

Pathfinder

3329 W. Pinhook Rd.  
Lafayette, LA 70508-3506, USA  
Tel. 337-233-3982  
Fax 337-234-2988

**PATHFINDER**  
A Schlumberger Company

30-015-41899

## ***DIRECTIONAL SURVEY REPORT***

***DEVON ENERGY PRODUCTION CO., L.P.***

***BETELGEUSE 19 FEDERAL 5H***

***EDDY COUNTY, NEW MEXICO***

**PREPARED BY: MARK TRAHAN**

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

SEP 18 2014

RECEIVED

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Lafayette, LA 70508-3506, USA  
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May 1, 2014

DEVON ENERGY PRODUCTION CO.  
Ms. Judy Barnett  
Regulatory Compliance Professional  
333 West Sheridan  
Oklahoma City, OK 73102

RE: DEVON ENERGY PRODUCTION CO., L.P.  
BETELGEUSE 19 FEDERAL 5H  
EDDY COUNTY, NM  
RIG: H&P 300  
API NO.: 30-015-41899  
FILE NO.: 14LAF0101

Dear Ms. Barnett:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA  
3 – Original Directional Survey Reports

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Trahan".

Mark Trahan  
M/LWD Service Coordinator  
PathFinder, a Schlumberger company

MT:sf

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DIRECTIONAL SURVEY COMPANY REPORT:

1. SURVEYING COMPANY: PATHFINDER, A SCHLUMBERGER COMPANY
2. NAME OF PERSON(S) PERFORMING SURVEY:
  - A) KEVIN BLANCHARD
  - B) PHILLIP DAVIS
  - C) JAMES COOPER
  - D) MIKE CORNISH
3. POSITION OF SAID PERSON(S): (A-D) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 04/06/14 TO 04/16/14
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY PRODUCTION CO., L.P.  
BETELGEUSE 19 FEDERAL 5H  
EDDY COUNTY, NM  
RIG: H&P 300  
API NO.: 30-015-41899
9. SURVEY CERTIFIED FROM: 3,880 TO 12,603 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4,711.96 FEET ON A BEARING OF 262.98 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED DEPTH OF 12,603 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

  
MARK TRAHAN  
M/LWD SERVICE COORDINATOR

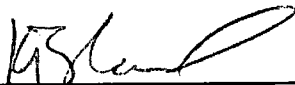
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STATE OF LOUISIANA  
PARISH OF LAFAYETTE

I, **Kevin Blanchard**, certify that; I am employed by PathFinder, a Schlumberger company; that I did on the day(s) of **04/06/14** through **04/16/14** conduct or supervise the taking of a **Measurement While Drilling** survey from a depth of **3,880 feet to a depth of 12,603 feet**; that the data is true, correct, complete and within the limitations of the tool as set forth by PathFinder, a Schlumberger company; that I am authorized and qualified to make this report; that this survey was conducted at the request of **DEVON ENERGY PRODUCTION CO., L.P.** for the **Betelgeuse 19 Federal 5H** Well API No. **30-015-41899** in **Eddy County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by PathFinder, a Schlumberger company.

  
\_\_\_\_\_  
**PathFinder Field Engineer**

# PathFinder – a Schlumberger company

## BHL Report

Page 01/01  
Tie-in Date: 04/06/2014  
Date Completed: 04/16/2014

DEVON ENERGY PRODUCTION CO.  
BETELGEUSE "19" FEDERAL #5H  
EDDY COUNTY, NM  
API#: 30-015-41899      Rig: H&P 300  
PathFinder Office Supervisor: MARK TRAHAN  
PathFinder Field Engineers: KEVIN BLANCHARD  
                                         PHILLIP DAVIS

Survey Horiz. Reference: WELLHEAD  
Ref Coordinates: LAT: 32.39.7.0655 N LON: 103.54.2.2833 W  
GRID Reference: NAD83 new mexico east Transverse Mercator  
Ref GRID Coord: X: 674511.8000 Y: 601186.2800  
North Aligned To: GRID NORTH  
Total Magnetic Correction: 7.19° EAST TO GRID  
Vertical Section Plane: 266.57  
Survey Vert. Reference: 26.00' Rotary Table To Ground  
Altitude: 3417.00' Ground To MSL

|                       |                |             |
|-----------------------|----------------|-------------|
| Measured Depth        | 12603.00       | (feet)      |
| Inclination           | 88.11          | (deg)       |
| Azimuth               | 265.24         | (deg)       |
| True Vertical Depth   | 7873.50        | (feet)      |
| Vertical Section      | 4702.74        | (feet)      |
| Survey X cord         | 669835.12      | (feet)      |
| Survey Y cord         | 600610.76      | (feet)      |
| Survey Lat            | 32.65043218 N  | (deg)       |
| Survey Lon            | 103.91583632 W | (deg)       |
| Rectangular Corr. N/S | 575.52 S       | (feet)      |
| Rectangular Corr. E/W | 4676.68 W      | (feet)      |
| Closure Distance      | 4711.96        | (feet)      |
| Direction of Closure  | 262.98         | (deg)       |
| Dogleg Severity       | 0.00           | (deg/100ft) |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
BETELGEUSE "19" FEDERAL #5H  
EDDY COUNTY, NM  
API#: 30-015-41899 Rig: H&P 300  
PathFinder Office Supervisor: MARK TRAHAN  
PathFinder Field Engineers: KEVIN BLANCHARD  
PHILLIP DAVIS

Page 01/07  
Tie-in Date: 04/06/2014  
Date Completed: 04/16/2014

Survey Horiz. Reference: WELLHEAD  
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GRID Reference: NAD83 new mexico east Transverse Mercator  
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North Aligned To: GRID NORTH  
Total Magnetic Correction: 7.19° EAST TO GRID  
Vertical Section Plane: 266.57  
Survey Vert. Reference: 26.00' Rotary Table To Ground  
Altitude: 3417.00' Ground To MSL

Survey Calculations by RX5 V6.05A using Minimum Curvature

| Measured<br>Depth<br>(ft)                              | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |        | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) |
|--------------------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|--------|-----------------------------|------------------------------|-----------------------------------|--------|-------------------|
| THE FOLLOWING ARE VAUGHN ENERGY SERVICES GYRO SURVEYS. |               |                        |             |                          |                             |                                           |        |                             |                              |                                   |        |                   |
| 100.00                                                 | 0.48          | 11.31                  | 100.00      | 0.00                     | -0.08                       | 0.40 N                                    | 0.06 E | 32.65196373 N               | 103.90063405 W               | 0.41@                             | 7.94   | 0.00              |
| 200.00                                                 | 0.13          | 81.19                  | 200.00      | 100.00                   | -0.30                       | 0.83 N                                    | 0.25 E | 32.65196490 N               | 103.90063341 W               | 0.87@                             | 16.78  | 0.45              |
| 300.00                                                 | 0.38          | 112.23                 | 300.00      | 100.00                   | -0.71                       | 0.72 N                                    | 0.67 E | 32.65196460 N               | 103.90063205 W               | 0.98@                             | 42.85  | 0.28              |
| 400.00                                                 | 0.50          | 142.90                 | 400.00      | 100.00                   | -1.25                       | 0.25 N                                    | 1.24 E | 32.65196329 N               | 103.90063021 W               | 1.26@                             | 78.68  | 0.26              |
| 500.00                                                 | 0.24          | 181.94                 | 500.00      | 100.00                   | -1.47                       | 0.31 S                                    | 1.50 E | 32.65196176 N               | 103.90062938 W               | 1.53@                             | 101.68 | 0.35              |
| 600.00                                                 | 1.12          | 221.01                 | 599.99      | 100.00                   | -0.77                       | 1.26 S                                    | 0.85 E | 32.65195916 N               | 103.90063150 W               | 1.52@                             | 146.00 | 0.95              |
| 700.00                                                 | 1.20          | 229.82                 | 699.97      | 100.00                   | 0.75                        | 2.67 S                                    | 0.59 W | 32.65195530 N               | 103.90063620 W               | 2.73@                             | 192.55 | 0.20              |
| 800.00                                                 | 0.73          | 236.24                 | 799.95      | 100.00                   | 2.14                        | 3.70 S                                    | 1.92 W | 32.65195248 N               | 103.90064054 W               | 4.17@                             | 207.48 | 0.48              |
| 900.00                                                 | 0.38          | 237.84                 | 899.95      | 100.00                   | 2.98                        | 4.23 S                                    | 2.73 W | 32.65195103 N               | 103.90064318 W               | 5.04@                             | 212.88 | 0.35              |
| 1000.00                                                | 0.46          | 242.22                 | 999.95      | 100.00                   | 3.64                        | 4.59 S                                    | 3.37 W | 32.65195004 N               | 103.90064525 W               | 5.70@                             | 216.27 | 0.09              |
| 1100.00                                                | 0.50          | 202.31                 | 1099.94     | 100.00                   | 4.19                        | 5.18 S                                    | 3.89 W | 32.65194842 N               | 103.90064695 W               | 6.48@                             | 216.89 | 0.33              |
| 1200.00                                                | 0.31          | 162.16                 | 1199.94     | 100.00                   | 4.32                        | 5.84 S                                    | 3.97 W | 32.65194660 N               | 103.90064723 W               | 7.07@                             | 214.21 | 0.33              |
| 1300.00                                                | 0.65          | 98.81                  | 1299.94     | 100.00                   | 3.69                        | 6.19 S                                    | 3.33 W | 32.65194565 N               | 103.90064514 W               | 7.03@                             | 208.28 | 0.58              |
| 1400.00                                                | 0.64          | 71.14                  | 1399.93     | 100.00                   | 2.60                        | 6.10 S                                    | 2.24 W | 32.65194590 N               | 103.90064160 W               | 6.49@                             | 200.19 | 0.31              |
| 1500.00                                                | 1.08          | 40.92                  | 1499.92     | 100.00                   | 1.40                        | 5.20 S                                    | 1.10 W | 32.65194834 N               | 103.90063787 W               | 5.32@                             | 191.89 | 0.62              |
| 1600.00                                                | 0.90          | 42.77                  | 1599.91     | 100.00                   | 0.18                        | 3.91 S                                    | 0.06 E | 32.65195187 N               | 103.90063411 W               | 3.91@                             | 179.19 | 0.18              |
| 1700.00                                                | 0.94          | 39.44                  | 1699.89     | 100.00                   | -0.95                       | 2.70 S                                    | 1.11 E | 32.65195518 N               | 103.90063067 W               | 2.92@                             | 157.69 | 0.07              |
| 1800.00                                                | 0.95          | 63.77                  | 1799.88     | 100.00                   | -2.27                       | 1.70 S                                    | 2.37 E | 32.65195791 N               | 103.90062655 W               | 2.92@                             | 125.67 | 0.40              |
| 1900.00                                                | 0.43          | 95.73                  | 1899.87     | 100.00                   | -3.40                       | 1.38 S                                    | 3.49 E | 32.65195881 N               | 103.90062291 W               | 3.75@                             | 111.50 | 0.63              |
| 2000.00                                                | 0.05          | 143.90                 | 1999.87     | 100.00                   | -3.80                       | 1.45 S                                    | 3.89 E | 32.65195860 N               | 103.90062162 W               | 4.15@                             | 110.42 | 0.40              |
| 2100.00                                                | 0.30          | 199.27                 | 2099.87     | 100.00                   | -3.72                       | 1.73 S                                    | 3.83 E | 32.65195783 N               | 103.90062182 W               | 4.20@                             | 114.32 | 0.27              |
| 2200.00                                                | 0.44          | 224.93                 | 2199.87     | 100.00                   | -3.33                       | 2.25 S                                    | 3.47 E | 32.65195640 N               | 103.90062299 W               | 4.14@                             | 122.94 | 0.21              |
| 2300.00                                                | 0.39          | 257.51                 | 2299.87     | 100.00                   | -2.71                       | 2.59 S                                    | 2.87 E | 32.65195546 N               | 103.90062495 W               | 3.87@                             | 132.13 | 0.24              |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
 BETELGEUSE "19" FEDERAL #5H  
 EDDY COUNTY, NM  
 API#: 30-015-41899      Rig: H&P 300

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| Measured<br>Depth<br>(ft)                                    | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |         | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) |
|--------------------------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|---------|-----------------------------|------------------------------|-----------------------------------|--------|-------------------|
| 2400.00                                                      | 0.30          | 244.90                 | 2399.87     | 100.00                   | -2.13                       | 2.78 S                                    | 2.30 E  | 32.65195496 N               | 103.90062680 W               | 3.61@                             | 140.40 | 0.12              |
| 2500.00                                                      | 0.95          | 227.32                 | 2499.86     | 100.00                   | -1.24                       | 3.45 S                                    | 1.45 E  | 32.65195312 N               | 103.90062956 W               | 3.75@                             | 157.18 | 0.67              |
| 2600.00                                                      | 0.53          | 235.30                 | 2599.85     | 100.00                   | -0.21                       | 4.28 S                                    | 0.46 E  | 32.65195086 N               | 103.90063279 W               | 4.30@                             | 173.82 | 0.43              |
| 2700.00                                                      | 0.71          | 207.93                 | 2699.84     | 100.00                   | 0.51                        | 5.09 S                                    | 0.21 W  | 32.65194864 N               | 103.90063498 W               | 5.09@                             | 182.33 | 0.34              |
| 2800.00                                                      | 1.00          | 220.98                 | 2799.83     | 100.00                   | 1.44                        | 6.29 S                                    | 1.07 W  | 32.65194534 N               | 103.90063780 W               | 6.39@                             | 189.64 | 0.35              |
| 2900.00                                                      | 1.04          | 225.89                 | 2899.82     | 100.00                   | 2.74                        | 7.59 S                                    | 2.29 W  | 32.65194180 N               | 103.90064179 W               | 7.92@                             | 196.82 | 0.10              |
| 3000.00                                                      | 1.11          | 223.36                 | 2999.80     | 100.00                   | 4.14                        | 8.92 S                                    | 3.61 W  | 32.65193814 N               | 103.90064609 W               | 9.62@                             | 202.03 | 0.08              |
| 3100.00                                                      | 0.62          | 236.67                 | 3099.79     | 100.00                   | 5.31                        | 9.92 S                                    | 4.73 W  | 32.65193540 N               | 103.90064973 W               | 10.99@                            | 205.47 | 0.53              |
| 3200.00                                                      | 1.01          | 210.73                 | 3199.78     | 100.00                   | 6.28                        | 10.98 S                                   | 5.63 W  | 32.65193252 N               | 103.90065267 W               | 12.34@                            | 207.15 | 0.53              |
| 3300.00                                                      | 0.81          | 197.85                 | 3299.77     | 100.00                   | 7.03                        | 12.41 S                                   | 6.30 W  | 32.65192859 N               | 103.90065486 W               | 13.91@                            | 206.91 | 0.28              |
| 3400.00                                                      | 0.74          | 202.57                 | 3399.76     | 100.00                   | 7.57                        | 13.68 S                                   | 6.76 W  | 32.65192511 N               | 103.90065639 W               | 15.26@                            | 206.31 | 0.09              |
| 3500.00                                                      | 0.45          | 224.18                 | 3499.75     | 100.00                   | 8.14                        | 14.55 S                                   | 7.28 W  | 32.65192270 N               | 103.90065809 W               | 16.28@                            | 206.58 | 0.36              |
| 3600.00                                                      | 0.67          | 236.23                 | 3599.75     | 100.00                   | 8.94                        | 15.16 S                                   | 8.04 W  | 32.65192104 N               | 103.90066057 W               | 17.16@                            | 207.94 | 0.25              |
| 3700.00                                                      | 0.72          | 217.66                 | 3699.74     | 100.00                   | 9.85                        | 15.98 S                                   | 8.91 W  | 32.65191879 N               | 103.90066341 W               | 18.30@                            | 209.14 | 0.23              |
| 3800.00                                                      | 0.86          | 224.05                 | 3799.73     | 100.00                   | 10.82                       | 17.02 S                                   | 9.82 W  | 32.65191595 N               | 103.90066636 W               | 19.65@                            | 209.98 | 0.17              |
| ** TIED INTO VAUGHN ENERGY SERVICES GYRO SURVEYS AT 3880'MD. |               |                        |             |                          |                             |                                           |         |                             |                              |                                   |        |                   |
| 3880.00                                                      | 0.91          | 218.41                 | 3879.72     | 80.00                    | 11.68                       | 17.95 S                                   | 10.63 W | 32.65191341 N               | 103.90066901 W               | 20.86@                            | 210.63 | 0.13              |
| THE FOLLOWING ARE PATHFINDER MWD SURVEYS.                    |               |                        |             |                          |                             |                                           |         |                             |                              |                                   |        |                   |
| 4079.00                                                      | 1.14          | 184.70                 | 4078.69     | 199.00                   | 13.02                       | 21.16 S                                   | 11.77 W | 32.65190459 N               | 103.90067277 W               | 24.22@                            | 209.09 | 0.32              |
| 4115.00                                                      | 1.32          | 171.46                 | 4114.68     | 36.00                    | 13.03                       | 21.93 S                                   | 11.74 W | 32.65190248 N               | 103.90067268 W               | 24.87@                            | 208.17 | 0.93              |
| 4209.00                                                      | 1.06          | 103.64                 | 4208.67     | 94.00                    | 12.10                       | 23.20 S                                   | 10.74 W | 32.65189897 N               | 103.90066943 W               | 25.57@                            | 204.83 | 1.43              |
| 4303.00                                                      | 2.02          | 35.93                  | 4302.64     | 94.00                    | 10.22                       | 22.07 S                                   | 8.92 W  | 32.65190207 N               | 103.90066351 W               | 23.80@                            | 202.01 | 2.01              |
| 4398.00                                                      | 3.61          | 34.04                  | 4397.52     | 95.00                    | 7.34                        | 18.23 S                                   | 6.26 W  | 32.65191258 N               | 103.90065482 W               | 19.28@                            | 198.95 | 1.68              |
| 4493.00                                                      | 4.31          | 31.18                  | 4492.29     | 95.00                    | 3.49                        | 12.70 S                                   | 2.74 W  | 32.65192775 N               | 103.90064331 W               | 12.99@                            | 192.17 | 0.76              |
| 4587.00                                                      | 5.45          | 31.26                  | 4585.95     | 94.00                    | -1.05                       | 5.86 S                                    | 1.41 E  | 32.65194650 N               | 103.90062975 W               | 6.03@                             | 166.52 | 1.21              |
| 4682.00                                                      | 5.28          | 29.62                  | 4680.53     | 95.00                    | -6.00                       | 1.79 N                                    | 5.91 E  | 32.65196749 N               | 103.90061502 W               | 6.17@                             | 73.11  | 0.24              |
| 4776.00                                                      | 6.51          | 27.51                  | 4774.03     | 94.00                    | -11.10                      | 10.28 N                                   | 10.51 E | 32.65199076 N               | 103.90059997 W               | 14.70@                            | 45.62  | 1.33              |
| 4871.00                                                      | 7.47          | 32.71                  | 4868.33     | 95.00                    | -17.51                      | 20.25 N                                   | 16.33 E | 32.65201811 N               | 103.90058091 W               | 26.02@                            | 38.88  | 1.21              |

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## Survey Report

DEVON ENERGY PRODUCTION CO.  
 BETELGEUSE "19" FEDERAL #5H  
 EDDY COUNTY, NM  
 API#: 30-015-41899      Rig: H&P 300

Page 03/07

| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) |          | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft) (deg) |       | DLS<br>(dg/100ft) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|--------------------------------------|----------|-----------------------------|------------------------------|-----------------------------------|-------|-------------------|
| 4965.00                   | 7.03          | 34.10                  | 4961.58     | 94.00                    | -24.62                      | 30.16 N                              | 22.86 E  | 32.65204526 N               | 103.90055957 W               | 37.84@                            | 37.16 | 0.50              |
| 5060.00                   | 6.33          | 32.29                  | 5055.93     | 95.00                    | -31.22                      | 39.40 N                              | 28.92 E  | 32.65207060 N               | 103.90053977 W               | 48.87@                            | 36.28 | 0.77              |
| 5155.00                   | 7.03          | 30.87                  | 5150.29     | 95.00                    | -37.55                      | 48.82 N                              | 34.70 E  | 32.65209641 N               | 103.90052086 W               | 59.89@                            | 35.40 | 0.76              |
| 5249.00                   | 6.86          | 32.75                  | 5243.60     | 94.00                    | -44.11                      | 58.47 N                              | 40.68 E  | 32.65212290 N               | 103.90050128 W               | 71.24@                            | 34.83 | 0.30              |
| 5344.00                   | 6.07          | 36.49                  | 5337.99     | 95.00                    | -50.68                      | 67.29 N                              | 46.74 E  | 32.65214704 N               | 103.90048148 W               | 81.93@                            | 34.79 | 0.94              |
| 5438.00                   | 7.12          | 36.99                  | 5431.37     | 94.00                    | -57.65                      | 75.93 N                              | 53.20 E  | 32.65217074 N               | 103.90046038 W               | 92.72@                            | 35.02 | 1.12              |
| 5533.00                   | 7.30          | 35.25                  | 5525.62     | 95.00                    | -65.24                      | 85.57 N                              | 60.23 E  | 32.65219714 N               | 103.90043742 W               | 104.64@                           | 35.14 | 0.30              |
| 5627.00                   | 7.12          | 34.22                  | 5618.87     | 94.00                    | -72.53                      | 95.26 N                              | 66.95 E  | 32.65222371 N               | 103.90041545 W               | 116.43@                           | 35.10 | 0.24              |
| 5722.00                   | 7.12          | 33.41                  | 5713.14     | 95.00                    | -79.66                      | 105.04 N                             | 73.50 E  | 32.65225053 N               | 103.90039403 W               | 128.21@                           | 34.98 | 0.11              |
| 5816.00                   | 6.51          | 33.88                  | 5806.48     | 94.00                    | -86.38                      | 114.33 N                             | 79.68 E  | 32.65227598 N               | 103.90037384 W               | 139.36@                           | 34.87 | 0.65              |
| 5910.00                   | 6.68          | 30.89                  | 5899.86     | 94.00                    | -92.69                      | 123.45 N                             | 85.46 E  | 32.65230097 N               | 103.90035494 W               | 150.14@                           | 34.69 | 0.41              |
| 6005.00                   | 6.33          | 31.34                  | 5994.24     | 95.00                    | -98.79                      | 132.66 N                             | 91.02 E  | 32.65232624 N               | 103.90033676 W               | 160.88@                           | 34.45 | 0.37              |
| 6100.00                   | 5.54          | 23.07                  | 6088.74     | 95.00                    | -103.83                     | 141.35 N                             | 95.54 E  | 32.65235008 N               | 103.90032195 W               | 170.61@                           | 34.05 | 1.22              |
| 6194.00                   | 4.04          | 13.36                  | 6182.41     | 94.00                    | -106.81                     | 148.75 N                             | 98.08 E  | 32.65237038 N               | 103.90031359 W               | 178.18@                           | 33.40 | 1.81              |
| 6289.00                   | 3.61          | 7.82                   | 6277.19     | 95.00                    | -108.36                     | 154.97 N                             | 99.26 E  | 32.65238746 N               | 103.90030967 W               | 184.03@                           | 32.64 | 0.60              |
| 6383.00                   | 3.08          | 346.60                 | 6371.04     | 94.00                    | -108.50                     | 160.36 N                             | 99.08 E  | 32.65240228 N               | 103.90031020 W               | 188.50@                           | 31.71 | 1.42              |
| 6477.00                   | 1.93          | 326.44                 | 6464.95     | 94.00                    | -107.27                     | 164.13 N                             | 97.62 E  | 32.65241267 N               | 103.90031489 W               | 190.97@                           | 30.74 | 1.52              |
| 6572.00                   | 0.18          | 11.52                  | 6559.93     | 95.00                    | -106.50                     | 165.61 N                             | 96.77 E  | 32.65241675 N               | 103.90031765 W               | 191.81@                           | 30.30 | 1.90              |
| 6666.00                   | 0.18          | 118.73                 | 6653.93     | 94.00                    | -106.66                     | 165.69 N                             | 96.93 E  | 32.65241695 N               | 103.90031713 W               | 191.95@                           | 30.33 | 0.31              |
| 6761.00                   | 0.35          | 109.80                 | 6748.93     | 95.00                    | -107.06                     | 165.52 N                             | 97.33 E  | 32.65241648 N               | 103.90031582 W               | 192.01@                           | 30.46 | 0.18              |
| 6856.00                   | 0.44          | 108.37                 | 6843.92     | 95.00                    | -107.66                     | 165.30 N                             | 97.95 E  | 32.65241588 N               | 103.90031381 W               | 192.14@                           | 30.65 | 0.10              |
| 6950.00                   | 0.44          | 96.26                  | 6937.92     | 94.00                    | -108.35                     | 165.15 N                             | 98.65 E  | 32.65241546 N               | 103.90031153 W               | 192.37@                           | 30.85 | 0.10              |
| 7045.00                   | 0.44          | 76.22                  | 7032.92     | 95.00                    | -109.07                     | 165.20 N                             | 99.37 E  | 32.65241558 N               | 103.90030920 W               | 192.78@                           | 31.03 | 0.16              |
| 7134.00                   | 0.44          | 82.76                  | 7121.92     | 89.00                    | -109.75                     | 165.32 N                             | 100.04 E | 32.65241591 N               | 103.90030702 W               | 193.23@                           | 31.18 | 0.06              |
| 7221.00                   | 2.55          | 197.74                 | 7208.89     | 87.00                    | -109.38                     | 163.52 N                             | 99.78 E  | 32.65241096 N               | 103.90030789 W               | 191.56@                           | 31.39 | 3.18              |
| 7252.00                   | 5.36          | 204.94                 | 7239.81     | 31.00                    | -108.45                     | 161.55 N                             | 98.96 E  | 32.65240556 N               | 103.90031058 W               | 189.45@                           | 31.49 | 9.19              |
| 7283.00                   | 8.27          | 209.34                 | 7270.59     | 31.00                    | -106.55                     | 158.29 N                             | 97.25 E  | 32.65239662 N               | 103.90031616 W               | 185.78@                           | 31.57 | 9.53              |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
BETELGEUSE "19" FEDERAL #5H  
EDDY COUNTY, NM  
API#: 30-015-41899      Rig: H&P 300

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| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft)      (ft) |          | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft)      (deg) |        | DLS<br>(dg/100ft) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|------------------------------------------------|----------|-----------------------------|------------------------------|----------------------------------------|--------|-------------------|
| 7315.00                   | 10.73         | 212.33                 | 7302.15     | 32.00                    | -103.56                     | 153.77 N                                       | 94.53 E  | 32.65238422 N               | 103.90032506 W               | 180.50@                                | 31.58  | 7.84              |
| 7346.00                   | 12.57         | 214.44                 | 7332.51     | 31.00                    | -99.81                      | 148.55 N                                       | 91.08 E  | 32.65236991 N               | 103.90033634 W               | 174.25@                                | 31.51  | 6.09              |
| 7378.00                   | 14.33         | 217.60                 | 7363.63     | 32.00                    | -95.07                      | 142.54 N                                       | 86.70 E  | 32.65235344 N               | 103.90035067 W               | 166.83@                                | 31.31  | 5.96              |
| 7409.00                   | 16.44         | 219.67                 | 7393.52     | 31.00                    | -89.55                      | 136.12 N                                       | 81.55 E  | 32.65233586 N               | 103.90036746 W               | 158.68@                                | 30.93  | 7.03              |
| 7441.00                   | 18.64         | 221.23                 | 7424.03     | 32.00                    | -82.86                      | 128.79 N                                       | 75.29 E  | 32.65231577 N               | 103.90038790 W               | 149.18@                                | 30.31  | 7.03              |
| 7472.00                   | 21.19         | 220.72                 | 7453.17     | 31.00                    | -75.48                      | 120.81 N                                       | 68.37 E  | 32.65229393 N               | 103.90041050 W               | 138.82@                                | 29.51  | 8.24              |
| 7504.00                   | 23.57         | 220.78                 | 7482.76     | 32.00                    | -66.99                      | 111.58 N                                       | 60.42 E  | 32.65226866 N               | 103.90043646 W               | 126.89@                                | 28.43  | 7.44              |
| 7535.00                   | 25.76         | 220.16                 | 7510.93     | 31.00                    | -58.02                      | 101.74 N                                       | 52.02 E  | 32.65224170 N               | 103.90046386 W               | 114.27@                                | 27.08  | 7.11              |
| 7567.00                   | 27.52         | 220.38                 | 7539.53     | 32.00                    | -48.11                      | 90.80 N                                        | 42.75 E  | 32.65221171 N               | 103.90049414 W               | 100.36@                                | 25.21  | 5.51              |
| 7598.00                   | 30.78         | 220.10                 | 7566.60     | 31.00                    | -37.68                      | 79.27 N                                        | 33.00 E  | 32.65218014 N               | 103.90052598 W               | 85.86@                                 | 22.60  | 10.53             |
| 7630.00                   | 32.98         | 219.08                 | 7593.77     | 32.00                    | -26.16                      | 66.24 N                                        | 22.23 E  | 32.65214446 N               | 103.90056113 W               | 69.87@                                 | 18.55  | 7.08              |
| 7661.00                   | 36.14         | 217.51                 | 7619.30     | 31.00                    | -14.46                      | 52.44 N                                        | 11.34 E  | 32.65210663 N               | 103.90059669 W               | 53.65@                                 | 12.21  | 10.59             |
| 7692.00                   | 38.60         | 217.46                 | 7643.94     | 31.00                    | -2.14                       | 37.51 N                                        | 0.11 W   | 32.65206573 N               | 103.90063408 W               | 37.51@                                 | 359.84 | 7.94              |
| 7724.00                   | 41.33         | 217.51                 | 7668.46     | 32.00                    | 11.32                       | 21.20 N                                        | 12.61 W  | 32.65202104 N               | 103.90067494 W               | 24.67@                                 | 329.25 | 8.53              |
| 7755.00                   | 43.70         | 217.43                 | 7691.31     | 31.00                    | 25.04                       | 4.58 N                                         | 25.36 W  | 32.65197548 N               | 103.90071656 W               | 25.77@                                 | 280.23 | 7.65              |
| 7787.00                   | 46.34         | 219.01                 | 7713.93     | 32.00                    | 40.08                       | 13.20 S                                        | 39.36 W  | 32.65192678 N               | 103.90076231 W               | 41.52@                                 | 251.46 | 8.96              |
| 7818.00                   | 50.03         | 219.65                 | 7734.59     | 31.00                    | 55.77                       | 31.07 S                                        | 54.01 W  | 32.65187784 N               | 103.90081012 W               | 62.30@                                 | 240.09 | 12.00             |
| 7850.00                   | 53.38         | 219.47                 | 7754.42     | 32.00                    | 72.89                       | 50.43 S                                        | 70.00 W  | 32.65182480 N               | 103.90086233 W               | 86.27@                                 | 234.23 | 10.48             |
| 7881.00                   | 55.66         | 220.80                 | 7772.41     | 31.00                    | 90.29                       | 69.72 S                                        | 86.27 W  | 32.65177195 N               | 103.90091546 W               | 110.92@                                | 231.06 | 8.14              |
| 7913.00                   | 56.19         | 221.52                 | 7790.34     | 32.00                    | 108.90                      | 89.68 S                                        | 103.72 W | 32.65171730 N               | 103.90097241 W               | 137.11@                                | 229.15 | 2.49              |
| 7944.00                   | 58.83         | 222.80                 | 7806.99     | 31.00                    | 127.58                      | 109.05 S                                       | 121.27 W | 32.65166423 N               | 103.90102969 W               | 163.09@                                | 228.04 | 9.20              |
| 7976.00                   | 61.38         | 223.81                 | 7822.94     | 32.00                    | 147.78                      | 129.24 S                                       | 140.30 W | 32.65160897 N               | 103.90109178 W               | 190.75@                                | 227.35 | 8.43              |
| 8007.00                   | 64.54         | 224.97                 | 7837.03     | 31.00                    | 168.24                      | 148.96 S                                       | 159.61 W | 32.65155496 N               | 103.90115480 W               | 218.33@                                | 226.98 | 10.72             |
| 8039.00                   | 66.92         | 227.31                 | 7850.18     | 32.00                    | 190.44                      | 169.17 S                                       | 180.65 W | 32.65149966 N               | 103.90122340 W               | 247.49@                                | 226.88 | 9.99              |
| 8070.00                   | 68.32         | 230.03                 | 7861.99     | 31.00                    | 213.06                      | 188.09 S                                       | 202.17 W | 32.65144788 N               | 103.90129359 W               | 276.14@                                | 227.07 | 9.29              |
| 8102.00                   | 70.26         | 232.66                 | 7873.31     | 32.00                    | 237.51                      | 206.78 S                                       | 225.54 W | 32.65139677 N               | 103.90136977 W               | 305.99@                                | 227.48 | 9.79              |
| 8133.00                   | 72.98         | 235.20                 | 7883.08     | 31.00                    | 262.28                      | 224.10 S                                       | 249.32 W | 32.65134945 N               | 103.90144726 W               | 335.23@                                | 228.05 | 11.72             |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
 BETELGEUSE "19" FEDERAL #5H  
 EDDY COUNTY, NM  
 API#: 30-015-41899      Rig: H&P 300

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| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |           | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|-----------|-----------------------------|------------------------------|-----------------------------------|--------|-------------------|
| 8164.00                   | 75.71         | 238.37                 | 7891.45     | 31.00                    | 288.19                      | 240.44 S                                  | 274.29 W  | 32.65130481 N               | 103.90152860 W               | 364.76@                           | 228.76 | 13.21             |
| 8196.00                   | 76.85         | 240.07                 | 7899.04     | 32.00                    | 315.80                      | 256.35 S                                  | 301.00 W  | 32.65126139 N               | 103.90161558 W               | 395.37@                           | 229.58 | 6.27              |
| 8227.00                   | 77.91         | 242.33                 | 7905.81     | 31.00                    | 343.13                      | 270.92 S                                  | 327.51 W  | 32.65122163 N               | 103.90170190 W               | 425.04@                           | 230.40 | 7.89              |
| 8259.00                   | 77.73         | 242.88                 | 7912.56     | 32.00                    | 371.71                      | 285.31 S                                  | 355.28 W  | 32.65118238 N               | 103.90179232 W               | 455.66@                           | 231.23 | 1.77              |
| 8291.00                   | 77.82         | 245.24                 | 7919.34     | 32.00                    | 400.60                      | 298.99 S                                  | 383.40 W  | 32.65114510 N               | 103.90188387 W               | 486.20@                           | 232.05 | 7.21              |
| 8322.00                   | 79.93         | 247.60                 | 7925.32     | 31.00                    | 429.15                      | 311.15 S                                  | 411.28 W  | 32.65111197 N               | 103.90197459 W               | 515.72@                           | 232.89 | 10.10             |
| 8354.00                   | 80.90         | 250.15                 | 7930.65     | 32.00                    | 459.21                      | 322.52 S                                  | 440.70 W  | 32.65108105 N               | 103.90207036 W               | 546.12@                           | 233.80 | 8.42              |
| 8385.00                   | 82.39         | 254.45                 | 7935.16     | 31.00                    | 488.93                      | 331.84 S                                  | 469.92 W  | 32.65105576 N               | 103.90216540 W               | 575.28@                           | 234.77 | 14.54             |
| 8417.00                   | 84.50         | 257.45                 | 7938.81     | 32.00                    | 520.17                      | 339.56 S                                  | 500.75 W  | 32.65103490 N               | 103.90226568 W               | 605.02@                           | 235.86 | 11.41             |
| 8448.00                   | 86.79         | 259.95                 | 7941.17     | 31.00                    | 550.79                      | 345.61 S                                  | 531.06 W  | 32.65101859 N               | 103.90236423 W               | 633.62@                           | 236.94 | 10.92             |
| 8480.00                   | 88.55         | 262.23                 | 7942.47     | 32.00                    | 582.61                      | 350.57 S                                  | 562.64 W  | 32.65100533 N               | 103.90246691 W               | 662.92@                           | 238.07 | 9.00              |
| 8562.00                   | 90.13         | 265.50                 | 7943.41     | 82.00                    | 664.50                      | 359.33 S                                  | 644.15 W  | 32.65098216 N               | 103.90273185 W               | 737.60@                           | 240.85 | 4.43              |
| 8657.00                   | 92.33         | 267.61                 | 7941.37     | 95.00                    | 759.47                      | 365.03 S                                  | 738.95 W  | 32.65096753 N               | 103.90303992 W               | 824.19@                           | 243.71 | 3.21              |
| 8751.00                   | 93.21         | 268.40                 | 7936.83     | 94.00                    | 853.32                      | 368.30 S                                  | 832.78 W  | 32.65095959 N               | 103.90334482 W               | 910.59@                           | 246.14 | 1.26              |
| 8846.00                   | 91.71         | 267.70                 | 7932.75     | 95.00                    | 948.20                      | 371.53 S                                  | 927.64 W  | 32.65095177 N               | 103.90365305 W               | 999.27@                           | 248.17 | 1.74              |
| 8940.00                   | 91.71         | 267.96                 | 7929.95     | 94.00                    | 1042.14                     | 375.09 S                                  | 1021.53 W | 32.65094303 N               | 103.90395814 W               | 1088.21@                          | 249.84 | 0.28              |
| 9034.00                   | 90.75         | 267.61                 | 7927.93     | 94.00                    | 1136.09                     | 378.72 S                                  | 1115.43 W | 32.65093409 N               | 103.90426330 W               | 1177.97@                          | 251.25 | 1.09              |
| 9129.00                   | 89.52         | 267.79                 | 7927.71     | 95.00                    | 1231.07                     | 382.53 S                                  | 1210.36 W | 32.65092467 N               | 103.90457175 W               | 1269.37@                          | 252.46 | 1.31              |
| 9223.00                   | 89.25         | 267.96                 | 7928.72     | 94.00                    | 1325.04                     | 386.02 S                                  | 1304.28 W | 32.65091613 N               | 103.90487697 W               | 1360.21@                          | 253.51 | 0.34              |
| 9317.00                   | 89.25         | 268.23                 | 7929.95     | 94.00                    | 1419.00                     | 389.14 S                                  | 1398.22 W | 32.65090858 N               | 103.90518222 W               | 1451.37@                          | 254.45 | 0.29              |
| 9412.00                   | 89.16         | 268.67                 | 7931.26     | 95.00                    | 1513.94                     | 391.71 S                                  | 1493.18 W | 32.65090257 N               | 103.90549077 W               | 1543.71@                          | 255.30 | 0.47              |
| 9506.00                   | 89.34         | 269.02                 | 7932.49     | 94.00                    | 1607.86                     | 393.61 S                                  | 1587.15 W | 32.65089841 N               | 103.90579611 W               | 1635.23@                          | 256.07 | 0.42              |
| 9601.00                   | 90.13         | 268.93                 | 7932.93     | 95.00                    | 1702.77                     | 395.31 S                                  | 1682.14 W | 32.65089478 N               | 103.90610473 W               | 1727.96@                          | 256.78 | 0.84              |
| 9695.00                   | 91.10         | 267.96                 | 7931.92     | 94.00                    | 1796.72                     | 397.86 S                                  | 1776.09 W | 32.65088881 N               | 103.90641003 W               | 1820.11@                          | 257.37 | 1.46              |
| 9790.00                   | 92.15         | 268.14                 | 7929.23     | 95.00                    | 1891.64                     | 401.09 S                                  | 1871.00 W | 32.65088098 N               | 103.90671842 W               | 1913.51@                          | 257.90 | 1.12              |
| 9884.00                   | 91.98         | 266.20                 | 7925.84     | 94.00                    | 1985.57                     | 405.73 S                                  | 1964.82 W | 32.65086927 N               | 103.90702330 W               | 2006.27@                          | 258.33 | 2.07              |
| 9979.00                   | 93.03         | 266.20                 | 7921.69     | 95.00                    | 2080.48                     | 412.02 S                                  | 2059.52 W | 32.65085302 N               | 103.90733107 W               | 2100.33@                          | 258.69 | 1.11              |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
 BETELGEUSE "19" FEDERAL #5H  
 EDDY COUNTY, NM  
 API#: 30-015-41899      Rig: H&P 300

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| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |           | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|-----------|-----------------------------|------------------------------|-----------------------------------|--------|-------------------|
| 10073.00                  | 93.03         | 266.55                 | 7916.72     | 94.00                    | 2174.35                     | 417.95 S                                  | 2153.20 W | 32.65083774 N               | 103.90763551 W               | 2193.39@                          | 259.02 | 0.37              |
| 10168.00                  | 92.86         | 266.99                 | 7911.84     | 95.00                    | 2269.22                     | 423.30 S                                  | 2247.92 W | 32.65082409 N               | 103.90794334 W               | 2287.43@                          | 259.34 | 0.50              |
| 10262.00                  | 90.84         | 266.29                 | 7908.81     | 94.00                    | 2363.17                     | 428.80 S                                  | 2341.71 W | 32.65080999 N               | 103.90824812 W               | 2380.64@                          | 259.62 | 2.27              |
| 10357.00                  | 89.34         | 266.12                 | 7908.66     | 95.00                    | 2458.16                     | 435.09 S                                  | 2436.49 W | 32.65079375 N               | 103.90855616 W               | 2475.04@                          | 259.88 | 1.59              |
| 10452.00                  | 89.25         | 266.55                 | 7909.83     | 95.00                    | 2553.15                     | 441.16 S                                  | 2531.29 W | 32.65077810 N               | 103.90886424 W               | 2569.45@                          | 260.11 | 0.46              |
| 10546.00                  | 89.34         | 267.26                 | 7910.98     | 94.00                    | 2647.14                     | 446.24 S                                  | 2625.15 W | 32.65076518 N               | 103.90916924 W               | 2662.81@                          | 260.35 | 0.76              |
| 10640.00                  | 89.25         | 267.61                 | 7912.14     | 94.00                    | 2741.13                     | 450.45 S                                  | 2719.05 W | 32.65075465 N               | 103.90947438 W               | 2756.11@                          | 260.59 | 0.38              |
| 10735.00                  | 89.52         | 267.17                 | 7913.16     | 95.00                    | 2836.11                     | 454.77 S                                  | 2813.94 W | 32.65074380 N               | 103.90978275 W               | 2850.46@                          | 260.82 | 0.54              |
| 10829.00                  | 91.28         | 266.82                 | 7912.50     | 94.00                    | 2930.10                     | 459.70 S                                  | 2907.81 W | 32.65073129 N               | 103.91008778 W               | 2943.92@                          | 261.02 | 1.91              |
| 10924.00                  | 91.63         | 266.73                 | 7910.09     | 95.00                    | 3025.07                     | 465.04 S                                  | 3002.63 W | 32.65071764 N               | 103.91039591 W               | 3038.43@                          | 261.20 | 0.38              |
| 11018.00                  | 92.33         | 267.52                 | 7906.84     | 94.00                    | 3119.01                     | 469.75 S                                  | 3096.45 W | 32.65070572 N               | 103.91070081 W               | 3131.88@                          | 261.37 | 1.12              |
| 11113.00                  | 91.28         | 267.08                 | 7903.85     | 95.00                    | 3213.95                     | 474.23 S                                  | 3191.30 W | 32.65069446 N               | 103.91100902 W               | 3226.34@                          | 261.55 | 1.20              |
| 11207.00                  | 91.19         | 267.35                 | 7901.82     | 94.00                    | 3307.92                     | 478.79 S                                  | 3285.16 W | 32.65068293 N               | 103.91131405 W               | 3319.87@                          | 261.71 | 0.30              |
| 11302.00                  | 92.77         | 268.40                 | 7898.54     | 95.00                    | 3402.84                     | 482.31 S                                  | 3380.04 W | 32.65067429 N               | 103.91162234 W               | 3414.28@                          | 261.88 | 2.00              |
| 11396.00                  | 92.86         | 268.23                 | 7893.93     | 94.00                    | 3496.68                     | 485.07 S                                  | 3473.88 W | 32.65066773 N               | 103.91192728 W               | 3507.59@                          | 262.05 | 0.20              |
| 11491.00                  | 92.51         | 267.79                 | 7889.48     | 95.00                    | 3591.55                     | 488.37 S                                  | 3568.72 W | 32.65065970 N               | 103.91223545 W               | 3601.98@                          | 262.21 | 0.59              |
| 11585.00                  | 91.45         | 265.33                 | 7886.23     | 94.00                    | 3685.48                     | 494.01 S                                  | 3662.49 W | 32.65064523 N               | 103.91254017 W               | 3695.65@                          | 262.32 | 2.85              |
| 11680.00                  | 91.19         | 264.89                 | 7884.04     | 95.00                    | 3780.43                     | 502.10 S                                  | 3757.12 W | 32.65062401 N               | 103.91284773 W               | 3790.52@                          | 262.39 | 0.54              |
| 11774.00                  | 92.77         | 265.68                 | 7880.79     | 94.00                    | 3874.34                     | 509.82 S                                  | 3850.74 W | 32.65060380 N               | 103.91315200 W               | 3884.34@                          | 262.46 | 1.88              |
| 11869.00                  | 93.91         | 265.94                 | 7875.26     | 95.00                    | 3969.17                     | 516.75 S                                  | 3945.32 W | 32.65058578 N               | 103.91345939 W               | 3979.02@                          | 262.54 | 1.23              |
| 11963.00                  | 92.51         | 265.76                 | 7869.99     | 94.00                    | 4063.01                     | 523.55 S                                  | 4038.93 W | 32.65056813 N               | 103.91376360 W               | 4072.72@                          | 262.61 | 1.50              |
| 12057.00                  | 90.57         | 264.80                 | 7867.47     | 94.00                    | 4156.95                     | 531.28 S                                  | 4132.57 W | 32.65054790 N               | 103.91406794 W               | 4166.58@                          | 262.67 | 2.30              |
| 12152.00                  | 89.78         | 264.89                 | 7867.18     | 95.00                    | 4251.91                     | 539.81 S                                  | 4227.18 W | 32.65052546 N               | 103.91437545 W               | 4261.51@                          | 262.72 | 0.84              |
| 12246.00                  | 90.13         | 265.68                 | 7867.25     | 94.00                    | 4345.88                     | 547.54 S                                  | 4320.86 W | 32.65050524 N               | 103.91467992 W               | 4355.42@                          | 262.78 | 0.92              |
| 12341.00                  | 89.69         | 265.68                 | 7867.40     | 95.00                    | 4440.87                     | 554.70 S                                  | 4415.59 W | 32.65048659 N               | 103.91498779 W               | 4450.30@                          | 262.84 | 0.46              |
| 12435.00                  | 88.90         | 265.59                 | 7868.56     | 94.00                    | 4534.85                     | 561.85 S                                  | 4509.31 W | 32.65046795 N               | 103.91529237 W               | 4544.18@                          | 262.90 | 0.85              |
| 12522.00                  | 88.11         | 265.24                 | 7870.83     | 87.00                    | 4621.80                     | 568.80 S                                  | 4596.00 W | 32.65044977 N               | 103.91557412 W               | 4631.07@                          | 262.94 | 0.99              |

# PathFinder – a Schlumberger company

## Survey Report

DEVON ENERGY PRODUCTION CO.  
BETELGEUSE "19" FEDERAL #5H  
EDDY COUNTY, NM  
API#: 30-015-41899      Rig: H&P 300

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| Measured<br>Depth<br>(ft)                    | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft)      (ft) |           | Survey<br>Latitude<br>(deg) | Survey<br>Longitude<br>(deg) | Closure<br>Dist Dir<br>(ft)      (deg) |        | DLS<br>(dg/100ft) |
|----------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|------------------------------------------------|-----------|-----------------------------|------------------------------|----------------------------------------|--------|-------------------|
| STRAIGHT LINE PROJECTION TO BIT AT 12603'MD. |               |                        |             |                          |                             |                                                |           |                             |                              |                                        |        |                   |
| 12603.00                                     | 88.11         | 265.24                 | 7873.50     | 81.00                    | 4702.74                     | 575.52 S                                       | 4676.68 W | 32.65043218 N               | 103.91583632 W               | 4711.96@                               | 262.98 | 0.00              |

\*\* The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder – a Schlumberger company and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.