



## **Energen**

**Winkler County, TX (NAD27 TC)**

**UL 20 Stripes 38-47**

**#605H**

**API: 42-495-33809**

**OH**

**Design: Final Surveys**

## **Standard Survey Report**

**20 April, 2018**

***INTEGRITY***  
**SERVICES**

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen                       | <b>Local Co-ordinate Reference:</b> | Well #605H                     |
| <b>Project:</b>  | Winkler County, TX (NAD27 TC) | <b>TVD Reference:</b>               | KB @ 2773.00usft (Integrity 5) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | KB @ 2773.00usft (Integrity 5) |
| <b>Well:</b>     | #605H                         | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Final Surveys                 | <b>Database:</b>                    | EDM 5000.14 Single User Db     |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Winkler County, TX (NAD27 TC)        |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | Texas Central 4203                   |                      |                |

|                       |           |                     |                   |                   |                   |
|-----------------------|-----------|---------------------|-------------------|-------------------|-------------------|
| Site                  |           | UL 20 Stripes 38-47 |                   |                   |                   |
| Site Position:        |           | Northing:           | 741,798.70 usft   | Latitude:         | 31° 40' 22.875 N  |
| From:                 | Map       | Easting:            | 1,084,990.10 usft | Longitude:        | 103° 16' 29.499 W |
| Position Uncertainty: | 0.00 usft | Slot Radius:        | 13-3/16 "         | Grid Convergence: | -1.52 °           |

|                      |       |           |                     |                   |               |                   |
|----------------------|-------|-----------|---------------------|-------------------|---------------|-------------------|
| Well                 | #605H |           |                     |                   |               |                   |
| Well Position        | +N/-S | 0.00 usft | Northing:           | 741,798.70 usft   | Latitude:     | 31° 40' 22.875 N  |
|                      | +E/-W | 0.00 usft | Easting:            | 1,084,990.10 usft | Longitude:    | 103° 16' 29.499 W |
| Position Uncertainty |       | 0.00 usft | Wellhead Elevation: | usft              | Ground Level: | 2,768.00 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | WMM2015           | 03/20/18           | 6.72                   | 59.58                | 47,554.30351819            |

|                          |                                |                     |                     |                      |      |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| <b>Design</b>            | Final Surveys                  |                     |                     |                      |      |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |      |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |      |
|                          | 0.00                           | 0.00                | 0.00                | 37.97                |      |

|                       |                  |                                |                  |                    |  |
|-----------------------|------------------|--------------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>      | 04/20/18                       |                  |                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b>       | <b>Tool Name</b> | <b>Description</b> |  |
| 147.00                | 4,950.00         | 50' Corrected Bit -Sensor (OH) | MWD              | MWD - Standard     |  |

|                                 |                        |                    |                              |                     |                     |                                |                                |                               |                              |
|---------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| <b>Survey</b>                   |                        |                    |                              |                     |                     |                                |                                |                               |                              |
| <b>Measured Depth (usft)</b>    | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |
| 0.00                            | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |
| 147.00                          | 0.90                   | 301.94             | 146.99                       | 0.61                | -0.98               | -0.12                          | 0.61                           | 0.61                          | 0.00                         |
| <b>147' MD First MWD Survey</b> |                        |                    |                              |                     |                     |                                |                                |                               |                              |
| 205.00                          | 1.27                   | 310.73             | 204.98                       | 1.27                | -1.85               | -0.14                          | 0.70                           | 0.64                          | 15.16                        |
| 263.00                          | 1.01                   | 312.49             | 262.97                       | 2.04                | -2.72               | -0.07                          | 0.45                           | -0.45                         | 3.03                         |
| 343.00                          | 1.19                   | 314.68             | 342.96                       | 3.10                | -3.83               | 0.09                           | 0.23                           | 0.23                          | 2.74                         |
| 366.00                          | 1.54                   | 321.63             | 365.95                       | 3.51                | -4.19               | 0.19                           | 1.68                           | 1.52                          | 30.22                        |
| 501.00                          | 1.54                   | 319.75             | 500.90                       | 6.31                | -6.49               | 0.99                           | 0.04                           | 0.00                          | -1.39                        |
| 590.00                          | 0.79                   | 301.82             | 589.88                       | 7.55                | -7.78               | 1.16                           | 0.93                           | -0.84                         | -20.15                       |
| 680.00                          | 0.35                   | 321.59             | 679.88                       | 8.09                | -8.48               | 1.16                           | 0.53                           | -0.49                         | 21.97                        |
| 770.00                          | 0.26                   | 352.55             | 769.88                       | 8.51                | -8.68               | 1.37                           | 0.20                           | -0.10                         | 34.40                        |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen                       | <b>Local Co-ordinate Reference:</b> | Well #605H                     |
| <b>Project:</b>  | Winkler County, TX (NAD27 TC) | <b>TVD Reference:</b>               | KB @ 2773.00usft (Integrity 5) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | KB @ 2773.00usft (Integrity 5) |
| <b>Well:</b>     | #605H                         | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Final Surveys                 | <b>Database:</b>                    | EDM 5000.14 Single User Db     |

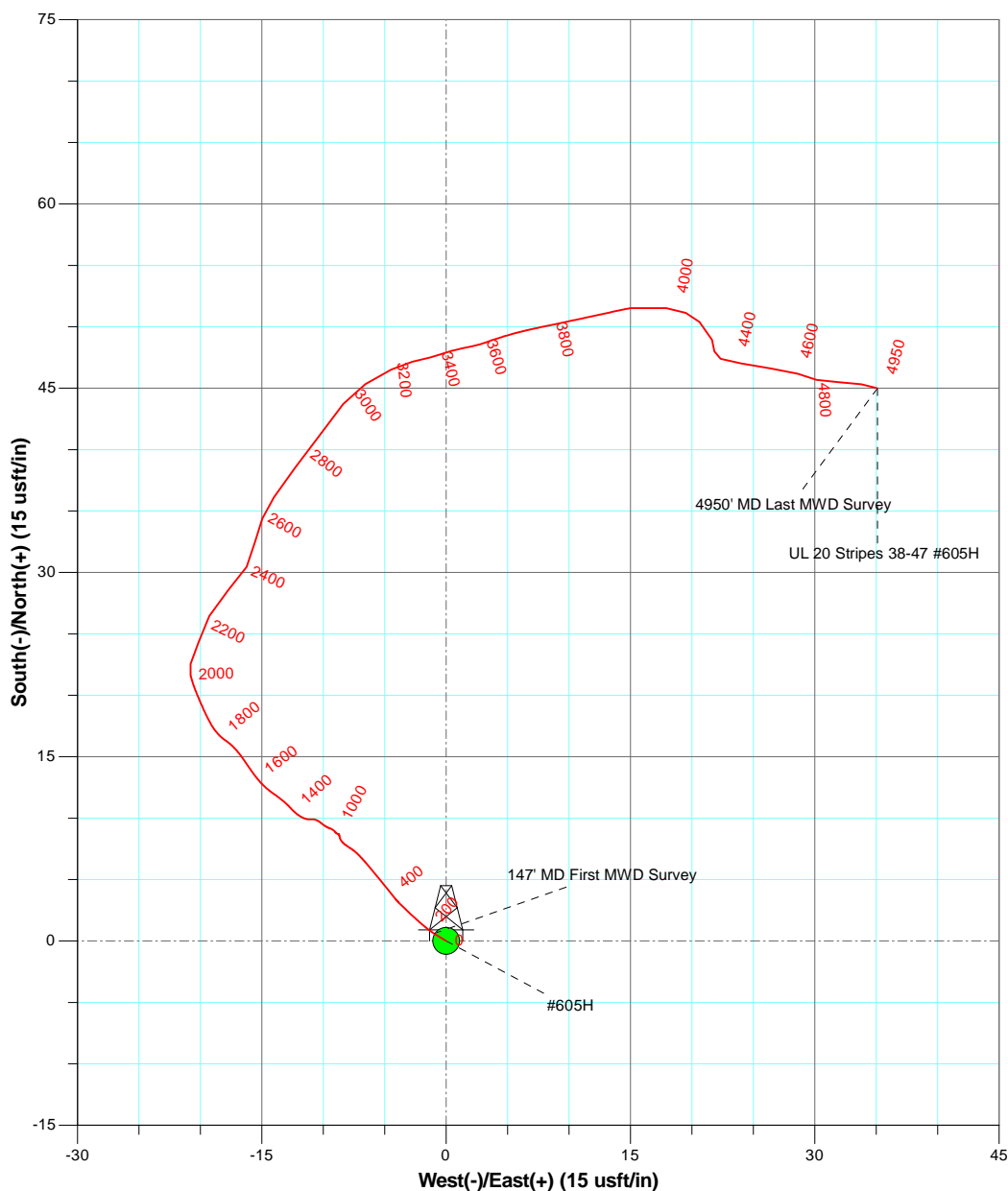
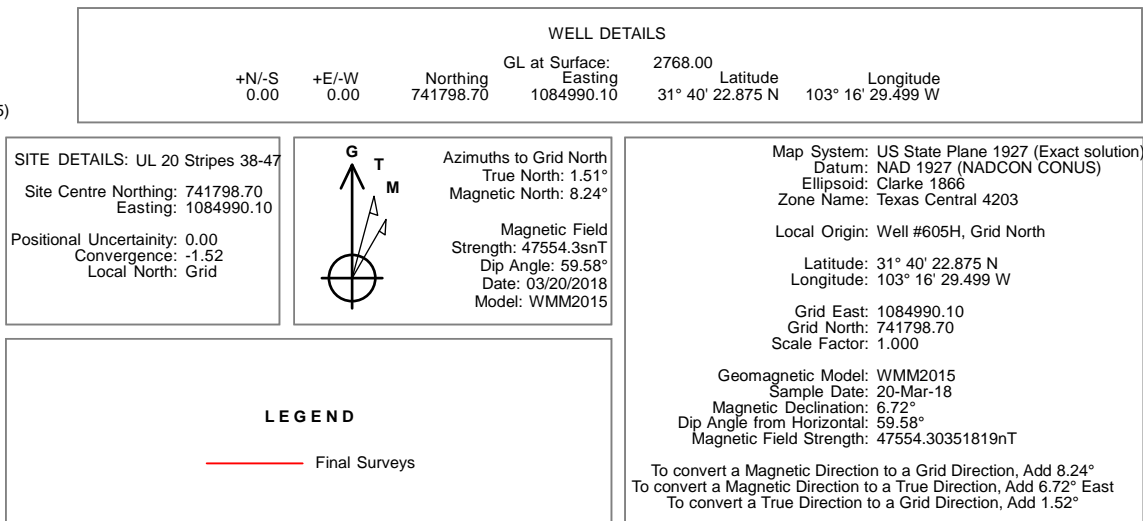
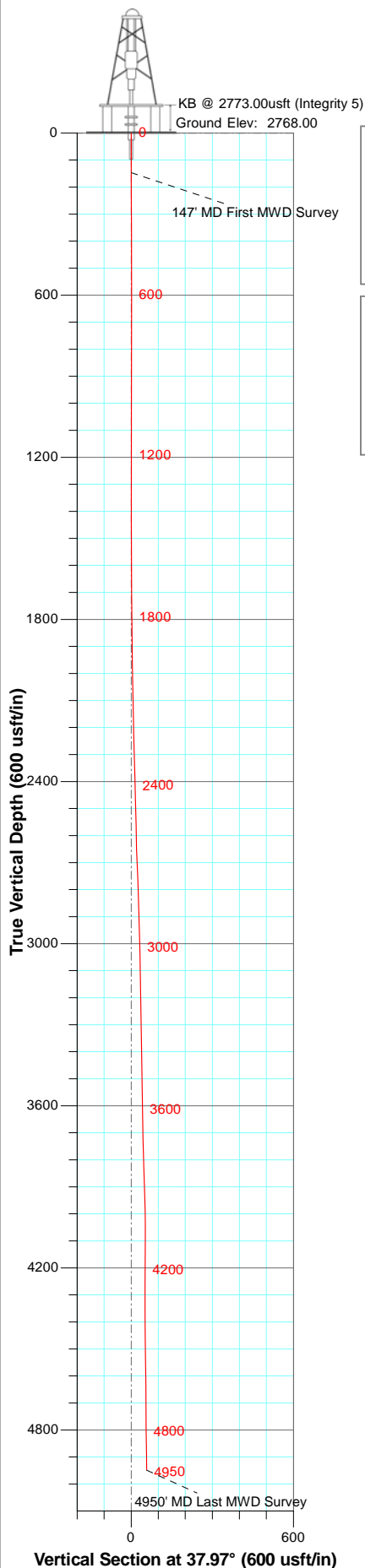
| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 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) |
| 859.00                | 0.09            | 263.23      | 858.88                | 8.70         | -8.77        | 1.46                    | 0.31                    | -0.19                  | -100.36               |
| 949.00                | 0.40            | 315.27      | 948.88                | 8.92         | -9.06        | 1.45                    | 0.39                    | 0.34                   | 57.82                 |
| 1,034.00              | 0.31            | 284.50      | 1,033.87              | 9.19         | -9.50        | 1.40                    | 0.24                    | -0.11                  | -36.20                |
| 1,128.00              | 0.70            | 309.20      | 1,127.87              | 9.61         | -10.19       | 1.31                    | 0.47                    | 0.41                   | 26.28                 |
| 1,218.00              | 0.48            | 262.62      | 1,217.87              | 9.91         | -10.99       | 1.05                    | 0.56                    | -0.24                  | -51.76                |
| 1,307.00              | 0.62            | 298.74      | 1,306.86              | 10.09        | -11.78       | 0.71                    | 0.41                    | 0.16                   | 40.58                 |
| 1,397.00              | 0.92            | 317.37      | 1,396.85              | 10.86        | -12.69       | 0.75                    | 0.43                    | 0.33                   | 20.70                 |
| 1,486.00              | 1.32            | 304.89      | 1,485.84              | 11.97        | -14.02       | 0.81                    | 0.52                    | 0.45                   | -14.02                |
| 1,576.00              | 1.10            | 322.74      | 1,575.82              | 13.25        | -15.39       | 0.98                    | 0.48                    | -0.24                  | 19.83                 |
| 1,666.00              | 1.45            | 325.55      | 1,665.80              | 14.88        | -16.56       | 1.54                    | 0.39                    | 0.39                   | 3.12                  |
| 1,755.00              | 1.19            | 304.37      | 1,754.77              | 16.33        | -17.96       | 1.82                    | 0.62                    | -0.29                  | -23.80                |
| 1,845.00              | 1.49            | 332.49      | 1,844.75              | 17.90        | -19.27       | 2.25                    | 0.79                    | 0.33                   | 31.24                 |
| 1,934.00              | 1.89            | 338.12      | 1,933.71              | 20.28        | -20.35       | 3.47                    | 0.49                    | 0.45                   | 6.33                  |
| 1,979.00              | 1.58            | 346.12      | 1,978.69              | 21.57        | -20.78       | 4.22                    | 0.87                    | -0.69                  | 17.78                 |
| 2,024.00              | 1.01            | 19.69       | 2,023.68              | 22.55        | -20.79       | 4.98                    | 2.06                    | -1.27                  | 74.60                 |
| 2,113.00              | 1.41            | 19.78       | 2,112.66              | 24.32        | -20.16       | 6.77                    | 0.45                    | 0.45                   | 0.10                  |
| 2,203.00              | 1.54            | 25.58       | 2,202.63              | 26.45        | -19.26       | 9.00                    | 0.22                    | 0.14                   | 6.44                  |
| 2,293.00              | 1.89            | 44.47       | 2,292.59              | 28.60        | -17.70       | 11.66                   | 0.73                    | 0.39                   | 20.99                 |
| 2,383.00              | 1.14            | 28.13       | 2,382.56              | 30.45        | -16.24       | 14.01                   | 0.95                    | -0.83                  | -18.16                |
| 2,472.00              | 1.58            | 11.14       | 2,471.53              | 32.43        | -15.58       | 15.98                   | 0.67                    | 0.49                   | -19.09                |
| 2,562.00              | 1.05            | 27.07       | 2,561.51              | 34.39        | -14.97       | 17.90                   | 0.71                    | -0.59                  | 17.70                 |
| 2,651.00              | 1.49            | 29.71       | 2,650.49              | 36.12        | -14.02       | 19.84                   | 0.50                    | 0.49                   | 2.97                  |
| 2,741.00              | 2.20            | 39.64       | 2,740.44              | 38.46        | -12.34       | 22.73                   | 0.86                    | 0.79                   | 11.03                 |
| 2,830.00              | 2.29            | 35.07       | 2,829.37              | 41.24        | -10.23       | 26.21                   | 0.23                    | 0.10                   | -5.13                 |
| 2,920.00              | 1.67            | 39.11       | 2,919.32              | 43.72        | -8.37        | 29.32                   | 0.71                    | -0.69                  | 4.49                  |
| 3,010.00              | 1.45            | 58.45       | 3,009.28              | 45.34        | -6.57        | 31.70                   | 0.63                    | -0.24                  | 21.49                 |
| 3,099.00              | 1.67            | 62.76       | 3,098.25              | 46.52        | -4.46        | 33.93                   | 0.28                    | 0.25                   | 4.84                  |
| 3,189.00              | 0.70            | 86.66       | 3,188.23              | 47.15        | -2.75        | 35.48                   | 1.19                    | -1.08                  | 26.56                 |
| 3,279.00              | 1.23            | 70.49       | 3,278.22              | 47.51        | -1.29        | 36.66                   | 0.66                    | 0.59                   | -17.97                |
| 3,368.00              | 0.97            | 75.59       | 3,367.20              | 48.01        | 0.34         | 38.06                   | 0.31                    | -0.29                  | 5.73                  |
| 3,458.00              | 1.05            | 78.58       | 3,457.19              | 48.37        | 1.89         | 39.29                   | 0.11                    | 0.09                   | 3.32                  |
| 3,547.00              | 1.01            | 69.96       | 3,546.17              | 48.80        | 3.43         | 40.58                   | 0.18                    | -0.04                  | -9.69                 |
| 3,637.00              | 1.36            | 73.92       | 3,636.15              | 49.36        | 5.20         | 42.11                   | 0.40                    | 0.39                   | 4.40                  |
| 3,726.00              | 1.92            | 78.22       | 3,725.12              | 49.96        | 7.67         | 44.11                   | 0.64                    | 0.63                   | 4.83                  |
| 3,832.00              | 2.20            | 77.87       | 3,831.05              | 50.75        | 11.40        | 47.02                   | 0.26                    | 0.26                   | -0.33                 |
| 3,906.00              | 2.40            | 77.61       | 3,904.99              | 51.38        | 14.30        | 49.31                   | 0.27                    | 0.27                   | -0.35                 |
| 3,995.00              | 2.33            | 98.35       | 3,993.91              | 51.52        | 17.91        | 51.63                   | 0.96                    | -0.08                  | 23.30                 |
| 4,040.00              | 1.89            | 110.22      | 4,038.88              | 51.13        | 19.51        | 52.31                   | 1.37                    | -0.98                  | 26.38                 |
| 4,085.00              | 1.63            | 139.75      | 4,083.86              | 50.39        | 20.62        | 52.41                   | 2.07                    | -0.58                  | 65.62                 |
| 4,174.00              | 0.66            | 158.12      | 4,172.85              | 48.94        | 21.63        | 51.89                   | 1.15                    | -1.09                  | 20.64                 |
| 4,264.00              | 0.57            | 179.74      | 4,262.84              | 48.01        | 21.83        | 51.28                   | 0.27                    | -0.10                  | 24.02                 |
| 4,354.00              | 0.70            | 109.16      | 4,352.84              | 47.39        | 22.35        | 51.11                   | 0.82                    | 0.14                   | -78.42                |
| 4,443.00              | 1.49            | 99.41       | 4,441.82              | 47.02        | 24.00        | 51.84                   | 0.91                    | 0.89                   | -10.96                |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen                       | <b>Local Co-ordinate Reference:</b> | Well #605H                     |
| <b>Project:</b>  | Winkler County, TX (NAD27 TC) | <b>TVD Reference:</b>               | KB @ 2773.00usft (Integrity 5) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | KB @ 2773.00usft (Integrity 5) |
| <b>Well:</b>     | #605H                         | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Final Surveys                 | <b>Database:</b>                    | EDM 5000.14 Single User Db     |

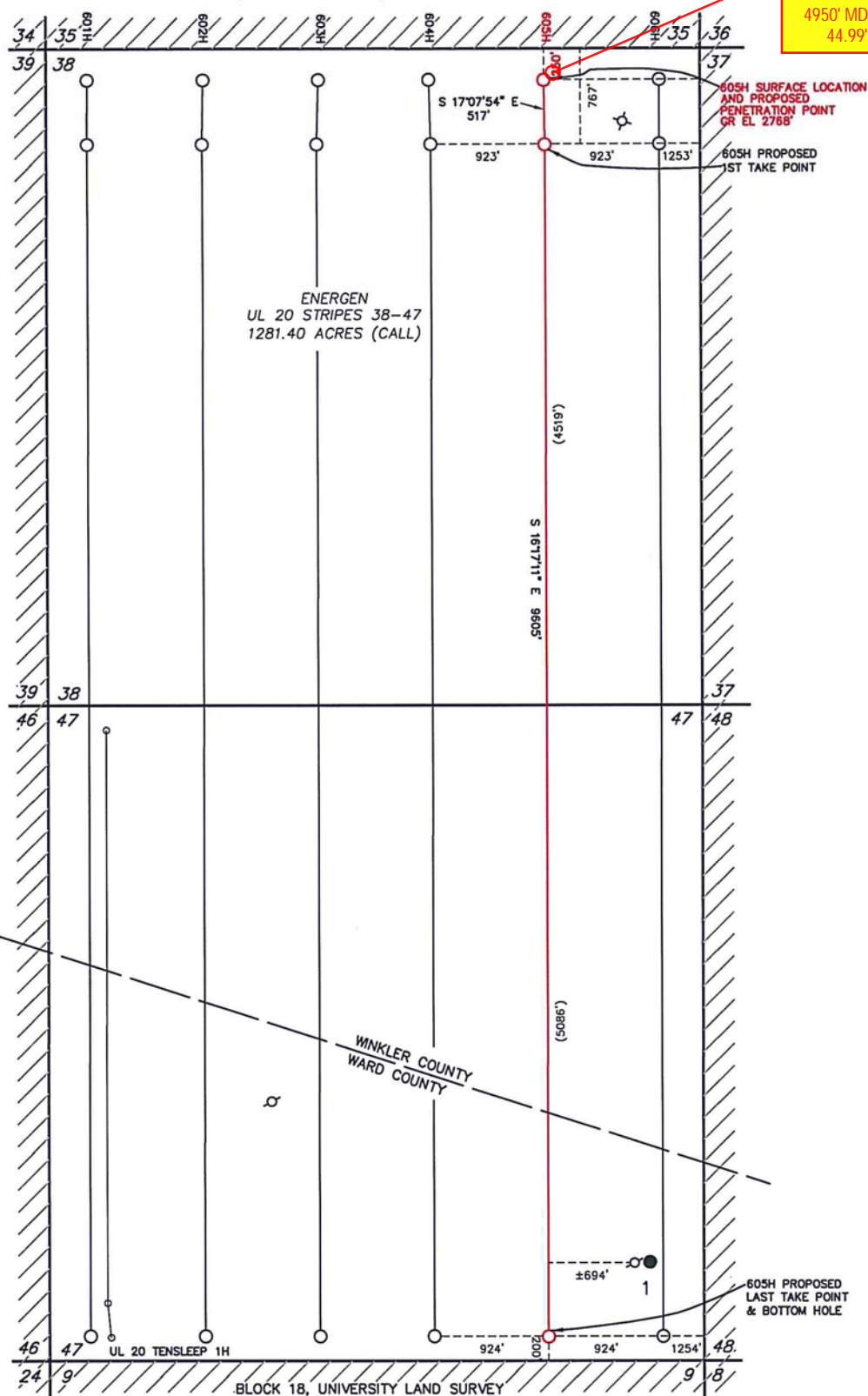
| Survey                   |                 |             |                       |              |              |                         |                         |                        |                       |  |
|--------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| 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) |  |
| 4,533.00                 | 1.63            | 99.41       | 4,531.79              | 46.62        | 26.42        | 53.01                   | 0.16                    | 0.16                   | 0.00                  |  |
| 4,622.00                 | 1.23            | 104.33      | 4,620.76              | 46.18        | 28.60        | 53.99                   | 0.47                    | -0.45                  | 5.53                  |  |
| 4,712.00                 | 0.84            | 112.23      | 4,710.74              | 45.69        | 30.14        | 54.56                   | 0.46                    | -0.43                  | 8.78                  |  |
| 4,802.00                 | 1.32            | 86.22       | 4,800.73              | 45.51        | 31.79        | 55.43                   | 0.75                    | 0.53                   | -28.90                |  |
| 4,891.00                 | 1.32            | 104.33      | 4,889.70              | 45.32        | 33.80        | 56.52                   | 0.47                    | 0.00                   | 20.35                 |  |
| 4,950.00                 | 1.30            | 104.18      | 4,948.69              | 44.99        | 35.11        | 57.07                   | 0.03                    | -0.03                  | -0.25                 |  |
| 4950' MD Last MWD Survey |                 |             |                       |              |              |                         |                         |                        |                       |  |

| Design Annotations    |                       |                   |              |                          |  |
|-----------------------|-----------------------|-------------------|--------------|--------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                          |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                  |  |
| 147.00                | 146.99                | 0.61              | -0.98        | 147' MD First MWD Survey |  |
| 4,950.00              | 4,948.69              | 44.99             | 35.11        | 4950' MD Last MWD Survey |  |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



Bottom Hole Location:  
57.07' VS @ 37.97° Azm  
4950' MD, 4948.69' TVD  
44.99' N. 35.11' E



| NAD 83, TEXAS CENTRAL ZONE                  |                                      | NAD 27, TEXAS CENTRAL ZONE       |                                      |
|---|--------------------------------------|----------------------------------|--------------------------------------|
| S/L: N=10584374.9', E=1381455.0'            | LAT=31.6731511 N, LONG=103.2753080 W | S/L: N=741798.7', E=1084990.1'   | LAT=31.6730210 N, LONG=103.2748609 W |
| 1ST/P: N=10583880.8', E=1381607.3'          | LAT=31.6718044 N, LONG=103.2747766 W | 1ST/P: N=741304.7', E=1085142.4' | LAT=31.6716743 N, LONG=103.2743296 W |
| B/H: N=10574661.1', E=1384300.9'            | LAT=31.6466537 N, LONG=103.2653284 W | B/H: N=732085.0', E=1087835.9'   | LAT=31.6465326 N, LONG=103.2648939 W |
| APPROXIMATELY 13.0 MILES NW OF PYOTE, TEXAS |                                      |                                  |                                      |

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE "REFERENCE" PORTION OF THIS PLAT IS FOR THE PRIVATE USE OF THE PARTY NAMED THE "REFERENCE" PORTION OF THE TITLE BLOCK AND DOES NOT CONSTITUTE A COMPLETE BOUNDARY SURVEY AS DEFINED BY THE "PROFESSIONAL LAND SURVEYING PRACTICES ACT."

Thais Watson Ahlstrand TEXAS R.P.L.S. No. 6359

REVISED 2/23/17  
FEBRUARY 6, 2017  
DATE










NOTES:

1. COORDINATES AND BEARINGS SHOWN HEREON ARE NAD 83, LAMBERT GRID COORDINATES AND CONFORM TO THE TEXAS COORDINATE SYSTEM "TEXAS CENTRAL ZONE," WITH REFERENCE TO UGCS TRI-STATION "ANGLE" WITH A CENTRAL COMBINED SCALE FACTOR OF 0.99980780. THE POSITIONAL TOLERANCE OF THIS SURVEY IS 0.01 METERS.
2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND REVIEW OF THE ABSTRACT OF TITLE. THERE MAY BE EASEMENTS AND/OR COVENANTS AFFECTING THIS PROPERTY NOT SHOWN HEREON. LOCATION OF IMPROVEMENTS AND/OR EASEMENTS WERE BEYOND COMMISSIONED SCOPE OF THIS PROJECT AND HAVE BEEN SPECIFICALLY OMITTED. VESTING DOCUMENTS NOT FURNISHED FOR THIS SURVEY.
3. SET DOCUMENTS AND ELECTRONIC DATA FILED IN THE OFFICE OF WPG INC FOR COMPLETE RECONSTRUCTION OF THESE SECTIONS OR BLOCKS.
4. REVISED 2/23/17 TO REMOVE OFFSET WALLS.



P.O. DRAWER 11185  
MIDLAND, TEXAS 79702  
(432) 520-9200  
FAX (432) 520-9212  
[tabistrand@xtra.com](mailto:tabistrand@xtra.com)

-  GAS WELL  
 WATER INJECTION WELL  
 OIL WELL  
 LOCATED WELL  
 DRY HOLE  
 WATER WELL  
 PLUGGED WELL

PERMIT PLAT  
ENERGEN RESOURCES CORPORATION  
UL 20 STRIPES 38-47 805H  
S/L & PROPOSED P/P: 250' FNWL & 1261' FNEL  
PROPOSED 1ST T/P: 767' FNWL & 1253' FNEL  
SECTION 38, BLOCK 20, UNIVERSITY LAND SURVEY  
PROPOSED LAST T/P & B/H: 200' FSEL & 1254' FNEL  
SECTION 47, BLOCK 20, UNIVERSITY LAND SURVEY

DATE: JANUARY 25, 2017 DATE SURVEYED: 1/11/17  
JOB NO.: 17-1011-00 FIELD BOOK 824/20 DRAFT NGH REV. 1



## Survey Certification Letter

April 26, 2018

State of Texas  
County of Winkler

I, **Chris Harris**, certify that; I am employed by **Integrity Services, LLC**; that I did on the day(s) of **4/10/2018** through **4/18/2018** conducted and / or supervised the MWD survey(s) taken from the depth of **147 feet** to depth of **4950 feet**; that the data is true, correct, complete and within the specifications and limitations of the survey tool provided by **Integrity Services, LLC**; that I am authorized and qualified to make this survey report; that was requested by **Energen Resources** for the surveys performed on the **UL 20 Stripes 38-47 #605H** Well, API No. **42-495-33809**. In **Winkler** County, Texas; and that I have reviewed this report and find that it conforms to the principles and procedures set forth by **Integrity Services, LLC**.

*Chris Harris*

Chris Harris  
Performance Supervisor  
P.O. Box 5989 | Midland, TX 79704  
Office: 432-682-0703  
[chris@integrity-serv.com](mailto:chris@integrity-serv.com)





October 9, 2018

Railroad Commission of Texas  
Oil and Gas Division  
P.O. Box 12967  
Capitol Station  
Austin, Texas 78711

Attention: Regulatory Department

Re: Energen Resources Corporation  
UL 20 Stripes 38-47 605H  
Winkler County, TX  
API #42-495-33809  
Job No. 62843

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

| Name & Title of Surveyor | Drain Hole Number | Surveyed Depths |        | Dates Performed |         | Type of Survey |
|--------------------------|-------------------|-----------------|--------|-----------------|---------|----------------|
|                          |                   | From            | To     | Start           | End     |                |
| Brooks Thibodeaux        | 605H              | 5,084           | 21,526 | 6/5/18          | 7/14/18 | MWD            |

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

*Brittany Carley*

Brittany Carley  
Operations Administrator





# **Energen Resources**

**Winkler County, Texas (Nad27)**

**UL 20 Stripes 38-47**

**605H**

**OH / 62843**

**Survey: Phoenix MWD Surveys**

## **Standard Survey Report**

**15 July, 2018**

***ENERGEN***®

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Winkler County, Texas (Nad27)        |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | Texas Central 4203                   |                      |                |

|                              |                     |                          |                     |
|------------------------------|---------------------|--------------------------|---------------------|
| <b>Site</b>                  | UL 20 Stripes 38-47 |                          |                     |
| <b>Site Position:</b>        |                     | <b>Northing:</b>         | 741,025.70 usft     |
| <b>From:</b>                 | Map                 | <b>Easting:</b>          | 1,082,345.50 usft   |
| <b>Position Uncertainty:</b> | 0.00 usft           | <b>Slot Radius:</b>      | 13-3/16 "           |
|                              |                     | <b>Latitude:</b>         | 31° 40' 14.53455 N  |
|                              |                     | <b>Longitude:</b>        | 103° 16' 59.85365 W |
|                              |                     | <b>Grid Convergence:</b> | -1.52 °             |

|                             |              |                            |                                   |
|-----------------------------|--------------|----------------------------|-----------------------------------|
| <b>Well</b>                 | 605H         |                            |                                   |
| <b>Well Position</b>        | <b>+N/-S</b> | 0.00 usft                  | <b>Northing:</b> 741,798.75 usft  |
|                             | <b>+E/-W</b> | 0.00 usft                  | <b>Easting:</b> 1,084,990.08 usft |
| <b>Position Uncertainty</b> | 0.00 usft    | <b>Wellhead Elevation:</b> | usft                              |
|                             |              | <b>Latitude:</b>           | 31° 40' 22.87562 N                |
|                             |              | <b>Longitude:</b>          | 103° 16' 29.49925 W               |
|                             |              | <b>Ground Level:</b>       | 2,768.00 usft                     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH / 62843        |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | MVHD              | 5/31/2018          | 7.13                   | 59.56                | 47,516.49851735            |

|                          |                                |                     |                     |                      |          |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|----------|
| <b>Design</b>            | Surveys (Scan Texas)           |                     |                     |                      |          |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |          |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 4,963.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |          |
|                          | 0.00                           | 0.00                | 0.00                | 163.67               |          |

|                       |                  |                                  |                  |                       |  |
|-----------------------|------------------|----------------------------------|------------------|-----------------------|--|
| <b>Survey Program</b> | <b>Date</b>      | 7/15/2018                        |                  |                       |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b>         | <b>Tool Name</b> | <b>Description</b>    |  |
| 160.00                | 4,963.00         | Evolution Surveys (OH / Surface) | MWD              | MWD - Standard        |  |
| 5,084.00              | 21,615.00        | Phoenix MWD Surveys (OH / 62843) | MWD+HDGM         | OWSG Rev.2 MWD + HDGM |  |

|                                 |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|---------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                   |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b>    | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 4,963.00                        | 1.30                   | 104.18             | 4,961.69                     | 44.99               | 35.11               | -33.30                         | 0.00                           | 0.00                          | 0.00                         |  |
| <b>Tie In</b>                   |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 5,084.00                        | 1.13                   | 109.66             | 5,082.66                     | 44.25               | 37.56               | -31.90                         | 0.17                           | -0.14                         | 4.53                         |  |
| <b>First Phoenix MWD Survey</b> |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 5,178.00                        | 1.31                   | 112.04             | 5,176.64                     | 43.53               | 39.43               | -30.69                         | 0.20                           | 0.19                          | 2.53                         |  |
| 5,273.00                        | 1.10                   | 160.86             | 5,271.62                     | 42.27               | 40.74               | -29.11                         | 1.07                           | -0.22                         | 51.39                        |  |
| 5,367.00                        | 0.93                   | 210.39             | 5,365.61                     | 40.75               | 40.65               | -27.68                         | 0.92                           | -0.18                         | 52.69                        |  |
| 5,462.00                        | 1.67                   | 251.14             | 5,460.58                     | 39.64               | 38.95               | -27.09                         | 1.20                           | 0.78                          | 42.89                        |  |
| 5,556.00                        | 1.94                   | 253.63             | 5,554.54                     | 38.75               | 36.13               | -27.03                         | 0.30                           | 0.29                          | 2.65                         |  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

| 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) |
| 5,651.00              | 1.82            | 250.63      | 5,649.49              | 37.80        | 33.16        | -26.95                  | 0.16                    | -0.13                  | -3.16                 |
| 5,745.00              | 1.80            | 253.30      | 5,743.44              | 36.88        | 30.34        | -26.86                  | 0.09                    | -0.02                  | 2.84                  |
| 5,839.00              | 1.68            | 251.34      | 5,837.40              | 36.01        | 27.62        | -26.80                  | 0.14                    | -0.13                  | -2.09                 |
| 5,934.00              | 1.60            | 255.50      | 5,932.36              | 35.24        | 25.02        | -26.78                  | 0.15                    | -0.08                  | 4.38                  |
| 6,028.00              | 1.51            | 256.65      | 6,026.32              | 34.62        | 22.54        | -26.89                  | 0.10                    | -0.10                  | 1.22                  |
| 6,123.00              | 1.41            | 257.11      | 6,121.29              | 34.07        | 20.18        | -27.02                  | 0.11                    | -0.11                  | 0.48                  |
| 6,217.00              | 1.31            | 252.51      | 6,215.27              | 33.49        | 18.03        | -27.07                  | 0.16                    | -0.11                  | -4.89                 |
| 6,311.00              | 1.31            | 248.87      | 6,309.24              | 32.78        | 16.00        | -26.96                  | 0.09                    | 0.00                   | -3.87                 |
| 6,405.00              | 1.29            | 251.60      | 6,403.22              | 32.06        | 14.00        | -26.83                  | 0.07                    | -0.02                  | 2.90                  |
| 6,500.00              | 1.23            | 247.61      | 6,498.19              | 31.33        | 12.04        | -26.68                  | 0.11                    | -0.06                  | -4.20                 |
| 6,594.00              | 1.24            | 249.42      | 6,592.17              | 30.59        | 10.15        | -26.50                  | 0.04                    | 0.01                   | 1.93                  |
| 6,689.00              | 1.19            | 247.38      | 6,687.15              | 29.85        | 8.28         | -26.32                  | 0.07                    | -0.05                  | -2.15                 |
| 6,783.00              | 1.07            | 244.27      | 6,781.13              | 29.09        | 6.59         | -26.07                  | 0.14                    | -0.13                  | -3.31                 |
| 6,877.00              | 1.08            | 243.12      | 6,875.12              | 28.31        | 5.01         | -25.76                  | 0.03                    | 0.01                   | -1.22                 |
| 6,971.00              | 1.06            | 236.51      | 6,969.10              | 27.43        | 3.49         | -25.34                  | 0.13                    | -0.02                  | -7.03                 |
| 7,066.00              | 0.76            | 184.45      | 7,064.09              | 26.32        | 2.71         | -24.49                  | 0.89                    | -0.32                  | -54.80                |
| 7,160.00              | 0.89            | 179.74      | 7,158.08              | 24.97        | 2.67         | -23.21                  | 0.16                    | 0.14                   | -5.01                 |
| 7,254.00              | 0.81            | 175.77      | 7,252.07              | 23.57        | 2.72         | -21.86                  | 0.11                    | -0.09                  | -4.22                 |
| 7,348.00              | 0.57            | 166.69      | 7,346.06              | 22.46        | 2.88         | -20.74                  | 0.28                    | -0.26                  | -9.66                 |
| 7,443.00              | 0.36            | 182.97      | 7,441.06              | 21.70        | 2.97         | -19.99                  | 0.26                    | -0.22                  | 17.14                 |
| 7,537.00              | 0.37            | 153.23      | 7,535.06              | 21.13        | 3.09         | -19.41                  | 0.20                    | 0.01                   | -31.64                |
| 7,632.00              | 0.67            | 122.65      | 7,630.05              | 20.56        | 3.70         | -18.69                  | 0.42                    | 0.32                   | -32.19                |
| 7,726.00              | 0.81            | 118.66      | 7,724.05              | 19.94        | 4.74         | -17.81                  | 0.16                    | 0.15                   | -4.24                 |
| 7,820.00              | 0.92            | 111.63      | 7,818.04              | 19.35        | 6.03         | -16.87                  | 0.16                    | 0.12                   | -7.48                 |
| 7,915.00              | 1.12            | 106.19      | 7,913.02              | 18.81        | 7.63         | -15.90                  | 0.23                    | 0.21                   | -5.73                 |
| 8,009.00              | 1.32            | 97.75       | 8,007.00              | 18.41        | 9.58         | -14.97                  | 0.29                    | 0.21                   | -8.98                 |
| 8,103.00              | 1.13            | 123.45      | 8,100.98              | 17.75        | 11.43        | -13.82                  | 0.61                    | -0.20                  | 27.34                 |
| 8,198.00              | 1.14            | 130.54      | 8,195.96              | 16.62        | 12.93        | -12.31                  | 0.15                    | 0.01                   | 7.46                  |
| 8,292.00              | 1.18            | 121.19      | 8,289.94              | 15.51        | 14.47        | -10.82                  | 0.21                    | 0.04                   | -9.95                 |
| 8,386.00              | 0.58            | 92.21       | 8,383.93              | 14.99        | 15.77        | -9.95                   | 0.78                    | -0.64                  | -30.83                |
| 8,480.00              | 0.20            | 194.13      | 8,477.93              | 14.81        | 16.21        | -9.66                   | 0.69                    | -0.40                  | 108.43                |
| 8,575.00              | 0.20            | 26.12       | 8,572.93              | 14.80        | 16.24        | -9.64                   | 0.42                    | 0.00                   | -176.85               |
| 8,669.00              | 0.49            | 19.62       | 8,666.93              | 15.33        | 16.45        | -10.08                  | 0.31                    | 0.31                   | -6.91                 |
| 8,763.00              | 0.59            | 11.48       | 8,760.92              | 16.18        | 16.68        | -10.84                  | 0.13                    | 0.11                   | -8.66                 |
| 8,857.00              | 0.64            | 10.07       | 8,854.92              | 17.17        | 16.86        | -11.74                  | 0.06                    | 0.05                   | -1.50                 |
| 8,952.00              | 0.52            | 4.14        | 8,949.91              | 18.12        | 16.99        | -12.61                  | 0.14                    | -0.13                  | -6.24                 |
| 9,046.00              | 0.57            | 6.51        | 9,043.91              | 19.01        | 17.07        | -13.45                  | 0.06                    | 0.05                   | 2.52                  |
| 9,143.00              | 0.95            | 4.91        | 9,140.90              | 20.29        | 17.20        | -14.64                  | 0.39                    | 0.39                   | -1.65                 |
| 9,238.00              | 1.23            | 4.75        | 9,235.88              | 22.09        | 17.35        | -16.33                  | 0.29                    | 0.29                   | -0.17                 |
| 9,333.00              | 1.29            | 4.84        | 9,330.86              | 24.18        | 17.52        | -18.27                  | 0.06                    | 0.06                   | 0.09                  |
| 9,428.00              | 1.84            | 215.87      | 9,425.84              | 24.00        | 16.72        | -18.34                  | 3.18                    | 0.58                   | -156.81               |
| 9,522.00              | 2.14            | 221.17      | 9,519.79              | 21.46        | 14.68        | -16.47                  | 0.37                    | 0.32                   | 5.64                  |
| 9,616.00              | 1.96            | 222.83      | 9,613.73              | 18.96        | 12.43        | -14.70                  | 0.20                    | -0.19                  | 1.77                  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

| 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) |
| 9,711.00              | 1.92            | 212.82      | 9,708.67              | 16.43        | 10.46        | -12.83                  | 0.36                    | -0.04                  | -10.54                |
| 9,806.00              | 1.64            | 198.29      | 9,803.63              | 13.80        | 9.17         | -10.67                  | 0.56                    | -0.29                  | -15.29                |
| 9,900.00              | 1.57            | 192.60      | 9,897.59              | 11.27        | 8.47         | -8.43                   | 0.19                    | -0.07                  | -6.05                 |
| 9,995.00              | 1.46            | 192.67      | 9,992.56              | 8.82         | 7.92         | -6.24                   | 0.12                    | -0.12                  | 0.07                  |
| 10,089.00             | 1.43            | 190.76      | 10,086.53             | 6.50         | 7.44         | -4.14                   | 0.06                    | -0.03                  | -2.03                 |
| 10,183.00             | 1.55            | 175.91      | 10,180.50             | 4.08         | 7.31         | -1.86                   | 0.43                    | 0.13                   | -15.80                |
| 10,278.00             | 1.81            | 163.48      | 10,275.45             | 1.36         | 7.83         | 0.90                    | 0.47                    | 0.27                   | -13.08                |
| 10,372.00             | 1.73            | 155.33      | 10,369.41             | -1.35        | 8.85         | 3.79                    | 0.28                    | -0.09                  | -8.67                 |
| 10,466.00             | 0.38            | 184.79      | 10,463.39             | -2.95        | 9.41         | 5.48                    | 1.50                    | -1.44                  | 31.34                 |
| 10,561.00             | 0.52            | 267.63      | 10,558.39             | -3.29        | 8.95         | 5.67                    | 0.64                    | 0.15                   | 87.20                 |
| 10,602.00             | 0.45            | 277.07      | 10,599.39             | -3.27        | 8.61         | 5.56                    | 0.26                    | -0.17                  | 23.02                 |
| 10,697.00             | 0.33            | 270.83      | 10,694.39             | -3.22        | 7.96         | 5.33                    | 0.13                    | -0.13                  | -6.57                 |
| 10,791.00             | 0.10            | 268.94      | 10,788.39             | -3.22        | 7.61         | 5.23                    | 0.24                    | -0.24                  | -2.01                 |
| 10,885.00             | 0.30            | 199.31      | 10,882.39             | -3.46        | 7.45         | 5.41                    | 0.30                    | 0.21                   | -74.07                |
| 10,979.00             | 0.77            | 192.87      | 10,976.38             | -4.30        | 7.23         | 6.16                    | 0.50                    | 0.50                   | -6.85                 |
| 11,026.00             | 1.24            | 178.11      | 11,023.37             | -5.12        | 7.17         | 6.93                    | 1.13                    | 1.00                   | -31.40                |
| 11,074.00             | 4.48            | 170.55      | 11,071.31             | -7.49        | 7.50         | 9.29                    | 6.78                    | 6.75                   | -15.75                |
| 11,121.00             | 7.61            | 166.23      | 11,118.04             | -12.32       | 8.54         | 14.23                   | 6.72                    | 6.66                   | -9.19                 |
| 11,168.00             | 10.80           | 164.55      | 11,164.43             | -19.59       | 10.45        | 21.74                   | 6.81                    | 6.79                   | -3.57                 |
| 11,215.00             | 13.94           | 166.65      | 11,210.33             | -29.35       | 12.94        | 31.80                   | 6.75                    | 6.68                   | 4.47                  |
| 11,262.00             | 16.60           | 165.18      | 11,255.67             | -41.35       | 15.96        | 44.17                   | 5.72                    | 5.66                   | -3.13                 |
| 11,309.00             | 19.73           | 164.75      | 11,300.32             | -55.50       | 19.77        | 58.81                   | 6.67                    | 6.66                   | -0.91                 |
| 11,357.00             | 23.51           | 164.33      | 11,344.94             | -72.54       | 24.48        | 76.49                   | 7.88                    | 7.88                   | -0.88                 |
| 11,404.00             | 27.27           | 164.15      | 11,387.39             | -91.93       | 29.96        | 96.64                   | 8.00                    | 8.00                   | -0.38                 |
| 11,451.00             | 30.95           | 164.53      | 11,428.45             | -113.94      | 36.13        | 119.50                  | 7.84                    | 7.83                   | 0.81                  |
| 11,498.00             | 35.35           | 163.55      | 11,467.79             | -138.64      | 43.20        | 145.20                  | 9.43                    | 9.36                   | -2.09                 |
| 11,545.00             | 38.67           | 164.32      | 11,505.31             | -165.83      | 51.02        | 173.48                  | 7.13                    | 7.06                   | 1.64                  |
| 11,592.00             | 41.98           | 164.72      | 11,541.14             | -195.13      | 59.14        | 203.89                  | 7.06                    | 7.04                   | 0.85                  |
| 11,639.00             | 45.65           | 164.10      | 11,575.05             | -226.47      | 67.89        | 236.42                  | 7.86                    | 7.81                   | -1.32                 |
| 11,686.00             | 49.47           | 163.25      | 11,606.76             | -259.75      | 77.64        | 271.10                  | 8.24                    | 8.13                   | -1.81                 |
| 11,733.00             | 52.67           | 162.95      | 11,636.29             | -294.73      | 88.27        | 307.65                  | 6.83                    | 6.81                   | -0.64                 |
| 11,763.00             | 54.91           | 162.94      | 11,654.01             | -317.87      | 95.37        | 331.86                  | 7.47                    | 7.47                   | -0.03                 |
| 11,814.00             | 59.09           | 164.15      | 11,681.78             | -358.88      | 107.47       | 374.62                  | 8.43                    | 8.20                   | 2.37                  |
| 11,861.00             | 62.65           | 164.76      | 11,704.66             | -398.43      | 118.47       | 415.66                  | 7.66                    | 7.57                   | 1.30                  |
| 11,908.00             | 66.99           | 165.24      | 11,724.65             | -439.50      | 129.47       | 458.17                  | 9.28                    | 9.23                   | 1.02                  |
| 11,955.00             | 70.72           | 165.26      | 11,741.60             | -481.88      | 140.63       | 501.99                  | 7.94                    | 7.94                   | 0.04                  |
| 12,002.00             | 73.45           | 165.22      | 11,756.06             | -525.13      | 152.02       | 546.69                  | 5.81                    | 5.81                   | -0.09                 |
| 12,049.00             | 76.84           | 164.86      | 11,768.10             | -569.01      | 163.75       | 592.10                  | 7.25                    | 7.21                   | -0.77                 |
| 12,096.00             | 80.36           | 164.97      | 11,777.39             | -613.49      | 175.74       | 638.15                  | 7.49                    | 7.49                   | 0.23                  |
| 12,144.00             | 83.31           | 165.19      | 11,784.21             | -659.39      | 187.97       | 685.64                  | 6.16                    | 6.15                   | 0.46                  |
| 12,191.00             | 85.57           | 166.01      | 11,788.76             | -704.70      | 199.60       | 732.39                  | 5.11                    | 4.81                   | 1.74                  |
| 12,238.00             | 87.04           | 167.21      | 11,791.79             | -750.33      | 210.46       | 779.23                  | 4.03                    | 3.13                   | 2.55                  |
| 12,285.00             | 88.75           | 165.33      | 11,793.52             | -795.95      | 221.61       | 826.15                  | 5.41                    | 3.64                   | -4.00                 |
| 12,333.00             | 91.16           | 164.97      | 11,793.56             | -842.34      | 233.91       | 874.13                  | 5.08                    | 5.02                   | -0.75                 |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

| 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) |  |
| 12,427.00             | 88.16           | 159.93      | 11,794.11             | -931.92      | 262.24       | 968.06                  | 6.24                    | -3.19                  | -5.36                 |  |
| 12,521.00             | 90.30           | 165.46      | 11,795.38             | -1,021.62    | 290.19       | 1,062.00                | 6.31                    | 2.28                   | 5.88                  |  |
| 12,575.00             | 91.62           | 165.10      | 11,794.47             | -1,073.84    | 303.91       | 1,115.97                | 2.53                    | 2.44                   | -0.67                 |  |
| 12,645.00             | 90.20           | 165.01      | 11,793.36             | -1,141.46    | 321.96       | 1,185.94                | 2.03                    | -2.03                  | -0.13                 |  |
| 12,739.00             | 90.48           | 165.85      | 11,792.80             | -1,232.44    | 345.60       | 1,279.89                | 0.94                    | 0.30                   | 0.89                  |  |
| 12,834.00             | 89.66           | 164.41      | 11,792.69             | -1,324.25    | 369.98       | 1,374.86                | 1.74                    | -0.86                  | -1.52                 |  |
| 12,928.00             | 89.66           | 163.74      | 11,793.25             | -1,414.64    | 395.77       | 1,468.85                | 0.71                    | 0.00                   | -0.71                 |  |
| 13,022.00             | 91.29           | 166.54      | 11,792.47             | -1,505.48    | 419.87       | 1,562.81                | 3.45                    | 1.73                   | 2.98                  |  |
| 13,116.00             | 91.23           | 165.23      | 11,790.40             | -1,596.62    | 442.79       | 1,656.71                | 1.39                    | -0.06                  | -1.39                 |  |
| 13,211.00             | 90.14           | 162.57      | 11,789.26             | -1,687.88    | 469.13       | 1,751.69                | 3.03                    | -1.15                  | -2.80                 |  |
| 13,305.00             | 90.92           | 159.75      | 11,788.39             | -1,776.83    | 499.48       | 1,845.59                | 3.11                    | 0.83                   | -3.00                 |  |
| 13,399.00             | 92.44           | 161.32      | 11,785.64             | -1,865.41    | 530.79       | 1,939.40                | 2.32                    | 1.62                   | 1.67                  |  |
| 13,493.00             | 88.83           | 161.69      | 11,784.60             | -1,954.54    | 560.60       | 2,033.31                | 3.86                    | -3.84                  | 0.39                  |  |
| 13,587.00             | 89.64           | 161.68      | 11,785.85             | -2,043.77    | 590.14       | 2,127.25                | 0.86                    | 0.86                   | -0.01                 |  |
| 13,680.00             | 92.58           | 159.75      | 11,784.05             | -2,131.52    | 620.84       | 2,220.09                | 3.78                    | 3.16                   | -2.08                 |  |
| 13,774.00             | 88.77           | 156.85      | 11,782.94             | -2,218.83    | 655.59       | 2,313.65                | 5.09                    | -4.05                  | -3.09                 |  |
| 13,868.00             | 91.65           | 161.76      | 11,782.60             | -2,306.72    | 688.79       | 2,407.33                | 6.06                    | 3.06                   | 5.22                  |  |
| 13,962.00             | 89.64           | 158.05      | 11,781.54             | -2,394.98    | 721.08       | 2,501.10                | 4.49                    | -2.14                  | -3.95                 |  |
| 14,056.00             | 92.29           | 163.67      | 11,779.95             | -2,483.72    | 751.88       | 2,594.93                | 6.61                    | 2.82                   | 5.98                  |  |
| 14,150.00             | 91.26           | 163.56      | 11,777.04             | -2,573.86    | 778.39       | 2,688.88                | 1.10                    | -1.10                  | -0.12                 |  |
| 14,244.00             | 93.38           | 166.34      | 11,773.24             | -2,664.55    | 802.77       | 2,782.77                | 3.72                    | 2.26                   | 2.96                  |  |
| 14,337.00             | 93.90           | 167.48      | 11,767.33             | -2,754.95    | 823.79       | 2,875.43                | 1.35                    | 0.56                   | 1.23                  |  |
| 14,431.00             | 87.65           | 164.85      | 11,766.06             | -2,846.16    | 846.26       | 2,969.28                | 7.21                    | -6.65                  | -2.80                 |  |
| 14,525.00             | 87.22           | 167.19      | 11,770.27             | -2,937.28    | 868.94       | 3,063.10                | 2.53                    | -0.46                  | 2.49                  |  |
| 14,619.00             | 88.18           | 166.39      | 11,774.04             | -3,028.71    | 890.41       | 3,156.88                | 1.33                    | 1.02                   | -0.85                 |  |
| 14,713.00             | 89.50           | 166.04      | 11,775.94             | -3,119.98    | 912.80       | 3,250.77                | 1.45                    | 1.40                   | -0.37                 |  |
| 14,807.00             | 94.31           | 167.18      | 11,772.82             | -3,211.35    | 934.55       | 3,344.56                | 5.26                    | 5.12                   | 1.21                  |  |
| 14,901.00             | 92.18           | 170.91      | 11,767.50             | -3,303.47    | 952.38       | 3,437.98                | 4.56                    | -2.27                  | 3.97                  |  |
| 14,995.00             | 93.97           | 169.51      | 11,762.46             | -3,395.96    | 968.34       | 3,531.23                | 2.42                    | 1.90                   | -1.49                 |  |
| 15,089.00             | 89.27           | 171.88      | 11,759.80             | -3,488.65    | 983.52       | 3,624.45                | 5.60                    | -5.00                  | 2.52                  |  |
| 15,183.00             | 91.37           | 177.03      | 11,759.27             | -3,582.18    | 992.60       | 3,716.75                | 5.92                    | 2.23                   | 5.48                  |  |
| 15,278.00             | 88.77           | 173.70      | 11,759.16             | -3,676.84    | 1,000.28     | 3,809.76                | 4.45                    | -2.74                  | -3.51                 |  |
| 15,372.00             | 89.75           | 168.38      | 11,760.37             | -3,769.65    | 1,014.91     | 3,902.94                | 5.75                    | 1.04                   | -5.66                 |  |
| 15,466.00             | 89.72           | 167.46      | 11,760.81             | -3,861.57    | 1,034.58     | 3,996.68                | 0.98                    | -0.03                  | -0.98                 |  |
| 15,561.00             | 91.04           | 162.21      | 11,760.18             | -3,953.23    | 1,059.42     | 4,091.62                | 5.70                    | 1.39                   | -5.53                 |  |
| 15,655.00             | 89.80           | 158.45      | 11,759.49             | -4,041.72    | 1,091.06     | 4,185.44                | 4.21                    | -1.32                  | -4.00                 |  |
| 15,750.00             | 89.97           | 157.23      | 11,759.68             | -4,129.70    | 1,126.89     | 4,279.95                | 1.30                    | 0.18                   | -1.28                 |  |
| 15,821.00             | 90.38           | 164.70      | 11,759.46             | -4,196.77    | 1,150.03     | 4,350.82                | 10.54                   | 0.58                   | 10.52                 |  |
| 15,915.00             | 89.22           | 162.27      | 11,759.79             | -4,286.88    | 1,176.75     | 4,444.81                | 2.86                    | -1.23                  | -2.59                 |  |
| 16,009.00             | 89.44           | 161.75      | 11,760.89             | -4,376.28    | 1,205.78     | 4,538.76                | 0.60                    | 0.23                   | -0.55                 |  |
| 16,103.00             | 90.30           | 161.17      | 11,761.10             | -4,465.40    | 1,235.67     | 4,632.69                | 1.10                    | 0.91                   | -0.62                 |  |
| 16,197.00             | 90.51           | 162.40      | 11,760.44             | -4,554.69    | 1,265.05     | 4,726.64                | 1.33                    | 0.22                   | 1.31                  |  |
| 16,291.00             | 91.31           | 160.62      | 11,758.94             | -4,643.82    | 1,294.85     | 4,820.55                | 2.08                    | 0.85                   | -1.89                 |  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

| 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) |  |
| 16,385.00             | 93.24           | 161.83      | 11,755.21             | -4,732.74    | 1,325.08     | 4,914.39                | 2.42                    | 2.05                   | 1.29                  |  |
| 16,479.00             | 90.98           | 161.32      | 11,751.75             | -4,821.86    | 1,354.77     | 5,008.26                | 2.46                    | -2.40                  | -0.54                 |  |
| 16,573.00             | 89.35           | 161.04      | 11,751.48             | -4,910.83    | 1,385.09     | 5,102.16                | 1.76                    | -1.73                  | -0.30                 |  |
| 16,667.00             | 90.05           | 160.79      | 11,751.97             | -4,999.66    | 1,415.83     | 5,196.05                | 0.79                    | 0.74                   | -0.27                 |  |
| 16,762.00             | 91.05           | 161.41      | 11,751.06             | -5,089.53    | 1,446.60     | 5,290.95                | 1.24                    | 1.05                   | 0.65                  |  |
| 16,856.00             | 93.16           | 162.73      | 11,747.61             | -5,178.90    | 1,475.51     | 5,384.84                | 2.65                    | 2.24                   | 1.40                  |  |
| 16,951.00             | 88.79           | 161.22      | 11,745.99             | -5,269.20    | 1,504.90     | 5,479.76                | 4.87                    | -4.60                  | -1.59                 |  |
| 17,045.00             | 88.98           | 161.37      | 11,747.82             | -5,358.22    | 1,535.04     | 5,573.66                | 0.26                    | 0.20                   | 0.16                  |  |
| 17,140.00             | 90.27           | 161.41      | 11,748.44             | -5,448.25    | 1,565.35     | 5,668.58                | 1.36                    | 1.36                   | 0.04                  |  |
| 17,234.00             | 90.16           | 161.05      | 11,748.09             | -5,537.25    | 1,595.60     | 5,762.50                | 0.40                    | -0.12                  | -0.38                 |  |
| 17,329.00             | 90.67           | 160.91      | 11,747.40             | -5,627.06    | 1,626.56     | 5,857.39                | 0.56                    | 0.54                   | -0.15                 |  |
| 17,423.00             | 89.64           | 160.46      | 11,747.15             | -5,715.76    | 1,657.65     | 5,951.26                | 1.20                    | -1.10                  | -0.48                 |  |
| 17,518.00             | 90.45           | 160.04      | 11,747.07             | -5,805.17    | 1,689.75     | 6,046.09                | 0.96                    | 0.85                   | -0.44                 |  |
| 17,612.00             | 91.88           | 161.02      | 11,745.16             | -5,893.78    | 1,721.08     | 6,139.93                | 1.84                    | 1.52                   | 1.04                  |  |
| 17,705.00             | 91.39           | 161.07      | 11,742.51             | -5,981.70    | 1,751.27     | 6,232.79                | 0.53                    | -0.53                  | 0.05                  |  |
| 17,800.00             | 90.59           | 159.71      | 11,740.87             | -6,071.17    | 1,783.15     | 6,327.62                | 1.66                    | -0.84                  | -1.43                 |  |
| 17,894.00             | 92.44           | 165.14      | 11,738.38             | -6,160.72    | 1,811.51     | 6,421.52                | 6.10                    | 1.97                   | 5.78                  |  |
| 17,989.00             | 91.82           | 163.97      | 11,734.85             | -6,252.22    | 1,836.80     | 6,516.44                | 1.39                    | -0.65                  | -1.23                 |  |
| 18,084.00             | 89.73           | 162.75      | 11,733.56             | -6,343.23    | 1,864.00     | 6,611.43                | 2.55                    | -2.20                  | -1.28                 |  |
| 18,177.00             | 91.45           | 164.66      | 11,732.61             | -6,432.48    | 1,890.09     | 6,704.41                | 2.76                    | 1.85                   | 2.05                  |  |
| 18,272.00             | 93.94           | 164.37      | 11,728.14             | -6,523.92    | 1,915.42     | 6,799.29                | 2.64                    | 2.62                   | -0.31                 |  |
| 18,367.00             | 92.93           | 164.52      | 11,722.45             | -6,615.28    | 1,940.85     | 6,894.11                | 1.07                    | -1.06                  | 0.16                  |  |
| 18,461.00             | 91.78           | 163.97      | 11,718.59             | -6,705.67    | 1,966.35     | 6,988.02                | 1.36                    | -1.22                  | -0.59                 |  |
| 18,556.00             | 91.82           | 164.57      | 11,715.60             | -6,797.06    | 1,992.09     | 7,082.97                | 0.63                    | 0.04                   | 0.63                  |  |
| 18,651.00             | 90.55           | 163.91      | 11,713.64             | -6,888.47    | 2,017.89     | 7,177.94                | 1.51                    | -1.34                  | -0.69                 |  |
| 18,745.00             | 90.67           | 163.84      | 11,712.64             | -6,978.77    | 2,044.00     | 7,271.94                | 0.15                    | 0.13                   | -0.07                 |  |
| 18,839.00             | 90.71           | 163.28      | 11,711.50             | -7,068.92    | 2,070.60     | 7,365.93                | 0.60                    | 0.04                   | -0.60                 |  |
| 18,934.00             | 91.77           | 163.57      | 11,709.45             | -7,159.95    | 2,097.69     | 7,460.91                | 1.16                    | 1.12                   | 0.31                  |  |
| 19,028.00             | 91.28           | 163.76      | 11,706.95             | -7,250.12    | 2,124.12     | 7,554.87                | 0.56                    | -0.52                  | 0.20                  |  |
| 19,122.00             | 91.58           | 163.25      | 11,704.60             | -7,340.22    | 2,150.80     | 7,648.84                | 0.63                    | 0.32                   | -0.54                 |  |
| 19,216.00             | 91.22           | 163.59      | 11,702.30             | -7,430.29    | 2,177.62     | 7,742.81                | 0.53                    | -0.38                  | 0.36                  |  |
| 19,310.00             | 90.56           | 163.48      | 11,700.84             | -7,520.42    | 2,204.25     | 7,836.80                | 0.71                    | -0.70                  | -0.12                 |  |
| 19,404.00             | 90.08           | 163.36      | 11,700.32             | -7,610.51    | 2,231.08     | 7,930.80                | 0.53                    | -0.51                  | -0.13                 |  |
| 19,498.00             | 90.44           | 163.21      | 11,699.89             | -7,700.54    | 2,258.11     | 8,024.80                | 0.41                    | 0.38                   | -0.16                 |  |
| 19,592.00             | 90.52           | 163.88      | 11,699.11             | -7,790.68    | 2,284.74     | 8,118.79                | 0.72                    | 0.09                   | 0.71                  |  |
| 19,687.00             | 90.45           | 163.54      | 11,698.30             | -7,881.87    | 2,311.38     | 8,213.79                | 0.37                    | -0.07                  | -0.36                 |  |
| 19,781.00             | 89.44           | 163.27      | 11,698.39             | -7,971.95    | 2,338.23     | 8,307.79                | 1.11                    | -1.07                  | -0.29                 |  |
| 19,875.00             | 89.30           | 163.00      | 11,699.42             | -8,061.90    | 2,365.50     | 8,401.78                | 0.32                    | -0.15                  | -0.29                 |  |
| 19,969.00             | 89.59           | 163.60      | 11,700.34             | -8,151.93    | 2,392.51     | 8,495.77                | 0.71                    | 0.31                   | 0.64                  |  |
| 20,063.00             | 90.93           | 163.59      | 11,699.91             | -8,242.10    | 2,419.06     | 8,589.77                | 1.43                    | 1.43                   | -0.01                 |  |
| 20,157.00             | 90.91           | 162.91      | 11,698.40             | -8,332.10    | 2,446.14     | 8,683.75                | 0.72                    | -0.02                  | -0.72                 |  |
| 20,252.00             | 90.70           | 163.22      | 11,697.06             | -8,422.97    | 2,473.81     | 8,778.74                | 0.39                    | -0.22                  | 0.33                  |  |
| 20,347.00             | 90.98           | 163.04      | 11,695.67             | -8,513.88    | 2,501.38     | 8,873.72                | 0.35                    | 0.29                   | -0.19                 |  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Energen Resources             | <b>Local Co-ordinate Reference:</b> | Well 605H                      |
| <b>Project:</b>  | Winkler County, Texas (Nad27) | <b>TVD Reference:</b>               | RKB @ 2793.00usft (Scan Texas) |
| <b>Site:</b>     | UL 20 Stripes 38-47           | <b>MD Reference:</b>                | RKB @ 2793.00usft (Scan Texas) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                           |
| <b>Wellbore:</b> | OH / 62843                    | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys (Scan Texas)          | <b>Database:</b>                    | USA Compass                    |

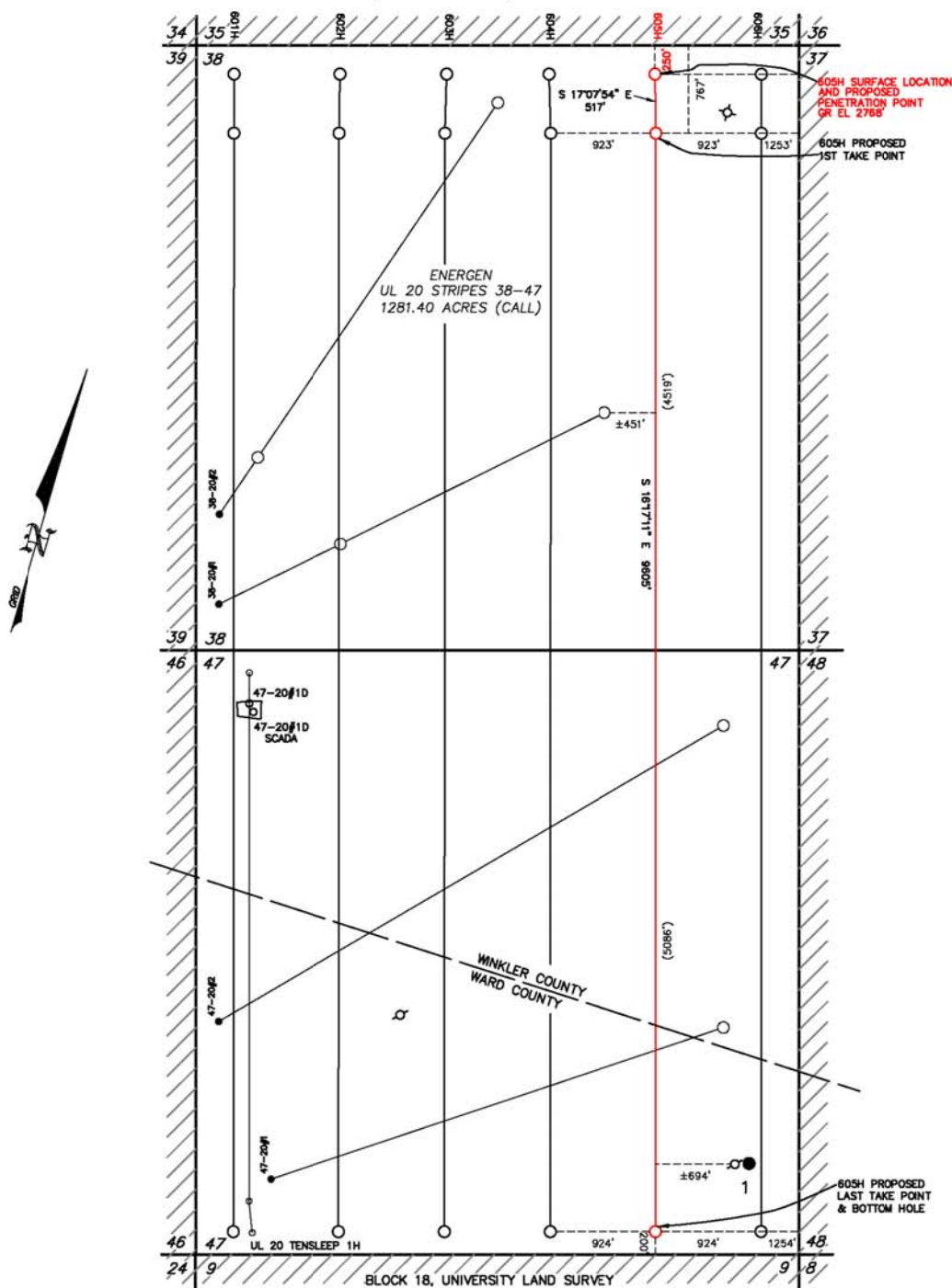
| Survey                          |                 |             |                       |              |              |                         |                         |                        |                       |  |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| 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) |  |
| 20,440.00                       | 91.50           | 163.52      | 11,693.66             | -8,602.92    | 2,528.13     | 8,966.70                | 0.76                    | 0.56                   | 0.52                  |  |
| 20,534.00                       | 91.30           | 163.21      | 11,691.36             | -8,692.96    | 2,555.03     | 9,060.67                | 0.39                    | -0.21                  | -0.33                 |  |
| 20,628.00                       | 89.84           | 163.57      | 11,690.43             | -8,783.03    | 2,581.90     | 9,154.66                | 1.60                    | -1.55                  | 0.38                  |  |
| 20,722.00                       | 89.67           | 163.09      | 11,690.83             | -8,873.08    | 2,608.86     | 9,248.66                | 0.54                    | -0.18                  | -0.51                 |  |
| 20,816.00                       | 89.56           | 163.09      | 11,691.46             | -8,963.01    | 2,636.20     | 9,342.65                | 0.12                    | -0.12                  | 0.00                  |  |
| 20,910.00                       | 89.90           | 163.00      | 11,691.90             | -9,052.93    | 2,663.62     | 9,436.64                | 0.37                    | 0.36                   | -0.10                 |  |
| 21,004.00                       | 90.42           | 163.49      | 11,691.64             | -9,142.93    | 2,690.71     | 9,530.64                | 0.76                    | 0.55                   | 0.52                  |  |
| 21,099.00                       | 90.56           | 163.04      | 11,690.83             | -9,233.91    | 2,718.07     | 9,625.63                | 0.50                    | 0.15                   | -0.47                 |  |
| 21,194.00                       | 91.16           | 163.36      | 11,689.40             | -9,324.84    | 2,745.52     | 9,720.62                | 0.72                    | 0.63                   | 0.34                  |  |
| 21,288.00                       | 89.44           | 163.13      | 11,688.91             | -9,414.85    | 2,772.62     | 9,814.61                | 1.85                    | -1.83                  | -0.24                 |  |
| 21,382.00                       | 90.30           | 163.74      | 11,689.12             | -9,504.94    | 2,799.42     | 9,908.61                | 1.12                    | 0.91                   | 0.65                  |  |
| 21,476.00                       | 93.27           | 169.08      | 11,686.19             | -9,596.22    | 2,821.49     | 10,002.41               | 6.50                    | 3.16                   | 5.68                  |  |
| 21,526.00                       | 91.04           | 166.43      | 11,684.31             | -9,645.04    | 2,832.09     | 10,052.24               | 6.92                    | -4.46                  | -5.30                 |  |
| <b>Final Phoenix MWD Survey</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 21,615.00                       | 91.04           | 166.43      | 11,682.70             | -9,731.55    | 2,852.96     | 10,141.12               | 0.00                    | 0.00                   | 0.00                  |  |
| <b>Projection to TD</b>         |                 |             |                       |              |              |                         |                         |                        |                       |  |

| Survey Annotations    |                       |                   |              |                          |  |
|-----------------------|-----------------------|-------------------|--------------|--------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                          |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                  |  |
| 4,963.00              | 4,961.69              | 44.99             | 35.11        | Tie In                   |  |
| 5,084.00              | 5,082.66              | 44.25             | 37.56        | First Phoenix MWD Survey |  |
| 21,526.00             | 11,684.31             | -9,645.04         | 2,832.09     | Final Phoenix MWD Survey |  |
| 21,615.00             | 11,682.70             | -9,731.55         | 2,852.96     | Projection to TD         |  |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|



**SECTION 38, BLOCK 20, UNIVERSITY LAND SURVEY**  
**SECTION 47, BLOCK 20, UNIVERSITY LAND SURVEY**



| NAD 83, TEXAS CENTRAL ZONE         |                                      | NAD 27, TEXAS CENTRAL ZONE       |                                      |
|------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|
| S/L: N=10584374.9', E=1381455.0'   | LAT=31.6731511 N, LONG=103.2753080 W | S/L: N=741798.7', E=1084990.1'   | LAT=31.6730210 N, LONG=103.2748609 W |
| 1ST/P: N=10583880.8', E=1381607.3' | LAT=31.6718044 N, LONG=103.2747766 W | 1ST/P: N=741304.7', E=1085142.4' | LAT=31.6716743 N, LONG=103.2743296 W |
| B/H: N=10574661.1', E=1384300.9'   | LAT=31.6466537 N, LONG=103.2653284 W | B/H: N=732085.0', E=1087835.9'   | LAT=31.6465326 N, LONG=103.2648939 W |

APPROXIMATELY 13.0 MILES NW OF PYOTE, TEXAS

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE INFORMATION PRESENTED HEREON IS FOR THE PRIVATE USE OF THE PARTY NAMED IN THE "REFERENCE PORTION" OF THE TITLE BLOCK AND DOES NOT CONSTITUTE A COMPLETE BOUNDARY SURVEY AS DEFINED BY THE "PROFESSIONAL LAND SURVEYING PRACTICES ACT."

*Thais Watson Ahlstrand*  
 Thais Watson Ahlstrand TEXAS R.P.L.S. No. 6359

FEBRUARY 6, 2017  
 DATE



NOTES:  
 1. COORDINATES AND BEARINGS SHOWN HEREON ARE NAD 83, LAMBERT GRID COORDINATES AND CONFORM TO THE TEXAS COORDINATE SYSTEM, TEXAS CENTRAL ZONE, WITH REFERENCE TO USGS TRI-STATION "ANGLE" WITH A CENTRAL COMBINED SCALE FACTOR OF 0.99980780. THE POSITIONAL TOLERANCE OF THIS SURVEY EXCEEDS THE REQUIREMENTS FOR A RURAL SURVEY.  
 2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND REVIEW OF THE ABSTRACT OF TITLE. THERE MAY BE EASEMENTS AND/OR COVENANTS AFFECTING THIS PROPERTY NOT SHOWN HEREON. LOCATION OF IMPROVEMENTS AND/OR EASEMENTS WERE BEYOND COMMISSIONED SCOPE OF THIS PROJECT AND HAVE BEEN SPECIFICALLY OMITTED. VESTING DOCUMENTS NOT FURNISHED FOR THIS SURVEY.  
 3. SEE DOCUMENTS AND ELECTRONIC DATA FILED IN THE OFFICE OF WPG INC FOR COMPLETE RECONSTRUCTION OF THESE SECTIONS OR BLOCKS.



**Watson Professional Group Inc**



P.O. DRAWER 11106  
 MIDLAND, TEXAS 79702  
 (432) 520-9200  
 FAX (432) 520-9202  
 tablstrand@wpg-usa.com

- ☼ GAS WELL
- ⚙️ WATER INJECTION WELL
- OIL WELL
- LOCATED WELL
- DRY HOLE
- ⦿ WATER WELL
- ⊗ PLUGGED WELL

**ENERGEN RESOURCES CORPORATION**  
**UL 20 STRIPES 38-47 605H**  
**S/L & PROPOSED P/P: 250' FNNL & 1281' FNNL**  
**PROPOSED 1ST T/P: 767' FNNL & 1253' FNNL**  
**SECTION 38, BLOCK 20, UNIVERSITY LAND SURVEY**  
**PROPOSED LAST T/P & B/H: 200' FSEL & 1254' FNNL**  
**SECTION 47, BLOCK 20, UNIVERSITY LAND SURVEY**  
**WINKLER & WARD COUNTIES, TEXAS**

DATE: JANUARY 25, 2017 DATE SURVEYED: 1/11/17  
 JOB NO.: 17-1011-00 FIELD BOOK: 824/20 DRAFT: NGH REV. 0

# SURVEY DATA CERTIFICATION



**PHOENIX**  
TECHNOLOGY SERVICES

Job #: 62843  
 Client: Energen Resources  
 County & State: Winkler County, Texas  
 Well: UL 20 Stripes 38-47 605H  
 API No: 42-495-33809  
 Proposed Direction: 163.67

## TIE-IN DATA

| MD                   | TVD     | INC  | AZM    | N/-S  | E/-W  | DATA SOURCE |
|----------------------|---------|------|--------|-------|-------|-------------|
| 4963.00              | 4961.69 | 1.30 | 104.18 | 44.99 | 35.11 | MWD         |
| Data Source Company: |         |      |        |       |       | P2WellCore  |

## SURVEY DATA

| First Survey Date | First Survey Depth | INC   | AZM     |
|-------------------|--------------------|-------|---------|
| 5-Jun-18          | 5,084 ft           | 1.13° | 109.66° |

| Last Survey Date | Last Survey Depth | INC    | AZM     |
|------------------|-------------------|--------|---------|
| 14-Jul-18        | 21,526 ft         | 91.04° | 166.43° |

| Survey Instrument Type |
|------------------------|
| Phoenix MWD            |

| Projected TD Survey Date | Projected TD Survey Depth | INC    | AZM     |
|--------------------------|---------------------------|--------|---------|
| 14-Jul-18                | 21,615 ft                 | 91.04° | 166.43° |

## CORRECTION INFORMATION

|                           |              |
|---------------------------|--------------|
| Magnetic Declination Used | 7.13 degrees |
| Grid Convergence Used     | 1.52 degrees |
| Total Correction          | 8.65 degrees |

| Corrected to True/Grid North |
|------------------------------|
| Grid                         |

TO THE BEST OF MY KNOWLEDGE, I  
 CERTIFY THIS SURVEY DATA TO BE  
 TRUE AND CORRECT.

Brooks Thibodeaux  
 Signature

July 14, 2018  
 Date