

# **XTO Energy - Western Div. (NM, CO, UT)**

**LaPlata County (NAD83)**

**Burkett #4-24**

**Burkett #4-24**

**Burkett #4-24 -- Slant Well**

**Plan: Burkett #4-24 -- Slant Well**

## **Standard Planning Report**

**19 June, 2013**

# XTO Energy, Inc.

## Planning Report

|                  |  |                                     |                                       |
|------------------|--|-------------------------------------|---------------------------------------|
| <b>Database:</b> | LMRKPROD                               | <b>Local Co-ordinate Reference:</b> | Site Burkett #4-24                    |
| <b>Company:</b>  | XTO Energy - Western Div. (NM, CO, UT) | <b>TVD Reference:</b>               | WELL @ 7582.00ft (Original Well Elev) |
| <b>Project:</b>  | LaPlata County (NAD83)                 | <b>MD Reference:</b>                | WELL @ 7582.00ft (Original Well Elev) |
| <b>Site:</b>     | Burkett #4-24                          | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | Burkett #4-24                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | Burkett #4-24 -- Slant Well            |                                     |                                       |
| <b>Design:</b>   | Burkett #4-24 -- Slant Well            |                                     |                                       |

|                    |  |                      |                            |
|--------------------|--|----------------------|----------------------------|
| <b>Project</b>     | LaPlata County (NAD83), LaPlata County, Colorado, Directional Fruitland Coal Wells |                      |                            |
| <b>Map System:</b> | US State Plane 1983  | <b>System Datum:</b> | Mean Sea Level             |
| <b>Geo Datum:</b>  | North American Datum 1983  |                      | Using Well Reference Point |
| <b>Map Zone:</b>   | Colorado Southern Zone   |                      |                            |

|                              |                          |                          |                      |
|------------------------------|--------------------------|--------------------------|----------------------|
| <b>Site</b>                  | Burkett #4-24, T35N, R8W |                          |                      |
| <b>Site Position:</b>        |                          | <b>Northing:</b>         | 1,232,049.87 usft    |
| <b>From:</b>                 | Lat/Long                 | <b>Easting:</b>          | 2,363,296.24 usft    |
| <b>Position Uncertainty:</b> | 0.00 ft                  | <b>Slot Radius:</b>      | 0"                   |
|                              |                          | <b>Latitude:</b>         | 37° 17' 0.492000 N   |
|                              |                          | <b>Longitude:</b>        | 107° 41' 19.032000 W |
|                              |                          | <b>Grid Convergence:</b> | -1.34 °              |

|                             |               |                            |                                    |
|-----------------------------|---------------|----------------------------|------------------------------------|
| <b>Well</b>                 | Burkett #4-24 |                            |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>  | 0.00 ft                    | <b>Northing:</b> 1,232,049.87 usft |
|                             | <b>+E/-W</b>  | 0.00 ft                    | <b>Easting:</b> 2,363,296.24 usft  |
| <b>Position Uncertainty</b> | 0.00 ft       | <b>Wellhead Elevation:</b> | 7,570.00 ft                        |
|                             |               | <b>Latitude:</b>           | 37° 17' 0.491949 N                 |
|                             |               | <b>Longitude:</b>          | 107° 41' 19.032000 W               |
|                             |               | <b>Ground Level:</b>       | 7,570.00 ft                        |

|                  |                             |                    |                        |                      |                            |
|------------------|-----------------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Burkett #4-24 -- Slant Well |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b>           | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF200510                  | 6/14/2013          | 9.67                   | 63.91                | 50,891                     |

|                          |                             |              |                      |                  |
|--------------------------|-----------------------------|--------------|----------------------|------------------|
| <b>Design</b>            | Burkett #4-24 -- Slant Well |              |                      |                  |
| <b>Audit Notes:</b>      |                             |              |                      |                  |
| <b>Version:</b>          | <b>Phase:</b>               | PROTOTYPE    | <b>Tie On Depth:</b> | 0.00             |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b>     | <b>+N/-S</b> | <b>+E/-W</b>         | <b>Direction</b> |
|                          | (ft)                        | (ft)         | (ft)                 | (°)              |
|                          | 0.00                        | 0.00         | 0.00                 | 229.48           |

|                       |                    |                |                       |              |              |                    |                   |                  |            |                        |
|-----------------------|--------------------|----------------|-----------------------|--------------|--------------|--------------------|-------------------|------------------|------------|------------------------|
| <b>Plan Sections</b>  |                    |                |                       |              |              |                    |                   |                  |            |                        |
| <b>Measured Depth</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical Depth</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg Rate</b> | <b>Build Rate</b> | <b>Turn Rate</b> | <b>TFO</b> | <b>Target</b>          |
| (ft)                  | (°)                | (°)            | (ft)                  | (ft)         | (ft)         | (°/100ft)          | (°/100ft)         | (°/100ft)        | (°)        |                        |
| 0.00                  | 0.00               | 0.00           | 0.00                  | 0.00         | 0.00         | 0.00               | 0.00              | 0.00             | 0.00       |                        |
| 300.00                | 0.00               | 0.00           | 300.00                | 0.00         | 0.00         | 0.00               | 0.00              | 0.00             | 0.00       |                        |
| 694.69                | 11.84              | 229.48         | 691.89                | -26.40       | -30.89       | 3.00               | 3.00              | 0.00             | 229.48     |                        |
| 2,026.13              | 11.84              | 229.48         | 1,995.00              | -203.90      | -238.57      | 0.00               | 0.00              | 0.00             | 0.00       | Burkett #4-24 -- Slant |
| 2,133.42              | 11.84              | 229.48         | 2,100.00              | -218.21      | -255.31      | 0.00               | 0.00              | 0.00             | 0.00       |                        |

# XTO Energy, Inc.

## Planning Report

|                  |  |                                     |                                       |
|------------------|--|-------------------------------------|---------------------------------------|
| <b>Database:</b> | LMRKPROD                               | <b>Local Co-ordinate Reference:</b> | Site Burkett #4-24                    |
| <b>Company:</b>  | XTO Energy - Western Div. (NM, CO, UT) | <b>TVD Reference:</b>               | WELL @ 7582.00ft (Original Well Elev) |
| <b>Project:</b>  | LaPlata County (NAD83)                 | <b>MD Reference:</b>                | WELL @ 7582.00ft (Original Well Elev) |
| <b>Site:</b>     | Burkett #4-24                          | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | Burkett #4-24                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | Burkett #4-24 -- Slant Well            |                                     |                                       |
| <b>Design:</b>   | Burkett #4-24 -- Slant Well            |                                     |                                       |

| Planned Survey        |                 |             |                     |            |            |                       |                       |                      |                     |
|-----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00                  | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 100.00                | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 200.00                | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 225.00                | 0.00            | 0.00        | 225.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 9 5/8"                |                 |             |                     |            |            |                       |                       |                      |                     |
| 300.00                | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 400.00                | 3.00            | 229.48      | 399.95              | -1.70      | -1.99      | 2.62                  | 3.00                  | 3.00                 | 0.00                |
| 500.00                | 6.00            | 229.48      | 499.63              | -6.80      | -7.95      | 10.46                 | 3.00                  | 3.00                 | 0.00                |
| 600.00                | 9.00            | 229.48      | 598.77              | -15.28     | -17.87     | 23.51                 | 3.00                  | 3.00                 | 0.00                |
| 694.69                | 11.84           | 229.48      | 691.89              | -26.40     | -30.89     | 40.64                 | 3.00                  | 3.00                 | 0.00                |
| 700.00                | 11.84           | 229.48      | 697.08              | -27.11     | -31.72     | 41.73                 | 0.00                  | 0.00                 | 0.00                |
| 800.00                | 11.84           | 229.48      | 794.96              | -40.44     | -47.32     | 62.25                 | 0.00                  | 0.00                 | 0.00                |
| 900.00                | 11.84           | 229.48      | 892.83              | -53.77     | -62.92     | 82.77                 | 0.00                  | 0.00                 | 0.00                |
| 1,000.00              | 11.84           | 229.48      | 990.70              | -67.11     | -78.52     | 103.28                | 0.00                  | 0.00                 | 0.00                |
| 1,057.52              | 11.84           | 229.48      | 1,047.00            | -74.77     | -87.49     | 115.09                | 0.00                  | 0.00                 | 0.00                |
| Kirtland Shale        |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,100.00              | 11.84           | 229.48      | 1,088.57            | -80.44     | -94.11     | 123.80                | 0.00                  | 0.00                 | 0.00                |
| 1,200.00              | 11.84           | 229.48      | 1,186.44            | -93.77     | -109.71    | 144.32                | 0.00                  | 0.00                 | 0.00                |
| 1,300.00              | 11.84           | 229.48      | 1,284.32            | -107.10    | -125.31    | 164.84                | 0.00                  | 0.00                 | 0.00                |
| 1,400.00              | 11.84           | 229.48      | 1,382.19            | -120.43    | -140.91    | 185.36                | 0.00                  | 0.00                 | 0.00                |
| 1,500.00              | 11.84           | 229.48      | 1,480.06            | -133.76    | -156.51    | 205.88                | 0.00                  | 0.00                 | 0.00                |
| 1,536.72              | 11.84           | 229.48      | 1,516.00            | -138.66    | -162.23    | 213.41                | 0.00                  | 0.00                 | 0.00                |
| Fruitland Formation   |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,600.00              | 11.84           | 229.48      | 1,577.93            | -147.09    | -172.11    | 226.40                | 0.00                  | 0.00                 | 0.00                |
| 1,700.00              | 11.84           | 229.48      | 1,675.81            | -160.42    | -187.70    | 246.92                | 0.00                  | 0.00                 | 0.00                |
| 1,800.00              | 11.84           | 229.48      | 1,773.68            | -173.76    | -203.30    | 267.44                | 0.00                  | 0.00                 | 0.00                |
| 1,896.37              | 11.84           | 229.48      | 1,868.00            | -186.60    | -218.33    | 287.21                | 0.00                  | 0.00                 | 0.00                |
| Upper Fruitland Coal  |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,900.00              | 11.84           | 229.48      | 1,871.55            | -187.09    | -218.90    | 287.96                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00              | 11.84           | 229.48      | 1,969.42            | -200.42    | -234.50    | 308.48                | 0.00                  | 0.00                 | 0.00                |
| 2,026.13              | 11.84           | 229.48      | 1,995.00            | -203.90    | -238.57    | 313.84                | 0.00                  | 0.00                 | 0.00                |
| Target Interval 2     |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,055.76              | 11.84           | 229.48      | 2,024.00            | -207.85    | -243.20    | 319.92                | 0.00                  | 0.00                 | 0.00                |
| Lower Fruitland Coal  |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,060.87              | 11.84           | 229.48      | 2,029.00            | -208.53    | -243.99    | 320.97                | 0.00                  | 0.00                 | 0.00                |
| Target Interval 1     |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,079.26              | 11.84           | 229.48      | 2,047.00            | -210.99    | -246.86    | 324.74                | 0.00                  | 0.00                 | 0.00                |
| Upper Pictured Cliffs |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,100.00              | 11.84           | 229.48      | 2,067.29            | -213.75    | -250.10    | 328.99                | 0.00                  | 0.00                 | 0.00                |
| 2,133.00              | 11.84           | 229.48      | 2,099.59            | -218.15    | -255.24    | 335.77                | 0.00                  | 0.00                 | 0.00                |
| 7"                    |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,133.42              | 11.84           | 229.48      | 2,100.00            | -218.21    | -255.31    | 335.85                | 0.00                  | 0.00                 | 0.00                |

| Design Targets           |               |              |          |            |            |                 |                |                     |                      |
|--------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|---------------------|----------------------|
| Target Name              | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude            | Longitude            |
| Burkett #4-24 -- Slant W | 0.00          | 0.00         | 1,995.00 | -203.90    | -238.57    | 1,231,851.61    | 2,363,052.95   | 37° 16' 58.475949 N | 107° 41' 21.984000 W |
| - hit/miss target        |               |              |          |            |            |                 |                |                     |                      |
| - Shape                  |               |              |          |            |            |                 |                |                     |                      |
| - Point                  |               |              |          |            |            |                 |                |                     |                      |

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## Planning Report

|                  |  |                                     |                                       |
|------------------|--|-------------------------------------|---------------------------------------|
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| <b>Company:</b>  | XTO Energy - Western Div. (NM, CO, UT) | <b>TVD Reference:</b>               | WELL @ 7582.00ft (Original Well Elev) |
| <b>Project:</b>  | LaPlata County (NAD83)                 | <b>MD Reference:</b>                | WELL @ 7582.00ft (Original Well Elev) |
| <b>Site:</b>     | Burkett #4-24                          | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | Burkett #4-24                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | Burkett #4-24 -- Slant Well            |                                     |                                       |
| <b>Design:</b>   | Burkett #4-24 -- Slant Well            |                                     |                                       |

| Casing Points       |                     |        |                     |                   |  |
|---------------------|---------------------|--------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name   | Casing Diameter (") | Hole Diameter (") |  |
| 225.00              | 225.00              | 9 5/8" | 9-5/8               | 12-1/4            |  |
| 2,133.00            | 2,099.59            | 7"     | 7                   | 8-3/4             |  |

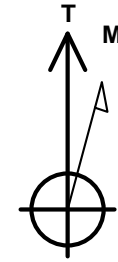
| Formations          |                     |                       |           |         |                   |  |
|---------------------|---------------------|-----------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name                  | Lithology | Dip (°) | Dip Direction (°) |  |
| 1,057.52            | 1,047.00            | Kirtland Shale        |           | 0.00    |                   |  |
| 1,536.72            | 1,516.00            | Fruitland Formation   |           | 0.00    |                   |  |
| 1,896.37            | 1,868.00            | Upper Fruitland Coal  |           | 0.00    |                   |  |
| 2,026.13            | 1,995.00            | Target Interval 2     |           | 0.00    |                   |  |
| 2,055.76            | 2,024.00            | Lower Fruitland Coal  |           | 0.00    |                   |  |
| 2,060.87            | 2,029.00            | Target Interval 1     |           | 0.00    |                   |  |
| 2,079.26            | 2,047.00            | Upper Pictured Cliffs |           | 0.00    |                   |  |



# Well Name: Burkett #4-24

San Juan Division  
Drilling Department

Calculation Method: Minimum Curvature  
Geodetic Datum: North American Datum 1983  
Lat: 37° 17' 0.492000 N  
Long: 107° 41' 19.032000 W



Azimuths to True North  
Magnetic North: 9.66°

Magnetic Field  
Strength: 50890.6snT  
Dip Angle: 63.91°  
Date: 6/14/2013  
Model: IGRF200510

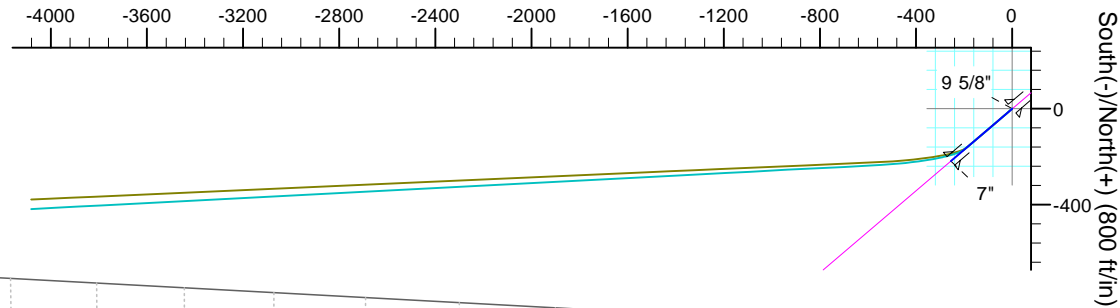
## CASING DETAILS

| TVD     | MD      | Name   |
|---------|---------|--------|
| 225.00  | 225.00  | 9 5/8" |
| 2099.59 | 2133.00 | 7"     |

## FORMATION TOP DETAILS

| TVDPATH | MDPATH  | Formation             |
|---------|---------|-----------------------|
| 1047.00 | 1057.52 | Kirtland Shale        |
| 1516.00 | 1536.72 | Fruitland Formation   |
| 1868.00 | 1896.37 | Upper Fruitland Coal  |
| 1995.00 | 2026.13 | Target Interval 2     |
| 2024.00 | 2055.76 | Lower Fruitland Coal  |
| 2029.00 | 2060.87 | Target Interval 1     |
| 2047.00 | 2079.26 | Upper Pictured Cliffs |

West(-)/East(+) (800 ft/in)



South(-)/North(+) (800 ft/in)

