



## Directional Survey

|                                            |                        |                                  |                                     |                               |
|--------------------------------------------|------------------------|----------------------------------|-------------------------------------|-------------------------------|
| Sub-Division<br>DELAWARE BASIN             | County<br>LEA          | Field Name<br>JOHNSON RANCH      | Region<br>DELAWARE BASIN EAST       | State/Province<br>NM          |
| Surface Legal Location<br>Sec 26 T23S R33E | API/Well<br>3002541961 | Latitude (°)<br>32° 16' 7.821" N | Longitude (°)<br>103° 32' 20.289" W | Ground Elev M...<br>3,652.40  |
|                                            |                        |                                  |                                     | Orig KB Elev (ft)<br>3,677.40 |
|                                            |                        |                                  |                                     | Tubing Head Elevation (ft)    |

|           |                     |                       |                      |                                        |
|-----------|---------------------|-----------------------|----------------------|----------------------------------------|
| Wellbores | Wellbore Name<br>OH | Parent Wellbore<br>OH | SAP Well ID<br>37871 | Vertical Section Direction (°)<br>3.61 |
|-----------|---------------------|-----------------------|----------------------|----------------------------------------|

|                        |                  |                  |                              |
|------------------------|------------------|------------------|------------------------------|
| Kick Offs & Key Depths | Date<br>2/3/2015 | Type<br>Kick Off | Top Depth (ftKB)<br>10,640.0 |
|------------------------|------------------|------------------|------------------------------|

|                                                      |                    |                 |                                                        |
|------------------------------------------------------|--------------------|-----------------|--------------------------------------------------------|
| Actual Deviation Survey<br>WEATHERFORD, Proposed? No | Definitive?<br>Yes | Proposed?<br>No | Proposed Deviation Survey<br>WEATHERFORD, Proposed? No |
|------------------------------------------------------|--------------------|-----------------|--------------------------------------------------------|

| Deviation Survey         |                           |                                |                            |                       |                        |
|--------------------------|---------------------------|--------------------------------|----------------------------|-----------------------|------------------------|
| Date<br>1/22/2015        |                           | Description<br>WEATHERFORD     |                            |                       |                        |
| MD Tie In (ftKB)<br>0.00 | TVD Tie In (ftKB)<br>0.00 | Inclination Tie In (°)<br>0.00 | Azimuth Tie In (°)<br>0.00 | NSTie In (ft)<br>0.00 | EW Tie In (ft)<br>0.00 |

| Survey Data |           |          |         |            |         |          |          |               |             |                |
|-------------|-----------|----------|---------|------------|---------|----------|----------|---------------|-------------|----------------|
| Date        | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft) | N/S (ft) | E/W (ft) | DLS (°/100ft) | Survey Tool | Survey Company |
| 1/22/2015   | 166.00    | 0.40     | 298.77  | 166.00     | 0.25    | 0.28     | -0.51    | 0.24          | SS          | EXTREME        |
| 1/22/2015   | 273.00    | 0.62     | 293.14  | 272.99     | 0.60    | 0.69     | -1.37    | 0.21          | SS          | EXTREME        |
| 1/22/2015   | 331.00    | 0.48     | 279.96  | 330.99     | 0.73    | 0.85     | -1.90    | 0.32          | SS          | EXTREME        |
| 1/22/2015   | 449.00    | 0.48     | 283.87  | 448.99     | 0.87    | 1.06     | -2.86    | 0.03          | SS          | EXTREME        |
| 1/22/2015   | 635.00    | 0.79     | 275.87  | 634.98     | 1.06    | 1.37     | -4.89    | 0.17          | SS          | EXTREME        |
| 1/22/2015   | 695.00    | 0.62     | 269.45  | 694.97     | 1.06    | 1.41     | -5.63    | 0.31          | SS          | EXTREME        |
| 1/22/2015   | 786.00    | 0.48     | 270.25  | 785.97     | 1.00    | 1.41     | -6.50    | 0.15          | SS          | EXTREME        |
| 1/22/2015   | 878.00    | 0.62     | 270.25  | 877.96     | 0.95    | 1.41     | -7.39    | 0.15          | SS          | EXTREME        |
| 1/22/2015   | 967.00    | 0.62     | 282.68  | 966.96     | 0.99    | 1.52     | -8.34    | 0.15          | SS          | EXTREME        |
| 1/22/2015   | 1,065.00  | 0.48     | 263.48  | 1,064.95   | 1.00    | 1.59     | -9.26    | 0.23          | SS          | EXTREME        |
| 1/22/2015   | 1,137.00  | 0.31     | 269.54  | 1,136.95   | 0.94    | 1.56     | -9.76    | 0.24          | SS          | EXTREME        |
| 1/22/2015   | 1,310.00  | 0.31     | 234.08  | 1,309.95   | 0.61    | 1.28     | -10.60   | 0.11          | SS          | EXTREME        |
| 1/26/2015   | 1,433.00  | 0.25     | 267.64  | 1,432.95   | 0.37    | 1.07     | -11.14   | 0.14          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,541.00  | 0.29     | 298.90  | 1,540.95   | 0.46    | 1.19     | -11.62   | 0.14          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,604.00  | 0.16     | 305.80  | 1,603.95   | 0.57    | 1.32     | -11.83   | 0.21          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,699.00  | 0.25     | 7.63    | 1,698.95   | 0.85    | 1.60     | -11.91   | 0.24          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,793.00  | 0.07     | 329.12  | 1,792.95   | 1.10    | 1.86     | -11.91   | 0.21          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,887.00  | 0.22     | 12.79   | 1,886.94   | 1.33    | 2.08     | -11.90   | 0.19          | MWD         | WEATHERFORD    |
| 1/26/2015   | 1,981.00  | 0.14     | 219.68  | 1,980.94   | 1.41    | 2.17     | -11.93   | 0.37          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,076.00  | 0.16     | 212.69  | 2,075.94   | 1.20    | 1.97     | -12.08   | 0.03          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,170.00  | 0.22     | 148.05  | 2,169.94   | 0.94    | 1.71     | -12.05   | 0.22          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,264.00  | 0.10     | 47.70   | 2,263.94   | 0.86    | 1.61     | -11.90   | 0.27          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,359.00  | 0.22     | 59.89   | 2,358.94   | 1.02    | 1.75     | -11.68   | 0.13          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,454.00  | 0.28     | 68.27   | 2,453.94   | 1.22    | 1.93     | -11.31   | 0.07          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,548.00  | 0.10     | 100.42  | 2,547.94   | 1.31    | 2.00     | -11.01   | 0.22          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,642.00  | 0.16     | 49.07   | 2,641.94   | 1.39    | 2.07     | -10.83   | 0.13          | MWD         | WEATHERFORD    |
| 1/26/2015   | 2,737.00  | 0.64     | 42.77   | 2,736.94   | 1.89    | 2.55     | -10.37   | 0.51          | MWD         | WEATHERFORD    |
| 1/27/2015   | 2,831.00  | 0.91     | 44.64   | 2,830.93   | 2.86    | 3.47     | -9.49    | 0.29          | MWD         | WEATHERFORD    |
| 1/27/2015   | 2,926.00  | 0.94     | 52.05   | 2,925.92   | 3.95    | 4.48     | -8.35    | 0.13          | MWD         | WEATHERFORD    |
| 1/27/2015   | 3,020.00  | 0.60     | 45.48   | 3,019.91   | 4.83    | 5.30     | -7.39    | 0.37          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,114.00  | 0.50     | 44.76   | 3,113.91   | 5.50    | 5.94     | -6.75    | 0.11          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,209.00  | 0.63     | 34.40   | 3,208.90   | 6.26    | 6.66     | -6.16    | 0.17          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,303.00  | 0.38     | 13.69   | 3,302.90   | 7.01    | 7.39     | -5.79    | 0.33          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,397.00  | 0.41     | 12.37   | 3,396.89   | 7.65    | 8.02     | -5.65    | 0.03          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,492.00  | 0.10     | 348.70  | 3,491.89   | 8.07    | 8.44     | -5.59    | 0.34          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,586.00  | 0.16     | 12.25   | 3,585.89   | 8.28    | 8.65     | -5.58    | 0.08          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,680.00  | 0.16     | 18.90   | 3,679.89   | 8.53    | 8.90     | -5.51    | 0.02          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,775.00  | 0.50     | 78.96   | 3,774.89   | 8.77    | 9.10     | -5.06    | 0.47          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,869.00  | 1.04     | 82.61   | 3,868.88   | 9.03    | 9.29     | -3.81    | 0.58          | MWD         | WEATHERFORD    |
| 1/28/2015   | 3,964.00  | 1.98     | 91.28   | 3,963.85   | 9.26    | 9.37     | -1.32    | 1.02          | MWD         | WEATHERFORD    |
| 1/28/2015   | 4,058.00  | 2.66     | 93.00   | 4,057.77   | 9.35    | 9.22     | 2.49     | 0.73          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,153.00  | 3.60     | 90.76   | 4,152.63   | 9.53    | 9.06     | 7.67     | 1.00          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,247.00  | 4.30     | 87.69   | 4,246.40   | 10.04   | 9.16     | 14.14    | 0.78          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,342.00  | 5.15     | 83.44   | 4,341.08   | 11.16   | 9.79     | 21.94    | 0.97          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,436.00  | 5.64     | 89.96   | 4,434.67   | 12.19   | 10.28    | 30.75    | 0.83          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,531.00  | 5.64     | 96.56   | 4,529.21   | 12.25   | 9.75     | 40.05    | 0.68          | MWD         | WEATHERFORD    |
| 1/29/2015   | 4,625.00  | 5.32     | 96.33   | 4,622.78   | 11.81   | 8.74     | 48.97    | 0.34          | MWD         | WEATHERFORD    |

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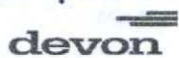


## Directional Survey

|                                            |                     |                                  |                                     |                               |
|--------------------------------------------|---------------------|----------------------------------|-------------------------------------|-------------------------------|
| Sub-Division<br>DELAWARE BASIN             | County<br>LEA       | Field Name<br>JOHNSON RANCH      | Region<br>DELAWARE BASIN EAST       | State/Province<br>NM          |
| Surface Legal Location<br>Sec 26 T23S R33E | APLUM<br>3002541981 | Latitude (")<br>32° 16' 7.821" N | Longitude (")<br>103° 32' 20.289" W | Ground Elev M.<br>3,652.40    |
|                                            |                     |                                  |                                     | Orig KB Elev (ft)<br>3,677.40 |
|                                            |                     |                                  |                                     | Tubing Head Elevation (ft)    |

## Survey Data

| Date      | MD (ftKB) | Incl (") | Azm (") | TVD (ftKB) | VS (ft) | N/S (ft) | E/W (ft) | DLS<br>("/100ft) | Survey<br>Tool | Survey Company |
|-----------|-----------|----------|---------|------------|---------|----------|----------|------------------|----------------|----------------|
| 1/29/2015 | 4,720.00  | 4.65     | 93.27   | 4,717.42   | 11.62   | 8.04     | 57.19    | 0.76             | MWD            | WEATHERFORD    |
| 1/29/2015 | 4,814.00  | 4.96     | 91.95   | 4,811.09   | 11.76   | 7.68     | 65.06    | 0.35             | MWD            | WEATHERFORD    |
| 1/29/2015 | 4,909.00  | 4.84     | 92.11   | 4,905.74   | 11.99   | 7.39     | 73.17    | 0.13             | MWD            | WEATHERFORD    |
| 1/29/2015 | 5,003.00  | 4.98     | 94.43   | 4,999.39   | 12.03   | 6.93     | 81.20    | 0.26             | MWD            | WEATHERFORD    |
| 1/29/2015 | 5,097.00  | 4.58     | 93.34   | 5,093.07   | 11.99   | 6.40     | 89.01    | 0.44             | MWD            | WEATHERFORD    |
| 1/29/2015 | 5,187.00  | 4.07     | 93.25   | 5,182.81   | 12.03   | 6.01     | 95.79    | 0.57             | MWD            | WEATHERFORD    |
| 2/4/2015  | 5,256.00  | 3.67     | 95.09   | 5,251.65   | 11.99   | 5.67     | 100.44   | 0.61             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,295.00  | 3.45     | 96.32   | 5,290.58   | 11.90   | 5.43     | 102.84   | 0.60             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,390.00  | 4.15     | 94.52   | 5,385.37   | 11.71   | 4.85     | 109.11   | 0.75             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,484.00  | 5.35     | 89.36   | 5,479.04   | 11.98   | 4.63     | 116.89   | 1.35             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,579.00  | 5.44     | 90.13   | 5,573.62   | 12.58   | 4.67     | 125.82   | 0.12             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,673.00  | 5.41     | 88.98   | 5,667.20   | 13.21   | 4.74     | 134.70   | 0.12             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,768.00  | 5.21     | 91.40   | 5,761.80   | 13.74   | 4.71     | 143.49   | 0.32             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,862.00  | 5.07     | 90.38   | 5,855.42   | 14.13   | 4.58     | 151.91   | 0.18             | MWD            | WEATHERFORD    |
| 1/31/2015 | 5,957.00  | 4.91     | 90.92   | 5,950.06   | 14.56   | 4.49     | 160.18   | 0.18             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,051.00  | 4.68     | 91.50   | 6,043.73   | 14.89   | 4.32     | 168.03   | 0.25             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,146.00  | 5.31     | 87.51   | 6,138.37   | 15.50   | 4.41     | 176.30   | 0.76             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,240.00  | 5.07     | 86.71   | 6,231.98   | 16.46   | 4.84     | 184.79   | 0.27             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,335.00  | 4.63     | 87.30   | 6,326.64   | 17.39   | 5.26     | 192.81   | 0.47             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,429.00  | 5.48     | 89.11   | 6,420.27   | 18.16   | 5.51     | 201.09   | 0.92             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,524.00  | 5.20     | 89.11   | 6,514.86   | 18.85   | 5.64     | 209.93   | 0.29             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,618.00  | 5.20     | 89.27   | 6,608.48   | 19.51   | 5.77     | 218.45   | 0.02             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,712.00  | 4.90     | 91.23   | 6,702.11   | 20.00   | 5.73     | 226.72   | 0.37             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,807.00  | 4.58     | 91.02   | 6,796.79   | 20.34   | 5.58     | 234.57   | 0.34             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,901.00  | 5.51     | 88.01   | 6,890.42   | 20.95   | 5.67     | 242.83   | 1.03             | MWD            | WEATHERFORD    |
| 1/31/2015 | 6,996.00  | 5.15     | 87.32   | 6,985.01   | 21.86   | 6.03     | 251.65   | 0.38             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,090.00  | 4.96     | 87.87   | 7,078.64   | 22.73   | 6.37     | 259.92   | 0.21             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,185.00  | 4.70     | 89.11   | 7,173.31   | 23.44   | 6.59     | 267.92   | 0.29             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,279.00  | 5.56     | 88.82   | 7,266.93   | 24.13   | 6.74     | 276.32   | 0.92             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,374.00  | 5.21     | 90.88   | 7,361.51   | 24.72   | 6.77     | 285.24   | 0.42             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,468.00  | 5.19     | 91.29   | 7,455.12   | 25.09   | 6.61     | 293.76   | 0.04             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,563.00  | 4.83     | 91.12   | 7,549.76   | 25.44   | 6.43     | 302.05   | 0.38             | MWD            | WEATHERFORD    |
| 1/31/2015 | 7,657.00  | 6.02     | 89.50   | 7,643.34   | 25.96   | 6.40     | 310.94   | 1.28             | MWD            | WEATHERFORD    |
| 2/1/2015  | 7,752.00  | 5.63     | 92.55   | 7,737.85   | 26.41   | 6.24     | 320.57   | 0.52             | MWD            | WEATHERFORD    |
| 2/1/2015  | 7,846.00  | 5.24     | 93.90   | 7,831.42   | 26.47   | 5.74     | 329.46   | 0.44             | MWD            | WEATHERFORD    |
| 2/1/2015  | 7,941.00  | 5.17     | 96.34   | 7,926.03   | 26.25   | 4.97     | 338.04   | 0.24             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,036.00  | 4.89     | 99.90   | 8,020.67   | 25.60   | 3.80     | 346.29   | 0.44             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,130.00  | 5.47     | 95.42   | 8,114.28   | 25.02   | 2.69     | 354.69   | 0.75             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,225.00  | 5.34     | 95.53   | 8,208.86   | 24.73   | 1.84     | 363.60   | 0.14             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,319.00  | 5.05     | 98.88   | 8,302.47   | 24.20   | 0.78     | 372.04   | 0.45             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,414.00  | 4.78     | 101.66  | 8,397.12   | 23.26   | -0.67    | 380.05   | 0.38             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,508.00  | 5.31     | 98.80   | 8,490.76   | 22.32   | -2.13    | 388.18   | 0.62             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,603.00  | 5.28     | 100.81  | 8,585.36   | 21.37   | -3.62    | 396.82   | 0.20             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,697.00  | 5.05     | 103.68  | 8,678.97   | 20.11   | -5.41    | 405.09   | 0.37             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,792.00  | 4.95     | 105.81  | 8,773.61   | 18.51   | -7.51    | 413.10   | 0.22             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,886.00  | 4.61     | 105.43  | 8,867.29   | 16.88   | -9.62    | 420.64   | 0.36             | MWD            | WEATHERFORD    |
| 2/1/2015  | 8,981.00  | 5.05     | 96.84   | 8,961.95   | 15.86   | -11.14   | 428.47   | 0.89             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,075.00  | 4.83     | 96.45   | 9,055.60   | 15.43   | -12.07   | 436.51   | 0.24             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,170.00  | 4.34     | 98.82   | 9,150.30   | 14.91   | -13.08   | 444.04   | 0.55             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,264.00  | 3.96     | 96.41   | 9,244.05   | 14.43   | -13.98   | 450.78   | 0.44             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,359.00  | 3.94     | 96.61   | 9,338.82   | 14.10   | -14.73   | 457.28   | 0.03             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,453.00  | 3.74     | 103.59  | 9,432.61   | 13.40   | -15.82   | 463.47   | 0.54             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,547.00  | 3.73     | 106.39  | 9,526.41   | 12.19   | -17.40   | 469.38   | 0.19             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,642.00  | 3.01     | 111.17  | 9,621.25   | 10.75   | -19.17   | 474.67   | 0.81             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,737.00  | 2.68     | 117.62  | 9,716.13   | 9.10    | -21.10   | 478.97   | 0.48             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,831.00  | 2.50     | 116.05  | 9,810.04   | 7.42    | -23.02   | 482.75   | 0.21             | MWD            | WEATHERFORD    |
| 2/2/2015  | 9,926.00  | 2.25     | 122.96  | 9,904.95   | 5.71    | -24.95   | 486.18   | 0.40             | MWD            | WEATHERFORD    |
| 2/2/2015  | 10,020.00 | 2.08     | 127.62  | 9,998.89   | 3.86    | -26.99   | 489.08   | 0.26             | MWD            | WEATHERFORD    |



## Directional Survey

|                                            |                        |                                  |                                     |                               |
|--------------------------------------------|------------------------|----------------------------------|-------------------------------------|-------------------------------|
| Sub-Division<br>DELAWARE BASIN             | County<br>LEA          | Field Name<br>JOHNSON RANCH      | Region<br>DELAWARE BASIN EAST       | State/Province<br>NM          |
| Surface Legal Location<br>Sec 26 T23S R33E | APN/Well<br>3002541961 | Latitude (")<br>32° 16' 7.821" N | Longitude (")<br>103° 32' 20.289" W | Ground Elev M...<br>3,652.40  |
|                                            |                        |                                  |                                     | Orig KB Elev (ft)<br>3,677.40 |
|                                            |                        |                                  |                                     | Tubing Head Elevation (ft)    |

## Survey Data

| Date     | MD (ftKB) | Incl (") | Azmi (") | TVD (ftKB) | VS (ft)  | N/S (ft) | E/W (ft) | DLS<br>("100ft) | Survey<br>Tool | Survey Company |
|----------|-----------|----------|----------|------------|----------|----------|----------|-----------------|----------------|----------------|
| 2/2/2015 | 10,115.00 | 2.26     | 129.01   | 10,093.82  | 1.81     | -29.22   | 491.90   | 0.20            | MWD            | WEATHERFORD    |
| 2/3/2015 | 10,209.00 | 2.45     | 140.02   | 10,187.74  | -0.72    | -31.93   | 494.63   | 0.52            | MWD            | WEATHERFORD    |
| 2/3/2015 | 10,304.00 | 2.47     | 143.38   | 10,282.65  | -3.76    | -35.13   | 497.16   | 0.15            | MWD            | WEATHERFORD    |
| 2/3/2015 | 10,398.00 | 2.59     | 141.60   | 10,376.56  | -6.88    | -38.42   | 499.69   | 0.15            | MWD            | WEATHERFORD    |
| 2/3/2015 | 10,493.00 | 3.40     | 134.46   | 10,471.43  | -10.32   | -42.07   | 503.03   | 0.94            | MWD            | WEATHERFORD    |
| 2/3/2015 | 10,577.00 | 3.76     | 132.15   | 10,555.27  | -13.66   | -45.67   | 506.85   | 0.46            | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,652.00 | 1.09     | 104.50   | 10,630.19  | -15.33   | -47.50   | 509.36   | 3.79            | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,683.00 | 3.37     | 14.36    | 10,661.17  | -14.49   | -46.69   | 509.88   | 11.43           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,715.00 | 7.06     | 13.68    | 10,693.04  | -11.63   | -43.86   | 510.57   | 11.53           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,746.00 | 10.94    | 17.56    | 10,723.65  | -6.90    | -39.21   | 511.91   | 12.66           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,778.00 | 14.85    | 20.80    | 10,754.84  | -0.03    | -32.48   | 514.29   | 12.42           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,810.00 | 18.66    | 23.01    | 10,785.47  | 8.72     | -23.93   | 517.74   | 12.07           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,841.00 | 22.51    | 23.90    | 10,814.49  | 18.97    | -13.93   | 522.09   | 12.46           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,872.00 | 26.47    | 24.61    | 10,842.69  | 30.99    | -2.22    | 527.37   | 12.81           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,904.00 | 29.67    | 26.08    | 10,870.93  | 44.97    | 11.38    | 533.83   | 10.23           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,936.00 | 32.86    | 27.64    | 10,898.28  | 60.22    | 26.19    | 541.34   | 10.28           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,967.00 | 35.96    | 27.75    | 10,923.85  | 76.21    | 41.70    | 549.48   | 10.00           | MWD            | WEATHERFORD    |
| 2/4/2015 | 10,999.00 | 39.83    | 27.86    | 10,949.10  | 94.14    | 59.08    | 558.65   | 12.10           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,031.00 | 43.32    | 26.49    | 10,973.03  | 113.60   | 77.97    | 568.33   | 11.27           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,062.00 | 46.94    | 25.95    | 10,994.90  | 133.88   | 97.68    | 578.04   | 11.74           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,094.00 | 50.68    | 25.95    | 11,015.97  | 156.15   | 119.33   | 588.57   | 11.69           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,125.00 | 54.88    | 25.68    | 11,034.72  | 179.00   | 141.54   | 599.32   | 13.57           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,157.00 | 59.34    | 24.59    | 11,052.09  | 203.99   | 165.87   | 610.72   | 14.23           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,188.00 | 63.07    | 22.64    | 11,067.02  | 229.52   | 190.76   | 621.59   | 13.23           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,220.00 | 66.29    | 19.76    | 11,080.71  | 257.08   | 217.72   | 632.04   | 12.94           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,252.00 | 68.89    | 16.96    | 11,092.91  | 285.69   | 245.79   | 641.35   | 11.46           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,283.00 | 71.28    | 14.95    | 11,103.47  | 314.16   | 273.81   | 649.36   | 9.83            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,314.00 | 73.91    | 12.72    | 11,112.74  | 343.26   | 302.53   | 656.43   | 10.91           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,346.00 | 75.94    | 11.10    | 11,121.06  | 373.84   | 332.76   | 662.80   | 8.01            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,378.00 | 78.88    | 9.53     | 11,128.04  | 404.85   | 363.49   | 668.39   | 10.36           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,409.00 | 81.21    | 7.35     | 11,133.40  | 435.27   | 393.68   | 672.87   | 10.22           | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,467.00 | 86.15    | 4.48     | 11,139.78  | 492.85   | 451.00   | 678.80   | 9.83            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,561.00 | 91.33    | 2.62     | 11,141.85  | 586.79   | 544.76   | 684.62   | 5.85            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,656.00 | 91.19    | 2.97     | 11,139.76  | 681.76   | 639.63   | 689.25   | 0.40            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,750.00 | 90.63    | 1.82     | 11,138.26  | 775.72   | 733.53   | 693.18   | 1.36            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,845.00 | 89.79    | 0.58     | 11,137.92  | 870.63   | 828.51   | 695.17   | 1.58            | MWD            | WEATHERFORD    |
| 2/4/2015 | 11,940.00 | 89.58    | 0.70     | 11,138.44  | 965.50   | 923.50   | 696.23   | 0.25            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,034.00 | 89.30    | 0.96     | 11,139.36  | 1,059.39 | 1,017.48 | 697.59   | 0.41            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,129.00 | 89.37    | 1.11     | 11,140.46  | 1,154.29 | 1,112.46 | 699.30   | 0.17            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,223.00 | 88.46    | 0.22     | 11,142.24  | 1,248.14 | 1,206.44 | 700.39   | 1.35            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,318.00 | 87.76    | 0.87     | 11,145.37  | 1,342.96 | 1,301.38 | 701.30   | 1.01            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,412.00 | 87.55    | 1.32     | 11,149.22  | 1,436.79 | 1,395.28 | 703.09   | 0.53            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,507.00 | 86.15    | 1.53     | 11,154.44  | 1,531.57 | 1,490.11 | 705.45   | 1.49            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,601.00 | 86.01    | 1.81     | 11,160.86  | 1,625.30 | 1,583.85 | 708.18   | 0.33            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,696.00 | 85.52    | 2.01     | 11,167.88  | 1,720.00 | 1,678.54 | 711.34   | 0.56            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,790.00 | 86.22    | 2.04     | 11,174.65  | 1,813.72 | 1,772.23 | 714.65   | 0.75            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,885.00 | 86.01    | 2.11     | 11,181.09  | 1,908.46 | 1,866.95 | 718.09   | 0.23            | MWD            | WEATHERFORD    |
| 2/4/2015 | 12,979.00 | 86.57    | 1.86     | 11,187.17  | 2,002.23 | 1,960.70 | 721.34   | 0.65            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,074.00 | 86.43    | 2.12     | 11,192.97  | 2,097.01 | 2,055.47 | 724.63   | 0.31            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,168.00 | 85.94    | 2.21     | 11,199.22  | 2,190.77 | 2,149.19 | 728.17   | 0.53            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,263.00 | 86.15    | 1.93     | 11,205.78  | 2,285.51 | 2,243.90 | 731.59   | 0.37            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,357.00 | 86.85    | 1.87     | 11,211.51  | 2,379.30 | 2,337.67 | 734.71   | 0.75            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,451.00 | 87.06    | 1.02     | 11,216.51  | 2,473.10 | 2,431.51 | 737.07   | 0.93            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,546.00 | 87.90    | 1.48     | 11,220.68  | 2,567.92 | 2,526.39 | 739.14   | 1.01            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,641.00 | 87.55    | 1.63     | 11,224.46  | 2,662.79 | 2,621.28 | 741.72   | 0.40            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,735.00 | 87.76    | 1.46     | 11,228.30  | 2,756.65 | 2,715.17 | 744.25   | 0.29            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,829.00 | 87.62    | 1.62     | 11,232.09  | 2,850.51 | 2,809.06 | 746.78   | 0.23            | MWD            | WEATHERFORD    |
| 2/4/2015 | 13,924.00 | 87.13    | 2.08     | 11,236.44  | 2,945.36 | 2,903.91 | 749.84   | 0.71            | MWD            | WEATHERFORD    |



## Directional Survey

|                                            |                       |                                  |                                     |                               |
|--------------------------------------------|-----------------------|----------------------------------|-------------------------------------|-------------------------------|
| Sub-Division<br>DELAWARE BASIN             | County<br>LEA         | Field Name<br>JOHNSON RANCH      | Region<br>DELAWARE BASIN EAST       | State/Province<br>NM          |
| Surface Legal Location<br>Sec 26 T23S R33E | API/UVI<br>3002541961 | Latitude (")<br>32° 16' 7.821" N | Longitude (")<br>103° 32' 20.289" W | Ground Elev M...<br>3,652.40  |
|                                            |                       |                                  |                                     | Orig KB Elev (ft)<br>3,677.40 |
|                                            |                       |                                  |                                     | Tubing Head Elevation (ft)    |

## Survey Data

| Date     | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft)  | N/S (ft) | E/W (ft) | DL/S<br>(°/100ft) | Survey<br>Tool | Survey Company |
|----------|-----------|----------|---------|------------|----------|----------|----------|-------------------|----------------|----------------|
| 2/4/2015 | 14,018.00 | 86.85    | 2.39    | 11,241.38  | 3,039.21 | 2,997.71 | 753.50   | 0.44              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,113.00 | 86.64    | 2.60    | 11,246.77  | 3,134.03 | 3,092.47 | 757.63   | 0.31              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,208.00 | 87.62    | 2.52    | 11,251.53  | 3,228.90 | 3,187.25 | 761.87   | 1.04              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,302.00 | 87.13    | 2.47    | 11,255.83  | 3,322.78 | 3,281.06 | 765.95   | 0.52              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,397.00 | 89.72    | 4.05    | 11,258.44  | 3,417.73 | 3,375.86 | 771.35   | 3.19              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,492.00 | 89.30    | 4.39    | 11,259.26  | 3,512.72 | 3,470.60 | 778.35   | 0.57              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,587.00 | 88.39    | 3.60    | 11,261.17  | 3,607.70 | 3,565.35 | 784.96   | 1.27              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,682.00 | 87.62    | 3.68    | 11,264.48  | 3,702.64 | 3,660.10 | 790.99   | 0.81              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,777.00 | 86.29    | 3.05    | 11,269.52  | 3,797.50 | 3,754.80 | 796.56   | 1.55              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,871.00 | 86.50    | 2.35    | 11,275.44  | 3,891.31 | 3,848.51 | 800.98   | 0.78              | MWD            | WEATHERFORD    |
| 2/4/2015 | 14,966.00 | 85.10    | 1.05    | 11,282.39  | 3,985.99 | 3,943.21 | 803.79   | 2.01              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,061.00 | 85.59    | 1.03    | 11,290.10  | 4,080.59 | 4,037.88 | 805.51   | 0.52              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,156.00 | 86.36    | 0.71    | 11,296.77  | 4,175.24 | 4,132.63 | 808.95   | 0.88              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,250.00 | 86.71    | 1.13    | 11,302.45  | 4,268.97 | 4,226.45 | 808.45   | 0.58              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,345.00 | 87.20    | 359.84  | 11,307.50  | 4,363.69 | 4,321.31 | 809.26   | 1.45              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,440.00 | 88.53    | 359.98  | 11,311.04  | 4,458.42 | 4,416.24 | 809.11   | 1.41              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,534.00 | 89.72    | 0.53    | 11,312.47  | 4,552.25 | 4,510.23 | 809.53   | 1.39              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,629.00 | 90.98    | 0.25    | 11,311.89  | 4,647.09 | 4,605.22 | 810.17   | 1.36              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,701.00 | 90.00    | 359.51  | 11,311.28  | 4,718.94 | 4,677.22 | 810.02   | 1.71              | MWD            | WEATHERFORD    |
| 2/4/2015 | 15,767.00 | 90.00    | 359.51  | 11,311.28  | 4,784.77 | 4,743.21 | 809.46   | 0.00              | BIT            | WEATHERFORD    |