



**Weatherford**

Evaluation, Drilling & Intervention  
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Occidental Permian Ltd.  
5 Greenway Plaza Suite 110  
Houston Tx 77046

Date: September 9, 2014

Attention: Karina Yustiz

HOBBSOC

Re: Occidental Permian Ltd  
Well: Ridge Runner 7 State #1H  
Lea County, New Mexico

FEB 09 2015

RECEIVED

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

| Name & Title<br>Of Surveyor    | Well<br>Number | Surveyed<br>Depths   | Dates<br>Performed    | Type of<br>Survey             |
|--------------------------------|----------------|----------------------|-----------------------|-------------------------------|
| Cletus Bayer<br>MWD Supervisor | 1H             | 229' MD<br>15274' MD | 8-8-2014<br>9-05-2014 | Measurement<br>While Drilling |

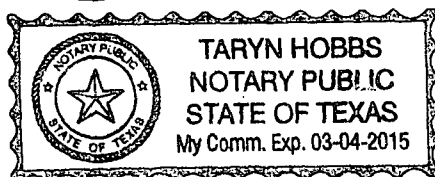
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesus Aguilar  
MWD Coordinator

On this, the 1<sup>st</sup> day of October, 2014, before me a notary public, the undersigned officer, personally appeared JESUS AGUILAR, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public



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**5D Survey Report**

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**OXY USA**

**Field Name:** *Lea Co. (NAD27 NME)*  
**Site Name:** *Ridge Runner 7 State #1H*  
**Well Name:** *Ridge Runner 7 State #1H*  
**Survey:** *Definitive Survey*

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05 September 2014



## Ridge Runner 7 State #1H

|                                                      |                                                                |                                   |                                    |  |
|------------------------------------------------------|----------------------------------------------------------------|-----------------------------------|------------------------------------|--|
| <b>Field Name</b>                                    | <b>Map Units :</b> US ft                                       |                                   | <b>Company Name :</b> OXY USA      |  |
| <b>Lea Co. (NAD27 NME)</b>                           | <b>Vertical Reference Datum (VRD) :</b> Mean Sea Level         |                                   |                                    |  |
|                                                      | <b>Projected Coordinate System :</b> NAD27 / New Mexico East   |                                   |                                    |  |
|                                                      | <b>Comment :</b>                                               |                                   |                                    |  |
| <b>Site Name</b><br>Ridge Runner 7 State #1H         | <b>Units :</b> US ft                                           | <b>North Reference :</b> Grid     | <b>Convergence Angle :</b> 0.38    |  |
|                                                      | <b>Position</b>                                                | <b>Northing :</b> 511306.40 US ft | <b>Latitude :</b> 32° 24' 13.21"   |  |
|                                                      |                                                                | <b>Easting :</b> 720529.40 US ft  | <b>Longitude :</b> -103° 37' 7.66" |  |
| <b>Elevation above Mean Sea Level:</b> 3615.60 US ft |                                                                | <b>Comment :</b>                  |                                    |  |
| <b>Slot Name</b><br>Ridge Runner 7 State #1H         | <b>Position (Offsets relative to Site Centre)</b>              |                                   |                                    |  |
|                                                      | <b>+N / -S :</b> 0.00 US ft                                    | <b>Northing :</b> 511306.40 US ft | <b>Latitude :</b> 32° 24' 13.21"   |  |
|                                                      | <b>+E / -W :</b> 0.00 US ft                                    | <b>Easting :</b> 720529.40 US ft  | <b>Longitude :</b> -103° 37' 7.66" |  |
|                                                      | <b>Slot TVD Reference :</b> Ground Elevation                   |                                   |                                    |  |
|                                                      | <b>Elevation above Mean Sea Level :</b> 3615.60 US ft          |                                   |                                    |  |
| <b>Well Name</b><br>Ridge Runner 7 State #1H         | <b>Type :</b> Main well                                        |                                   | <b>UWI :</b>                       |  |
|                                                      | <b>Rig Height Drill Floor :</b> 24.00 US ft                    |                                   | <b>Comment :</b>                   |  |
|                                                      | <b>Relative to Mean Sea Level:</b> 3639.60 US ft               |                                   |                                    |  |
|                                                      | <b>Closure Distance :</b> 4816.2 US ft                         |                                   | <b>Closure Azimuth :</b> 89.5861°  |  |
|                                                      | <b>Vertical Section (Position of Origin Relative to Site )</b> |                                   |                                    |  |
| <b>+N / -S :</b> 0.00 US ft                          |                                                                | <b>+E / -W :</b> 0.00 US ft       | <b>Az :</b> 89.69°                 |  |

### Target Set

**Name :** Ridge Runner 7 State #1H  
**Number of Targets :** 1

**Comment :**

|                     |                                           |                                   |                                     |
|---------------------|-------------------------------------------|-----------------------------------|-------------------------------------|
| <b>Target Name:</b> | <b>Position (Relative to Site centre)</b> |                                   |                                     |
| <b>LTP</b>          | <b>+N / -S :</b> 25.30US ft               | <b>Northing :</b> 511331.70 US ft | <b>Latitude :</b> 32° 24' 13.15"    |
|                     | <b>+E / -W :</b> 4666.30 US ft            | <b>Easting :</b> 725195.70US ft   | <b>Longitude :</b> -103° 36' 13.24" |
| <b>Shape:</b>       | <b>TVD (Drill Floor) :</b> 10858.00 US ft |                                   |                                     |
| <b>Cuboid</b>       | <b>Orientation Azimuth :</b> 0.00°        | <b>Inclination :</b> 0.00°        |                                     |
|                     | <b>Dimensions Length :</b> 0.00 US ft     | <b>Breadth :</b> 0.00 US ft       | <b>Height :</b> 0.00 US ft          |

### Survey Name: Definitive Survey

**Date :** 24/Jul/2014      **Survey Tool :**      **Comment :**      **Company :**

### Magnetic Model

**Model Name:** Default      **Date:** 12/Feb/2014      **Field Strength:** 50000.0 nT      **Declination:** 0.00°      **Dip:** 0.00°

### Survey Tool Ranges

| Name | Start MD (us ft) | End MD (us ft) | Source Survey |
|------|------------------|----------------|---------------|
| MWD  | 0.00             | 15325.00       | MWD Svy       |

## 5D Survey Report

Well path created using minimum curvature

| Survey Points (Relative to Site centre, TVD relative to Drill Floor) |            |           |                |                     |                     |               |                      |                     |                    |               |               |
|----------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------|----------------------|---------------------|--------------------|---------------|---------------|
| MD<br>(US ft)                                                        | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(%/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Survey Tool   | Comment       |
| 0.00                                                                 | 0.00       | 0.00      | 0.00           | 0.00                | 0.00                | 0.00          | 0.00                 | 511306.40           | 720529.40          | MWD (MWD Svy) |               |
| 229.00                                                               | 0.30       | 106.22    | 229.00         | -0.17               | 0.58                | 0.57          | 0.13                 | 511306.23           | 720529.98          | MWD (MWD Svy) | First Wft Svy |
| 414.00                                                               | 0.21       | 118.63    | 414.00         | -0.47               | 1.34                | 1.34          | 0.06                 | 511305.93           | 720530.74          | MWD (MWD Svy) |               |
| 598.00                                                               | 0.10       | 299.54    | 598.00         | -0.55               | 1.49                | 1.49          | 0.17                 | 511305.85           | 720530.89          | MWD (MWD Svy) |               |
| 782.00                                                               | 0.16       | 171.90    | 782.00         | -0.72               | 1.39                | 1.39          | 0.13                 | 511305.68           | 720530.79          | MWD (MWD Svy) |               |
| 931.00                                                               | 0.22       | 245.68    | 931.00         | -1.05               | 1.16                | 1.15          | 0.16                 | 511305.35           | 720530.56          | MWD (MWD Svy) |               |
| 1150.00                                                              | 0.22       | 283.74    | 1149.99        | -1.12               | 0.37                | 0.36          | 0.07                 | 511305.28           | 720529.77          | MWD (MWD Svy) |               |
| 1339.00                                                              | 0.50       | 227.90    | 1338.99        | -1.59               | -0.60               | -0.60         | 0.22                 | 511304.81           | 720528.80          | MWD (MWD Svy) |               |
| 1529.00                                                              | 0.20       | 213.64    | 1528.99        | -2.42               | -1.40               | -1.41         | 0.16                 | 511303.98           | 720528.00          | MWD (MWD Svy) |               |
| 1718.00                                                              | 0.07       | 156.96    | 1717.99        | -2.80               | -1.53               | -1.55         | 0.09                 | 511303.60           | 720527.87          | MWD (MWD Svy) |               |
| 1907.00                                                              | 0.66       | 59.07     | 1906.98        | -2.35               | -0.55               | -0.57         | 0.36                 | 511304.05           | 720528.85          | MWD (MWD Svy) |               |
| 2097.00                                                              | 1.22       | 72.05     | 2096.96        | -1.16               | 2.31                | 2.30          | 0.31                 | 511305.24           | 720531.71          | MWD (MWD Svy) |               |
| 2191.00                                                              | 1.51       | 66.13     | 2190.93        | -0.35               | 4.39                | 4.39          | 0.34                 | 511306.05           | 720533.79          | MWD (MWD Svy) |               |
| 2286.00                                                              | 1.82       | 66.46     | 2285.89        | 0.76                | 6.92                | 6.93          | 0.33                 | 511307.16           | 720536.32          | MWD (MWD Svy) |               |
| 2381.00                                                              | 2.11       | 59.06     | 2380.83        | 2.26                | 9.80                | 9.82          | 0.41                 | 511308.66           | 720539.20          | MWD (MWD Svy) |               |
| 2475.00                                                              | 1.63       | 66.34     | 2474.78        | 3.69                | 12.51               | 12.53         | 0.57                 | 511310.09           | 720541.91          | MWD (MWD Svy) |               |
| 2570.00                                                              | 1.63       | 65.01     | 2569.75        | 4.80                | 14.98               | 15.00         | 0.04                 | 511311.20           | 720544.38          | MWD (MWD Svy) |               |
| 2664.00                                                              | 1.88       | 57.41     | 2663.70        | 6.19                | 17.49               | 17.52         | 0.36                 | 511312.59           | 720546.89          | MWD (MWD Svy) |               |
| 2759.00                                                              | 1.13       | 63.92     | 2758.67        | 7.45                | 19.64               | 19.68         | 0.81                 | 511313.85           | 720549.04          | MWD (MWD Svy) |               |
| 2854.00                                                              | 1.34       | 52.44     | 2853.65        | 8.53                | 21.36               | 21.41         | 0.34                 | 511314.93           | 720550.76          | MWD (MWD Svy) |               |
| 2948.00                                                              | 1.97       | 47.92     | 2947.61        | 10.29               | 23.43               | 23.49         | 0.68                 | 511316.69           | 720552.83          | MWD (MWD Svy) |               |
| 3080.00                                                              | 1.21       | 79.11     | 3079.56        | 12.07               | 26.49               | 26.55         | 0.85                 | 511318.47           | 720555.89          | MWD (MWD Svy) |               |
| 3137.00                                                              | 1.27       | 100.50    | 3136.54        | 12.07               | 27.70               | 27.76         | 0.81                 | 511318.47           | 720557.10          | MWD (MWD Svy) |               |
| 3232.00                                                              | 1.61       | 114.24    | 3231.51        | 11.33               | 29.95               | 30.01         | 0.51                 | 511317.73           | 720559.35          | MWD (MWD Svy) |               |
| 3326.00                                                              | 2.10       | 97.67     | 3325.46        | 10.56               | 32.86               | 32.92         | 0.77                 | 511316.96           | 720562.26          | MWD (MWD Svy) |               |
| 3421.00                                                              | 1.30       | 131.15    | 3420.42        | 9.62                | 35.40               | 35.45         | 1.31                 | 511316.02           | 720564.80          | MWD (MWD Svy) |               |
| 3515.00                                                              | 1.60       | 150.20    | 3514.39        | 7.78                | 36.85               | 36.89         | 0.60                 | 511314.18           | 720566.25          | MWD (MWD Svy) |               |
| 3610.00                                                              | 2.08       | 152.61    | 3609.35        | 5.09                | 38.30               | 38.33         | 0.51                 | 511311.49           | 720567.70          | MWD (MWD Svy) |               |
| 3704.00                                                              | 0.51       | 179.49    | 3703.32        | 3.16                | 39.09               | 39.11         | 1.75                 | 511309.56           | 720568.49          | MWD (MWD Svy) |               |
| 3799.00                                                              | 0.35       | 142.57    | 3798.32        | 2.51                | 39.27               | 39.29         | 0.33                 | 511308.91           | 720568.67          | MWD (MWD Svy) |               |
| 3893.00                                                              | 0.58       | 155.13    | 3892.31        | 1.85                | 39.65               | 39.66         | 0.27                 | 511308.25           | 720569.05          | MWD (MWD Svy) |               |
| 3988.00                                                              | 0.56       | 238.72    | 3987.31        | 1.17                | 39.45               | 39.46         | 0.80                 | 511307.57           | 720568.85          | MWD (MWD Svy) |               |
| 4082.00                                                              | 0.99       | 242.78    | 4081.30        | 0.56                | 38.34               | 38.34         | 0.46                 | 511306.96           | 720567.74          | MWD (MWD Svy) |               |
| 4176.00                                                              | 0.94       | 242.50    | 4175.29        | -0.17               | 36.93               | 36.93         | 0.05                 | 511306.23           | 720566.33          | MWD (MWD Svy) |               |

## 5D Survey Report

| Survey Points (Relative to Site centre, TVD relative to Drill Floor) |             |           |                |                     |                     |               |                      |                     |                    |               |         |
|----------------------------------------------------------------------|-------------|-----------|----------------|---------------------|---------------------|---------------|----------------------|---------------------|--------------------|---------------|---------|
| MD<br>(US ft)                                                        | Incl<br>(°) | Az<br>(°) | TVD<br>(US ft) | N Offset<br>(US ft) | E Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(%/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Survey Tool   | Comment |
| 4271.00                                                              | 0.94        | 205.22    | 4270.28        | -1.23               | 35.91               | 35.90         | 0.63                 | 511305.17           | 720565.31          | MWD (MWD Svy) |         |
| 4366.00                                                              | 1.21        | 194.55    | 4365.26        | -2.91               | 35.33               | 35.31         | 0.35                 | 511303.49           | 720564.73          | MWD (MWD Svy) |         |
| 4460.00                                                              | 1.04        | 193.30    | 4459.24        | -4.70               | 34.88               | 34.85         | 0.18                 | 511301.70           | 720564.28          | MWD (MWD Svy) |         |
| 4555.00                                                              | 0.90        | 190.89    | 4554.23        | -6.27               | 34.54               | 34.51         | 0.15                 | 511300.13           | 720563.94          | MWD (MWD Svy) |         |
| 4649.00                                                              | 0.70        | 191.28    | 4648.22        | -7.56               | 34.29               | 34.25         | 0.21                 | 511298.84           | 720563.69          | MWD (MWD Svy) |         |
| 4704.00                                                              | 0.95        | 182.83    | 4703.21        | -8.34               | 34.20               | 34.16         | 0.50                 | 511298.06           | 720563.60          | MWD (MWD Svy) |         |
| 4829.00                                                              | 0.70        | 207.43    | 4828.20        | -10.05              | 33.80               | 33.74         | 0.34                 | 511296.35           | 720563.20          | MWD (MWD Svy) |         |
| 4924.00                                                              | 0.64        | 203.15    | 4923.19        | -11.06              | 33.32               | 33.26         | 0.08                 | 511295.34           | 720562.72          | MWD (MWD Svy) |         |
| 5018.00                                                              | 0.58        | 208.19    | 5017.19        | -11.96              | 32.89               | 32.83         | 0.09                 | 511294.44           | 720562.29          | MWD (MWD Svy) |         |
| 5113.00                                                              | 0.58        | 195.50    | 5112.18        | -12.85              | 32.54               | 32.47         | 0.13                 | 511293.55           | 720561.94          | MWD (MWD Svy) |         |
| 5207.00                                                              | 0.47        | 184.49    | 5206.18        | -13.69              | 32.38               | 32.30         | 0.16                 | 511292.71           | 720561.78          | MWD (MWD Svy) |         |
| 5302.00                                                              | 0.56        | 183.62    | 5301.18        | -14.54              | 32.32               | 32.24         | 0.10                 | 511291.86           | 720561.72          | MWD (MWD Svy) |         |
| 5491.00                                                              | 0.47        | 175.00    | 5490.17        | -16.24              | 32.33               | 32.24         | 0.06                 | 511290.16           | 720561.73          | MWD (MWD Svy) |         |
| 5585.00                                                              | 0.35        | 182.04    | 5584.17        | -16.91              | 32.35               | 32.26         | 0.14                 | 511289.49           | 720561.75          | MWD (MWD Svy) |         |
| 5680.00                                                              | 0.29        | 204.38    | 5679.16        | -17.42              | 32.24               | 32.15         | 0.14                 | 511288.98           | 720561.64          | MWD (MWD Svy) |         |
| 5774.00                                                              | 0.56        | 324.35    | 5773.16        | -17.26              | 31.88               | 31.78         | 0.80                 | 511289.14           | 720561.28          | MWD (MWD Svy) |         |
| 5869.00                                                              | 0.56        | 55.78     | 5868.16        | -16.62              | 31.99               | 31.90         | 0.84                 | 511289.78           | 720561.39          | MWD (MWD Svy) |         |
| 5963.00                                                              | 0.85        | 310.63    | 5962.16        | -15.91              | 31.84               | 31.75         | 1.21                 | 511290.49           | 720561.24          | MWD (MWD Svy) |         |
| 6058.00                                                              | 2.08        | 297.91    | 6057.12        | -14.64              | 29.78               | 29.70         | 1.33                 | 511291.76           | 720559.18          | MWD (MWD Svy) |         |
| 6152.00                                                              | 3.20        | 298.13    | 6151.02        | -12.61              | 25.96               | 25.89         | 1.19                 | 511293.79           | 720555.36          | MWD (MWD Svy) |         |
| 6247.00                                                              | 3.22        | 297.43    | 6245.87        | -10.13              | 21.25               | 21.20         | 0.05                 | 511296.27           | 720550.65          | MWD (MWD Svy) |         |
| 6341.00                                                              | 3.04        | 293.06    | 6339.73        | -7.94               | 16.62               | 16.57         | 0.32                 | 511298.46           | 720546.02          | MWD (MWD Svy) |         |
| 6436.00                                                              | 3.01        | 292.66    | 6434.60        | -5.99               | 12.00               | 11.96         | 0.04                 | 511300.41           | 720541.40          | MWD (MWD Svy) |         |
| 6531.00                                                              | 2.95        | 293.54    | 6529.47        | -4.05               | 7.45                | 7.43          | 0.08                 | 511302.35           | 720536.85          | MWD (MWD Svy) |         |
| 6625.00                                                              | 1.92        | 292.01    | 6623.39        | -2.49               | 3.78                | 3.76          | 1.10                 | 511303.91           | 720533.18          | MWD (MWD Svy) |         |
| 6720.00                                                              | 1.88        | 294.23    | 6718.33        | -1.26               | 0.88                | 0.87          | 0.09                 | 511305.14           | 720530.28          | MWD (MWD Svy) |         |
| 6814.00                                                              | 0.85        | 299.70    | 6812.30        | -0.28               | -1.13               | -1.13         | 1.10                 | 511306.12           | 720528.27          | MWD (MWD Svy) |         |
| 6909.00                                                              | 0.73        | 290.19    | 6907.30        | 0.28                | -2.31               | -2.31         | 0.19                 | 511306.68           | 720527.09          | MWD (MWD Svy) |         |
| 7003.00                                                              | 0.70        | 262.59    | 7001.29        | 0.41                | -3.44               | -3.44         | 0.36                 | 511306.81           | 720525.96          | MWD (MWD Svy) |         |
| 7098.00                                                              | 0.66        | 265.35    | 7096.28        | 0.29                | -4.56               | -4.56         | 0.05                 | 511306.69           | 720524.84          | MWD (MWD Svy) |         |
| 7192.00                                                              | 0.63        | 272.32    | 7190.28        | 0.27                | -5.62               | -5.62         | 0.09                 | 511306.67           | 720523.78          | MWD (MWD Svy) |         |
| 7287.00                                                              | 0.63        | 257.82    | 7285.27        | 0.18                | -6.65               | -6.65         | 0.17                 | 511306.58           | 720522.75          | MWD (MWD Svy) |         |
| 7381.00                                                              | 0.66        | 243.24    | 7379.26        | -0.17               | -7.64               | -7.64         | 0.18                 | 511306.23           | 720521.76          | MWD (MWD Svy) |         |
| 7476.00                                                              | 0.70        | 241.58    | 7474.26        | -0.70               | -8.64               | -8.64         | 0.05                 | 511305.70           | 720520.76          | MWD (MWD Svy) |         |
| 7571.00                                                              | 0.70        | 227.45    | 7569.25        | -1.36               | -9.58               | -9.58         | 0.18                 | 511305.04           | 720519.82          | MWD (MWD Svy) |         |

## 5D Survey Report

| Survey Points (Relative to Site centre, TVD relative to Drill Floor) |            |           |                |                     |                     |               |                       |                     |                    |               |         |
|----------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------|-----------------------|---------------------|--------------------|---------------|---------|
| MD<br>(US ft)                                                        | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(ft/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Survey Tool   | Comment |
| 7665.00                                                              | 0.76       | 226.28    | 7663.24        | -2.18               | -10.45              | -10.46        | 0.07                  | 511304.22           | 720518.95          | MWD (MWD Svy) |         |
| 7760.00                                                              | 0.84       | 225.04    | 7758.23        | -3.11               | -11.40              | -11.42        | 0.09                  | 511303.29           | 720518.00          | MWD (MWD Svy) |         |
| 7854.00                                                              | 0.53       | 200.45    | 7852.23        | -4.01               | -12.04              | -12.06        | 0.45                  | 511302.39           | 720517.36          | MWD (MWD Svy) |         |
| 7949.00                                                              | 0.41       | 169.21    | 7947.22        | -4.75               | -12.13              | -12.15        | 0.29                  | 511301.65           | 720517.27          | MWD (MWD Svy) |         |
| 8044.00                                                              | 0.47       | 120.23    | 8042.22        | -5.28               | -11.73              | -11.76        | 0.39                  | 511301.12           | 720517.67          | MWD (MWD Svy) |         |
| 8138.00                                                              | 0.70       | 105.09    | 8136.22        | -5.62               | -10.84              | -10.87        | 0.29                  | 511300.78           | 720518.56          | MWD (MWD Svy) |         |
| 8233.00                                                              | 0.70       | 101.31    | 8231.21        | -5.89               | -9.71               | -9.74         | 0.05                  | 511300.51           | 720519.69          | MWD (MWD Svy) |         |
| 8327.00                                                              | 0.56       | 111.82    | 8325.20        | -6.17               | -8.72               | -8.76         | 0.19                  | 511300.23           | 720520.68          | MWD (MWD Svy) |         |
| 8422.00                                                              | 0.56       | 137.92    | 8420.20        | -6.69               | -7.98               | -8.02         | 0.27                  | 511299.71           | 720521.42          | MWD (MWD Svy) |         |
| 8517.00                                                              | 0.66       | 171.67    | 8515.19        | -7.58               | -7.59               | -7.63         | 0.39                  | 511298.82           | 720521.81          | MWD (MWD Svy) |         |
| 8611.00                                                              | 0.70       | 174.81    | 8609.19        | -8.68               | -7.46               | -7.51         | 0.06                  | 511297.72           | 720521.94          | MWD (MWD Svy) |         |
| 8706.00                                                              | 0.55       | 180.75    | 8704.18        | -9.72               | -7.41               | -7.47         | 0.17                  | 511296.68           | 720521.99          | MWD (MWD Svy) |         |
| 8800.00                                                              | 0.49       | 213.46    | 8798.18        | -10.50              | -7.64               | -7.70         | 0.32                  | 511295.90           | 720521.76          | MWD (MWD Svy) |         |
| 8895.00                                                              | 0.80       | 208.48    | 8893.17        | -11.43              | -8.18               | -8.24         | 0.33                  | 511294.97           | 720521.22          | MWD (MWD Svy) |         |
| 8989.00                                                              | 1.12       | 225.36    | 8987.16        | -12.65              | -9.15               | -9.22         | 0.45                  | 511293.75           | 720520.25          | MWD (MWD Svy) |         |
| 9084.00                                                              | 1.64       | 270.80    | 9082.13        | -13.28              | -11.17              | -11.24        | 1.23                  | 511293.12           | 720518.23          | MWD (MWD Svy) |         |
| 9179.00                                                              | 2.10       | 266.71    | 9177.08        | -13.36              | -14.26              | -14.34        | 0.50                  | 511293.04           | 720515.14          | MWD (MWD Svy) |         |
| 9273.00                                                              | 1.63       | 291.52    | 9271.03        | -12.97              | -17.23              | -17.30        | 0.98                  | 511293.43           | 720512.17          | MWD (MWD Svy) |         |
| 9368.00                                                              | 1.67       | 296.66    | 9366.00        | -11.85              | -19.72              | -19.79        | 0.16                  | 511294.55           | 720509.68          | MWD (MWD Svy) |         |
| 9490.00                                                              | 1.84       | 295.52    | 9487.94        | -10.21              | -23.08              | -23.13        | 0.14                  | 511296.19           | 720506.32          | MWD (MWD Svy) |         |
| 9585.00                                                              | 1.85       | 297.53    | 9582.89        | -8.85               | -25.81              | -25.86        | 0.07                  | 511297.55           | 720503.59          | MWD (MWD Svy) |         |
| 9679.00                                                              | 1.50       | 293.13    | 9676.85        | -7.66               | -28.29              | -28.33        | 0.40                  | 511298.74           | 720501.11          | MWD (MWD Svy) |         |
| 9773.00                                                              | 1.50       | 279.49    | 9770.82        | -6.98               | -30.64              | -30.67        | 0.38                  | 511299.42           | 720498.76          | MWD (MWD Svy) |         |
| 9868.00                                                              | 1.44       | 282.06    | 9865.79        | -6.52               | -33.03              | -33.06        | 0.09                  | 511299.88           | 720496.37          | MWD (MWD Svy) |         |
| 9931.00                                                              | 1.36       | 274.35    | 9928.77        | -6.30               | -34.55              | -34.58        | 0.32                  | 511300.10           | 720494.85          | MWD (MWD Svy) |         |
| 9963.00                                                              | 1.34       | 275.46    | 9960.76        | -6.23               | -35.30              | -35.33        | 0.10                  | 511300.17           | 720494.10          | MWD (MWD Svy) |         |
| 9994.00                                                              | 0.76       | 284.79    | 9991.75        | -6.15               | -35.86              | -35.89        | 1.94                  | 511300.25           | 720493.54          | MWD (MWD Svy) |         |
| 10026.00                                                             | 1.74       | 55.94     | 10023.75       | -5.82               | -35.66              | -35.69        | 7.23                  | 511300.58           | 720493.74          | MWD (MWD Svy) |         |
| 10057.00                                                             | 3.58       | 76.72     | 10054.71       | -5.34               | -34.33              | -34.36        | 6.61                  | 511301.06           | 720495.07          | MWD (MWD Svy) |         |
| 10152.00                                                             | 8.66       | 81.95     | 10149.14       | -3.65               | -24.36              | -24.37        | 5.37                  | 511302.75           | 720505.04          | MWD (MWD Svy) |         |
| 10246.00                                                             | 11.93      | 94.44     | 10241.63       | -3.41               | -7.66               | -7.67         | 4.19                  | 511302.99           | 720521.74          | MWD (MWD Svy) |         |
| 10341.00                                                             | 20.83      | 86.06     | 10332.69       | -3.01               | 19.04               | 19.03         | 9.67                  | 511303.39           | 720548.44          | MWD (MWD Svy) |         |
| 10435.00                                                             | 31.33      | 85.02     | 10417.00       | 0.27                | 60.18               | 60.18         | 11.18                 | 511306.67           | 720589.58          | MWD (MWD Svy) |         |
| 10530.00                                                             | 40.02      | 87.54     | 10494.11       | 3.73                | 115.41              | 115.43        | 9.28                  | 511310.13           | 720644.81          | MWD (MWD Svy) |         |
| 10624.00                                                             | 45.92      | 87.13     | 10562.86       | 6.72                | 179.38              | 179.42        | 6.28                  | 511313.12           | 720708.78          | MWD (MWD Svy) |         |

## 5D Survey Report

| Survey Points (Relative to Site centre, TVD relative to Drill Floor) |            |           |                |                     |                     |               |                       |                     |                    |               |         |
|----------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------|-----------------------|---------------------|--------------------|---------------|---------|
| ID<br>(US ft)                                                        | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N Offset<br>(US ft) | E Offset<br>(US ft) | VS<br>(US ft) | PLS<br>(ft/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Survey Tool   | Comment |
| 10719.00                                                             | 51.29      | 87.80     | 10625.65       | 9.85                | 250.55              | 250.60        | 5.68                  | 511316.25           | 720779.95          | MWD (MWD Svy) |         |
| 10813.00                                                             | 57.84      | 89.32     | 10680.12       | 11.74               | 327.07              | 327.13        | 7.09                  | 511318.14           | 720856.47          | MWD (MWD Svy) |         |
| 10908.00                                                             | 68.20      | 90.56     | 10723.17       | 11.78               | 411.62              | 411.67        | 10.97                 | 511318.18           | 720941.02          | MWD (MWD Svy) |         |
| 11002.00                                                             | 73.76      | 90.10     | 10753.79       | 11.28               | 500.45              | 500.50        | 5.93                  | 511317.68           | 721029.85          | MWD (MWD Svy) |         |
| 11097.00                                                             | 75.57      | 90.06     | 10778.91       | 11.15               | 592.06              | 592.11        | 1.91                  | 511317.55           | 721121.46          | MWD (MWD Svy) |         |
| 11128.00                                                             | 79.38      | 89.44     | 10785.63       | 11.28               | 622.32              | 622.37        | 12.44                 | 511317.68           | 721151.72          | MWD (MWD Svy) |         |
| 11191.00                                                             | 86.43      | 89.07     | 10793.41       | 12.10               | 684.79              | 684.85        | 11.21                 | 511318.50           | 721214.19          | MWD (MWD Svy) |         |
| 11286.00                                                             | 88.11      | 88.22     | 10797.93       | 14.34               | 779.65              | 779.72        | 1.98                  | 511320.74           | 721309.05          | MWD (MWD Svy) |         |
| 11380.00                                                             | 89.86      | 88.82     | 10799.60       | 16.77               | 873.60              | 873.68        | 1.97                  | 511323.17           | 721403.00          | MWD (MWD Svy) |         |
| 11475.00                                                             | 91.40      | 88.77     | 10798.56       | 18.77               | 968.57              | 968.66        | 1.62                  | 511325.17           | 721497.97          | MWD (MWD Svy) |         |
| 11569.00                                                             | 92.31      | 88.96     | 10795.51       | 20.63               | 1062.50             | 1062.60       | 0.99                  | 511327.03           | 721591.90          | MWD (MWD Svy) |         |
| 11664.00                                                             | 91.47      | 90.14     | 10792.38       | 21.37               | 1157.45             | 1157.54       | 1.52                  | 511327.77           | 721686.85          | MWD (MWD Svy) |         |
| 11758.00                                                             | 91.26      | 90.34     | 10790.14       | 20.98               | 1251.42             | 1251.51       | 0.31                  | 511327.38           | 721780.82          | MWD (MWD Svy) |         |
| 11853.00                                                             | 89.79      | 91.27     | 10789.27       | 19.64               | 1346.40             | 1346.49       | 1.83                  | 511326.04           | 721875.80          | MWD (MWD Svy) |         |
| 11948.00                                                             | 87.62      | 91.44     | 10791.42       | 17.40               | 1441.34             | 1441.42       | 2.29                  | 511323.80           | 721970.74          | MWD (MWD Svy) |         |
| 12042.00                                                             | 88.46      | 91.10     | 10794.63       | 15.32               | 1535.27             | 1535.33       | 0.96                  | 511321.72           | 722064.67          | MWD (MWD Svy) |         |
| 12137.00                                                             | 87.83      | 90.40     | 10797.71       | 14.07               | 1630.21             | 1630.26       | 0.99                  | 511320.47           | 722159.61          | MWD (MWD Svy) |         |
| 12231.00                                                             | 88.25      | 90.18     | 10800.92       | 13.60               | 1724.15             | 1724.20       | 0.50                  | 511320.00           | 722253.55          | MWD (MWD Svy) |         |
| 12283.00                                                             | 88.81      | 88.23     | 10802.26       | 14.32               | 1776.12             | 1776.18       | 3.90                  | 511320.72           | 722305.52          | MWD (MWD Svy) |         |
| 12378.00                                                             | 89.87      | 88.67     | 10803.35       | 16.89               | 1871.08             | 1871.15       | 1.21                  | 511323.29           | 722400.48          | MWD (MWD Svy) |         |
| 12472.00                                                             | 89.25      | 90.34     | 10804.07       | 17.70               | 1965.07             | 1965.14       | 1.90                  | 511324.10           | 722494.47          | MWD (MWD Svy) |         |
| 12567.00                                                             | 90.31      | 90.69     | 10804.44       | 16.85               | 2060.07             | 2060.13       | 1.18                  | 511323.25           | 722589.47          | MWD (MWD Svy) |         |
| 12661.00                                                             | 88.11      | 90.25     | 10805.73       | 16.08               | 2154.05             | 2154.10       | 2.39                  | 511322.48           | 722683.45          | MWD (MWD Svy) |         |
| 12756.00                                                             | 88.46      | 90.17     | 10808.58       | 15.73               | 2249.00             | 2249.06       | 0.38                  | 511322.13           | 722778.40          | MWD (MWD Svy) |         |
| 12851.00                                                             | 88.90      | 90.08     | 10810.76       | 15.52               | 2343.98             | 2344.03       | 0.47                  | 511321.92           | 722873.38          | MWD (MWD Svy) |         |
| 12945.00                                                             | 88.90      | 90.08     | 10812.57       | 15.39               | 2437.96             | 2438.01       | 0.00                  | 511321.79           | 722967.36          | MWD (MWD Svy) |         |
| 13040.00                                                             | 89.52      | 89.73     | 10813.88       | 15.55               | 2532.95             | 2533.00       | 0.75                  | 511321.95           | 723062.35          | MWD (MWD Svy) |         |
| 13134.00                                                             | 90.04      | 89.38     | 10814.24       | 16.28               | 2626.95             | 2627.00       | 0.67                  | 511322.68           | 723156.35          | MWD (MWD Svy) |         |
| 13229.00                                                             | 90.48      | 89.46     | 10813.81       | 17.24               | 2721.94             | 2722.00       | 0.47                  | 511323.64           | 723251.34          | MWD (MWD Svy) |         |
| 13323.00                                                             | 88.90      | 89.38     | 10814.32       | 18.19               | 2815.93             | 2815.99       | 1.68                  | 511324.59           | 723345.33          | MWD (MWD Svy) |         |
| 13418.00                                                             | 88.55      | 89.11     | 10816.43       | 19.44               | 2910.90             | 2910.96       | 0.47                  | 511325.84           | 723440.30          | MWD (MWD Svy) |         |
| 13512.00                                                             | 89.16      | 89.11     | 10818.31       | 20.90               | 3004.87             | 3004.94       | 0.65                  | 511327.30           | 723534.27          | MWD (MWD Svy) |         |
| 13607.00                                                             | 89.69      | 89.64     | 10819.26       | 21.94               | 3099.86             | 3099.93       | 0.79                  | 511328.34           | 723629.26          | MWD (MWD Svy) |         |
| 13701.00                                                             | 90.57      | 89.29     | 10819.05       | 22.81               | 3193.85             | 3193.93       | 1.01                  | 511329.21           | 723723.25          | MWD (MWD Svy) |         |
| 13796.00                                                             | 89.87      | 89.73     | 10818.68       | 23.63               | 3288.85             | 3288.93       | 0.87                  | 511330.03           | 723818.25          | MWD (MWD Svy) |         |

## 5D Survey Report

| Survey Points (Relative to Site centre, TVD relative to Drill Floor) |            |           |                |                     |                     |               |                      |                     |                    |               |              |
|----------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------|----------------------|---------------------|--------------------|---------------|--------------|
| MD<br>(US ft)                                                        | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N Offset<br>(US ft) | E Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(%/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Survey Tool   | Comment      |
| 13891.00                                                             | 88.46      | 89.55     | 10820.07       | 24.22               | 3383.83             | 3383.92       | 1.50                 | 511330.62           | 723913.23          | MWD (MWD Svy) |              |
| 14009.00                                                             | 87.93      | 89.73     | 10823.79       | 24.96               | 3501.77             | 3501.86       | 0.47                 | 511331.36           | 724031.17          | MWD (MWD Svy) |              |
| 14103.00                                                             | 85.74      | 88.32     | 10828.98       | 26.56               | 3595.61             | 3595.70       | 2.77                 | 511332.96           | 724125.01          | MWD (MWD Svy) |              |
| 14198.00                                                             | 85.30      | 87.53     | 10836.40       | 29.99               | 3690.25             | 3690.36       | 0.95                 | 511336.39           | 724219.65          | MWD (MWD Svy) |              |
| 14292.00                                                             | 86.09      | 87.00     | 10843.45       | 34.46               | 3783.88             | 3784.01       | 1.01                 | 511340.86           | 724313.28          | MWD (MWD Svy) |              |
| 14387.00                                                             | 86.53      | 87.35     | 10849.57       | 39.13               | 3878.57             | 3878.72       | 0.59                 | 511345.53           | 724407.97          | MWD (MWD Svy) |              |
| 14481.00                                                             | 88.90      | 90.52     | 10853.31       | 40.88               | 3972.46             | 3972.62       | 4.21                 | 511347.28           | 724501.86          | MWD (MWD Svy) |              |
| 14575.00                                                             | 89.87      | 92.19     | 10854.32       | 38.66               | 4066.42             | 4066.57       | 2.05                 | 511345.06           | 724595.82          | MWD (MWD Svy) |              |
| 14670.00                                                             | 90.22      | 91.92     | 10854.25       | 35.25               | 4161.36             | 4161.49       | 0.47                 | 511341.65           | 724690.76          | MWD (MWD Svy) |              |
| 14764.00                                                             | 90.48      | 92.63     | 10853.68       | 31.52               | 4255.29             | 4255.39       | 0.80                 | 511337.92           | 724784.69          | MWD (MWD Svy) |              |
| 14859.00                                                             | 88.81      | 90.61     | 10854.26       | 28.83               | 4350.24             | 4350.33       | 2.76                 | 511335.23           | 724879.64          | MWD (MWD Svy) |              |
| 14953.00                                                             | 88.81      | 90.25     | 10856.22       | 28.13               | 4444.21             | 4444.30       | 0.38                 | 511334.53           | 724973.61          | MWD (MWD Svy) |              |
| 15048.00                                                             | 88.99      | 89.64     | 10858.04       | 28.22               | 4539.20             | 4539.28       | 0.67                 | 511334.62           | 725068.60          | MWD (MWD Svy) |              |
| 15143.00                                                             | 89.08      | 89.11     | 10859.64       | 29.25               | 4634.18             | 4634.27       | 0.57                 | 511335.65           | 725163.58          | MWD (MWD Svy) |              |
| 15237.00                                                             | 89.34      | 88.14     | 10860.94       | 31.51               | 4728.14             | 4728.24       | 1.07                 | 511337.91           | 725257.54          | MWD (MWD Svy) |              |
| 15274.00                                                             | 89.25      | 87.79     | 10861.39       | 32.82               | 4765.11             | 4765.22       | 0.98                 | 511339.22           | 725294.51          | MWD (MWD Svy) | Last WFT MWD |
| 15325.00                                                             | 89.25      | 87.79     | 10862.06       | 34.79               | 4816.07             | 4816.19       | 0.00                 | 511341.19           | 725345.47          | MWD (MWD Svy) | Proj To Bit  |