



Company: Mewbourne Oil Company

Lease/Well: Zircon 1 State /No. 001H

Rig Name: Patterson 41

State/County: New Mexico/Eddy

Latitude: 32.68

GRID North is 0.16 Degrees East of True North

VS-Azi: 90.30 Degrees



DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ZIRCON 1 STATE 001H.ut

Minimum Curvature Method

Report Date/Time: 6/18/2012 / 14:02

Vaughn Energy Services

Corpus Christi, Texas

800-606-4976

Surveyor: Adam Gwyn

Zircon 1 State No. 001H / API 30-015-39198

15-39198

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 0.00                    | 0.00                 | 0.00                      | 0.00      | 0.00        | 0.00        | 0.00                      | 0.00                      | 0.00                        | ****                          |
| 100.00                  | 0.73                 | 28.87                     | 100.00    | 0.56        | 0.31        | 0.30                      | 0.64                      | 28.87                       | 0.73                          |
| 200.00                  | 0.31                 | 102.37                    | 199.99    | 1.06        | 0.88        | 0.87                      | 1.37                      | 39.73                       | 0.71                          |
| 300.00                  | 0.31                 | 84.53                     | 299.99    | 1.02        | 1.41        | 1.40                      | 1.74                      | 53.98                       | 0.10                          |
| 400.00                  | 0.38                 | 82.03                     | 399.99    | 1.10        | 2.00        | 2.00                      | 2.28                      | 61.32                       | 0.07                          |
| 500.00                  | 0.36                 | 89.23                     | 499.99    | 1.15        | 2.64        | 2.64                      | 2.88                      | 66.56                       | 0.05                          |
| 600.00                  | 0.46                 | 78.86                     | 599.99    | 1.23        | 3.35        | 3.34                      | 3.57                      | 69.87                       | 0.13                          |
| 700.00                  | 0.51                 | 91.42                     | 699.98    | 1.29        | 4.19        | 4.18                      | 4.38                      | 72.82                       | 0.12                          |
| 800.00                  | 0.61                 | 65.60                     | 799.98    | 1.50        | 5.12        | 5.11                      | 5.34                      | 73.62                       | 0.27                          |
| 900.00                  | 0.80                 | 75.15                     | 899.97    | 1.91        | 6.28        | 6.27                      | 6.57                      | 73.13                       | 0.22                          |
| 1000.00                 | 1.37                 | 75.86                     | 999.95    | 2.38        | 8.12        | 8.11                      | 8.46                      | 73.68                       | 0.57                          |
| 1100.00                 | 1.56                 | 67.91                     | 1099.92   | 3.18        | 10.54       | 10.53                     | 11.01                     | 73.21                       | 0.28                          |
| 1200.00                 | 1.46                 | 65.81                     | 1199.88   | 4.21        | 12.96       | 12.94                     | 13.63                     | 71.99                       | 0.12                          |
| 1300.00                 | 1.33                 | 58.91                     | 1299.85   | 5.34        | 15.12       | 15.09                     | 16.03                     | 70.56                       | 0.21                          |
| 1400.00                 | 1.44                 | 43.19                     | 1399.83   | 6.85        | 16.98       | 16.94                     | 18.31                     | 68.02                       | 0.39                          |
| 1500.00                 | 1.59                 | 41.22                     | 1499.79   | 8.81        | 18.75       | 18.70                     | 20.72                     | 64.82                       | 0.16                          |
| 1600.00                 | 1.51                 | 44.18                     | 1599.75   | 10.81       | 20.59       | 20.53                     | 23.25                     | 62.31                       | 0.11                          |
| 1700.00                 | 1.35                 | 45.71                     | 1699.72   | 12.58       | 22.35       | 22.29                     | 25.65                     | 60.63                       | 0.17                          |
| 1800.00                 | 1.17                 | 26.70                     | 1799.70   | 14.31       | 23.65       | 23.58                     | 27.65                     | 58.82                       | 0.45                          |
| 1900.00                 | 1.09                 | 13.95                     | 1899.68   | 16.15       | 24.34       | 24.26                     | 29.22                     | 56.44                       | 0.26                          |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 2000.00                 | 0.93                 | 9.73                      | 1999.66   | 17.88       | 24.71       | 24.62                     | 30.50                     | 54.11                       | 0.17                          |
| 2100.00                 | 0.55                 | 1.65                      | 2099.66   | 19.16       | 24.86       | 24.76                     | 31.39                     | 52.38                       | 0.40                          |
| 2200.00                 | 0.64                 | 335.23                    | 2199.65   | 20.14       | 24.64       | 24.54                     | 31.83                     | 50.74                       | 0.29                          |
| 2300.00                 | 0.59                 | 330.27                    | 2299.64   | 21.10       | 24.15       | 24.04                     | 32.07                     | 48.86                       | 0.07                          |
| 2400.00                 | 0.73                 | 329.34                    | 2399.64   | 22.10       | 23.57       | 23.45                     | 32.31                     | 46.84                       | 0.14                          |
| 2500.00                 | 0.69                 | 331.76                    | 2499.63   | 23.18       | 22.96       | 22.84                     | 32.62                     | 44.73                       | 0.06                          |
| 2600.00                 | 0.53                 | 349.19                    | 2599.62   | 24.16       | 22.59       | 22.46                     | 33.07                     | 43.08                       | 0.24                          |
| 2700.00                 | 0.43                 | 351.68                    | 2699.62   | 24.98       | 22.45       | 22.32                     | 33.58                     | 41.95                       | 0.10                          |
| 2800.00                 | 0.46                 | 345.54                    | 2799.62   | 25.73       | 22.30       | 22.16                     | 34.05                     | 40.91                       | 0.06                          |
| 2900.00                 | 0.45                 | 358.10                    | 2899.62   | 26.51       | 22.18       | 22.04                     | 34.57                     | 39.92                       | 0.10                          |
| 3000.00                 | 0.37                 | 357.40                    | 2999.61   | 27.23       | 22.15       | 22.01                     | 35.10                     | 39.13                       | 0.08                          |
| 3100.00                 | 0.36                 | 345.48                    | 3099.61   | 27.86       | 22.06       | 21.91                     | 35.54                     | 38.37                       | 0.08                          |
| 3200.00                 | 0.54                 | 346.75                    | 3199.61   | 28.63       | 21.87       | 21.72                     | 36.03                     | 37.38                       | 0.18                          |
| 3300.00                 | 0.43                 | 357.40                    | 3299.60   | 29.46       | 21.75       | 21.59                     | 36.62                     | 36.43                       | 0.14                          |
| 3400.00                 | 0.38                 | 349.05                    | 3399.60   | 30.17       | 21.67       | 21.51                     | 37.14                     | 35.69                       | 0.08                          |
| 3500.00                 | 0.47                 | 342.89                    | 3499.60   | 30.88       | 21.49       | 21.32                     | 37.62                     | 34.83                       | 0.10                          |
| 3600.00                 | 0.61                 | 346.00                    | 3599.59   | 31.79       | 21.24       | 21.07                     | 38.23                     | 33.75                       | 0.15                          |
| 3700.00                 | 0.58                 | 333.15                    | 3699.59   | 32.76       | 20.88       | 20.70                     | 38.85                     | 32.51                       | 0.14                          |
| 3800.00                 | 0.50                 | 322.70                    | 3799.58   | 33.56       | 20.38       | 20.21                     | 39.27                     | 31.27                       | 0.13                          |
| 3900.00                 | 0.93                 | 337.32                    | 3899.58   | 34.66       | 19.81       | 19.62                     | 39.92                     | 29.75                       | 0.46                          |
| 4000.00                 | 1.63                 | 341.70                    | 3999.55   | 36.75       | 19.05       | 18.86                     | 41.39                     | 27.40                       | 0.71                          |
| 4100.00                 | 1.78                 | 347.69                    | 4099.51   | 39.61       | 18.27       | 18.06                     | 43.63                     | 24.76                       | 0.24                          |
| 4200.00                 | 1.98                 | 357.77                    | 4199.45   | 42.86       | 17.87       | 17.65                     | 46.44                     | 22.64                       | 0.39                          |
| 4300.00                 | 2.00                 | 352.05                    | 4299.39   | 46.31       | 17.56       | 17.32                     | 49.53                     | 20.77                       | 0.20                          |
| 4400.00                 | 1.82                 | 353.49                    | 4399.34   | 49.61       | 17.14       | 16.88                     | 52.49                     | 19.06                       | 0.18                          |
| 4500.00                 | 1.86                 | 348.84                    | 4499.29   | 52.78       | 16.65       | 16.37                     | 55.35                     | 17.51                       | 0.16                          |
| 4600.00                 | 1.75                 | 342.81                    | 4599.24   | 55.84       | 15.88       | 15.59                     | 58.05                     | 15.88                       | 0.22                          |
| 4700.00                 | 1.43                 | 330.98                    | 4699.20   | 58.38       | 14.83       | 14.52                     | 60.24                     | 14.25                       | 0.46                          |
| 4800.00                 | 1.35                 | 321.22                    | 4799.17   | 60.39       | 13.49       | 13.17                     | 61.88                     | 12.59                       | 0.25                          |
| 4900.00                 | 1.49                 | 312.45                    | 4899.14   | 62.19       | 11.79       | 11.47                     | 63.29                     | 10.74                       | 0.26                          |
| 5000.00                 | 1.46                 | 308.90                    | 4999.11   | 63.86       | 9.84        | 9.51                      | 64.62                     | 8.76                        | 0.10                          |
| 5100.00                 | 1.55                 | 310.76                    | 5099.07   | 65.54       | 7.83        | 7.49                      | 66.01                     | 6.81                        | 0.10                          |
| 5200.00                 | 1.69                 | 306.62                    | 5199.03   | 67.30       | 5.62        | 5.27                      | 67.54                     | 4.78                        | 0.19                          |
| 5300.00                 | 1.68                 | 304.92                    | 5298.99   | 69.02       | 3.23        | 2.87                      | 69.10                     | 2.68                        | 0.05                          |
| 5400.00                 | 1.82                 | 308.77                    | 5398.94   | 70.86       | 0.79        | 0.42                      | 70.86                     | 0.64                        | 0.18                          |
| 5500.00                 | 1.48                 | 299.11                    | 5498.90   | 72.47       | -1.57       | -1.95                     | 72.49                     | 358.76                      | 0.44                          |
| 5600.00                 | 1.14                 | 286.29                    | 5598.87   | 73.38       | -3.65       | -4.03                     | 73.47                     | 357.15                      | 0.44                          |
| 5700.00                 | 1.16                 | 277.86                    | 5698.85   | 73.80       | -5.61       | -6.00                     | 74.01                     | 355.65                      | 0.17                          |
| 5800.00                 | 1.23                 | 282.74                    | 5798.83   | 74.18       | -7.66       | -8.05                     | 74.57                     | 354.10                      | 0.12                          |
| 5900.00                 | 1.28                 | 276.47                    | 5898.81   | 74.54       | -9.82       | -10.21                    | 75.18                     | 352.49                      | 0.15                          |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 6000.00                 | 1.38                 | 278.10                    | 5998.78   | 74.83       | -12.12      | -12.51                    | 75.81                     | 350.80                      | 0.11                          |
| 6100.00                 | 1.91                 | 283.57                    | 6098.74   | 75.40       | -14.94      | -15.33                    | 76.86                     | 348.79                      | 0.56                          |
| 6200.00                 | 1.80                 | 277.56                    | 6198.69   | 75.99       | -18.12      | -18.52                    | 78.12                     | 346.59                      | 0.23                          |
| 6300.00                 | 1.86                 | 279.05                    | 6298.64   | 76.46       | -21.28      | -21.68                    | 79.36                     | 344.45                      | 0.08                          |
| 6400.00                 | 1.91                 | 285.17                    | 6398.58   | 77.15       | -24.49      | -24.90                    | 80.94                     | 342.39                      | 0.21                          |
| 6500.00                 | 1.99                 | 288.08                    | 6498.52   | 78.12       | -27.75      | -28.16                    | 82.90                     | 340.44                      | 0.13                          |
| 6600.00                 | 2.12                 | 294.20                    | 6598.46   | 79.42       | -31.09      | -31.51                    | 85.29                     | 338.62                      | 0.26                          |
| 6700.00                 | 1.99                 | 283.86                    | 6698.40   | 80.60       | -34.47      | -34.89                    | 87.66                     | 336.84                      | 0.39                          |
| 6800.00                 | 1.78                 | 276.24                    | 6798.34   | 81.18       | -37.70      | -38.13                    | 89.51                     | 335.09                      | 0.33                          |
| 6900.00                 | 1.61                 | 262.11                    | 6898.30   | 81.16       | -40.63      | -41.06                    | 90.76                     | 333.40                      | 0.45                          |
| 7000.00                 | 1.61                 | 253.68                    | 6998.26   | 80.57       | -43.38      | -43.80                    | 91.50                     | 331.70                      | 0.24                          |
| 7100.00                 | 1.23                 | 250.09                    | 7098.23   | 79.81       | -45.74      | -46.16                    | 91.99                     | 330.18                      | 0.39                          |
| 7200.00                 | 1.29                 | 247.95                    | 7198.20   | 79.02       | -47.80      | -48.21                    | 92.35                     | 328.83                      | 0.08                          |
| 7300.00                 | 1.11                 | 251.23                    | 7298.18   | 78.28       | -49.77      | -50.18                    | 92.76                     | 327.55                      | 0.19                          |
| 7400.00                 | 0.75                 | 230.08                    | 7398.17   | 77.54       | -51.19      | -51.59                    | 92.92                     | 326.57                      | 0.49                          |
| 7460.00                 | 0.49                 | 191.68                    | 7458.16   | 77.04       | -51.54      | -51.95                    | 92.69                     | 326.21                      | 0.80                          |

# **Mewbourne Oil Co**

**Eddy County, New Mexico**

**Sec 1, T19S, 29E**

**Zircon "1" State #1H**

**Wellbore #1**

**Survey: MWD**

## **DDC Survey Report**

**25 June, 2012**



# DDC Survey Report



|                  |                         |                                     |                                   |
|------------------|-------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Mewbourne Oil Co        | <b>Local Co-ordinate Reference:</b> | Well Zircon "1" State #1H         |
| <b>Project:</b>  | Eddy County, New Mexico | <b>TVD Reference:</b>               | WELL @ 3398.0usft (Patterson #41) |
| <b>Site:</b>     | Sec 1, T19S, 29E        | <b>MD Reference:</b>                | WELL @ 3398.0usft (Patterson #41) |
| <b>Well:</b>     | Zircon "1" State #1H    | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Wellbore #1             | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Wellbore #1             | <b>Database:</b>                    | EDM 5000 1 Single User Db         |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, New Mexico              |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                  |                          |                 |
|------------------------------|------------------|--------------------------|-----------------|
| <b>Site</b>                  | Sec 1, T19S, 29E |                          |                 |
| <b>Site Position:</b>        |                  | <b>Northing:</b>         | 612,532.04 usft |
| <b>From:</b>                 | Map              | <b>Easting:</b>          | 591,682.24 usft |
| <b>Position Uncertainty:</b> | 0.0 usft         | <b>Slot Radius:</b>      | 13-3/16 "       |
|                              |                  | <b>Latitude:</b>         | 32° 41' 0.946 N |
|                              |                  | <b>Longitude:</b>        | 104° 2' 7.252 W |
|                              |                  | <b>Grid Convergence:</b> | 0.16 °          |

|                             |                      |                            |                                  |
|-----------------------------|----------------------|----------------------------|----------------------------------|
| <b>Well</b>                 | Zircon "1" State #1H |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b>         | 0.0 usft                   | <b>Northing:</b> 612,532.04 usft |
|                             | <b>+E/-W</b>         | 0.0 usft                   | <b>Easting:</b> 591,682.24 usft  |
| <b>Position Uncertainty</b> | 0.0 usft             | <b>Wellhead Elevation:</b> | usft                             |
|                             |                      | <b>Latitude:</b>           | 32° 41' 0.946 N                  |
|                             |                      | <b>Longitude:</b>          | 104° 2' 7.252 W                  |
|                             |                      | <b>Ground Level:</b>       | 3,378.0 usft                     |

|                  |                   |                    |                                   |
|------------------|-------------------|--------------------|-----------------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                                   |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b>            |
|                  | IGRF2010          | 6/8/2012           | 7.71                              |
|                  |                   |                    | <b>Dip Angle (°)</b> 60.51        |
|                  |                   |                    | <b>Field Strength (nT)</b> 48,744 |

|                          |                                |                      |                            |
|--------------------------|--------------------------------|----------------------|----------------------------|
| <b>Design</b>            | Wellbore #1                    |                      |                            |
| <b>Audit Notes:</b>      |                                |                      |                            |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>        | ACTUAL                     |
|                          |                                | <b>Tie On Depth:</b> | 0.0                        |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b>  | <b>+E/-W (usft)</b>        |
|                          | 0.0                            | 0.0                  | 0.0                        |
|                          |                                |                      | <b>Direction (°)</b> 90.30 |

|                       |                       |                          |                    |
|-----------------------|-----------------------|--------------------------|--------------------|
| <b>Survey Program</b> | <b>Date</b> 6/25/2012 |                          |                    |
| <b>From (usft)</b>    | <b>To (usft)</b>      | <b>Survey (Wellbore)</b> | <b>Tool Name</b>   |
| 100.0                 | 7,460.0               | Gyro (Wellbore #1)       | Good_gyro          |
| 7,580.0               | 12,603.0              | MWD (Wellbore #1)        | MWD default        |
|                       |                       |                          | <b>Description</b> |
|                       |                       |                          | Good Gyro          |
|                       |                       |                          | MWD - Standard     |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |
| 7,580.0                      | 1.10                   | 236.20             | 7,578.2                      | 75.9                | -52.6               | -53.0                          | 0.69                           | 0.51                          | 37.10                        |
| 7,612.0                      | 1.50                   | 253.80             | 7,610.1                      | 75.6                | -53.2               | -53.6                          | 1.75                           | 1.25                          | 55.00                        |
| 7,643.0                      | 1.10                   | 90.30              | 7,641.1                      | 75.5                | -53.3               | -53.7                          | 8.30                           | -1.29                         | -527.42                      |
| 7,675.0                      | 4.70                   | 83.00              | 7,673.1                      | 75.7                | -51.7               | -52.1                          | 11.29                          | 11.25                         | -22.81                       |
| 7,706.0                      | 8.10                   | 82.80              | 7,703.9                      | 76.1                | -48.3               | -48.7                          | 10.97                          | 10.97                         | -0.65                        |
| 7,738.0                      | 11.60                  | 81.90              | 7,735.4                      | 76.8                | -42.9               | -43.3                          | 10.95                          | 10.94                         | -2.81                        |
| 7,770.0                      | 15.10                  | 82.10              | 7,766.6                      | 77.9                | -35.5               | -36.0                          | 10.94                          | 10.94                         | 0.63                         |
| 7,801.0                      | 18.90                  | 82.60              | 7,796.2                      | 79.1                | -26.6               | -27.0                          | 12.27                          | 12.26                         | 1.61                         |
| 7,833.0                      | 22.50                  | 84.70              | 7,826.1                      | 80.3                | -15.3               | -15.7                          | 11.48                          | 11.25                         | 6.56                         |

# DDC Survey Report



|                  |                         |                                     |                                   |
|------------------|-------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Mewbourne Oil Co        | <b>Local Co-ordinate Reference:</b> | Well Zircon "1" State #1H         |
| <b>Project:</b>  | Eddy County, New Mexico | <b>TVD Reference:</b>               | WELL @ 3398.0usft (Patterson #41) |
| <b>Site:</b>     | Sec 1, T19S, 29E        | <b>MD Reference:</b>                | WELL @ 3398.0usft (Patterson #41) |
| <b>Well:</b>     | Zircon "1" State #1H    | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Wellbore #1             | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Wellbore #1             | <b>Database:</b>                    | EDM 5000 1 Single User Db         |

## Survey

| Measured Depth (usft)                           | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| <b>CROSSED HARD LINE @ 7864' MD / 7854' TVD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,864.0                                         | 26.50           | 86.50       | 7,854.3               | 81.3         | -2.5         | -2.9                    | 13.12                   | 12.90                  | 5.81                  |
| 7,896.0                                         | 30.40           | 86.50       | 7,882.5               | 82.2         | 12.7         | 12.3                    | 12.19                   | 12.19                  | 0.00                  |
| 7,927.0                                         | 34.20           | 85.30       | 7,908.7               | 83.4         | 29.2         | 28.8                    | 12.43                   | 12.26                  | -3.87                 |
| 7,959.0                                         | 38.70           | 83.80       | 7,934.4               | 85.2         | 48.1         | 47.7                    | 14.33                   | 14.06                  | -4.69                 |
| 7,990.0                                         | 42.70           | 82.80       | 7,957.9               | 87.6         | 68.2         | 67.8                    | 13.07                   | 12.90                  | -3.23                 |
| 8,022.0                                         | 46.90           | 83.10       | 7,980.6               | 90.3         | 90.6         | 90.1                    | 13.14                   | 13.13                  | 0.94                  |
| 8,053.0                                         | 51.30           | 84.40       | 8,000.9               | 92.9         | 113.9        | 113.4                   | 14.54                   | 14.19                  | 4.19                  |
| 8,085.0                                         | 55.70           | 85.80       | 8,019.9               | 95.1         | 139.5        | 139.0                   | 14.19                   | 13.75                  | 4.38                  |
| 8,117.0                                         | 60.10           | 87.50       | 8,036.9               | 96.6         | 166.5        | 166.0                   | 14.47                   | 13.75                  | 5.31                  |
| 8,148.0                                         | 64.50           | 89.60       | 8,051.3               | 97.3         | 194.0        | 193.5                   | 15.41                   | 14.19                  | 6.77                  |
| 8,180.0                                         | 68.00           | 90.70       | 8,064.2               | 97.2         | 223.3        | 222.7                   | 11.38                   | 10.94                  | 3.44                  |
| 8,211.0                                         | 71.10           | 91.10       | 8,075.0               | 96.8         | 252.3        | 251.8                   | 10.07                   | 10.00                  | 1.29                  |
| 8,243.0                                         | 74.40           | 91.40       | 8,084.5               | 96.1         | 282.8        | 282.3                   | 10.35                   | 10.31                  | 0.94                  |
| 8,387.0                                         | 88.20           | 92.70       | 8,106.3               | 91.0         | 424.8        | 424.3                   | 9.62                    | 9.58                   | 0.90                  |
| 8,419.0                                         | 88.50           | 92.70       | 8,107.2               | 89.5         | 456.7        | 456.2                   | 0.94                    | 0.94                   | 0.00                  |
| 8,451.0                                         | 89.90           | 92.90       | 8,107.6               | 87.9         | 488.7        | 488.2                   | 4.42                    | 4.38                   | 0.63                  |
| 8,482.0                                         | 90.30           | 93.10       | 8,107.6               | 86.3         | 519.6        | 519.2                   | 1.44                    | 1.29                   | 0.65                  |
| 8,546.0                                         | 89.50           | 92.70       | 8,107.7               | 83.1         | 583.5        | 583.1                   | 1.40                    | -1.25                  | -0.63                 |
| 8,609.0                                         | 89.10           | 92.00       | 8,108.4               | 80.5         | 646.5        | 646.0                   | 1.28                    | -0.63                  | -1.11                 |
| 8,673.0                                         | 89.00           | 92.00       | 8,109.5               | 78.3         | 710.4        | 710.0                   | 0.16                    | -0.16                  | 0.00                  |
| 8,736.0                                         | 89.00           | 92.40       | 8,110.6               | 75.8         | 773.4        | 773.0                   | 0.63                    | 0.00                   | 0.63                  |
| 8,800.0                                         | 90.00           | 91.90       | 8,111.2               | 73.4         | 837.3        | 836.9                   | 1.75                    | 1.56                   | -0.78                 |
| 8,863.0                                         | 90.30           | 91.50       | 8,111.0               | 71.6         | 900.3        | 899.9                   | 0.79                    | 0.48                   | -0.63                 |
| 8,926.0                                         | 90.80           | 90.80       | 8,110.4               | 70.3         | 963.3        | 962.9                   | 1.37                    | 0.79                   | -1.11                 |
| 8,990.0                                         | 89.90           | 91.30       | 8,110.0               | 69.1         | 1,027.3      | 1,026.9                 | 1.61                    | -1.41                  | 0.78                  |
| 9,054.0                                         | 90.00           | 91.20       | 8,110.1               | 67.7         | 1,091.3      | 1,090.9                 | 0.22                    | 0.16                   | -0.16                 |
| 9,118.0                                         | 90.20           | 91.00       | 8,110.0               | 66.5         | 1,155.2      | 1,154.9                 | 0.44                    | 0.31                   | -0.31                 |
| 9,182.0                                         | 89.80           | 89.90       | 8,110.0               | 66.0         | 1,219.2      | 1,218.9                 | 1.83                    | -0.63                  | -1.72                 |
| 9,245.0                                         | 89.20           | 91.20       | 8,110.5               | 65.4         | 1,282.2      | 1,281.9                 | 2.27                    | -0.95                  | 2.06                  |
| 9,309.0                                         | 88.90           | 91.50       | 8,111.6               | 63.9         | 1,346.2      | 1,345.9                 | 0.66                    | -0.47                  | 0.47                  |
| 9,372.0                                         | 89.20           | 90.80       | 8,112.6               | 62.6         | 1,409.2      | 1,408.8                 | 1.21                    | 0.48                   | -1.11                 |
| 9,436.0                                         | 89.10           | 90.30       | 8,113.6               | 62.0         | 1,473.2      | 1,472.8                 | 0.80                    | -0.16                  | -0.78                 |
| 9,499.0                                         | 89.70           | 91.20       | 8,114.2               | 61.2         | 1,536.2      | 1,535.8                 | 1.72                    | 0.95                   | 1.43                  |
| 9,563.0                                         | 89.80           | 91.00       | 8,114.5               | 60.0         | 1,600.2      | 1,599.8                 | 0.35                    | 0.16                   | -0.31                 |
| 9,627.0                                         | 89.40           | 91.00       | 8,114.9               | 58.8         | 1,664.1      | 1,663.8                 | 0.63                    | -0.63                  | 0.00                  |
| 9,691.0                                         | 90.00           | 92.00       | 8,115.3               | 57.2         | 1,728.1      | 1,727.8                 | 1.82                    | 0.94                   | 1.56                  |
| 9,755.0                                         | 90.20           | 92.60       | 8,115.2               | 54.6         | 1,792.1      | 1,791.8                 | 0.99                    | 0.31                   | 0.94                  |
| 9,818.0                                         | 90.40           | 92.70       | 8,114.8               | 51.7         | 1,855.0      | 1,854.7                 | 0.35                    | 0.32                   | 0.16                  |
| 9,882.0                                         | 90.50           | 92.70       | 8,114.3               | 48.7         | 1,918.9      | 1,918.6                 | 0.16                    | 0.16                   | 0.00                  |
| 9,946.0                                         | 89.70           | 92.70       | 8,114.2               | 45.7         | 1,982.8      | 1,982.6                 | 1.25                    | -1.25                  | 0.00                  |
| 10,009.0                                        | 89.50           | 92.60       | 8,114.7               | 42.7         | 2,045.8      | 2,045.5                 | 0.35                    | -0.32                  | -0.16                 |
| 10,073.0                                        | 89.70           | 92.40       | 8,115.1               | 40.0         | 2,109.7      | 2,109.5                 | 0.44                    | 0.31                   | -0.31                 |
| 10,136.0                                        | 89.70           | 92.20       | 8,115.4               | 37.4         | 2,172.7      | 2,172.4                 | 0.32                    | 0.00                   | -0.32                 |

# DDC Survey Report



|                  |                         |                                     |                                   |
|------------------|-------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Mewbourne Oil Co        | <b>Local Co-ordinate Reference:</b> | Well Zircon "1" State #1H         |
| <b>Project:</b>  | Eddy County, New Mexico | <b>TVD Reference:</b>               | WELL @ 3398.0usft (Patterson #41) |
| <b>Site:</b>     | Sec 1, T19S, 29E        | <b>MD Reference:</b>                | WELL @ 3398.0usft (Patterson #41) |
| <b>Well:</b>     | Zircon "1" State #1H    | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Wellbore #1             | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Wellbore #1             | <b>Database:</b>                    | EDM 5000.1 Single User Db         |

## Survey

| Measured Depth (usft)             | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,200.0                          | 89.90           | 92.20       | 8,115.7               | 35.0         | 2,236.6      | 2,236.4                 | 0.31                    | 0.31                   | 0.00                  |
| 10,261.0                          | 90.80           | 91.70       | 8,115.3               | 32.9         | 2,297.6      | 2,297.4                 | 1.69                    | 1.48                   | -0.82                 |
| 10,325.0                          | 89.90           | 91.90       | 8,114.9               | 30.9         | 2,361.5      | 2,361.4                 | 1.44                    | -1.41                  | 0.31                  |
| 10,388.0                          | 89.70           | 91.90       | 8,115.1               | 28.8         | 2,424.5      | 2,424.3                 | 0.32                    | -0.32                  | 0.00                  |
| 10,452.0                          | 90.00           | 91.50       | 8,115.3               | 26.9         | 2,488.5      | 2,488.3                 | 0.78                    | 0.47                   | -0.63                 |
| 10,516.0                          | 88.90           | 92.20       | 8,115.9               | 24.8         | 2,552.4      | 2,552.3                 | 2.04                    | -1.72                  | 1.09                  |
| 10,580.0                          | 88.60           | 92.60       | 8,117.3               | 22.1         | 2,616.4      | 2,616.2                 | 0.78                    | -0.47                  | 0.63                  |
| 10,643.0                          | 88.80           | 92.60       | 8,118.7               | 19.3         | 2,679.3      | 2,679.2                 | 0.32                    | 0.32                   | 0.00                  |
| 10,707.0                          | 89.50           | 92.20       | 8,119.7               | 16.6         | 2,743.2      | 2,743.1                 | 1.26                    | 1.09                   | -0.63                 |
| 10,771.0                          | 89.80           | 92.40       | 8,120.1               | 14.0         | 2,807.2      | 2,807.1                 | 0.56                    | 0.47                   | 0.31                  |
| 10,835.0                          | 89.60           | 91.50       | 8,120.4               | 11.9         | 2,871.1      | 2,871.0                 | 1.44                    | -0.31                  | -1.41                 |
| 10,899.0                          | 89.30           | 90.80       | 8,121.0               | 10.6         | 2,935.1      | 2,935.0                 | 1.19                    | -0.47                  | -1.09                 |
| 10,962.0                          | 90.20           | 91.90       | 8,121.3               | 9.1          | 2,998.1      | 2,998.0                 | 2.26                    | 1.43                   | 1.75                  |
| 11,026.0                          | 90.50           | 92.00       | 8,120.9               | 6.9          | 3,062.1      | 3,062.0                 | 0.49                    | 0.47                   | 0.16                  |
| 11,089.0                          | 90.90           | 92.20       | 8,120.1               | 4.6          | 3,125.0      | 3,125.0                 | 0.71                    | 0.63                   | 0.32                  |
| 11,153.0                          | 89.50           | 92.40       | 8,119.9               | 2.0          | 3,189.0      | 3,188.9                 | 2.21                    | -2.19                  | 0.31                  |
| 11,217.0                          | 88.70           | 92.90       | 8,120.9               | -0.9         | 3,252.9      | 3,252.8                 | 1.47                    | -1.25                  | 0.78                  |
| 11,280.0                          | 90.20           | 92.90       | 8,121.5               | -4.1         | 3,315.8      | 3,315.8                 | 2.38                    | 2.38                   | 0.00                  |
| 11,344.0                          | 90.50           | 92.40       | 8,121.1               | -7.1         | 3,379.7      | 3,379.7                 | 0.91                    | 0.47                   | -0.78                 |
| 11,408.0                          | 90.60           | 92.00       | 8,120.5               | -9.5         | 3,443.7      | 3,443.7                 | 0.64                    | 0.16                   | -0.63                 |
| 11,471.0                          | 90.60           | 91.50       | 8,119.9               | -11.4        | 3,506.6      | 3,506.7                 | 0.79                    | 0.00                   | -0.79                 |
| 11,535.0                          | 89.60           | 91.50       | 8,119.7               | -13.1        | 3,570.6      | 3,570.6                 | 1.56                    | -1.56                  | 0.00                  |
| 11,598.0                          | 90.00           | 94.20       | 8,120.0               | -16.3        | 3,633.5      | 3,633.6                 | 4.33                    | 0.63                   | 4.29                  |
| 11,662.0                          | 89.50           | 93.40       | 8,120.2               | -20.5        | 3,697.4      | 3,697.5                 | 1.47                    | -0.78                  | -1.25                 |
| 11,725.0                          | 88.40           | 90.80       | 8,121.4               | -22.8        | 3,760.3      | 3,760.4                 | 4.48                    | -1.75                  | -4.13                 |
| 11,788.0                          | 89.00           | 90.30       | 8,122.8               | -23.4        | 3,823.3      | 3,823.4                 | 1.24                    | 0.95                   | -0.79                 |
| 11,852.0                          | 89.20           | 89.80       | 8,123.8               | -23.5        | 3,887.3      | 3,887.4                 | 0.84                    | 0.31                   | -0.78                 |
| 11,915.0                          | 89.20           | 88.90       | 8,124.7               | -22.7        | 3,950.3      | 3,950.4                 | 1.43                    | 0.00                   | -1.43                 |
| 11,978.0                          | 88.80           | 87.80       | 8,125.8               | -20.9        | 4,013.3      | 4,013.3                 | 1.86                    | -0.63                  | -1.75                 |
| 12,042.0                          | 89.20           | 88.20       | 8,126.9               | -18.7        | 4,077.2      | 4,077.3                 | 0.88                    | 0.63                   | 0.63                  |
| 12,106.0                          | 89.50           | 88.50       | 8,127.6               | -16.9        | 4,141.2      | 4,141.2                 | 0.66                    | 0.47                   | 0.47                  |
| 12,169.0                          | 89.40           | 87.80       | 8,128.3               | -14.8        | 4,204.1      | 4,204.2                 | 1.12                    | -0.16                  | -1.11                 |
| 12,233.0                          | 90.00           | 87.50       | 8,128.6               | -12.2        | 4,268.1      | 4,268.1                 | 1.05                    | 0.94                   | -0.47                 |
| 12,297.0                          | 91.40           | 87.30       | 8,127.8               | -9.3         | 4,332.0      | 4,332.0                 | 2.21                    | 2.19                   | -0.31                 |
| 12,329.0                          | 91.90           | 86.80       | 8,126.9               | -7.7         | 4,364.0      | 4,363.9                 | 2.21                    | 1.56                   | -1.56                 |
| 12,361.0                          | 91.40           | 86.20       | 8,126.0               | -5.7         | 4,395.9      | 4,395.9                 | 2.44                    | -1.56                  | -1.88                 |
| 12,392.0                          | 90.70           | 86.40       | 8,125.4               | -3.7         | 4,426.8      | 4,426.8                 | 2.35                    | -2.26                  | 0.65                  |
| 12,424.0                          | 89.90           | 88.00       | 8,125.2               | -2.1         | 4,458.8      | 4,458.7                 | 5.59                    | -2.50                  | 5.00                  |
| 12,488.0                          | 90.00           | 88.50       | 8,125.3               | -0.2         | 4,522.8      | 4,522.7                 | 0.80                    | 0.16                   | 0.78                  |
| 12,551.0                          | 90.10           | 88.50       | 8,125.2               | 1.5          | 4,585.7      | 4,585.7                 | 0.16                    | 0.16                   | 0.00                  |
| <b>TD @ 12603' MD / 8125' TVD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,603.0                          | 90.10           | 88.50       | 8,125.1               | 2.8          | 4,637.7      | 4,637.6                 | 0.00                    | 0.00                   | 0.00                  |

# DDC Survey Report



|                  |                         |                                     |                                   |
|------------------|-------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | Mewbourne Oil Co        | <b>Local Co-ordinate Reference:</b> | Well Zircon "1" State #1H         |
| <b>Project:</b>  | Eddy County, New Mexico | <b>TVD Reference:</b>               | WELL @ 3398.0usft (Patterson #41) |
| <b>Site:</b>     | Sec 1, T19S, 29E        | <b>MD Reference:</b>                | WELL @ 3398.0usft (Patterson #41) |
| <b>Well:</b>     | Zircon "1" State #1H    | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Wellbore #1             | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Wellbore #1             | <b>Database:</b>                    | EDM 5000.1 Single User Db         |

| Survey Annotations          |                             |                   |                 |                                          |
|-----------------------------|-----------------------------|-------------------|-----------------|------------------------------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                  |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                          |
| 7,460.0                     | 7,458.2                     | 77.0              | -51.5           | TIE IN @ 7460' MD / 7458' TVD            |
| 7,864.0                     | 7,854.3                     | 81.3              | -2.5            | CROSSED HARD LINE @ 7864' MD / 7854' TVD |
| 12,603.0                    | 8,125.1                     | 2.8               | 4,637.7         | TD @ 12603' MD / 8125' TVD               |

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



Company Name: Mewbourne Oil Co  
Zircon "1" State #1H  
Eddy County, New Mexico  
Rig Patterson #41  
Created By DINA CHANCE  
Date: 6/25/2012

Zircon "1" State #1H  
Eddy County, New Mexico  
Q120284 & WT-12395  
Design #2



Azimuths to Grid North

Magnetic North: 7.55°

Magnetic Field

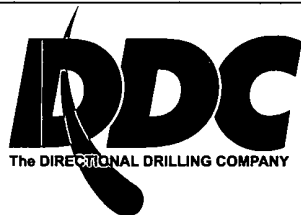
Strength: 48743.8snT

Dip Angle: 60.51°

Date: 6/8/2012

Model: IGRF2010

## Mewbourne Oil Company

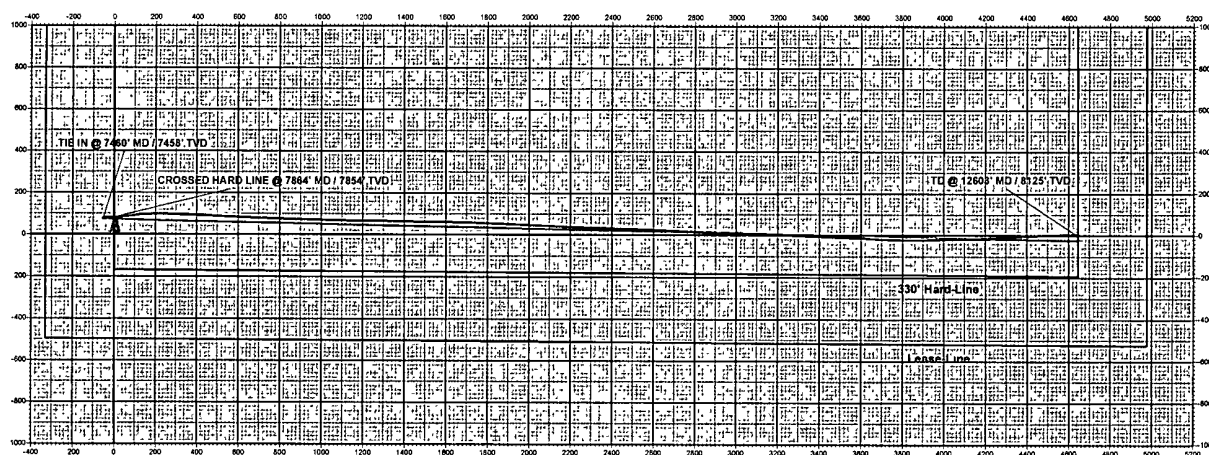


### PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

### WELL DETAILS: Zircon "1" State #1H

| Ground Level |           | 3378 0          |                 |
|--------------|-----------|-----------------|-----------------|
| North        | East      | Latitude        | Longitude       |
| 612532 03    | 591682 24 | 32° 41' 0 946 N | 104° 2' 7 252 W |



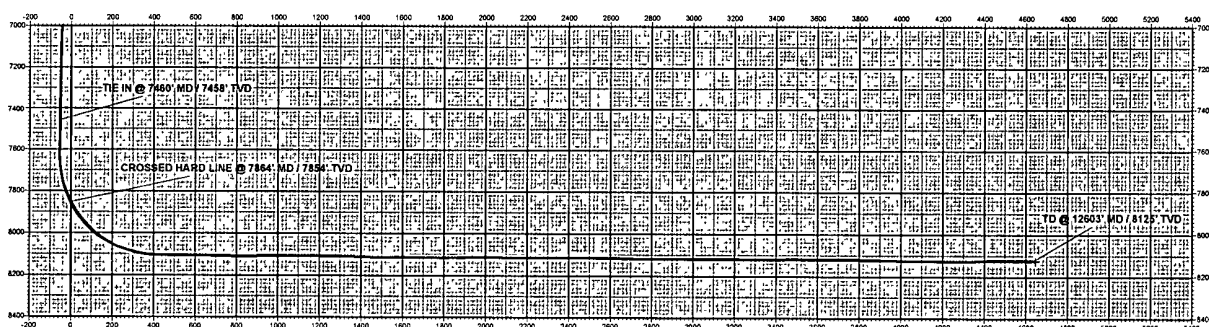
### ANNOTATIONS

| MD      | Inc   | Azi    | TVD    | +N-S | +E-W   | VSec   | Departure | Annotation                               |
|---------|-------|--------|--------|------|--------|--------|-----------|------------------------------------------|
| 7450 0  | 0 49  | 131 68 | 7450 2 | 77 0 | -51 8  | -51 8  | 149 1     | TIE IN @ 7450' MD / 7450' TVD            |
| 7854 0  | 26 50 | 86 50  | 7854 3 | 81 3 | -2 5   | -2 5   | 203 3     | CROSSED HARD LINE @ 7854' MD / 7854' TVD |
| 12603 0 | 90 10 | 88 50  | 8125 1 | 2 8  | 4637 7 | 4637 6 | 4847 2    | TD @ 12603' MD / 8125' TVD               |

### DESIGN TARGET DETAILS

| Name                      | TVD    | +N-S  | +E-W   | North     | East      | Latitude        | Longitude        |
|---------------------------|--------|-------|--------|-----------|-----------|-----------------|------------------|
| PBHL Zircon "1" State #1H | 8128 0 | -23 9 | 4546 6 | 612569 10 | 596328 94 | 32° 41' 0 976 N | 104° 1' 12 888 W |

- plan hits target center



Vertical Section at 90 30° (200 usf/in)

Operating Company Mewbourne  
Well Name & Number ZIRCON 1 STATE # 1H  
Sales Ticket Number 4742898  
Date 6/25/2012

Company Rep Josh Proise  
Field  
BOT Service Rep John Davis  
District Location Odessa, Texas, USA



|                          | Size  | Weight   | Grade  | ID    | Drift                | Thread   | Capacity | Length    | Burst              | Collapse |
|--------------------------|-------|----------|--------|-------|----------------------|----------|----------|-----------|--------------------|----------|
| Casing                   | 7.000 | 26.00    | P-110  | 6.276 | 6.151                |          | 0.03826  | 8,324.00  | 9,960              | 6,230    |
| Top Liner                | 4.500 | 13.50    | 338000 | 3.920 | 3.795                | LT&C     | 0.01492  | 4,413.44  | 12,410             | 10,680   |
| Bott Liner               |       |          |        |       |                      |          |          |           |                    |          |
| TVD                      |       | 8,125.00 |        | KOP   |                      | 7,630.00 |          | Open Hole | 6.125              | 310.9    |
| Carry Fluid Weight (ppg) |       |          | 8.6    |       | Propan Content (ppa) |          |          |           | Max Drill Out Size | 0        |

|           | Comm. Number | Description                  | Depth   | Length | OD | ID | Ball Seat ID | Shear Press. | Max Rate (BPM) | Displ. (BBL) |
|-----------|--------------|------------------------------|---------|--------|----|----|--------------|--------------|----------------|--------------|
| Liner Top | 1            | JR Setting Sleeve_RH Profile | 8126.56 |        |    |    |              |              |                |              |

|             |                                   |  |  |        |        |       |       |       |      |         |
|-------------|-----------------------------------|--|--|--------|--------|-------|-------|-------|------|---------|
| Zone Length |                                   |  |  |        |        |       |       |       |      |         |
|             |                                   |  |  |        |        |       |       |       |      |         |
| 30<br>321.9 | JR Sleeve_S3 Hyd Set Packer       |  |  | 8.64   | 5.813  | 3.875 |       |       |      |         |
|             | 4-1/2-13.5 LTC Nipple             |  |  | 8.64   | 8.14   | 5.000 | 3.920 |       |      |         |
|             | 7 Joints of 4-1/2-13 5 LTC Casing |  |  | 16.78  | 267.60 | 5.000 | 3.920 |       |      |         |
|             | 3.625 EX Frac Sleeve              |  |  | 284.38 | 3.53   | 5.750 |       | 3.525 | 2375 | 312 311 |
|             | 1 Joint of 4-1/2-13 5 LTC Casing  |  |  | 287.91 | 37.89  | 5.000 | 3.920 |       |      |         |
| 29<br>160.2 | Baker Open Hole Packer            |  |  | 325.80 | 3.89   | 5.820 | 3.875 |       | 2154 |         |
|             | 2 Joints of 4-1/2-13 5 LTC Casing |  |  | 329.69 | 76.52  | 5.000 | 3.920 |       |      |         |
|             | 3.500 EX-C Frac Sleeve            |  |  | 406.21 | 3.53   | 5.750 |       | 3.448 | 2375 | 299 311 |
|             | 2 Joint of 4-1/2-13.5 LTC Casing  |  |  | 409.74 | 76.25  | 5.000 | 3.920 |       |      |         |
|             | Baker Open Hole Packer            |  |  | 485.99 | 3.89   | 5.820 | 3.875 |       | 2154 |         |
| 28<br>122.4 | 2 Joints of 4-1/2-13.5 LTC Casing |  |  | 489.88 | 76.58  | 5.000 | 3.920 |       |      |         |
|             | 3.438 EX-C Frac Sleeve            |  |  | 566.46 | 3.53   | 5.750 |       | 3.385 | 2375 | 288 311 |
|             | 1 Joint of 4-1/2-13.5 LTC Casing  |  |  | 569.99 | 38.28  | 5.000 | 3.920 |       |      |         |
|             | Baker Open Hole Packer            |  |  | 608.27 | 3.89   | 5.820 | 3.875 |       | 2154 |         |
|             | 2 Joints of 4-1/2-13 5 LTC Casing |  |  | 612.16 | 75.49  | 5.000 | 3.920 |       |      |         |
| 27<br>158   | 3.375 EX_C Frac Sleeve            |  |  | 687.65 | 3.53   | 5.750 |       | 3.323 | 2375 | 278 311 |
|             | 2 Joint of 4-1/2-13.5 LTC Casing  |  |  | 691.18 | 75.07  | 5.000 | 3.920 |       |      |         |
|             | Baker Open Hole Packer            |  |  | 766.25 | 3.89   | 5.820 | 3.875 |       | 2154 |         |
|             | 2 Joints of 4-1/2-13.5 LTC Casing |  |  | 770.14 | 76.13  | 5.000 | 3.920 |       |      |         |
|             | 3.313 EX-C Frac Sleeve            |  |  | 846.27 | 3.53   | 5.750 |       | 3.260 | 2375 | 267 311 |
| 26<br>120.8 | 1 Joints of 4-1/2-13.5 LTC Casing |  |  | 849.80 | 37.27  | 5.000 | 3.920 |       |      |         |
|             | Baker Open Hole Packer            |  |  | 887.07 | 3.90   | 5.820 | 3.875 |       | 2154 |         |

Operating Company Mewbourne  
 Well Name & Number ZIRCON 1 STATE # 1H  
 Sales Ticket Number 4742898  
 Date 6/25/2012

Company Rep Josh Prorise  
 Field   
 BOT Service Rep John Davis  
 District Location Odessa, Texas, USA



|                          | Size  | Weight   | Grade  | ID                   | Drift | Thread   | Capacity | Length             | Burst  | Collapse |
|--------------------------|-------|----------|--------|----------------------|-------|----------|----------|--------------------|--------|----------|
| Casing                   | 7.000 | 26.00    | P-110  | 6.276                | 6.151 |          | 0.03826  | 8,324.00           | 9,960  | 6,230    |
| Top Liner                | 4.500 | 13.50    | 338000 | 3.920                | 3.795 | LT&C     | 0.01492  | 4,413.44           | 12,410 | 10,680   |
| Bott Liner               |       |          |        |                      |       |          |          |                    |        |          |
| TVD                      |       | 8,125.00 |        | KOP                  |       | 7,630.00 |          | Open Hole          | 6.125  | 310.9    |
| Carry Fluid Weight (ppg) |       | 8.6      |        | Propan Content (ppa) |       |          |          | Max Drill Out Size |        | 0        |

|             | Comm. Number | Description                       | Depth   | Length | OD    | ID    | Ball Seat ID | Shear Press. | Max Rate (BPM) | Displ. (BBL) |
|-------------|--------------|-----------------------------------|---------|--------|-------|-------|--------------|--------------|----------------|--------------|
| 25<br>121.6 |              | 2 Joints of 4-1/2-13.5 LTC Casing | 890.97  | 76.10  | 5 000 | 3.920 |              |              |                |              |
|             |              | 3.250 EX-C Frac Sleeve            | 967.07  | 3.53   | 5.750 |       | 3.198        | 2375         | 257            | 311          |
|             |              | 1 Joint of 4-1/2-13.5 LTC Casing  | 970.60  | 38.03  | 5.000 | 3.920 |              |              |                |              |
| 24<br>157.3 |              | Baker Open Hole Packer            | 1008.63 | 3.89   | 5 820 | 3 875 |              | 2154         |                |              |
|             |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1012.52 | 74.69  | 5 000 | 3.920 |              |              |                |              |
|             |              | 3.188 EX-C Frac Sleeve            | 1087.21 | 3 53   | 5.750 |       | 3.135        | 2375         | 247            | 311          |
| 23<br>160.2 |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1090.74 | 75.19  | 5 000 | 3.920 |              |              |                |              |
|             |              | Baker Open Hole Packer            | 1165.93 | 3.89   | 5 820 | 3.875 |              | 2154         |                |              |
|             |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1169.82 | 76.10  | 5 000 | 3.920 |              |              |                |              |
| 22<br>120.3 |              | 3.125 EX-C Frac Sleeve            | 1245.92 | 3 55   | 5.750 |       | 3.073        | 2375         | 237            | 311          |
|             |              | 2 Joint of 4-1/2-13 5 LTC Casing  | 1249.47 | 76 66  | 5.000 | 3.920 |              |              |                |              |
|             |              | Baker Open Hole Packer            | 1326.13 | 3.89   | 5 820 | 3.875 |              | 2154         |                |              |
| 21<br>160.9 |              | 2 Joints of 4-1/2-13 5 LTC Casing | 1330.02 | 75.94  | 5.000 | 3.920 |              |              |                |              |
|             |              | 3.063 EX-C Frac Sleeve            | 1405.96 | 3 53   | 5.750 |       | 3 010        | 2375         | 228            | 311          |
|             |              | 1 Joints of 4-1/2-13 5 LTC Casing | 1409.49 | 36 98  | 5 000 | 3.920 |              |              |                |              |
| 20<br>160.5 |              | Baker Open Hole Packer            | 1446.47 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|             |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1450.36 | 76 40  | 5 000 | 3.920 |              |              |                |              |
|             |              | 3 000 EX-C Frac sleeve            | 1526.76 | 3 53   | 5.750 |       | 2 948        | 2375         | 218            | 311          |
| 19          |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 1530.29 | 77 04  | 5 000 | 3.920 |              |              |                |              |
|             |              | Baker Open Hole Packer            | 1607.33 | 3 89   | 5.820 | 3.875 |              | 2154         |                |              |
|             |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1611.22 | 76 55  | 5.000 | 3.920 |              |              |                |              |
|             |              | 2.938 EX-C Frac Sleeve            | 1687.77 | 3.53   | 5.750 |       | 2.885        | 2375         | 209            | 311          |
|             |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1691.30 | 76.50  | 5.000 | 3.920 |              |              |                |              |
|             |              | Baker Open Hole Packer            | 1767.80 | 3.89   | 5.820 | 3 875 |              | 2154         |                |              |
|             |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 1771.69 | 74.66  | 5.000 | 3.920 |              |              |                |              |
|             |              | 2 875 EX-C Frac Sleeve            | 1846.35 | 3 53   | 5.750 |       | 2.823        | 2375         | 200            | 311          |

Operating Company Mewbourne  
 Well Name & Number ZIRCON 1 STATE # 1H  
 Sales Ticket Number 4742898  
 Date 6/25/2012

Company Rep Josh Prorise  
 Field   
 BOT Service Rep John Davis  
 District Location Odessa, Texas, USA



|                          | Size  | Weight   | Grade  | ID                    | Drift | Thread   | Capacity | Length             | Burst  | Collapse |
|--------------------------|-------|----------|--------|-----------------------|-------|----------|----------|--------------------|--------|----------|
| Casing                   | 7.000 | 26.00    | P-110  | 6.276                 | 6.151 |          | 0.03826  | 8,324.00           | 9,960  | 6,230    |
| Top Liner                | 4.500 | 13.50    | 338000 | 3.920                 | 3.795 | LT&C     | 0.01492  | 4,413.44           | 12,410 | 10,680   |
| Bott Liner               |       |          |        |                       |       |          |          |                    |        |          |
| TVD                      |       | 8,125.00 |        | KOP                   |       | 7,630.00 |          | Open Hole          | 6.125  | 310.9    |
| Carry Fluid Weight (ppg) |       | 8.6      |        | Propant Content (ppa) |       |          |          | Max Drill Out Size |        | 0        |

|       | Comm. Number | Description                       | Depth   | Length | OD    | ID    | Ball Seat ID | Shear Press. | Max Rate (BPM) | Displ. (BBL) |
|-------|--------------|-----------------------------------|---------|--------|-------|-------|--------------|--------------|----------------|--------------|
| 157.1 |              | 2 Joints of 4-1/2-13.5 LTC Casing | 1849.88 | 75.05  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 1924.93 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 1928.82 | 73.96  | 5.000 | 3.920 |              |              |                |              |
| 18    |              | 2.813 EX_C Frac Sleeve            | 2002.78 | 3.53   | 5.750 |       | 2.760        | 2375         | 192            | 311          |
| 119.3 |              | 1 Joints of 4-1/2-13.5 LTC Casing | 2006.31 | 37.94  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2044.25 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 2048.14 | 75.56  | 5.000 | 3.920 |              |              |                |              |
| 17    |              | 2.750 EX_C Frac Sleeve            | 2123.70 | 3.53   | 5.750 |       | 2.698        | 2375         | 183            | 311          |
| 158.1 |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2127.23 | 75.08  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2202.31 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 2206.20 | 76.19  | 5.000 | 3.920 |              |              |                |              |
| 16    |              | 2.688 EX_C Frac Sleeve            | 2282.39 | 3.53   | 5.750 |       | 2.635        | 2375         | 175            | 311          |
| 160.3 |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2285.92 | 76.69  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2362.61 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2366.50 | 76.58  | 5.000 | 3.920 |              |              |                |              |
| 15    |              | 2.625 EX_C Frac Sleeve            | 2443.08 | 3.53   | 5.750 |       | 2.573        | 2375         | 166            | 311          |
| 122.3 |              | 1 Joint of 4-1/2-13.5 LTC Casing  | 2446.61 | 38.33  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2484.94 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2488.83 | 75.49  | 5.000 | 3.920 |              |              |                |              |
| 14    |              | 2.563 EX_C Frac Sleeve            | 2564.32 | 3.53   | 5.750 |       | 2.510        | 2375         | 158            | 311          |
| 160   |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2567.85 | 77.05  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2644.90 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
|       |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2648.79 | 76.66  | 5.000 | 3.920 |              |              |                |              |
| 13    |              | 2.500 EX_C Frac Sleeve            | 2725.45 | 3.53   | 5.750 |       | 2.448        | 2375         | 151            | 311          |
| 160.4 |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 2728.98 | 76.32  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2805.30 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |

Operating Company Mewbourne  
 Well Name & Number ZIRCON 1 STATE # 1H  
 Sales Ticket Number 4742898  
 Date 6/25/2012

Company Rep Josh Prorise  
 Field   
 BOT Service Rep John Davis  
 District Location Odessa, Texas, USA



|                          | Size  | Weight   | Grade  | ID    | Drift                 | Thread   | Capacity | Length    | Burst              | Collapse |
|--------------------------|-------|----------|--------|-------|-----------------------|----------|----------|-----------|--------------------|----------|
| Casing                   | 7.000 | 26.00    | P-110  | 6.276 | 6.151                 |          | 0.03826  | 8,324.00  | 9,960              | 6,230    |
| Top Liner                | 4.500 | 13.50    | 338000 | 3.920 | 3.795                 | LT&C     | 0.01492  | 4,413.44  | 12,410             | 10,680   |
| Bott Liner               |       |          |        |       |                       |          |          |           |                    |          |
| TVD                      |       | 8,125.00 |        | KOP   |                       | 7,630.00 |          | Open Hole | 6.125              | 310.9    |
| Carry Fluid Weight (ppg) |       |          | 8.6    |       | Propant Content (ppa) |          |          |           | Max Drill Out Size | 0        |

|       | Comm. Number | Description                       | Depth   | Length | OD    | ID    | Ball Seat ID | Shear Press. | Max Rate (BPM) | Displ. (BBL) |
|-------|--------------|-----------------------------------|---------|--------|-------|-------|--------------|--------------|----------------|--------------|
| 12    |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2809.19 | 75.22  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.438 EX_C Frac Sleeve            | 2884.41 | 3.53   | 5.750 |       | 2.386        | 2375         | 143            | 311          |
| 120.6 |              | 1 Joints of 4-1/2-13.5 LTC Casing | 2887.94 | 37.94  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 2925.88 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 11    |              | 2 Joints of 4-1/2-13.5 LTC Casing | 2929.77 | 75.67  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.375 EX_C Frac Sleeve            | 3005.44 | 3.53   | 5.750 |       | 2.323        | 2375         | 136            | 311          |
| 159.3 |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 3008.97 | 76.37  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 3085.34 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 10    |              | 2 Joints of 4-1/2-13.5 LTC Casing | 3089.23 | 76.23  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.313 EX_C Frac Sleeve            | 3165.46 | 3.53   | 5.750 |       | 2.261        | 2375         | 129            | 311          |
| 121.5 |              | 1 Joints of 4-1/2-13.5 LTC Casing | 3168.99 | 37.80  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 3206.79 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 9     |              | 2 Joints of 4-1/2-13.5 LTC Casing | 3210.68 | 75.40  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.250 EX Frac Sleeve              | 3286.08 | 3.90   | 5.750 |       | 2.150        | 2286         | 114            | 311          |
| 121.2 |              | 1 Joint of 4-1/2-13.5 LTC Casing  | 3289.98 | 37.97  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 3327.95 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 8     |              | 2 Joints of 4-1/2-13.5 LTC Casing | 3331.84 | 75.86  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.125 EX Frac Sleeve              | 3407.70 | 3.90   | 5.750 |       | 2.025        | 2286         | 101            | 311          |
| 159.5 |              | 2 Joint of 4-1/2-13.5 LTC Casing  | 3411.60 | 75.88  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 3487.48 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 7     |              | 2 Joints of 4-1/2-13.5 LTC Casing | 3491.37 | 75.86  | 5.000 | 3.920 |              |              |                |              |
|       |              | 2.000 EX Frac Sleeve              | 3567.23 | 3.90   | 5.750 |       | 1.900        | 2286         | 89             | 311          |
| 120.7 |              | 1 Joints of 4-1/2-13.5 LTC Casing | 3571.13 | 37.07  | 5.000 | 3.920 |              |              |                |              |
|       |              | Baker Open Hole Packer            | 3608.20 | 3.89   | 5.820 | 3.875 |              | 2154         |                |              |
| 6     |              | 2 Joints of 4-1/2-13.5 LTC Casing | 3612.09 | 76.54  | 5.000 | 3.920 |              |              |                |              |
|       |              | 1.875 EX Frac Sleeve              | 3688.63 | 3.90   | 5.750 |       | 1.775        | 2286         | 78             | 311          |

|                          |                    |
|--------------------------|--------------------|
| <b>Company Rep</b>       | Josh Prorise       |
| <b>Field</b>             |                    |
| <b>BOT Service Rep</b>   | John Davis         |
| <b>District Location</b> | Odessa, Texas, USA |

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