

# "As Drilled Plat"

**CONFIDENTIAL**

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                                |                                                      |                                                               |
|------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------|
| <sup>1</sup> API Number<br><b>30-045-35455</b> | <sup>2</sup> Pool Code<br><b>97232 / 11880</b>       | <sup>3</sup> Pool Name<br><b>Basin Mancos / Chacha Gallup</b> |
| <sup>4</sup> Property Code<br><b>303657</b>    | <sup>5</sup> Property Name<br><b>ROPCO 16</b>        | <sup>6</sup> Well Number<br><b>1H</b>                         |
| <sup>7</sup> OGRID No.<br><b>5380</b>          | <sup>8</sup> Operator Name<br><b>XTO ENERGY INC.</b> | <sup>9</sup> Elevation<br><b>5,218</b>                        |

### <sup>10</sup> Surface Location

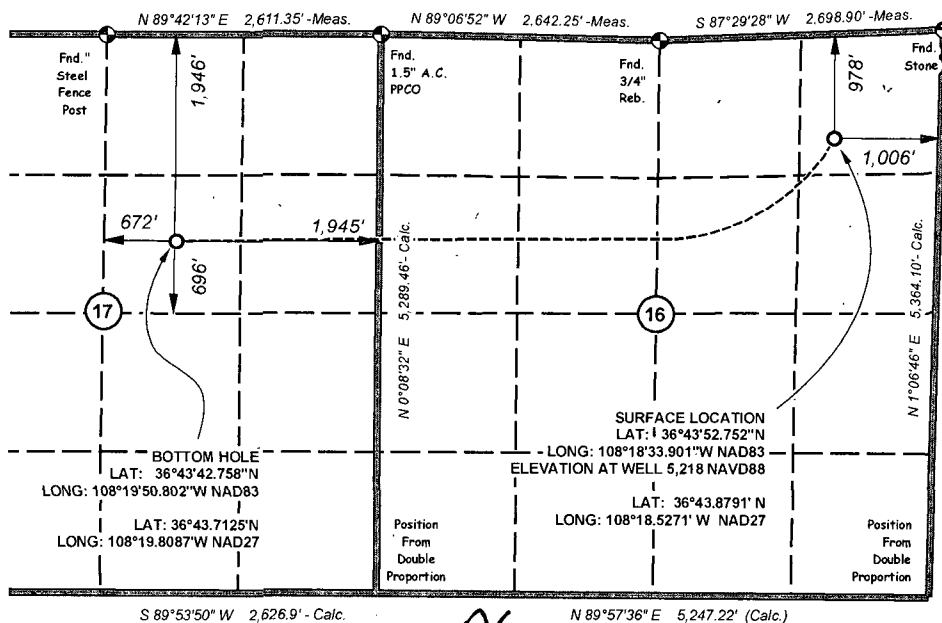
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| A             | 16      | 29 N     | 14 W  |         | 978           | NORTH            | 1006          | EAST           | SAN JUAN |

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

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| G             | 17      | 29 N     | 14 W  |         | 1946          | NORTH            | 1945          | EAST           | SAN JUAN |

|                                                                      |                               |                                  |                                             |                                                 |
|----------------------------------------------------------------------|-------------------------------|----------------------------------|---------------------------------------------|-------------------------------------------------|
| <sup>12</sup> Dedicated Acres<br><b>GP: 80 AC</b><br><b>MC: 4 AC</b> | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No.<br><b>NSP 19163</b> | <b>RCVD AUG 15 '13</b><br><b>OIL CONS. DIV.</b> |
|----------------------------------------------------------------------|-------------------------------|----------------------------------|---------------------------------------------|-------------------------------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.  
**DIST. 3**



Note:  
1-Acreages shown based on record values  
from G.L.O. plat approved May 26, 1881.

2-Location of below surface features provided by Client,  
from Wft Svy report, Created By Russell W. Joyner,  
dated 6/6/2013.

### <sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

**Sherry J. Morrow** 8/15/13  
Signature Date

**Sherry J. Morrow**  
Printed Name

**Sherry-morrow@xtoenergy.com**  
E-mail Address

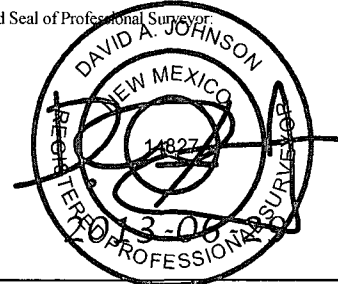
### <sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

June 27, 2013

Date of Survey

Signature and Seal of Professional Surveyor



Certificate #14827



Ropco 16-#H  
San Juan Co., New Mexico

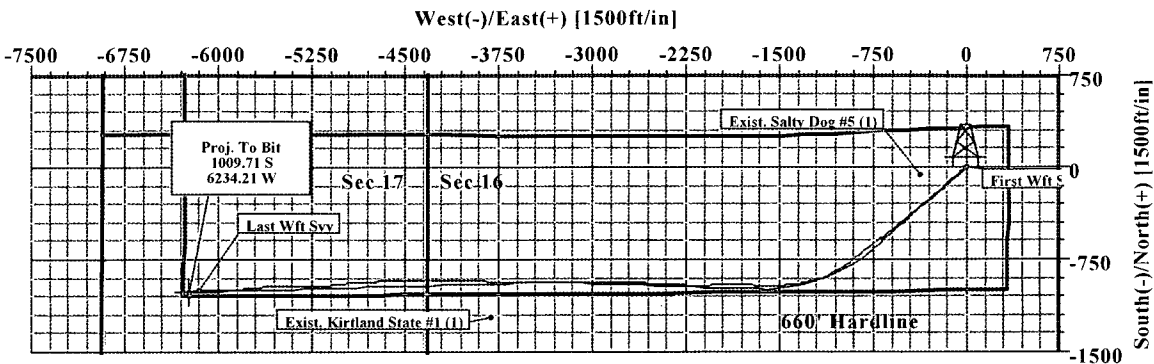
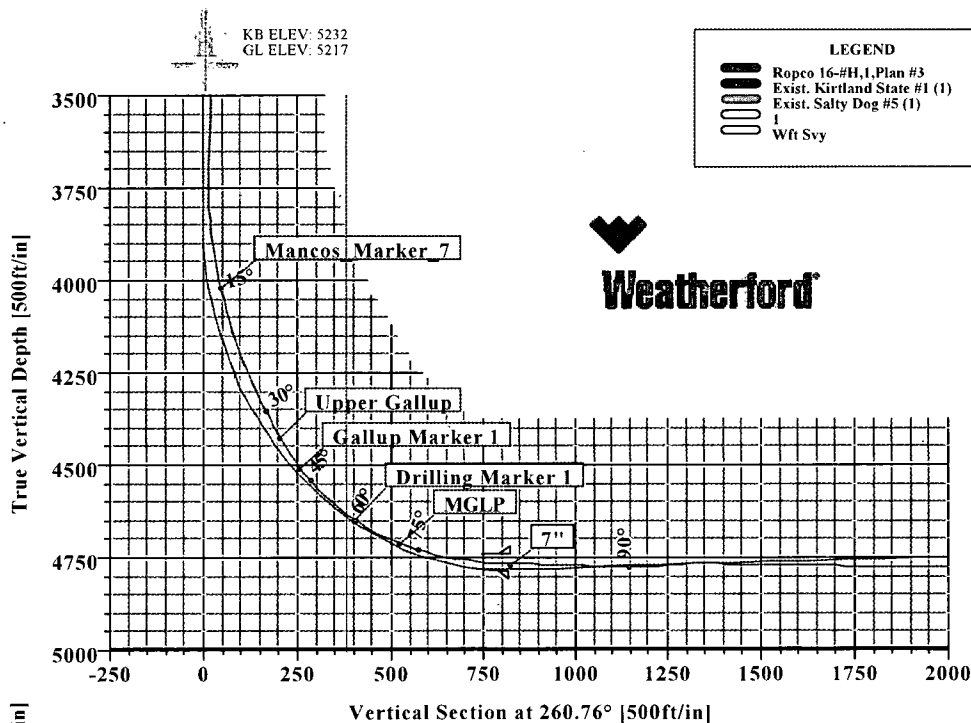
#### SITE DETAILS

Ropco 16-#H

Site Centre Latitude: 36°43'52.750N  
Longitude: 108°18'33.800W

Ground Level: 5217.00  
Positional Uncertainty: 0.00  
Convergence: -0.28

KB ELEV: 5232  
GL ELEV: 5217



#### LEGEND

- Ropco 16-#H, I, Plan #3
- Exist. Kirtland State #1 (1)
- Exist. Salty Dog #5 (1)
- Wft Svy

#### SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N/-S    | +E/-W    | DLeg | TFace  | VSec    | Target |
|-----|----------|-------|--------|---------|----------|----------|------|--------|---------|--------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00    | 0.00     | 0.00     | 0.00 | 0.00   | 0.00    |        |
| 2   | 3828.42  | 0.00  | 0.00   | 3828.42 | 0.00     | 0.00     | 0.00 | 0.00   | 0.00    |        |
| 3   | 5354.09  | 91.54 | 228.20 | 4783.00 | -653.60  | -731.01  | 6.00 | 228.20 | 826.47  |        |
| 4   | 6372.30  | 91.54 | 272.00 | 4754.23 | -991.66  | -1664.91 | 4.30 | 89.38  | 1802.54 |        |
| 5   | 7917.03  | 91.54 | 272.00 | 4712.71 | -937.77  | -3208.14 | 0.00 | 0.00   | 3317.09 |        |
| 6   | 8034.56  | 91.54 | 268.47 | 4709.55 | -937.29  | -3325.60 | 3.00 | -89.92 | 3432.95 |        |
| 7   | 10953.02 | 91.54 | 268.47 | 4631.00 | -1015.04 | -6241.97 | 0.00 | 0.00   | 6323.96 | PBHL   |

#### WELL DETAILS

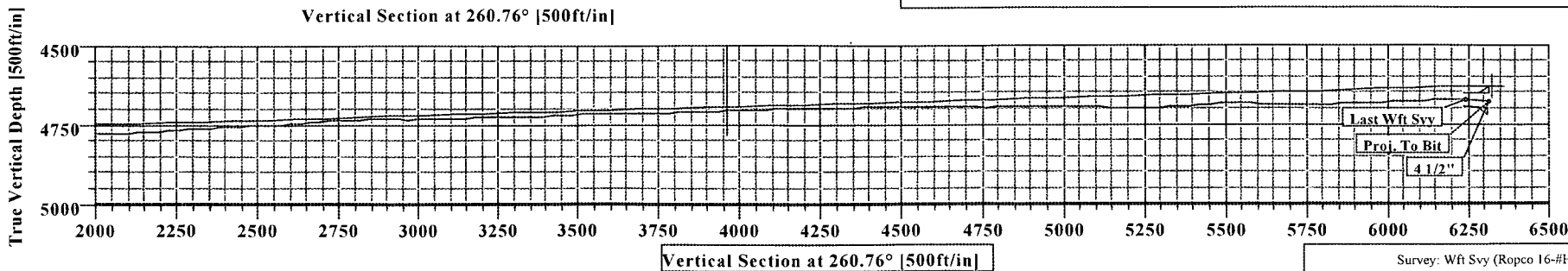
| Name        | +N/-S | +E/-W | Northing   | Easting    | Latitude      | Longitude      | Slot |
|-------------|-------|-------|------------|------------|---------------|----------------|------|
| Ropco 16-#H | 0.00  | 0.00  | 2085867.65 | 2583596.70 | 36°43'52.750N | 108°18'33.800W | N/A  |

#### TARGET DETAILS

| Name | TVD     | +N/-S    | +E/-W    | Latitude      | Longitude      | Shape |
|------|---------|----------|----------|---------------|----------------|-------|
| PBHL | 4631.00 | -1015.04 | -6241.97 | 36°43'42.706N | 108°19'50.480W | Point |

#### Survey: Wft Svy (Ropco 16-#H/I)

| No  | MD       | Inc   | Az     | TVD     | +N/-S    | +E/-W    | DLeg | TFace | VSec    |
|-----|----------|-------|--------|---------|----------|----------|------|-------|---------|
| 251 | 10900.00 | 88.06 | 266.43 | 4677.14 | -1009.71 | -6234.21 | 0.00 | 0.00  | 6315.45 |



Survey: Wft Svy (Ropco 16-#H/I)

Created By: Russell W. Joyner

Date: 6/6/2013

ROD AUG 15 '13  
D1 CUMS.D1V  
D1S1.3



# Weatherford

## WFT Survey Report Lat, Long



**Weatherford**

Company: XTO Date: 6/6/2013 Time: 06:00:09 Page: 1  
 Field: San Juan, NM (NAD 83) Co-ordinate(NE) Reference: Well: Ropco 16-#H, True North  
 Site: Ropco 16-#H Vertical (TVD) Reference: SITE 5232.0  
 Well: Ropco 16-#H Section (VS) Reference: Well (0.00N,0.00E,260.76Azi)  
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Wft Svy Start Date: 5/22/2013  
 Company: Weatherford Engineer: Russell W. Joyner  
 Tool: MWD;MWD - Standard Tied-to: From Surface

Site: Ropco 16-#H  
 Site Position: Northing: 2085867.65 ft Latitude: 36 43 52.750 N  
 From: Geographic Easting: 2583596.70 ft Longitude: 108 18 33.800 W  
 Position Uncertainty: 0.00 ft North Reference: True  
 Ground Level: 5217.00 ft Grid Convergence: -0.28 deg

Well: Ropco 16-#H Slot Name:  
 Well Position: +N/-S 0.00 ft Northing: 2085867.65 ft Latitude: 36 43 52.750 N  
 +E/-W 0.00 ft Easting: 2583596.70 ft Longitude: 108 18 33.800 W  
 Position Uncertainty: 0.00 ft

Wellpath: 1  
 Current Datum: SITE Height 5232.00 ft  
 Magnetic Data: 5/15/2013  
 Field Strength: 50516 nT  
 Vertical Section: Depth From (TVD) ft  
 Drilled From: Surface  
 Tie-on Depth: 0.00 ft  
 Above System Datum: Mean Sea Level  
 Declination: 9.89 deg  
 Mag Dip Angle: 63.31 deg  
 +E/-W Direction deg  
 0.00 0.00 0.00 260.76

| Survey   |             |             |           |           |           |          |                  |     |     |        |      |     |        |               |
|----------|-------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|---------------|
| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comment       |
| 0.00     | 0.00        | 0.00        | 0.00      | 0.00      | 0.00      | 0.00     | 0.00             | 36  | 43  | 52.750 | 108  | 18  | 33.800 | First Wft Svy |
| 548.00   | 0.47        | 357.78      | 547.99    | 2.25      | -0.09     | -0.27    | 0.09             | 36  | 43  | 52.772 | 108  | 18  | 33.801 |               |
| 670.00   | 0.81        | 346.61      | 669.99    | 3.58      | -0.31     | -0.27    | 0.30             | 36  | 43  | 52.785 | 108  | 18  | 33.804 |               |
| 798.00   | 0.51        | 354.79      | 797.98    | 5.03      | -0.57     | -0.25    | 0.25             | 36  | 43  | 52.800 | 108  | 18  | 33.807 |               |
| 924.00   | 0.51        | 354.13      | 923.97    | 6.15      | -0.68     | -0.32    | 0.00             | 36  | 43  | 52.811 | 108  | 18  | 33.808 |               |
| 1050.00  | 1.31        | 278.70      | 1049.96   | 6.92      | -2.16     | 1.02     | 1.02             | 36  | 43  | 52.818 | 108  | 18  | 33.826 |               |
| 1173.00  | 1.30        | 245.21      | 1172.93   | 6.55      | -4.81     | 3.70     | 0.61             | 36  | 43  | 52.815 | 108  | 18  | 33.859 |               |
| 1300.00  | 1.22        | 189.50      | 1299.90   | 4.61      | -6.34     | 5.52     | 0.93             | 36  | 43  | 52.796 | 108  | 18  | 33.878 |               |
| 1424.00  | 1.13        | 198.23      | 1423.88   | 2.15      | -6.94     | 6.51     | 0.16             | 36  | 43  | 52.771 | 108  | 18  | 33.885 |               |
| 1551.00  | 1.14        | 202.24      | 1550.85   | -0.21     | -7.81     | 7.75     | 0.06             | 36  | 43  | 52.748 | 108  | 18  | 33.896 |               |
| 1676.00  | 1.05        | 200.25      | 1675.83   | -2.43     | -8.68     | 8.96     | 0.08             | 36  | 43  | 52.726 | 108  | 18  | 33.907 |               |
| 1801.00  | 1.18        | 206.69      | 1800.81   | -4.66     | -9.66     | 10.28    | 0.14             | 36  | 43  | 52.704 | 108  | 18  | 33.919 |               |
| 1925.00  | 1.15        | 214.80      | 1924.78   | -6.82     | -10.94    | 11.89    | 0.14             | 36  | 43  | 52.683 | 108  | 18  | 33.934 |               |
| 2050.00  | 1.87        | 203.08      | 2049.74   | -9.73     | -12.46    | 13.86    | 0.62             | 36  | 43  | 52.654 | 108  | 18  | 33.953 |               |
| 2176.00  | 1.25        | 212.51      | 2175.69   | -12.78    | -14.00    | 15.87    | 0.53             | 36  | 43  | 52.624 | 108  | 18  | 33.972 |               |
| 2299.00  | 1.46        | 222.03      | 2298.65   | -15.07    | -15.77    | 17.99    | 0.25             | 36  | 43  | 52.601 | 108  | 18  | 33.994 |               |
| 2425.00  | 1.41        | 191.83      | 2424.62   | -17.78    | -17.16    | 19.80    | 0.59             | 36  | 43  | 52.574 | 108  | 18  | 34.011 |               |
| 2550.00  | 1.32        | 192.90      | 2549.58   | -20.69    | -17.80    | 20.89    | 0.07             | 36  | 43  | 52.545 | 108  | 18  | 34.019 |               |
| 2676.00  | 1.31        | 205.12      | 2675.55   | -23.41    | -18.73    | 22.25    | 0.22             | 36  | 43  | 52.519 | 108  | 18  | 34.030 |               |
| 2803.00  | 0.53        | 148.82      | 2802.53   | -25.23    | -19.05    | 22.85    | 0.87             | 36  | 43  | 52.501 | 108  | 18  | 34.034 |               |
| 2929.00  | 0.49        | 158.78      | 2928.53   | -26.23    | -18.55    | 22.52    | 0.08             | 36  | 43  | 52.491 | 108  | 18  | 34.028 |               |
| 3055.00  | 0.24        | 117.61      | 3054.53   | -26.85    | -18.12    | 22.20    | 0.28             | 36  | 43  | 52.484 | 108  | 18  | 34.023 |               |
| 3179.00  | 0.28        | 271.94      | 3178.52   | -26.96    | -18.19    | 22.29    | 0.41             | 36  | 43  | 52.483 | 108  | 18  | 34.024 |               |
| 3306.00  | 0.88        | 124.44      | 3305.52   | -27.50    | -17.70    | 21.89    | 0.89             | 36  | 43  | 52.478 | 108  | 18  | 34.017 |               |
| 3432.00  | 0.77        | 126.71      | 3431.51   | -28.56    | -16.22    | 20.60    | 0.09             | 36  | 43  | 52.468 | 108  | 18  | 33.999 |               |
| 3558.00  | 0.67        | 118.06      | 3557.50   | -29.41    | -14.89    | 19.42    | 0.12             | 36  | 43  | 52.459 | 108  | 18  | 33.983 |               |
| 3683.00  | 0.63        | 99.47       | 3682.49   | -29.87    | -13.57    | 18.19    | 0.17             | 36  | 43  | 52.455 | 108  | 18  | 33.967 |               |
| 3746.00  | 0.41        | 123.28      | 3745.49   | -30.05    | -13.04    | 17.70    | 0.48             | 36  | 43  | 52.453 | 108  | 18  | 33.960 |               |
| 3778.00  | 0.47        | 111.69      | 3777.49   | -30.16    | -12.82    | 17.50    | 0.33             | 36  | 43  | 52.452 | 108  | 18  | 33.958 |               |
| 3809.00  | 1.55        | 218.10      | 3808.48   | -30.53    | -12.96    | 17.70    | 5.62             | 36  | 43  | 52.448 | 108  | 18  | 33.959 |               |



# Weatherford

## WFT Survey Report Lat, Long

**Weatherford**

Company: XTO  
Field: San Juan, NM (NAD 83)  
Site: Ropco 16-#H  
Well: Ropco 16-#H  
Wellpath: 1

Date: 6/6/2013 Time: 06:00:09 Page: 2  
Co-ordinate(NE) Reference: Well: Ropco 16-#H, True North  
Vertical (TVD) Reference: SITE 5232.0  
Section (VS) Reference: Well (0.00N,0.00E,260.76Azi)  
Survey Calculation Method: Minimum Curvature Db: Sybase

### Survey

| MD<br>ft | Incl.<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comment |
|----------|--------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|---------|
| 3840.00  | -4.53        | 229.69      | 3839.44   | -31.66    | -14.16    | 19.06    | 9.77             | 36  | 43  | 52.437 | 108  | 18  | 33.974 |         |
| 3871.00  | 7.04         | 233.83      | 3870.28   | -33.57    | -16.62    | 21.80    | 8.20             | 36  | 43  | 52.418 | 108  | 18  | 34.004 |         |
| 3903.00  | 9.10         | 234.72      | 3901.96   | -36.19    | -20.27    | 25.82    | 6.45             | 36  | 43  | 52.392 | 108  | 18  | 34.049 |         |
| 3934.00  | 10.23        | 235.28      | 3932.52   | -39.17    | -24.54    | 30.51    | 3.66             | 36  | 43  | 52.363 | 108  | 18  | 34.101 |         |
| 3965.00  | 11.84        | 234.61      | 3962.94   | -42.58    | -29.39    | 35.85    | 5.21             | 36  | 43  | 52.329 | 108  | 18  | 34.161 |         |
| 3996.00  | 13.48        | 232.96      | 3993.19   | -46.60    | -34.87    | 41.90    | 5.42             | 36  | 43  | 52.289 | 108  | 18  | 34.228 |         |
| 4027.00  | 15.09        | 230.19      | 4023.23   | -51.36    | -40.85    | 48.57    | 5.64             | 36  | 43  | 52.242 | 108  | 18  | 34.302 |         |
| 4058.00  | 16.77        | 226.62      | 4053.04   | -57.02    | -47.21    | 55.75    | 6.27             | 36  | 43  | 52.186 | 108  | 18  | 34.380 |         |
| 4090.00  | 17.82        | 226.78      | 4083.59   | -63.54    | -54.13    | 63.63    | 3.28             | 36  | 43  | 52.122 | 108  | 18  | 34.465 |         |
| 4120.00  | 19.01        | 228.00      | 4112.05   | -69.95    | -61.11    | 71.55    | 4.17             | 36  | 43  | 52.058 | 108  | 18  | 34.551 |         |
| 4152.00  | 20.09        | 228.55      | 4142.21   | -77.08    | -69.10    | 80.58    | 3.42             | 36  | 43  | 51.988 | 108  | 18  | 34.649 |         |
| 4183.00  | 21.71        | 229.71      | 4171.17   | -84.31    | -77.46    | 90.00    | 5.39             | 36  | 43  | 51.916 | 108  | 18  | 34.752 |         |
| 4214.00  | 23.40        | 231.35      | 4199.80   | -91.87    | -86.64    | 100.27   | 5.82             | 36  | 43  | 51.842 | 108  | 18  | 34.864 |         |
| 4246.00  | 24.51        | 231.80      | 4229.04   | -99.94    | -96.82    | 111.62   | 3.52             | 36  | 43  | 51.762 | 108  | 18  | 34.989 |         |
| 4278.00  | 25.64        | 231.89      | 4258.02   | -108.32   | -107.49   | 123.49   | 3.53             | 36  | 43  | 51.679 | 108  | 18  | 35.120 |         |
| 4310.00  | 26.98        | 231.67      | 4286.71   | -117.09   | -118.63   | 135.89   | 4.20             | 36  | 43  | 51.592 | 108  | 18  | 35.257 |         |
| 4341.00  | 28.29        | 230.72      | 4314.17   | -126.11   | -129.83   | 148.40   | 4.46             | 36  | 43  | 51.503 | 108  | 18  | 35.395 |         |
| 4372.00  | 29.48        | 229.21      | 4341.31   | -135.74   | -141.30   | 161.26   | 4.50             | 36  | 43  | 51.408 | 108  | 18  | 35.536 |         |
| 4404.00  | 30.83        | 228.28      | 4368.98   | -146.34   | -153.38   | 174.89   | 4.46             | 36  | 43  | 51.303 | 108  | 18  | 35.684 |         |
| 4435.00  | 32.30        | 228.19      | 4395.40   | -157.15   | -165.48   | 188.57   | 4.74             | 36  | 43  | 51.196 | 108  | 18  | 35.833 |         |
| 4466.00  | 33.25        | 228.03      | 4421.46   | -168.36   | -177.97   | 202.70   | 3.08             | 36  | 43  | 51.085 | 108  | 18  | 35.986 |         |
| 4497.00  | 35.05        | 227.57      | 4447.11   | -180.05   | -190.86   | 217.30   | 5.87             | 36  | 43  | 50.970 | 108  | 18  | 36.145 |         |
| 4529.00  | 36.94        | 227.45      | 4473.00   | -192.75   | -204.73   | 233.02   | 5.91             | 36  | 43  | 50.844 | 108  | 18  | 36.315 |         |
| 4560.00  | 39.72        | 227.81      | 4497.32   | -205.70   | -218.93   | 249.12   | 9.00             | 36  | 43  | 50.716 | 108  | 18  | 36.490 |         |
| 4591.00  | 42.84        | 229.11      | 4520.61   | -219.26   | -234.24   | 266.41   | 10.44            | 36  | 43  | 50.582 | 108  | 18  | 36.678 |         |
| 4623.00  | 45.07        | 230.93      | 4543.65   | -233.52   | -251.27   | 285.50   | 8.01             | 36  | 43  | 50.441 | 108  | 18  | 36.887 |         |
| 4654.00  | 47.19        | 231.74      | 4565.13   | -247.48   | -268.72   | 304.97   | 7.09             | 36  | 43  | 50.303 | 108  | 18  | 37.101 |         |
| 4685.00  | 49.73        | 232.04      | 4585.69   | -261.80   | -286.97   | 325.29   | 8.23             | 36  | 43  | 50.161 | 108  | 18  | 37.325 |         |
| 4716.00  | 52.70        | 231.82      | 4605.10   | -276.70   | -305.99   | 346.45   | 9.60             | 36  | 43  | 50.014 | 108  | 18  | 37.559 |         |
| 4748.00  | 55.22        | 231.42      | 4623.93   | -292.76   | -326.28   | 369.05   | 7.94             | 36  | 43  | 49.855 | 108  | 18  | 37.808 |         |
| 4780.00  | 58.62        | 231.39      | 4641.39   | -309.49   | -347.23   | 392.42   | 10.63            | 36  | 43  | 49.690 | 108  | 18  | 38.066 |         |
| 4811.00  | 60.95        | 231.51      | 4656.99   | -326.18   | -368.18   | 415.78   | 7.52             | 36  | 43  | 49.525 | 108  | 18  | 38.323 |         |
| 4842.00  | 63.41        | 231.31      | 4671.46   | -343.28   | -389.61   | 439.67   | 7.96             | 36  | 43  | 49.355 | 108  | 18  | 38.586 |         |
| 4874.00  | 64.84        | 231.17      | 4685.42   | -361.31   | -412.06   | 464.72   | 4.49             | 36  | 43  | 49.177 | 108  | 18  | 38.862 |         |
| 4905.00  | 67.21        | 230.49      | 4698.02   | -379.20   | -434.01   | 489.27   | 7.90             | 36  | 43  | 49.000 | 108  | 18  | 39.132 |         |
| 4937.00  | 69.22        | 230.56      | 4709.89   | -398.09   | -456.95   | 514.94   | 6.28             | 36  | 43  | 48.814 | 108  | 18  | 39.414 |         |
| 4968.00  | 72.33        | 230.88      | 4720.10   | -416.61   | -479.60   | 540.28   | 10.08            | 36  | 43  | 48.630 | 108  | 18  | 39.692 |         |
| 5000.00  | 74.61        | 230.55      | 4729.20   | -436.04   | -503.35   | 566.83   | 7.19             | 36  | 43  | 48.438 | 108  | 18  | 39.984 |         |
| 5031.00  | 76.54        | 230.17      | 4736.93   | -455.19   | -526.47   | 592.72   | 6.34             | 36  | 43  | 48.249 | 108  | 18  | 40.268 |         |
| 5063.00  | 78.88        | 230.88      | 4743.74   | -475.07   | -550.60   | 619.74   | 7.63             | 36  | 43  | 48.052 | 108  | 18  | 40.564 |         |
| 5095.00  | 80.68        | 231.34      | 4749.41   | -494.84   | -575.11   | 647.10   | 5.80             | 36  | 43  | 47.857 | 108  | 18  | 40.865 |         |
| 5126.00  | 82.48        | 231.52      | 4753.95   | -513.96   | -599.09   | 673.84   | 5.83             | 36  | 43  | 47.668 | 108  | 18  | 41.160 |         |
| 5157.00  | 83.56        | 231.28      | 4757.72   | -533.15   | -623.13   | 700.66   | 3.57             | 36  | 43  | 47.478 | 108  | 18  | 41.455 |         |
| 5188.00  | 84.71        | 231.26      | 4760.89   | -552.45   | -647.19   | 727.50   | 3.71             | 36  | 43  | 47.287 | 108  | 18  | 41.751 |         |
| 5220.00  | 85.63        | 231.71      | 4763.58   | -572.30   | -672.14   | 755.31   | 3.20             | 36  | 43  | 47.091 | 108  | 18  | 42.057 |         |
| 5240.00  | 86.68        | 231.81      | 4764.92   | -584.65   | -687.81   | 772.76   | 5.27             | 36  | 43  | 46.969 | 108  | 18  | 42.250 |         |
| 5333.00  | 89.62        | 233.26      | 4767.93   | -641.18   | -761.58   | 854.65   | 3.52             | 36  | 43  | 46.410 | 108  | 18  | 43.156 |         |
| 5364.00  | 89.46        | 232.85      | 4768.18   | -659.82   | -786.35   | 882.10   | 1.42             | 36  | 43  | 46.225 | 108  | 18  | 43.460 |         |
| 5396.00  | 89.37        | 232.28      | 4768.50   | -679.27   | -811.76   | 910.30   | 1.80             | 36  | 43  | 46.033 | 108  | 18  | 43.772 |         |
| 5428.00  | 88.57        | 232.53      | 4769.08   | -698.79   | -837.11   | 938.45   | 2.62             | 36  | 43  | 45.840 | 108  | 18  | 44.084 |         |
| 5459.00  | 87.87        | 232.62      | 4770.04   | -717.62   | -861.72   | 965.77   | 2.28             | 36  | 43  | 45.654 | 108  | 18  | 44.386 |         |
| 5491.00  | 87.27        | 232.90      | 4771.40   | -736.96   | -887.17   | 993.99   | 2.07             | 36  | 43  | 45.462 | 108  | 18  | 44.699 |         |



# Weatherford

## WFT Survey Report Lat, Long

**Weatherford®**

|                                     |                                                                       |                       |                |
|-------------------------------------|-----------------------------------------------------------------------|-----------------------|----------------|
| <b>Company:</b> XTO                 | <b>Date:</b> 6/6/2013                                                 | <b>Time:</b> 06:00:09 | <b>Page:</b> 3 |
| <b>Field:</b> San Juan, NM (NAD 83) | <b>Co-ordinate(NE) Reference:</b> Well: Ropco 16-#H, True North       |                       |                |
| <b>Site:</b> Ropco 16-#H            | <b>Vertical (TVD) Reference:</b> SITE 5232.0                          |                       |                |
| <b>Well:</b> Ropco 16-#H            | <b>Section (VS) Reference:</b> Well (0.00N,0.00E,260.76Azi)           |                       |                |
| <b>Wellpath:</b> 1                  | <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase |                       |                |

**Survey**

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comment |
|----------|-------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|---------|
| 5523.00  | 87.11       | 233.62      | 4772.97   | -756.08   | -912.78   | 1022.34  | 2.30             | 36  | 43  | 45.273 | 108  | 18  | 45.013 |         |
| 5554.00  | 87.38       | 234.62      | 4774.46   | -774.23   | -937.87   | 1050.02  | 3.34             | 36  | 43  | 45.094 | 108  | 18  | 45.321 |         |
| 5586.00  | 87.81       | 235.74      | 4775.80   | -792.49   | -964.12   | 1078.86  | 3.75             | 36  | 43  | 44.913 | 108  | 18  | 45.644 |         |
| 5618.00  | 88.25       | 236.64      | 4776.90   | -810.28   | -990.69   | 1107.94  | 3.13             | 36  | 43  | 44.737 | 108  | 18  | 45.970 |         |
| 5650.00  | 89.32       | 237.55      | 4777.58   | -827.66   | -1017.55  | 1137.25  | 4.39             | 36  | 43  | 44.566 | 108  | 18  | 46.300 |         |
| 5681.00  | 91.28       | 239.05      | 4777.41   | -843.95   | -1043.92  | 1165.89  | 7.96             | 36  | 43  | 44.404 | 108  | 18  | 46.624 |         |
| 5713.00  | 93.29       | 241.64      | 4776.14   | -859.77   | -1071.71  | 1195.85  | 10.24            | 36  | 43  | 44.248 | 108  | 18  | 46.966 |         |
| 5745.00  | 94.41       | 244.37      | 4773.99   | -874.26   | -1100.15  | 1226.26  | 9.20             | 36  | 43  | 44.105 | 108  | 18  | 47.315 |         |
| 5777.00  | 94.92       | 247.49      | 4771.39   | -887.26   | -1129.27  | 1257.08  | 9.85             | 36  | 43  | 43.976 | 108  | 18  | 47.673 |         |
| 5809.00  | 94.25       | 249.91      | 4768.83   | -898.85   | -1158.98  | 1288.28  | 7.82             | 36  | 43  | 43.862 | 108  | 18  | 48.038 |         |
| 5840.00  | 92.73       | 252.09      | 4766.94   | -908.92   | -1188.24  | 1318.77  | 8.56             | 36  | 43  | 43.762 | 108  | 18  | 48.397 |         |
| 5872.00  | 89.53       | 253.39      | 4766.31   | -918.41   | -1218.79  | 1350.44  | 10.79            | 36  | 43  | 43.668 | 108  | 18  | 48.772 |         |
| 5904.00  | 87.64       | 255.02      | 4767.10   | -927.12   | -1249.57  | 1382.22  | 7.80             | 36  | 43  | 43.582 | 108  | 18  | 49.150 |         |
| 5935.00  | 87.64       | 257.30      | 4768.38   | -934.53   | -1279.64  | 1413.09  | 7.35             | 36  | 43  | 43.509 | 108  | 18  | 49.520 |         |
| 5967.00  | 88.92       | 258.50      | 4769.34   | -941.23   | -1310.91  | 1445.04  | 5.48             | 36  | 43  | 43.442 | 108  | 18  | 49.904 |         |
| 5999.00  | 89.88       | 259.87      | 4769.67   | -947.24   | -1342.34  | 1477.02  | 5.23             | 36  | 43  | 43.383 | 108  | 18  | 50.290 |         |
| 6031.00  | 90.73       | 261.05      | 4769.50   | -952.54   | -1373.90  | 1509.02  | 4.54             | 36  | 43  | 43.331 | 108  | 18  | 50.678 |         |
| 6062.00  | 91.00       | 262.64      | 4769.03   | -956.94   | -1404.58  | 1540.01  | 5.20             | 36  | 43  | 43.287 | 108  | 18  | 51.055 |         |
| 6094.00  | 90.42       | 264.47      | 4768.64   | -960.53   | -1436.37  | 1571.97  | 6.00             | 36  | 43  | 43.251 | 108  | 18  | 51.445 |         |
| 6125.00  | 89.81       | 266.13      | 4768.58   | -963.07   | -1467.27  | 1602.87  | 5.70             | 36  | 43  | 43.226 | 108  | 18  | 51.825 |         |
| 6157.00  | 88.37       | 267.75      | 4769.08   | -964.78   | -1499.22  | 1634.68  | 6.77             | 36  | 43  | 43.209 | 108  | 18  | 52.217 |         |
| 6189.00  | 87.73       | 269.53      | 4770.17   | -965.54   | -1531.19  | 1666.36  | 5.91             | 36  | 43  | 43.202 | 108  | 18  | 52.610 |         |
| 6221.00  | 86.43       | 270.87      | 4771.80   | -965.43   | -1563.15  | 1697.88  | 5.83             | 36  | 43  | 43.203 | 108  | 18  | 53.003 |         |
| 6253.00  | 85.91       | 271.88      | 4773.94   | -964.66   | -1595.06  | 1729.26  | 3.54             | 36  | 43  | 43.211 | 108  | 18  | 53.395 |         |
| 6284.00  | 87.02       | 272.33      | 4775.85   | -963.52   | -1625.98  | 1759.60  | 3.86             | 36  | 43  | 43.222 | 108  | 18  | 53.775 |         |
| 6315.00  | 87.88       | 272.48      | 4777.23   | -962.22   | -1656.93  | 1789.93  | 2.82             | 36  | 43  | 43.235 | 108  | 18  | 54.155 |         |
| 6347.00  | 89.13       | 272.11      | 4778.07   | -960.94   | -1688.89  | 1821.27  | 4.07             | 36  | 43  | 43.247 | 108  | 18  | 54.547 |         |
| 6379.00  | 90.44       | 271.44      | 4778.19   | -959.95   | -1720.87  | 1852.68  | 4.60             | 36  | 43  | 43.257 | 108  | 18  | 54.940 |         |
| 6411.00  | 91.10       | 270.84      | 4777.76   | -959.31   | -1752.86  | 1884.16  | 2.79             | 36  | 43  | 43.263 | 108  | 18  | 55.333 |         |
| 6442.00  | 91.01       | 270.54      | 4777.18   | -958.94   | -1783.85  | 1914.69  | 1.01             | 36  | 43  | 43.267 | 108  | 18  | 55.714 |         |
| 6474.00  | 89.91       | 270.58      | 4776.93   | -958.63   | -1815.85  | 1946.22  | 3.44             | 36  | 43  | 43.270 | 108  | 18  | 56.107 |         |
| 6506.00  | 89.56       | 270.30      | 4777.08   | -958.38   | -1847.85  | 1977.76  | 1.40             | 36  | 43  | 43.272 | 108  | 18  | 56.500 |         |
| 6537.00  | 89.48       | 269.91      | 4777.34   | -958.33   | -1878.85  | 2008.35  | 1.28             | 36  | 43  | 43.273 | 108  | 18  | 56.881 |         |
| 6569.00  | 89.34       | 269.57      | 4777.67   | -958.47   | -1910.85  | 2039.95  | 1.15             | 36  | 43  | 43.272 | 108  | 18  | 57.274 |         |
| 6601.00  | 91.00       | 269.18      | 4777.57   | -958.82   | -1942.84  | 2071.59  | 5.33             | 36  | 43  | 43.268 | 108  | 18  | 57.667 |         |
| 6632.00  | 92.27       | 268.98      | 4776.69   | -959.32   | -1973.83  | 2102.25  | 4.15             | 36  | 43  | 43.263 | 108  | 18  | 58.048 |         |
| 6664.00  | 93.22       | 268.95      | 4775.15   | -959.90   | -2005.78  | 2133.89  | 2.97             | 36  | 43  | 43.257 | 108  | 18  | 58.440 |         |
| 6696.00  | 93.59       | 268.67      | 4773.25   | -960.56   | -2037.72  | 2165.52  | 1.45             | 36  | 43  | 43.251 | 108  | 18  | 58.833 |         |
| 6727.00  | 93.81       | 268.66      | 4771.25   | -961.28   | -2068.65  | 2196.16  | 0.71             | 36  | 43  | 43.244 | 108  | 18  | 59.213 |         |
| 6759.00  | 93.62       | 269.41      | 4769.18   | -961.82   | -2100.58  | 2227.76  | 2.41             | 36  | 43  | 43.238 | 108  | 18  | 59.605 |         |
| 6791.00  | 93.53       | 270.22      | 4767.18   | -961.92   | -2132.51  | 2259.30  | 2.54             | 36  | 43  | 43.237 | 108  | 18  | 59.997 |         |
| 6822.00  | 93.55       | 270.43      | 4765.27   | -961.74   | -2163.45  | 2289.81  | 0.68             | 36  | 43  | 43.239 | 108  | 19  | 0.377  |         |
| 6854.00  | 93.81       | 270.28      | 4763.22   | -961.55   | -2195.39  | 2321.30  | 0.94             | 36  | 43  | 43.241 | 108  | 19  | 0.769  |         |
| 6886.00  | 93.32       | 271.24      | 4761.23   | -961.12   | -2227.32  | 2352.75  | 3.36             | 36  | 43  | 43.245 | 108  | 19  | 1.162  |         |
| 6917.00  | 92.73       | 272.13      | 4759.59   | -960.21   | -2258.26  | 2383.14  | 3.44             | 36  | 43  | 43.254 | 108  | 19  | 1.542  |         |
| 6949.00  | 92.76       | 273.20      | 4758.06   | -958.73   | -2290.19  | 2414.42  | 3.34             | 36  | 43  | 43.269 | 108  | 19  | 1.934  |         |
| 6981.00  | 92.45       | 274.12      | 4756.60   | -956.69   | -2322.09  | 2445.58  | 3.03             | 36  | 43  | 43.289 | 108  | 19  | 2.326  |         |
| 7013.00  | 92.68       | 273.79      | 4755.17   | -954.48   | -2353.99  | 2476.70  | 1.26             | 36  | 43  | 43.311 | 108  | 19  | 2.718  |         |
| 7044.00  | 92.57       | 273.35      | 4753.75   | -952.55   | -2384.89  | 2506.90  | 1.46             | 36  | 43  | 43.330 | 108  | 19  | 3.097  |         |
| 7076.00  | 93.33       | 272.40      | 4752.10   | -950.95   | -2416.81  | 2538.14  | 3.80             | 36  | 43  | 43.346 | 108  | 19  | 3.490  |         |
| 7108.00  | 93.68       | 272.30      | 4750.15   | -949.64   | -2448.72  | 2569.43  | 1.14             | 36  | 43  | 43.358 | 108  | 19  | 3.882  |         |
| 7139.00  | 94.75       | 271.71      | 4747.87   | -948.56   | -2479.62  | 2599.76  | 3.94             | 36  | 43  | 43.369 | 108  | 19  | 4.261  |         |
| 7171.00  | 95.17       | 271.99      | 4745.10   | -947.53   | -2511.48  | 2631.04  | 1.58             | 36  | 43  | 43.379 | 108  | 19  | 4.653  |         |



# Weatherford WFT Survey Report Lat, Long



|                              |                                                          |                |         |
|------------------------------|----------------------------------------------------------|----------------|---------|
| Company: XTO                 | Date: 6/6/2013                                           | Time: 06:00:09 | Page: 4 |
| Field: San Juan, NM (NAD 83) | Co-ordinate(NE) Reference: Well: Ropco 16-#H, True North |                |         |
| Site: Ropco 16-#H            | Vertical (TVD) Reference: SITE 5232.0                    |                |         |
| Well: Ropco 16-#H            | Section (VS) Reference: Well (0.00N,0.00E,260.76Azi)     |                |         |
| Wellpath: 1                  | Survey Calculation Method: Minimum Curvature             | Db: Sybase     |         |

## Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comment |
|----------|-------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|---------|
| 7203.00  | 93.82       | 273.13      | 4742.59   | -946.10   | -2543.35  | 2662.27  | 5.51             | 36  | 43  | 43.393 | 108  | 19  | 5.044  |         |
| 7234.00  | 92.06       | 274.19      | 4741.00   | -944.13   | -2574.25  | 2692.44  | 6.63             | 36  | 43  | 43.413 | 108  | 19  | 5.424  |         |
| 7266.00  | 93.08       | 273.98      | 4739.57   | -941.85   | -2606.13  | 2723.55  | 3.25             | 36  | 43  | 43.435 | 108  | 19  | 5.815  |         |
| 7298.00  | 92.57       | 273.58      | 4737.99   | -939.74   | -2638.02  | 2754.69  | 2.02             | 36  | 43  | 43.456 | 108  | 19  | 6.207  |         |
| 7329.00  | 92.48       | 272.77      | 4736.63   | -938.03   | -2668.95  | 2784.93  | 2.63             | 36  | 43  | 43.473 | 108  | 19  | 6.587  |         |
| 7361.00  | 92.62       | 272.33      | 4735.20   | -936.61   | -2700.88  | 2816.23  | 1.44             | 36  | 43  | 43.487 | 108  | 19  | 6.979  |         |
| 7393.00  | 91.19       | 271.72      | 4734.14   | -935.48   | -2732.84  | 2847.59  | 4.86             | 36  | 43  | 43.498 | 108  | 19  | 7.372  |         |
| 7424.00  | 90.68       | 270.87      | 4733.63   | -934.78   | -2763.83  | 2878.07  | 3.20             | 36  | 43  | 43.505 | 108  | 19  | 7.753  |         |
| 7455.00  | 88.83       | 270.13      | 4733.77   | -934.50   | -2794.83  | 2908.62  | 6.43             | 36  | 43  | 43.508 | 108  | 19  | 8.133  |         |
| 7486.00  | 88.97       | 270.12      | 4734.36   | -934.44   | -2825.82  | 2939.20  | 0.45             | 36  | 43  | 43.508 | 108  | 19  | 8.514  |         |
| 7516.00  | 90.24       | 271.22      | 4734.57   | -934.09   | -2855.82  | 2968.75  | 5.60             | 36  | 43  | 43.512 | 108  | 19  | 8.883  |         |
| 7547.00  | 91.14       | 271.68      | 4734.19   | -933.30   | -2886.81  | 2999.21  | 3.26             | 36  | 43  | 43.520 | 108  | 19  | 9.263  |         |
| 7577.00  | 91.91       | 269.93      | 4733.40   | -932.88   | -2916.79  | 3028.74  | 6.37             | 36  | 43  | 43.524 | 108  | 19  | 9.632  |         |
| 7608.00  | 91.25       | 269.08      | 4732.54   | -933.15   | -2947.78  | 3059.36  | 3.47             | 36  | 43  | 43.521 | 108  | 19  | 10.012 |         |
| 7639.00  | 91.84       | 269.45      | 4731.71   | -933.55   | -2978.76  | 3090.01  | 2.25             | 36  | 43  | 43.517 | 108  | 19  | 10.393 |         |
| 7669.00  | 91.66       | 270.29      | 4730.79   | -933.61   | -3008.75  | 3119.62  | 2.86             | 36  | 43  | 43.516 | 108  | 19  | 10.761 |         |
| 7700.00  | 92.08       | 270.32      | 4729.78   | -933.45   | -3039.73  | 3150.17  | 1.36             | 36  | 43  | 43.518 | 108  | 19  | 11.142 |         |
| 7731.00  | 90.51       | 269.08      | 4729.08   | -933.61   | -3070.72  | 3180.79  | 6.45             | 36  | 43  | 43.516 | 108  | 19  | 11.523 |         |
| 7761.00  | 90.81       | 269.20      | 4728.73   | -934.06   | -3100.72  | 3210.47  | 1.08             | 36  | 43  | 43.512 | 108  | 19  | 11.891 |         |
| 7822.00  | 90.10       | 270.62      | 4728.25   | -934.16   | -3161.71  | 3270.69  | 2.60             | 36  | 43  | 43.511 | 108  | 19  | 12.640 |         |
| 7853.00  | 90.91       | 269.57      | 4727.97   | -934.11   | -3192.71  | 3301.27  | 4.28             | 36  | 43  | 43.511 | 108  | 19  | 13.021 |         |
| 7884.00  | 91.42       | 268.88      | 4727.34   | -934.53   | -3223.70  | 3331.93  | 2.77             | 36  | 43  | 43.507 | 108  | 19  | 13.402 |         |
| 7914.00  | 91.19       | 268.08      | 4726.66   | -935.32   | -3253.68  | 3361.65  | 2.77             | 36  | 43  | 43.499 | 108  | 19  | 13.770 |         |
| 7944.00  | 93.78       | 268.98      | 4725.36   | -936.09   | -3283.64  | 3391.34  | 9.14             | 36  | 43  | 43.492 | 108  | 19  | 14.138 |         |
| 7975.00  | 92.40       | 268.08      | 4723.69   | -936.88   | -3314.59  | 3422.01  | 5.31             | 36  | 43  | 43.484 | 108  | 19  | 14.518 |         |
| 8005.00  | 92.89       | 267.63      | 4722.30   | -938.01   | -3344.53  | 3451.75  | 2.22             | 36  | 43  | 43.473 | 108  | 19  | 14.886 |         |
| 8036.00  | 94.17       | 269.07      | 4720.40   | -938.90   | -3375.46  | 3482.42  | 6.21             | 36  | 43  | 43.464 | 108  | 19  | 15.266 |         |
| 8066.00  | 93.25       | 270.56      | 4718.45   | -938.99   | -3405.40  | 3511.98  | 5.83             | 36  | 43  | 43.463 | 108  | 19  | 15.634 |         |
| 8097.00  | 93.53       | 270.77      | 4716.62   | -938.63   | -3436.34  | 3542.47  | 1.13             | 36  | 43  | 43.466 | 108  | 19  | 16.014 |         |
| 8127.00  | 90.44       | 270.88      | 4715.58   | -938.20   | -3466.31  | 3571.98  | 10.31            | 36  | 43  | 43.471 | 108  | 19  | 16.382 |         |
| 8158.00  | 90.61       | 270.53      | 4715.30   | -937.82   | -3497.31  | 3602.52  | 1.26             | 36  | 43  | 43.474 | 108  | 19  | 16.763 |         |
| 8189.00  | 91.61       | 270.72      | 4714.70   | -937.48   | -3528.30  | 3633.05  | 3.28             | 36  | 43  | 43.478 | 108  | 19  | 17.144 |         |
| 8219.00  | 89.76       | 270.97      | 4714.34   | -937.04   | -3558.30  | 3662.59  | 6.22             | 36  | 43  | 43.482 | 108  | 19  | 17.512 |         |
| 8249.00  | 89.58       | 269.91      | 4714.51   | -936.81   | -3588.29  | 3692.16  | 3.58             | 36  | 43  | 43.484 | 108  | 19  | 17.881 |         |
| 8279.00  | 90.12       | 270.08      | 4714.59   | -936.81   | -3618.29  | 3721.77  | 1.89             | 36  | 43  | 43.484 | 108  | 19  | 18.249 |         |
| 8310.00  | 90.87       | 270.07      | 4714.32   | -936.77   | -3649.29  | 3752.36  | 2.42             | 36  | 43  | 43.484 | 108  | 19  | 18.630 |         |
| 8341.00  | 90.73       | 270.76      | 4713.89   | -936.55   | -3680.29  | 3782.92  | 2.27             | 36  | 43  | 43.487 | 108  | 19  | 19.011 |         |
| 8371.00  | 93.85       | 272.45      | 4712.69   | -935.71   | -3710.25  | 3812.35  | 11.83            | 36  | 43  | 43.495 | 108  | 19  | 19.379 |         |
| 8402.00  | 92.89       | 272.32      | 4710.87   | -934.42   | -3741.17  | 3842.66  | 3.12             | 36  | 43  | 43.508 | 108  | 19  | 19.759 |         |
| 8432.00  | 90.61       | 272.29      | 4709.95   | -933.22   | -3771.13  | 3872.04  | 7.60             | 36  | 43  | 43.519 | 108  | 19  | 20.127 |         |
| 8463.00  | 90.72       | 273.08      | 4709.59   | -931.76   | -3802.09  | 3902.37  | 2.57             | 36  | 43  | 43.534 | 108  | 19  | 20.507 |         |
| 8494.00  | 92.14       | 273.62      | 4708.82   | -929.95   | -3833.03  | 3932.61  | 4.90             | 36  | 43  | 43.552 | 108  | 19  | 20.887 |         |
| 8524.00  | 94.01       | 274.33      | 4707.21   | -927.88   | -3862.91  | 3961.78  | 6.67             | 36  | 43  | 43.572 | 108  | 19  | 21.254 |         |
| 8555.00  | 91.88       | 274.08      | 4705.62   | -925.61   | -3893.78  | 3991.88  | 6.92             | 36  | 43  | 43.595 | 108  | 19  | 21.634 |         |
| 8586.00  | 91.29       | 272.65      | 4704.76   | -923.79   | -3924.72  | 4022.12  | 4.99             | 36  | 43  | 43.612 | 108  | 19  | 22.014 |         |
| 8616.00  | 89.77       | 271.86      | 4704.48   | -922.61   | -3954.69  | 4051.52  | 5.71             | 36  | 43  | 43.624 | 108  | 19  | 22.382 |         |
| 8647.00  | 91.59       | 272.14      | 4704.11   | -921.53   | -3985.67  | 4081.92  | 5.94             | 36  | 43  | 43.635 | 108  | 19  | 22.762 |         |
| 8677.00  | 93.85       | 273.03      | 4702.69   | -920.17   | -4015.60  | 4111.25  | 8.10             | 36  | 43  | 43.648 | 108  | 19  | 23.130 |         |
| 8708.00  | 94.01       | 273.16      | 4700.57   | -918.50   | -4046.48  | 4141.46  | 0.66             | 36  | 43  | 43.665 | 108  | 19  | 23.510 |         |
| 8739.00  | 92.48       | 271.93      | 4698.81   | -917.13   | -4077.40  | 4171.76  | 6.33             | 36  | 43  | 43.678 | 108  | 19  | 23.889 |         |
| 8769.00  | 90.31       | 270.89      | 4698.08   | -916.39   | -4107.38  | 4201.23  | 8.02             | 36  | 43  | 43.685 | 108  | 19  | 24.258 |         |
| 8800.00  | 88.99       | 270.59      | 4698.27   | -915.99   | -4138.38  | 4231.76  | 4.37             | 36  | 43  | 43.689 | 108  | 19  | 24.638 |         |



# Weatherford

## WFT Survey Report Lat, Long

**Weatherford®**

|                                     |                                                                       |                       |                |
|-------------------------------------|-----------------------------------------------------------------------|-----------------------|----------------|
| <b>Company:</b> XTO                 | <b>Date:</b> 6/6/2013                                                 | <b>Time:</b> 06:00:09 | <b>Page:</b> 5 |
| <b>Field:</b> San Juan, NM (NAD 83) | <b>Co-ordinate(NE) Reference:</b> Well: Ropco 16-#H, True North       |                       |                |
| <b>Site:</b> Ropco 16-#H            | <b>Vertical (TVD) Reference:</b> SITE 5232.0                          |                       |                |
| <b>Well:</b> Ropco 16-#H            | <b>Section (VS) Reference:</b> Well (0.00N,0.00E,260.76Azi)           |                       |                |
| <b>Wellpath:</b> 1                  | <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase |                       |                |

**Survey**

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comments |
|----------|-------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|----------|
| 8859.00  | 90.87       | 270.77      | 4698.34   | -915.29   | -4197.37  | 4289.88  | 3.20             | 36  | 43  | 43.696 | 108  | 19  | 25.363 |          |
| 8891.00  | 90.05       | 268.83      | 4698.09   | -915.40   | -4229.37  | 4321.48  | 6.58             | 36  | 43  | 43.695 | 108  | 19  | 25.756 |          |
| 8922.00  | 90.44       | 268.79      | 4697.95   | -916.05   | -4260.36  | 4352.17  | 1.26             | 36  | 43  | 43.689 | 108  | 19  | 26.137 |          |
| 8954.00  | 90.70       | 269.00      | 4697.63   | -916.66   | -4292.35  | 4383.85  | 1.04             | 36  | 43  | 43.682 | 108  | 19  | 26.530 |          |
| 8986.00  | 90.38       | 268.27      | 4697.33   | -917.43   | -4324.34  | 4415.54  | 2.49             | 36  | 43  | 43.675 | 108  | 19  | 26.923 |          |
| 9018.00  | 90.65       | 268.56      | 4697.05   | -918.31   | -4356.33  | 4447.26  | 1.24             | 36  | 43  | 43.666 | 108  | 19  | 27.316 |          |
| 9049.00  | 90.42       | 269.47      | 4696.76   | -918.84   | -4387.32  | 4477.93  | 3.03             | 36  | 43  | 43.661 | 108  | 19  | 27.697 |          |
| 9081.00  | 89.95       | 268.22      | 4696.65   | -919.49   | -4419.32  | 4509.62  | 4.17             | 36  | 43  | 43.654 | 108  | 19  | 28.090 |          |
| 9113.00  | 89.88       | 268.02      | 4696.70   | -920.54   | -4451.30  | 4541.35  | 0.66             | 36  | 43  | 43.644 | 108  | 19  | 28.483 |          |
| 9145.00  | 90.03       | 267.69      | 4696.73   | -921.74   | -4483.28  | 4573.11  | 1.13             | 36  | 43  | 43.632 | 108  | 19  | 28.875 |          |
| 9176.00  | 90.30       | 268.37      | 4696.64   | -922.80   | -4514.26  | 4603.86  | 2.36             | 36  | 43  | 43.621 | 108  | 19  | 29.256 |          |
| 9209.00  | 89.90       | 268.38      | 4696.58   | -923.74   | -4547.24  | 4636.57  | 1.21             | 36  | 43  | 43.612 | 108  | 19  | 29.661 |          |
| 9240.00  | 89.72       | 268.15      | 4696.68   | -924.68   | -4578.23  | 4667.30  | 0.94             | 36  | 43  | 43.603 | 108  | 19  | 30.042 |          |
| 9272.00  | 88.81       | 268.67      | 4697.09   | -925.56   | -4610.21  | 4699.01  | 3.28             | 36  | 43  | 43.594 | 108  | 19  | 30.435 |          |
| 9304.00  | 88.72       | 267.98      | 4697.78   | -926.50   | -4642.19  | 4730.73  | 2.17             | 36  | 43  | 43.585 | 108  | 19  | 30.828 |          |
| 9335.00  | 90.68       | 268.20      | 4697.94   | -927.53   | -4673.17  | 4761.47  | 6.36             | 36  | 43  | 43.574 | 108  | 19  | 31.208 |          |
| 9367.00  | 90.84       | 268.15      | 4697.52   | -928.55   | -4705.16  | 4793.20  | 0.52             | 36  | 43  | 43.564 | 108  | 19  | 31.601 |          |
| 9399.00  | 89.98       | 265.02      | 4697.29   | -930.46   | -4737.09  | 4825.03  | 10.14            | 36  | 43  | 43.545 | 108  | 19  | 31.993 |          |
| 9431.00  | 90.54       | 266.05      | 4697.14   | -932.95   | -4769.00  | 4856.92  | 3.66             | 36  | 43  | 43.521 | 108  | 19  | 32.385 |          |
| 9463.00  | 90.87       | 267.09      | 4696.75   | -934.86   | -4800.94  | 4888.75  | 3.41             | 36  | 43  | 43.502 | 108  | 19  | 32.778 |          |
| 9494.00  | 91.08       | 266.93      | 4696.22   | -936.48   | -4831.89  | 4919.56  | 0.85             | 36  | 43  | 43.486 | 108  | 19  | 33.158 |          |
| 9526.00  | 91.24       | 267.13      | 4695.58   | -938.14   | -4863.84  | 4951.36  | 0.80             | 36  | 43  | 43.469 | 108  | 19  | 33.550 |          |
| 9558.00  | 91.70       | 267.30      | 4694.75   | -939.69   | -4895.79  | 4983.15  | 1.53             | 36  | 43  | 43.454 | 108  | 19  | 33.943 |          |
| 9589.00  | 89.51       | 264.96      | 4694.43   | -941.78   | -4926.71  | 5014.01  | 10.34            | 36  | 43  | 43.433 | 108  | 19  | 34.323 |          |
| 9621.00  | 87.94       | 263.81      | 4695.14   | -944.91   | -4958.55  | 5045.94  | 6.08             | 36  | 43  | 43.402 | 108  | 19  | 34.714 |          |
| 9653.00  | 87.62       | 263.92      | 4696.38   | -948.33   | -4990.34  | 5077.87  | 1.06             | 36  | 43  | 43.368 | 108  | 19  | 35.104 |          |
| 9685.00  | 88.00       | 263.75      | 4697.60   | -951.77   | -5022.14  | 5109.80  | 1.30             | 36  | 43  | 43.334 | 108  | 19  | 35.495 |          |
| 9716.00  | 88.81       | 264.61      | 4698.46   | -954.91   | -5052.96  | 5140.73  | 3.81             | 36  | 43  | 43.303 | 108  | 19  | 35.874 |          |
| 9748.00  | 88.71       | 264.65      | 4699.16   | -957.90   | -5084.82  | 5172.65  | 0.34             | 36  | 43  | 43.273 | 108  | 19  | 36.265 |          |
| 9780.00  | 88.69       | 264.06      | 4699.88   | -961.05   | -5116.65  | 5204.58  | 1.84             | 36  | 43  | 43.242 | 108  | 19  | 36.656 |          |
| 9812.00  | 90.24       | 265.14      | 4700.18   | -964.06   | -5148.51  | 5236.50  | 5.90             | 36  | 43  | 43.212 | 108  | 19  | 37.047 |          |
| 9844.00  | 91.08       | 266.89      | 4699.81   | -966.28   | -5180.43  | 5268.36  | 6.07             | 36  | 43  | 43.190 | 108  | 19  | 37.439 |          |
| 9875.00  | 92.90       | 268.88      | 4698.74   | -967.43   | -5211.38  | 5299.10  | 8.70             | 36  | 43  | 43.179 | 108  | 19  | 37.820 |          |
| 9907.00  | 92.99       | 270.28      | 4697.09   | -967.66   | -5243.34  | 5330.68  | 4.38             | 36  | 43  | 43.177 | 108  | 19  | 38.212 |          |
| 9939.00  | 93.29       | 270.17      | 4695.34   | -967.54   | -5275.29  | 5362.20  | 1.00             | 36  | 43  | 43.178 | 108  | 19  | 38.605 |          |
| 9971.00  | 93.92       | 270.27      | 4693.33   | -967.41   | -5307.23  | 5393.70  | 1.99             | 36  | 43  | 43.179 | 108  | 19  | 38.997 |          |
| 10003.00 | 93.68       | 269.29      | 4691.21   | -967.54   | -5339.16  | 5425.24  | 3.15             | 36  | 43  | 43.178 | 108  | 19  | 39.389 |          |
| 10034.00 | 93.99       | 269.66      | 4689.13   | -967.82   | -5370.09  | 5455.81  | 1.56             | 36  | 43  | 43.175 | 108  | 19  | 39.769 |          |
| 10066.00 | 92.63       | 268.07      | 4687.29   | -968.45   | -5402.02  | 5487.43  | 6.53             | 36  | 43  | 43.168 | 108  | 19  | 40.162 |          |
| 10098.00 | 89.62       | 267.59      | 4686.66   | -969.66   | -5433.99  | 5519.18  | 9.53             | 36  | 43  | 43.156 | 108  | 19  | 40.554 |          |
| 10129.00 | 89.05       | 266.52      | 4687.02   | -971.26   | -5464.95  | 5549.99  | 3.91             | 36  | 43  | 43.141 | 108  | 19  | 40.935 |          |
| 10160.00 | 89.39       | 268.69      | 4687.44   | -972.55   | -5495.92  | 5580.77  | 7.08             | 36  | 43  | 43.128 | 108  | 19  | 41.315 |          |
| 10191.00 | 89.28       | 268.42      | 4687.80   | -973.33   | -5526.90  | 5611.48  | 0.94             | 36  | 43  | 43.120 | 108  | 19  | 41.696 |          |
| 10223.00 | 88.83       | 268.72      | 4688.33   | -974.13   | -5558.89  | 5643.18  | 1.69             | 36  | 43  | 43.112 | 108  | 19  | 42.089 |          |
| 10254.00 | 88.95       | 269.13      | 4688.93   | -974.71   | -5589.88  | 5673.86  | 1.38             | 36  | 43  | 43.106 | 108  | 19  | 42.469 |          |
| 10286.00 | 90.54       | 268.40      | 4689.07   | -975.40   | -5621.87  | 5705.54  | 5.47             | 36  | 43  | 43.099 | 108  | 19  | 42.862 |          |
| 10318.00 | 91.03       | 265.66      | 4688.63   | -977.06   | -5653.82  | 5737.35  | 8.70             | 36  | 43  | 43.083 | 108  | 19  | 43.255 |          |
| 10349.00 | 89.91       | 261.91      | 4688.38   | -980.42   | -5684.63  | 5768.29  | 12.62            | 36  | 43  | 43.050 | 108  | 19  | 43.633 |          |
| 10381.00 | 90.30       | 262.40      | 4688.32   | -984.78   | -5716.33  | 5800.29  | 1.96             | 36  | 43  | 43.006 | 108  | 19  | 44.023 |          |
| 10413.00 | 90.84       | 265.19      | 4688.00   | -988.24   | -5748.14  | 5832.24  | 8.88             | 36  | 43  | 42.972 | 108  | 19  | 44.414 |          |
| 10444.00 | 91.77       | 266.07      | 4687.29   | -990.60   | -5779.04  | 5863.11  | 4.13             | 36  | 43  | 42.949 | 108  | 19  | 44.793 |          |
| 10476.00 | 91.92       | 266.26      | 4686.26   | -992.74   | -5810.95  | 5894.96  | 0.76             | 36  | 43  | 42.927 | 108  | 19  | 45.185 |          |
| 10508.00 | 91.68       | 265.87      | 4685.26   | -994.94   | -5842.86  | 5926.80  | 1.43             | 36  | 43  | 42.906 | 108  | 19  | 45.577 |          |



# Weatherford

## WFT Survey Report Lat, Long

**Weatherford**

|                              |                                                          |                |         |
|------------------------------|----------------------------------------------------------|----------------|---------|
| Company: XTO                 | Date: 6/6/2013                                           | Time: 06:00:09 | Page: 6 |
| Field: San Juan, NM (NAD 83) | Co-ordinate(NE) Reference: Well: Ropco 16-#H, True North |                |         |
| Site: Ropco 16-#H            | Vertical (TVD) Reference: SITE 5232.0                    |                |         |
| Well: Ropco 16-#H            | Section (VS) Reference: Well (0.00N,0.00E,260.76Azi)     |                |         |
| Wellpath: 1                  | Survey Calculation Method: Minimum Curvature Db: Sybase  |                |         |

**Survey**

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | N/S<br>ft | E/W<br>ft | VS<br>ft | DLS<br>deg/100ft | Lat | Min | Sec    | Long | Min | Sec    | Comment      |
|----------|-------------|-------------|-----------|-----------|-----------|----------|------------------|-----|-----|--------|------|-----|--------|--------------|
| 10539.00 | 92.15       | 267.23      | 4684.22   | -996.80   | -5873.79  | 5957.63  | 4.64             | 36  | 43  | 42.887 | 108  | 19  | 45.957 |              |
| 10570.00 | 92.15       | 266.84      | 4683.06   | -998.40   | -5904.72  | 5988.42  | 1.26             | 36  | 43  | 42.871 | 108  | 19  | 46.337 |              |
| 10602.00 | 92.38       | 268.81      | 4681.80   | -999.62   | -5936.67  | 6020.15  | 6.19             | 36  | 43  | 42.859 | 108  | 19  | 46.730 |              |
| 10634.00 | 92.55       | 268.34      | 4680.42   | -1000.41  | -5968.63  | 6051.82  | 1.56             | 36  | 43  | 42.851 | 108  | 19  | 47.122 |              |
| 10666.00 | 92.80       | 269.35      | 4678.93   | -1001.06  | -6000.59  | 6083.47  | 3.25             | 36  | 43  | 42.845 | 108  | 19  | 47.515 |              |
| 10698.00 | 93.24       | 269.73      | 4677.24   | -1001.31  | -6032.55  | 6115.05  | 1.82             | 36  | 43  | 42.842 | 108  | 19  | 47.907 |              |
| 10729.00 | 92.45       | 269.57      | 4675.70   | -1001.50  | -6063.51  | 6145.64  | 2.60             | 36  | 43  | 42.840 | 108  | 19  | 48.288 |              |
| 10761.00 | 91.61       | 268.03      | 4674.57   | -1002.17  | -6095.48  | 6177.31  | 5.48             | 36  | 43  | 42.834 | 108  | 19  | 48.680 |              |
| 10793.00 | 90.02       | 267.57      | 4674.11   | -1003.40  | -6127.45  | 6209.06  | 5.17             | 36  | 43  | 42.821 | 108  | 19  | 49.073 |              |
| 10828.00 | 88.06       | 266.43      | 4674.70   | -1005.23  | -6162.40  | 6243.85  | 6.48             | 36  | 43  | 42.803 | 108  | 19  | 49.502 | Last Wft Svy |
| 10900.00 | 88.06       | 266.43      | 4677.14   | -1009.71  | -6234.21  | 6315.45  | 0.00             | 36  | 43  | 42.759 | 108  | 19  | 50.385 | Proj. To Bit |

**Casing Points**

| MD<br>ft | TVD<br>ft | Diameter<br>in | Hole Size<br>in | Name   |
|----------|-----------|----------------|-----------------|--------|
| 518.00   | 517.99    | 0.000          | 0.000           | Csg    |
| 5300.00  | 4767.41   | 7.000          | 8.750           | 7"     |
| 10900.00 | 4677.14   | 4.500          | 6.125           | 4 1/2" |

**Annotation**

| MD<br>ft | TVD<br>ft |               |
|----------|-----------|---------------|
| 548.00   | 547.99    | First Wft Svy |
| 10828.00 | 4674.70   | Last Wft Svy  |
| 10900.00 | 4677.14   | Proj. To Bit  |