | 355.61      | 8,675.74              | 190.32       | 223.68       | 189.11                  | 14.84                   | 14.83                  | -0.73                 |  |

# LEAM Drilling Systems

## Survey Report

|                  |                           |                                     |                                   |
|------------------|---------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy              | <b>Local Co-ordinate Reference:</b> | Well Tomb Raider 12-1 Fed 516H    |
| <b>Project:</b>  | Eddy County, NM (NAD-83)  | <b>TVD Reference:</b>               | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Site:</b>     | Tomb Raider 1-12 Fed Com  | <b>MD Reference:</b>                | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Well:</b>     | Tomb Raider 12-1 Fed 516H | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | ST01                      | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | ST01                      | <b>Database:</b>                    | LEAM 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) |
| 8,745.00              | 37.64           | 355.08      | 8,714.80              | 216.31       | 221.55       | 215.11                  | 16.67                   | 16.66                  | -1.13                 |
| 8,791.00              | 41.59           | 355.61      | 8,750.23              | 245.54       | 219.18       | 244.35                  | 8.62                    | 8.59                   | 1.15                  |
| 8,838.00              | 45.02           | 357.02      | 8,784.43              | 277.70       | 217.12       | 276.52                  | 7.58                    | 7.30                   | 3.00                  |
| 8,886.00              | 47.84           | 358.07      | 8,817.51              | 312.44       | 215.64       | 311.27                  | 6.08                    | 5.88                   | 2.19                  |
| 8,933.00              | 51.79           | 358.42      | 8,847.83              | 348.33       | 214.54       | 347.16                  | 8.42                    | 8.40                   | 0.74                  |
| 8,980.00              | 55.57           | 358.60      | 8,875.67              | 386.18       | 213.56       | 385.02                  | 8.05                    | 8.04                   | 0.38                  |
| 9,027.00              | 58.65           | 0.18        | 8,901.19              | 425.63       | 213.15       | 424.47                  | 7.14                    | 6.55                   | 3.36                  |
| 9,076.00              | 61.73           | 1.59        | 8,925.54              | 468.14       | 213.81       | 466.97                  | 6.76                    | 6.29                   | 2.88                  |
| 9,123.00              | 64.54           | 0.71        | 8,946.78              | 510.05       | 214.65       | 508.88                  | 6.21                    | 5.98                   | -1.87                 |
| 9,171.00              | 68.06           | 359.30      | 8,966.07              | 554.00       | 214.65       | 552.83                  | 7.81                    | 7.33                   | -2.94                 |
| 9,218.00              | 72.63           | 359.83      | 8,981.88              | 598.24       | 214.31       | 597.08                  | 9.78                    | 9.72                   | 1.13                  |
| 9,265.00              | 77.65           | 1.06        | 8,993.93              | 643.66       | 214.67       | 642.48                  | 10.98                   | 10.68                  | 2.62                  |
| 9,312.00              | 81.78           | 1.24        | 9,002.32              | 689.88       | 215.60       | 688.70                  | 8.80                    | 8.79                   | 0.38                  |
| 9,360.00              | 85.12           | 0.71        | 9,007.79              | 737.55       | 216.41       | 736.37                  | 7.04                    | 6.96                   | -1.10                 |
| 9,427.00              | 87.23           | 0.01        | 9,012.26              | 804.40       | 216.83       | 803.21                  | 3.32                    | 3.15                   | -1.04                 |
| 9,521.00              | 88.55           | 0.01        | 9,015.72              | 898.33       | 216.85       | 897.15                  | 1.40                    | 1.40                   | 0.00                  |
| 9,616.00              | 89.96           | 0.53        | 9,016.96              | 993.32       | 217.29       | 992.13                  | 1.58                    | 1.48                   | 0.55                  |
| 9,710.00              | 89.96           | 1.06        | 9,017.02              | 1,087.31     | 218.60       | 1,086.11                | 0.56                    | 0.00                   | 0.56                  |
| 9,804.00              | 90.66           | 359.65      | 9,016.51              | 1,181.31     | 219.18       | 1,180.10                | 1.67                    | 0.74                   | -1.50                 |
| 9,898.00              | 90.77           | 358.95      | 9,015.34              | 1,275.29     | 218.03       | 1,274.09                | 0.75                    | 0.12                   | -0.74                 |
| 9,993.00              | 90.82           | 358.42      | 9,014.02              | 1,370.26     | 215.85       | 1,369.07                | 0.56                    | 0.05                   | -0.56                 |
| 10,087.00             | 90.40           | 358.78      | 9,013.02              | 1,464.22     | 213.56       | 1,463.05                | 0.59                    | -0.45                  | 0.38                  |
| 10,183.00             | 90.31           | 358.42      | 9,012.43              | 1,560.19     | 211.21       | 1,559.03                | 0.39                    | -0.09                  | -0.38                 |
| 10,278.00             | 91.10           | 358.25      | 9,011.26              | 1,655.14     | 208.45       | 1,653.99                | 0.85                    | 0.83                   | -0.18                 |
| 10,373.00             | 89.52           | 357.19      | 9,010.74              | 1,750.06     | 204.67       | 1,748.93                | 2.00                    | -1.66                  | -1.12                 |
| 10,468.00             | 89.34           | 357.02      | 9,011.69              | 1,844.94     | 199.87       | 1,843.83                | 0.26                    | -0.19                  | -0.18                 |
| 10,563.00             | 90.57           | 356.84      | 9,011.76              | 1,939.80     | 194.79       | 1,938.72                | 1.31                    | 1.29                   | -0.19                 |
| 10,658.00             | 89.16           | 358.25      | 9,011.99              | 2,034.71     | 190.72       | 2,033.64                | 2.10                    | -1.48                  | 1.48                  |
| 10,749.00             | 88.72           | 0.71        | 9,013.67              | 2,125.68     | 189.89       | 2,124.62                | 2.75                    | -0.48                  | 2.70                  |
| 10,840.00             | 88.99           | 0.89        | 9,015.49              | 2,216.65     | 191.16       | 2,215.59                | 0.36                    | 0.30                   | 0.20                  |
| 10,932.00             | 89.25           | 0.01        | 9,016.90              | 2,308.64     | 191.88       | 2,307.57                | 1.00                    | 0.28                   | -0.96                 |
| 11,023.00             | 88.20           | 358.42      | 9,018.93              | 2,399.60     | 190.64       | 2,398.54                | 2.09                    | -1.15                  | -1.75                 |
| 11,114.00             | 90.22           | 0.01        | 9,020.18              | 2,490.58     | 189.39       | 2,489.52                | 2.82                    | 2.22                   | 1.75                  |
| 11,205.00             | 91.28           | 1.76        | 9,018.99              | 2,581.55     | 190.80       | 2,580.48                | 2.25                    | 1.16                   | 1.92                  |
| 11,297.00             | 91.63           | 1.59        | 9,016.65              | 2,673.49     | 193.49       | 2,672.40                | 0.42                    | 0.38                   | -0.18                 |
| 11,390.00             | 90.84           | 1.59        | 9,014.65              | 2,766.43     | 196.07       | 2,765.33                | 0.85                    | -0.85                  | 0.00                  |
| 11,482.00             | 90.92           | 2.12        | 9,013.24              | 2,858.37     | 199.04       | 2,857.25                | 0.58                    | 0.09                   | 0.58                  |
| 11,574.00             | 89.69           | 0.71        | 9,012.75              | 2,950.33     | 201.31       | 2,949.20                | 2.03                    | -1.34                  | -1.53                 |
| 11,665.00             | 89.43           | 0.53        | 9,013.45              | 3,041.33     | 202.30       | 3,040.19                | 0.35                    | -0.29                  | -0.20                 |
| 11,758.00             | 90.57           | 359.30      | 9,013.45              | 3,134.32     | 202.16       | 3,133.18                | 1.80                    | 1.23                   | -1.32                 |
| 11,850.00             | 89.60           | 359.13      | 9,013.31              | 3,226.31     | 200.90       | 3,225.18                | 1.07                    | -1.05                  | -0.18                 |
| 11,943.00             | 89.25           | 359.13      | 9,014.24              | 3,319.30     | 199.49       | 3,318.17                | 0.38                    | -0.38                  | 0.00                  |
| 12,035.00             | 89.43           | 359.13      | 9,015.30              | 3,411.28     | 198.09       | 3,410.16                | 0.20                    | 0.20                   | 0.00                  |
| 12,130.00             | 89.69           | 359.13      | 9,016.03              | 3,506.27     | 196.65       | 3,505.15                | 0.27                    | 0.27                   | 0.00                  |

# LEAM Drilling Systems

## Survey Report

|                  |                           |                                     |                                   |
|------------------|---------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy              | <b>Local Co-ordinate Reference:</b> | Well Tomb Raider 12-1 Fed 516H    |
| <b>Project:</b>  | Eddy County, NM (NAD-83)  | <b>TVD Reference:</b>               | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Site:</b>     | Tomb Raider 1-12 Fed Com  | <b>MD Reference:</b>                | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Well:</b>     | Tomb Raider 12-1 Fed 516H | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | ST01                      | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | ST01                      | <b>Database:</b>                    | LEAM 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) |
| 12,224.00             | 90.75           | 357.19      | 9,015.67              | 3,600.21     | 193.63       | 3,599.11                | 2.35                    | 1.13                   | -2.06                 |
| 12,319.00             | 89.96           | 358.25      | 9,015.08              | 3,695.13     | 189.85       | 3,694.05                | 1.39                    | -0.83                  | 1.12                  |
| 12,414.00             | 90.48           | 358.07      | 9,014.72              | 3,790.08     | 186.80       | 3,789.02                | 0.58                    | 0.55                   | -0.19                 |
| 12,507.00             | 88.99           | 359.65      | 9,015.15              | 3,883.06     | 184.95       | 3,882.00                | 2.34                    | -1.60                  | 1.70                  |
| 12,601.00             | 89.16           | 0.71        | 9,016.67              | 3,977.04     | 185.25       | 3,975.98                | 1.14                    | 0.18                   | 1.13                  |
| 12,696.00             | 89.25           | 0.53        | 9,017.98              | 4,072.03     | 186.28       | 4,070.96                | 0.21                    | 0.09                   | -0.19                 |
| 12,790.00             | 89.16           | 0.36        | 9,019.29              | 4,166.02     | 187.01       | 4,164.94                | 0.20                    | -0.10                  | -0.18                 |
| 12,884.00             | 88.64           | 0.36        | 9,021.09              | 4,260.00     | 187.60       | 4,258.92                | 0.55                    | -0.55                  | 0.00                  |
| 12,979.00             | 88.64           | 1.06        | 9,023.35              | 4,354.96     | 188.77       | 4,353.88                | 0.74                    | 0.00                   | 0.74                  |
| 13,074.00             | 90.22           | 1.76        | 9,024.29              | 4,449.93     | 191.11       | 4,448.83                | 1.82                    | 1.66                   | 0.74                  |
| 13,169.00             | 90.40           | 1.41        | 9,023.78              | 4,544.89     | 193.74       | 4,543.77                | 0.41                    | 0.19                   | -0.37                 |
| 13,263.00             | 92.51           | 2.29        | 9,021.39              | 4,638.80     | 196.77       | 4,637.67                | 2.43                    | 2.24                   | 0.94                  |
| 13,358.00             | 93.56           | 2.47        | 9,016.36              | 4,733.59     | 200.71       | 4,732.43                | 1.12                    | 1.11                   | 0.19                  |
| 13,451.00             | 92.33           | 0.89        | 9,011.58              | 4,826.42     | 203.43       | 4,825.25                | 2.15                    | -1.32                  | -1.70                 |
| 13,546.00             | 92.33           | 0.36        | 9,007.72              | 4,921.33     | 204.47       | 4,920.16                | 0.56                    | 0.00                   | -0.56                 |
| 13,640.00             | 90.92           | 0.01        | 9,005.06              | 5,015.29     | 204.77       | 5,014.11                | 1.55                    | -1.50                  | -0.37                 |
| 13,735.00             | 88.20           | 357.90      | 9,005.79              | 5,110.26     | 203.04       | 5,109.09                | 3.62                    | -2.86                  | -2.22                 |
| 13,830.00             | 88.64           | 359.65      | 9,008.40              | 5,205.20     | 201.01       | 5,204.03                | 1.90                    | 0.46                   | 1.84                  |
| 13,924.00             | 87.93           | 359.13      | 9,011.22              | 5,299.15     | 200.01       | 5,297.99                | 0.94                    | -0.76                  | -0.55                 |
| 14,019.00             | 89.16           | 1.59        | 9,013.63              | 5,394.11     | 200.61       | 5,392.94                | 2.89                    | 1.29                   | 2.59                  |
| 14,115.00             | 90.22           | 1.24        | 9,014.15              | 5,490.08     | 202.98       | 5,488.90                | 1.16                    | 1.10                   | -0.36                 |
| 14,209.00             | 91.28           | 0.36        | 9,012.92              | 5,584.06     | 204.29       | 5,582.87                | 1.47                    | 1.13                   | -0.94                 |
| 14,303.00             | 91.63           | 359.83      | 9,010.53              | 5,678.03     | 204.45       | 5,676.84                | 0.68                    | 0.37                   | -0.56                 |
| 14,397.00             | 90.92           | 359.30      | 9,008.44              | 5,772.00     | 203.73       | 5,770.81                | 0.94                    | -0.76                  | -0.56                 |
| 14,491.00             | 90.31           | 358.95      | 9,007.43              | 5,865.98     | 202.30       | 5,864.80                | 0.75                    | -0.65                  | -0.37                 |
| 14,586.00             | 91.10           | 358.25      | 9,006.26              | 5,960.95     | 199.98       | 5,959.78                | 1.11                    | 0.83                   | -0.74                 |
| 14,681.00             | 92.42           | 358.60      | 9,003.35              | 6,055.86     | 197.37       | 6,054.71                | 1.44                    | 1.39                   | 0.37                  |
| 14,776.00             | 90.48           | 358.60      | 9,000.94              | 6,150.80     | 195.05       | 6,149.65                | 2.04                    | -2.04                  | 0.00                  |
| 14,870.00             | 90.48           | 358.95      | 9,000.15              | 6,244.77     | 193.04       | 6,243.64                | 0.37                    | 0.00                   | 0.37                  |
| 14,965.00             | 89.78           | 359.65      | 8,999.94              | 6,339.77     | 191.88       | 6,338.63                | 1.04                    | -0.74                  | 0.74                  |
| 15,059.00             | 89.96           | 359.65      | 9,000.15              | 6,433.76     | 191.30       | 6,432.63                | 0.19                    | 0.19                   | 0.00                  |
| 15,155.00             | 88.37           | 358.42      | 9,001.55              | 6,529.73     | 189.68       | 6,528.61                | 2.09                    | -1.66                  | -1.28                 |
| 15,249.00             | 88.37           | 358.25      | 9,004.22              | 6,623.66     | 186.95       | 6,622.55                | 0.18                    | 0.00                   | -0.18                 |
| 15,343.00             | 88.02           | 359.13      | 9,007.19              | 6,717.58     | 184.81       | 6,716.49                | 1.01                    | -0.37                  | 0.94                  |
| 15,438.00             | 88.90           | 359.30      | 9,009.74              | 6,812.54     | 183.51       | 6,811.45                | 0.94                    | 0.93                   | 0.18                  |
| 15,532.00             | 90.48           | 359.65      | 9,010.25              | 6,906.53     | 182.64       | 6,905.44                | 1.72                    | 1.68                   | 0.37                  |
| 15,627.00             | 90.57           | 358.42      | 9,009.38              | 7,001.51     | 181.04       | 7,000.43                | 1.30                    | 0.09                   | -1.29                 |
| 15,720.00             | 90.66           | 358.07      | 9,008.38              | 7,094.46     | 178.20       | 7,093.40                | 0.39                    | 0.10                   | -0.38                 |
| 15,815.00             | 91.70           | 357.72      | 9,006.42              | 7,189.38     | 174.71       | 7,188.33                | 1.16                    | 1.09                   | -0.37                 |
| 15,909.00             | 89.60           | 358.95      | 9,005.36              | 7,283.33     | 171.98       | 7,282.29                | 2.59                    | -2.23                  | 1.31                  |
| 16,004.00             | 88.81           | 358.42      | 9,006.67              | 7,378.29     | 169.80       | 7,377.26                | 1.00                    | -0.83                  | -0.56                 |
| 16,099.00             | 87.67           | 358.60      | 9,009.59              | 7,473.21     | 167.33       | 7,472.20                | 1.21                    | -1.20                  | 0.19                  |
| 16,194.00             | 90.40           | 0.36        | 9,011.19              | 7,568.18     | 166.47       | 7,567.17                | 3.42                    | 2.87                   | 1.85                  |

# LEAM Drilling Systems

## Survey Report

|                  |                           |                                     |                                   |
|------------------|---------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Devon Energy              | <b>Local Co-ordinate Reference:</b> | Well Tomb Raider 12-1 Fed 516H    |
| <b>Project:</b>  | Eddy County, NM (NAD-83)  | <b>TVD Reference:</b>               | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Site:</b>     | Tomb Raider 1-12 Fed Com  | <b>MD Reference:</b>                | 3502.3' GE + 32' KB @ 3534.30usft |
| <b>Well:</b>     | Tomb Raider 12-1 Fed 516H | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | ST01                      | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | ST01                      | <b>Database:</b>                    | LEAM 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) |  |
| 16,289.00             | 90.92           | 1.76        | 9,010.10              | 7,663.16     | 168.22       | 7,662.13                | 1.57                    | 0.55                   | 1.47                  |  |
| 16,383.00             | 91.36           | 2.12        | 9,008.23              | 7,757.08     | 171.41       | 7,756.04                | 0.60                    | 0.47                   | 0.38                  |  |
| 16,478.00             | 92.86           | 1.94        | 9,004.73              | 7,851.96     | 174.77       | 7,850.90                | 1.59                    | 1.58                   | -0.19                 |  |
| 16,572.00             | 91.10           | 1.94        | 9,001.48              | 7,945.84     | 177.95       | 7,944.76                | 1.87                    | -1.87                  | 0.00                  |  |
| 16,668.00             | 89.08           | 0.71        | 9,001.33              | 8,041.81     | 180.17       | 8,040.72                | 2.46                    | -2.10                  | -1.28                 |  |
| 16,762.00             | 88.72           | 0.53        | 9,003.14              | 8,135.79     | 181.19       | 8,134.69                | 0.43                    | -0.38                  | -0.19                 |  |
| 16,857.00             | 89.43           | 2.29        | 9,004.67              | 8,230.74     | 183.52       | 8,229.63                | 2.00                    | 0.75                   | 1.85                  |  |
| 16,951.00             | 90.57           | 4.40        | 9,004.67              | 8,324.57     | 189.01       | 8,323.43                | 2.55                    | 1.21                   | 2.24                  |  |
| 17,045.00             | 90.13           | 2.99        | 9,004.10              | 8,418.38     | 195.06       | 8,417.20                | 1.57                    | -0.47                  | -1.50                 |  |
| 17,140.00             | 89.96           | 0.53        | 9,004.02              | 8,513.32     | 197.98       | 8,512.13                | 2.60                    | -0.18                  | -2.59                 |  |
| 17,235.00             | 88.55           | 359.48      | 9,005.26              | 8,608.31     | 197.99       | 8,607.11                | 1.85                    | -1.48                  | -1.11                 |  |
| 17,330.00             | 89.52           | 358.42      | 9,006.86              | 8,703.28     | 196.25       | 8,702.09                | 1.51                    | 1.02                   | -1.12                 |  |
| 17,424.00             | 89.52           | 357.37      | 9,007.64              | 8,797.21     | 192.80       | 8,796.04                | 1.12                    | 0.00                   | -1.12                 |  |
| 17,519.00             | 89.08           | 357.37      | 9,008.80              | 8,892.10     | 188.44       | 8,890.95                | 0.46                    | -0.46                  | 0.00                  |  |
| 17,613.00             | 89.87           | 358.60      | 9,009.67              | 8,986.04     | 185.13       | 8,984.91                | 1.56                    | 0.84                   | 1.31                  |  |
| 17,706.00             | 89.08           | 358.42      | 9,010.52              | 9,079.00     | 182.72       | 9,077.88                | 0.87                    | -0.85                  | -0.19                 |  |
| 17,801.00             | 92.15           | 0.18        | 9,009.50              | 9,173.98     | 181.55       | 9,172.86                | 3.72                    | 3.23                   | 1.85                  |  |
| 17,895.00             | 90.40           | 359.13      | 9,007.41              | 9,267.95     | 180.99       | 9,266.83                | 2.17                    | -1.86                  | -1.12                 |  |
| 17,989.00             | 91.36           | 0.18        | 9,005.96              | 9,361.93     | 180.42       | 9,360.82                | 1.51                    | 1.02                   | 1.12                  |  |
| 18,083.00             | 88.55           | 358.42      | 9,006.04              | 9,455.91     | 179.27       | 9,454.80                | 3.53                    | -2.99                  | -1.87                 |  |
| 18,177.00             | 87.14           | 357.55      | 9,009.57              | 9,549.78     | 175.97       | 9,548.69                | 1.76                    | -1.50                  | -0.93                 |  |
| 18,272.00             | 86.97           | 358.78      | 9,014.45              | 9,644.61     | 172.93       | 9,643.53                | 1.31                    | -0.18                  | 1.29                  |  |
| 18,366.00             | 91.54           | 0.89        | 9,015.67              | 9,738.57     | 172.66       | 9,737.49                | 5.35                    | 4.86                   | 2.24                  |  |
| 18,460.00             | 91.19           | 357.20      | 9,013.43              | 9,832.51     | 171.10       | 9,831.44                | 3.94                    | -0.37                  | -3.93                 |  |
| 18,555.00             | 89.52           | 356.31      | 9,012.85              | 9,927.35     | 165.72       | 9,926.31                | 1.99                    | -1.76                  | -0.94                 |  |
| 18,649.00             | 91.28           | 357.19      | 9,012.19              | 10,021.20    | 160.39       | 10,020.18               | 2.09                    | 1.87                   | 0.94                  |  |
| 18,744.00             | 90.40           | 356.84      | 9,010.80              | 10,116.05    | 155.45       | 10,115.07               | 1.00                    | -0.93                  | -0.37                 |  |
| 18,839.00             | 91.71           | 359.83      | 9,009.05              | 10,210.99    | 152.69       | 10,210.01               | 3.44                    | 1.38                   | 3.15                  |  |
| 18,934.00             | 92.51           | 0.71        | 9,005.55              | 10,305.92    | 153.13       | 10,304.94               | 1.25                    | 0.84                   | 0.93                  |  |
| 19,028.00             | 93.39           | 0.53        | 9,000.71              | 10,399.79    | 154.15       | 10,398.80               | 0.96                    | 0.94                   | -0.19                 |  |
| 19,055.00             | 93.47           | 0.89        | 8,999.10              | 10,426.74    | 154.48       | 10,425.75               | 1.36                    | 0.30                   | 1.33                  |  |
| 19,116.00             | 93.47           | 0.89        | 8,995.40              | 10,487.62    | 155.43       | 10,486.62               | 0.00                    | 0.00                   | 0.00                  |  |
| TD Projection         |                 |             |                       |              |              |                         |                         |                        |                       |  |