

## Results of Directional Survey

|             |              |           |                                    |
|-------------|--------------|-----------|------------------------------------|
| API number: | 30-025-40576 |           |                                    |
| OGRID:      |              | Operator: | YATES PETROLEUM CORPORATION        |
|             |              | Property: | SEPTEMBER GRASS BSG STATE COM # 1H |

|         |        |   |    |          |          |
|---------|--------|---|----|----------|----------|
| surface | ULSTR: | R | 05 | T 21S    | R 34E    |
|         |        |   |    | 2480 FSL | 1955 FEL |

|        |        |         |     |          |          |
|--------|--------|---------|-----|----------|----------|
| BH Loc | ULSTR: | G       | 08  | T 21S    | R 34E    |
| 16219  | MD     | 11668.6 | TVD | 2308 FNL | 1925 FEL |

|             |        |         |     |          |          |
|-------------|--------|---------|-----|----------|----------|
| Top Perf/OH | ULSTR: | R       | 05  | T 21S    | R 34E    |
| 12001       | MD     | 11661.1 | TVD | 1909 FSL | 1917 FEL |

|             |        |         |     |          |          |
|-------------|--------|---------|-----|----------|----------|
| Bot Perf/OH | ULSTR: | G       | 08  | T 21S    | R 34E    |
| 16150       | MD     | 11667.8 | TVD | 2239 FNL | 1925 FEL |

|              |       |          |       |          |
|--------------|-------|----------|-------|----------|
|              | MD    | N/S      | E/W   | VD       |
|              | 11983 | -553.00  | 38.20 | 11660.8  |
| TOP PERFS/OH | 12001 | -571.00  | 38.17 | 11661.14 |
|              | 12046 | -616.00  | 38.10 | 11662.00 |
|              | 16059 | -4628.40 | 28.90 | 11667.20 |
| BOT PERFS/OH | 16150 | -4719.40 | 29.68 | 11667.81 |
|              | 16164 | -4733.40 | 29.80 | 11667.90 |

|              |       |          |       |          |
|--------------|-------|----------|-------|----------|
| NEXT TO LAST | 16164 | -4733.40 | 29.80 | 11667.90 |
| LAST READING | 16219 | -4788.40 | 30.20 | 11668.60 |
| TD           | 16219 | -4788.40 | 30.20 | 11668.60 |

|                  |      |    |      |    |
|------------------|------|----|------|----|
| Surface Location | 2480 | FS | 1955 | FE |
| Projected BHL    | 2308 | FN | 1925 | FE |
| Location of      |      |    |      |    |
| Top Perfs/OH     | 1909 | FS | 1917 | FE |
| Bottom Perfs/OH  | 2239 | FN | 1925 | FE |

### SUMMARY of Subsurface Locations

|                  |              |      |    |      |    |             |
|------------------|--------------|------|----|------|----|-------------|
| Surface Location | R-05-21S-34E | 2480 | FS | 1955 | FE | Vert. Depth |
| Top Perfs/OH     | R-05-21S-34E | 1909 | FS | 1917 | FE | 11661.14    |
| Bottom Perfs/OH  | G-08-21S-34E | 2239 | FN | 1925 | FE | 11667.81    |
| Projected TD     | G-08-21S-34E | 2308 | FN | 1925 | FE | 11668.60    |

MAR 25 2014

*ONG/RAAMS TEST 03/24/14*



## **Yates Petroleum**

Lea County, NM (NAD-83)  
September Grass BSG State Com  
#1H

HOBBS OCD

FEB 05 2014

RECEIVED

OH

Design: OH

## **Standard Survey Report**

08 July, 2013



|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD-83)   |                      |                |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone   |                      |                |

|                              |                               |                          |                   |
|------------------------------|-------------------------------|--------------------------|-------------------|
| <b>Site</b>                  | September Grass BSG State Com |                          |                   |
| <b>Site Position:</b>        |                               | <b>Northing:</b>         | 549,372.07 usft   |
| <b>From:</b>                 | Map                           | <b>Easting:</b>          | 801,366.95 usft   |
| <b>Position Uncertainty:</b> | 2.0 usft                      | <b>Slot Radius:</b>      | 13-3/16 "         |
|                              |                               | <b>Latitude:</b>         | 32° 30' 26.843 N  |
|                              |                               | <b>Longitude:</b>        | 103° 29' 23.390 W |
|                              |                               | <b>Grid Convergence:</b> | 0.45 °            |

|                             |              |                            |                                  |
|-----------------------------|--------------|----------------------------|----------------------------------|
| <b>Well</b>                 | #1H          |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b> | 0.0 usft                   | <b>Northing:</b> 549,372.07 usft |
|                             | <b>+E/-W</b> | 0.0 usft                   | <b>Easting:</b> 801,366.95 usft  |
| <b>Position Uncertainty</b> | 0.0 usft     | <b>Wellhead Elevation:</b> | usft                             |
|                             |              | <b>Latitude:</b>           | 32° 30' 26.843 N                 |
|                             |              | <b>Longitude:</b>          | 103° 29' 23.390 W                |
|                             |              | <b>Ground Level:</b>       | 3,714.0 usft                     |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | OH                |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2010          | 5/14/2013          | 7.33               | 60.42            | 48,602                |

|                          |                         |               |              |                          |
|--------------------------|-------------------------|---------------|--------------|--------------------------|
| <b>Design</b>            | OH                      |               |              |                          |
| <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)</b> | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>         |
|                          | (usft)                  | (usft)        | (usft)       | (°)                      |
|                          | 0.0                     | 0.0           | 0.0          | 180.40                   |

|                       |               |                            |                  |                                          |
|-----------------------|---------------|----------------------------|------------------|------------------------------------------|
| <b>Survey Program</b> | Date 7/8/2013 |                            |                  |                                          |
| <b>From</b>           | <b>To</b>     | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b>                       |
| (usft)                | (usft)        |                            |                  |                                          |
| 151.0                 | 16,164.0      | Survey #1 - Crescent1 (OH) | MWD              | MWD - Standard                           |
| 16,219.0              | 16,219.0      | Survey #2 - PTB (OH)       | BLIND            | Blind drilling, where no tool is applied |

|                 |                    |                |                 |               |               |                 |                    |                    |                    |  |
|-----------------|--------------------|----------------|-----------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|--|
| <b>Survey</b>   |                    |                |                 |               |               |                 |                    |                    |                    |  |
| <b>Measured</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b>  | <b>+E/-W</b>  | <b>Vertical</b> | <b>Dogleg</b>      | <b>Build</b>       | <b>Turn</b>        |  |
| <b>Depth</b>    | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b>    | <b>(usft)</b> | <b>(usft)</b> | <b>Section</b>  | <b>Rate</b>        | <b>Rate</b>        | <b>Rate</b>        |  |
| <b>(usft)</b>   |                    |                | <b>(usft)</b>   |               |               | <b>(usft)</b>   | <b>(°/100usft)</b> | <b>(°/100usft)</b> | <b>(°/100usft)</b> |  |
| 0.0             | 0.00               | 0.00           | 0.0             | 0.0           | 0.0           | 0.0             | 0.00               | 0.00               | 0.00               |  |
| 151.0           | 0.30               | 63.00          | 151.0           | 0.2           | 0.4           | -0.2            | 0.20               | 0.20               | 0.00               |  |
| 303.0           | 0.30               | 68.90          | 303.0           | 0.5           | 1.1           | -0.5            | 0.02               | 0.00               | 3.88               |  |
| 422.0           | 0.40               | 80.50          | 422.0           | 0.7           | 1.8           | -0.7            | 0.10               | 0.08               | 9.75               |  |
| 481.0           | 0.40               | 89.60          | 481.0           | 0.7           | 2.2           | -0.7            | 0.11               | 0.00               | 15.42              |  |
| 541.0           | 0.50               | 75.30          | 541.0           | 0.8           | 2.7           | -0.8            | 0.25               | 0.17               | -23.83             |  |
| 598.0           | 1.10               | 88.50          | 598.0           | 0.9           | 3.4           | -0.9            | 1.09               | 1.05               | 23.16              |  |
| 658.0           | 1.60               | 83.00          | 658.0           | 1.0           | 4.8           | -1.0            | 0.86               | 0.83               | -9.17              |  |
| 716.0           | 2.30               | 88.30          | 715.9           | 1.1           | 6.8           | -1.2            | 1.25               | 1.21               | 9.14               |  |
| 778.0           | 2.50               | 85.10          | 777.9           | 1.3           | 9.4           | -1.3            | 0.39               | 0.32               | -5.16              |  |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                      |                    |                |                             |                 |                 |                               |                               |                              |                             |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 835.0                       | 2.40               | 86.50          | 834.8                       | 1.4             | 11.8            | -1.5                          | 0.20                          | -0.18                        | 2.46                        |
| 928.0                       | 3.10               | 86.00          | 927.7                       | 1.7             | 16.3            | -1.9                          | 0.75                          | 0.75                         | -0.54                       |
| 1,023.0                     | 3.10               | 85.50          | 1,022.6                     | 2.1             | 21.4            | -2.3                          | 0.03                          | 0.00                         | -0.53                       |
| 1,118.0                     | 3.00               | 87.70          | 1,117.4                     | 2.4             | 26.5            | -2.6                          | 0.16                          | -0.11                        | 2.32                        |
| 1,213.0                     | 2.30               | 84.20          | 1,212.3                     | 2.7             | 30.8            | -2.9                          | 0.76                          | -0.74                        | -3.68                       |
| 1,308.0                     | 2.70               | 87.30          | 1,307.3                     | 3.0             | 35.0            | -3.3                          | 0.44                          | 0.42                         | 3.26                        |
| 1,403.0                     | 2.70               | 84.80          | 1,402.1                     | 3.3             | 39.4            | -3.6                          | 0.12                          | 0.00                         | -2.63                       |
| 1,498.0                     | 2.40               | 88.00          | 1,497.1                     | 3.6             | 43.6            | -3.9                          | 0.35                          | -0.32                        | 3.37                        |
| 1,593.0                     | 1.80               | 88.70          | 1,592.0                     | 3.7             | 47.1            | -4.0                          | 0.63                          | -0.63                        | 0.74                        |
| 1,688.0                     | 1.00               | 92.10          | 1,687.0                     | 3.7             | 49.4            | -4.0                          | 0.85                          | -0.84                        | 3.58                        |
| 1,783.0                     | 0.80               | 116.80         | 1,782.0                     | 3.4             | 50.9            | -3.7                          | 0.45                          | -0.21                        | 26.00                       |
| 1,974.0                     | 0.60               | 126.50         | 1,972.9                     | 2.2             | 52.9            | -2.5                          | 0.12                          | -0.10                        | 5.08                        |
| 2,069.0                     | 0.60               | 108.80         | 2,067.9                     | 1.7             | 53.7            | -2.1                          | 0.19                          | 0.00                         | -18.63                      |
| 2,258.0                     | 0.40               | 71.50          | 2,256.9                     | 1.6             | 55.3            | -2.0                          | 0.20                          | -0.11                        | -19.74                      |
| 2,448.0                     | 0.30               | 83.60          | 2,446.9                     | 1.9             | 56.4            | -2.3                          | 0.07                          | -0.05                        | 6.37                        |
| 2,637.0                     | 0.10               | 176.20         | 2,635.9                     | 1.8             | 56.9            | -2.2                          | 0.17                          | -0.11                        | 48.99                       |
| 2,827.0                     | 0.20               | 128.70         | 2,825.9                     | 1.4             | 57.2            | -1.8                          | 0.08                          | 0.05                         | -25.00                      |
| 2,922.0                     | 0.40               | 85.70          | 2,920.9                     | 1.3             | 57.6            | -1.7                          | 0.30                          | 0.21                         | -45.26                      |
| 3,016.0                     | 0.70               | 70.50          | 3,014.9                     | 1.5             | 58.5            | -1.9                          | 0.35                          | 0.32                         | -16.17                      |
| 3,111.0                     | 0.50               | 88.90          | 3,109.9                     | 1.7             | 59.5            | -2.1                          | 0.29                          | -0.21                        | 19.37                       |
| 3,206.0                     | 0.20               | 158.40         | 3,204.9                     | 1.6             | 60.0            | -2.0                          | 0.49                          | -0.32                        | 73.16                       |
| 3,301.0                     | 0.10               | 174.60         | 3,299.9                     | 1.3             | 60.0            | -1.8                          | 0.11                          | -0.11                        | 17.05                       |
| 3,395.0                     | 0.20               | 188.10         | 3,393.9                     | 1.1             | 60.0            | -1.5                          | 0.11                          | 0.11                         | 14.36                       |
| 3,490.0                     | 0.70               | 227.30         | 3,488.9                     | 0.5             | 59.6            | -1.0                          | 0.59                          | 0.53                         | 41.26                       |
| 3,585.0                     | 0.90               | 236.70         | 3,583.9                     | -0.3            | 58.5            | -0.2                          | 0.25                          | 0.21                         | 9.89                        |
| 3,680.0                     | 0.80               | 238.70         | 3,678.9                     | -1.0            | 57.3            | 0.6                           | 0.11                          | -0.11                        | 2.11                        |
| 3,774.0                     | 0.60               | 243.60         | 3,772.9                     | -1.6            | 56.3            | 1.2                           | 0.22                          | -0.21                        | 5.21                        |
| 3,964.0                     | 0.30               | 256.10         | 3,962.9                     | -2.1            | 54.9            | 1.7                           | 0.17                          | -0.16                        | 6.58                        |
| 4,154.0                     | 0.20               | 274.40         | 4,152.9                     | -2.2            | 54.1            | 1.8                           | 0.07                          | -0.05                        | 9.63                        |
| 4,342.0                     | 0.40               | 78.70          | 4,340.9                     | -2.1            | 54.4            | 1.7                           | 0.32                          | 0.11                         | 87.39                       |
| 4,532.0                     | 3.20               | 92.80          | 4,530.8                     | -2.2            | 60.4            | 1.8                           | 1.48                          | 1.47                         | 7.42                        |
| 4,721.0                     | 4.80               | 97.00          | 4,719.3                     | -3.4            | 73.5            | 2.9                           | 0.86                          | 0.85                         | 2.22                        |
| 4,816.0                     | 4.70               | 98.70          | 4,814.0                     | -4.5            | 81.3            | 3.9                           | 0.18                          | -0.11                        | 1.79                        |
| 4,911.0                     | 3.80               | 108.40         | 4,908.7                     | -6.1            | 88.1            | 5.5                           | 1.21                          | -0.95                        | 10.21                       |
| 5,005.0                     | 3.00               | 121.00         | 5,002.5                     | -8.3            | 93.2            | 7.7                           | 1.16                          | -0.85                        | 13.40                       |
| 5,099.0                     | 2.20               | 140.10         | 5,096.4                     | -11.0           | 96.5            | 10.3                          | 1.24                          | -0.85                        | 20.32                       |
| 5,194.0                     | 1.50               | 161.00         | 5,191.4                     | -13.6           | 98.0            | 12.9                          | 1.01                          | -0.74                        | 22.00                       |
| 5,290.0                     | 1.10               | 165.70         | 5,287.4                     | -15.6           | 98.7            | 14.9                          | 0.43                          | -0.42                        | 4.90                        |
| 5,384.0                     | 0.70               | 188.50         | 5,381.4                     | -17.1           | 98.8            | 16.4                          | 0.56                          | -0.43                        | 24.26                       |
| 5,478.0                     | 0.70               | 153.20         | 5,475.3                     | -18.2           | 99.0            | 17.5                          | 0.45                          | 0.00                         | -37.55                      |
| 5,573.0                     | 0.40               | 164.80         | 5,570.3                     | -19.0           | 99.3            | 18.3                          | 0.34                          | -0.32                        | 12.21                       |
| 5,667.0                     | 0.70               | 158.70         | 5,664.3                     | -19.8           | 99.6            | 19.2                          | 0.32                          | 0.32                         | -6.49                       |
| 5,761.0                     | 0.50               | 129.10         | 5,758.3                     | -20.6           | 100.2           | 19.9                          | 0.39                          | -0.21                        | -31.49                      |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                      |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 5,869.0                     | 0.70               | 128.30         | 5,866.3                     | -21.3           | 101.0           | 20.6                          | 0.19                          | 0.19                         | -0.74                       |  |
| 6,011.0                     | 0.50               | 155.30         | 6,008.3                     | -22.4           | 102.0           | 21.7                          | 0.24                          | -0.14                        | 19.01                       |  |
| 6,106.0                     | 1.00               | 310.90         | 6,103.3                     | -22.3           | 101.5           | 21.6                          | 1.55                          | 0.53                         | 163.79                      |  |
| 6,233.0                     | 1.80               | 303.20         | 6,230.3                     | -20.5           | 99.0            | 19.8                          | 0.65                          | 0.63                         | -6.06                       |  |
| 6,328.0                     | 1.80               | 310.20         | 6,325.2                     | -18.7           | 96.6            | 18.0                          | 0.23                          | 0.00                         | 7.37                        |  |
| 6,422.0                     | 1.70               | 312.30         | 6,419.2                     | -16.8           | 94.5            | 16.1                          | 0.13                          | -0.11                        | 2.23                        |  |
| 6,516.0                     | 1.40               | 316.70         | 6,513.2                     | -15.0           | 92.7            | 14.4                          | 0.34                          | -0.32                        | 4.68                        |  |
| 6,611.0                     | 1.20               | 316.70         | 6,608.1                     | -13.4           | 91.2            | 12.8                          | 0.21                          | -0.21                        | 0.00                        |  |
| 6,706.0                     | 1.30               | 299.50         | 6,703.1                     | -12.2           | 89.6            | 11.6                          | 0.41                          | 0.11                         | -18.11                      |  |
| 6,801.0                     | 1.80               | 286.10         | 6,798.1                     | -11.3           | 87.2            | 10.6                          | 0.65                          | 0.53                         | -14.11                      |  |
| 6,895.0                     | 1.30               | 281.50         | 6,892.0                     | -10.6           | 84.7            | 10.0                          | 0.55                          | -0.53                        | -4.89                       |  |
| 6,991.0                     | 2.30               | 268.90         | 6,988.0                     | -10.4           | 81.7            | 9.9                           | 1.11                          | 1.04                         | -13.13                      |  |
| 7,086.0                     | 1.90               | 262.20         | 7,082.9                     | -10.7           | 78.3            | 10.2                          | 0.49                          | -0.42                        | -7.05                       |  |
| 7,180.0                     | 2.10               | 257.30         | 7,176.9                     | -11.3           | 75.0            | 10.8                          | 0.28                          | 0.21                         | -5.21                       |  |
| 7,275.0                     | 2.10               | 252.00         | 7,271.8                     | -12.2           | 71.7            | 11.7                          | 0.20                          | 0.00                         | -5.58                       |  |
| 7,370.0                     | 1.90               | 253.20         | 7,366.7                     | -13.2           | 68.5            | 12.7                          | 0.22                          | -0.21                        | 1.26                        |  |
| 7,465.0                     | 2.60               | 279.40         | 7,461.7                     | -13.3           | 64.9            | 12.9                          | 1.29                          | 0.74                         | 27.58                       |  |
| 7,559.0                     | 2.80               | 299.70         | 7,555.6                     | -11.8           | 60.8            | 11.4                          | 1.03                          | 0.21                         | 21.60                       |  |
| 7,655.0                     | 2.10               | 328.50         | 7,651.5                     | -9.2            | 57.8            | 8.8                           | 1.45                          | -0.73                        | 30.00                       |  |
| 7,749.0                     | 1.90               | 356.60         | 7,745.4                     | -6.1            | 56.8            | 5.7                           | 1.05                          | -0.21                        | 29.89                       |  |
| 7,844.0                     | 1.00               | 3.30           | 7,840.4                     | -3.7            | 56.8            | 3.3                           | 0.96                          | -0.95                        | 7.05                        |  |
| 7,939.0                     | 0.80               | 2.60           | 7,935.4                     | -2.2            | 56.9            | 1.8                           | 0.21                          | -0.21                        | -0.74                       |  |
| 8,034.0                     | 0.90               | 6.50           | 8,030.4                     | -0.8            | 57.0            | 0.4                           | 0.12                          | 0.11                         | 4.11                        |  |
| 8,129.0                     | 0.70               | 13.80          | 8,125.4                     | 0.5             | 57.2            | -0.9                          | 0.24                          | -0.21                        | 7.68                        |  |
| 8,223.0                     | 0.80               | 40.00          | 8,219.4                     | 1.5             | 57.8            | -1.9                          | 0.38                          | 0.11                         | 27.87                       |  |
| 8,319.0                     | 0.60               | 59.00          | 8,315.4                     | 2.3             | 58.6            | -2.7                          | 0.32                          | -0.21                        | 19.79                       |  |
| 8,413.0                     | 0.40               | 45.30          | 8,409.4                     | 2.8             | 59.3            | -3.2                          | 0.25                          | -0.21                        | -14.57                      |  |
| 8,508.0                     | 0.40               | 77.60          | 8,504.3                     | 3.1             | 59.8            | -3.5                          | 0.23                          | 0.00                         | 34.00                       |  |
| 8,603.0                     | 0.40               | 329.20         | 8,599.3                     | 3.4             | 60.0            | -3.9                          | 0.68                          | 0.00                         | -114.11                     |  |
| 8,698.0                     | 0.40               | 46.70          | 8,694.3                     | 4.0             | 60.1            | -4.4                          | 0.53                          | 0.00                         | 81.58                       |  |
| 8,793.0                     | 0.40               | 111.00         | 8,789.3                     | 4.1             | 60.6            | -4.5                          | 0.45                          | 0.00                         | 67.68                       |  |
| 8,888.0                     | 0.90               | 151.50         | 8,884.3                     | 3.3             | 61.3            | -3.7                          | 0.68                          | 0.53                         | 42.63                       |  |
| 8,983.0                     | 1.40               | 177.00         | 8,979.3                     | 1.5             | 61.7            | -1.9                          | 0.74                          | 0.53                         | 26.84                       |  |
| 9,078.0                     | 0.60               | 258.20         | 9,074.3                     | 0.2             | 61.3            | -0.6                          | 1.51                          | -0.84                        | 85.47                       |  |
| 9,172.0                     | 1.50               | 254.10         | 9,168.3                     | -0.2            | 59.6            | -0.2                          | 0.96                          | 0.96                         | -4.36                       |  |
| 9,267.0                     | 1.20               | 307.00         | 9,263.3                     | 0.0             | 57.6            | -0.4                          | 1.30                          | -0.32                        | 55.68                       |  |
| 9,362.0                     | 0.70               | 292.60         | 9,358.3                     | 0.9             | 56.3            | -1.2                          | 0.58                          | -0.53                        | -15.16                      |  |
| 9,456.0                     | 1.60               | 291.70         | 9,452.2                     | 1.6             | 54.5            | -1.9                          | 0.96                          | 0.96                         | -0.96                       |  |
| 9,555.0                     | 2.10               | 298.20         | 9,551.2                     | 2.9             | 51.7            | -3.3                          | 0.55                          | 0.51                         | 6.57                        |  |
| 9,650.0                     | 2.00               | 336.90         | 9,646.1                     | 5.3             | 49.5            | -5.6                          | 1.43                          | -0.11                        | 40.74                       |  |
| 9,744.0                     | 0.40               | 346.60         | 9,740.1                     | 7.1             | 48.8            | -7.4                          | 1.71                          | -1.70                        | 10.32                       |  |
| 9,839.0                     | 0.80               | 348.30         | 9,835.1                     | 8.1             | 48.5            | -8.4                          | 0.42                          | 0.42                         | 1.79                        |  |
| 9,934.0                     | 0.30               | 342.40         | 9,930.1                     | 9.0             | 48.3            | -9.3                          | 0.53                          | -0.53                        | -6.21                       |  |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                                                                          |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|---------------------------------------------------------------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft)                                                     | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 10,029.0                                                                        | 0.20               | 248.30         | 10,025.1                    | 9.1             | 48.1            | -9.5                          | 0.39                          | -0.11                        | -99.05                      |  |
| 10,124.0                                                                        | 0.40               | 289.50         | 10,120.1                    | 9.2             | 47.6            | -9.5                          | 0.30                          | 0.21                         | 43.37                       |  |
| 10,218.0                                                                        | 0.40               | 245.70         | 10,214.1                    | 9.2             | 47.0            | -9.5                          | 0.32                          | 0.00                         | -46.60                      |  |
| 10,313.0                                                                        | 0.40               | 230.00         | 10,309.1                    | 8.8             | 46.5            | -9.1                          | 0.12                          | 0.00                         | -16.53                      |  |
| 10,408.0                                                                        | 0.90               | 210.70         | 10,404.1                    | 8.0             | 45.8            | -8.3                          | 0.57                          | 0.53                         | -20.32                      |  |
| 10,503.0                                                                        | 1.10               | 237.30         | 10,499.1                    | 6.8             | 44.7            | -7.1                          | 0.53                          | 0.21                         | 28.00                       |  |
| 10,598.0                                                                        | 0.40               | 262.60         | 10,594.1                    | 6.3             | 43.6            | -6.6                          | 0.80                          | -0.74                        | 26.63                       |  |
| 10,692.0                                                                        | 0.40               | 274.70         | 10,688.1                    | 6.3             | 42.9            | -6.6                          | 0.09                          | 0.00                         | 12.87                       |  |
| 10,787.0                                                                        | 0.50               | 181.70         | 10,783.1                    | 5.9             | 42.6            | -6.2                          | 0.69                          | 0.11                         | -97.89                      |  |
| 10,882.0                                                                        | 1.10               | 191.90         | 10,878.0                    | 4.6             | 42.4            | -4.9                          | 0.65                          | 0.63                         | 10.74                       |  |
| 10,976.0                                                                        | 1.00               | 186.50         | 10,972.0                    | 2.9             | 42.1            | -3.2                          | 0.15                          | -0.11                        | -5.74                       |  |
| 11,071.0                                                                        | 1.40               | 195.60         | 11,067.0                    | 0.9             | 41.7            | -1.2                          | 0.47                          | 0.42                         | 9.58                        |  |
| 11,121.0                                                                        | 1.70               | 199.80         | 11,117.0                    | -0.3            | 41.3            | 0.1                           | 0.64                          | 0.60                         | 8.40                        |  |
| <b>KOP - 11121.0' MD, 11117.0' TVD, 1.70° INC, 0.1' VS</b>                      |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
| 11,197.0                                                                        | 4.70               | 174.10         | 11,192.9                    | -4.5            | 41.2            | 4.2                           | 4.28                          | 3.95                         | -33.82                      |  |
| 11,229.0                                                                        | 9.60               | 172.90         | 11,224.6                    | -8.5            | 41.7            | 8.2                           | 15.32                         | 15.31                        | -3.75                       |  |
| 11,260.0                                                                        | 15.20              | 174.00         | 11,254.9                    | -15.1           | 42.5            | 14.8                          | 18.08                         | 18.06                        | 3.55                        |  |
| 11,292.0                                                                        | 19.20              | 177.10         | 11,285.4                    | -24.5           | 43.2            | 24.2                          | 12.82                         | 12.50                        | 9.69                        |  |
| 11,323.0                                                                        | 22.20              | 179.40         | 11,314.4                    | -35.5           | 43.5            | 35.1                          | 10.02                         | 9.68                         | 7.42                        |  |
| 11,355.0                                                                        | 25.20              | 180.70         | 11,343.7                    | -48.3           | 43.5            | 48.0                          | 9.52                          | 9.38                         | 4.06                        |  |
| 11,386.0                                                                        | 28.40              | 180.80         | 11,371.4                    | -62.3           | 43.3            | 62.0                          | 10.32                         | 10.32                        | 0.32                        |  |
| 11,418.0                                                                        | 31.80              | 181.40         | 11,399.1                    | -78.3           | 43.0            | 78.0                          | 10.67                         | 10.63                        | 1.88                        |  |
| 11,450.0                                                                        | 35.30              | 181.40         | 11,425.7                    | -96.0           | 42.5            | 95.7                          | 10.94                         | 10.94                        | 0.00                        |  |
| 11,481.0                                                                        | 37.70              | 181.00         | 11,450.7                    | -114.4          | 42.1            | 114.1                         | 7.78                          | 7.74                         | -1.29                       |  |
| 11,513.0                                                                        | 40.40              | 180.70         | 11,475.5                    | -134.6          | 41.8            | 134.3                         | 8.46                          | 8.44                         | -0.94                       |  |
| 11,544.0                                                                        | 44.30              | 180.50         | 11,498.4                    | -155.5          | 41.6            | 155.2                         | 12.59                         | 12.58                        | -0.65                       |  |
| 11,576.0                                                                        | 48.40              | 180.30         | 11,520.5                    | -178.6          | 41.5            | 178.3                         | 12.82                         | 12.81                        | -0.63                       |  |
| 11,595.0                                                                        | 50.78              | 180.30         | 11,532.8                    | -193.1          | 41.4            | 192.8                         | 12.50                         | 12.50                        | 0.00                        |  |
| <b>Cross into 330' Lease - 11595.0' MD, 11532.8' TVD, 50.78° INC, 192.8' VS</b> |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
| 11,608.0                                                                        | 52.40              | 180.30         | 11,540.9                    | -203.3          | 41.3            | 203.0                         | 12.50                         | 12.50                        | 0.00                        |  |
| 11,639.0                                                                        | 56.50              | 180.10         | 11,558.9                    | -228.5          | 41.3            | 228.2                         | 13.24                         | 13.23                        | -0.65                       |  |
| 11,671.0                                                                        | 60.10              | 180.10         | 11,575.7                    | -255.7          | 41.2            | 255.4                         | 11.25                         | 11.25                        | 0.00                        |  |
| 11,703.0                                                                        | 63.10              | 180.10         | 11,590.9                    | -283.9          | 41.2            | 283.6                         | 9.38                          | 9.38                         | 0.00                        |  |
| 11,733.0                                                                        | 66.10              | 180.50         | 11,603.8                    | -311.0          | 41.0            | 310.7                         | 10.07                         | 10.00                        | 1.33                        |  |
| 11,762.0                                                                        | 69.30              | 181.50         | 11,614.8                    | -337.8          | 40.5            | 337.5                         | 11.49                         | 11.03                        | 3.45                        |  |
| 11,794.0                                                                        | 71.70              | 181.70         | 11,625.5                    | -367.9          | 39.7            | 367.6                         | 7.52                          | 7.50                         | 0.63                        |  |
| 11,825.0                                                                        | 74.20              | 181.20         | 11,634.6                    | -397.6          | 39.0            | 397.3                         | 8.21                          | 8.06                         | -1.61                       |  |
| 11,857.0                                                                        | 76.90              | 180.80         | 11,642.6                    | -428.5          | 38.4            | 428.3                         | 8.52                          | 8.44                         | -1.25                       |  |
| 11,888.0                                                                        | 79.20              | 180.30         | 11,649.0                    | -458.9          | 38.1            | 458.6                         | 7.59                          | 7.42                         | -1.61                       |  |
| 11,920.0                                                                        | 81.50              | 179.90         | 11,654.3                    | -490.4          | 38.1            | 490.1                         | 7.29                          | 7.19                         | -1.25                       |  |
| 11,952.0                                                                        | 84.10              | 179.80         | 11,658.4                    | -522.1          | 38.1            | 521.9                         | 8.13                          | 8.13                         | -0.31                       |  |
| 11,983.0                                                                        | 86.80              | 179.90         | 11,660.8                    | -553.0          | 38.2            | 552.8                         | 8.72                          | 8.71                         | 0.32                        |  |
| 12,046.0                                                                        | 91.10              | 180.30         | 11,662.0                    | -616.0          | 38.1            | 615.7                         | 6.85                          | 6.83                         | 0.63                        |  |
| <b>EOC - 12046.0' MD, 11662.0' TVD, 91.10° INC, 615.7' VS</b>                   |                    |                |                             |                 |                 |                               |                               |                              |                             |  |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| 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) |
| 12,078.0              | 91.00           | 180.70      | 11,661.4              | -648.0       | 37.8         | 647.7                   | 1.29                    | -0.31                  | 1.25                  |
| 12,141.0              | 90.50           | 181.40      | 11,660.6              | -711.0       | 36.7         | 710.7                   | 1.37                    | -0.79                  | 1.11                  |
| 12,172.0              | 90.20           | 181.40      | 11,660.4              | -742.0       | 35.9         | 741.7                   | 0.97                    | -0.97                  | 0.00                  |
| 12,267.0              | 89.90           | 180.80      | 11,660.3              | -837.0       | 34.1         | 836.7                   | 0.71                    | -0.32                  | -0.63                 |
| 12,361.0              | 90.00           | 181.00      | 11,660.4              | -931.0       | 32.6         | 930.7                   | 0.24                    | 0.11                   | 0.21                  |
| 12,456.0              | 89.90           | 181.00      | 11,660.5              | -1,025.9     | 31.0         | 1,025.7                 | 0.11                    | -0.11                  | 0.00                  |
| 12,550.0              | 90.60           | 180.10      | 11,660.0              | -1,119.9     | 30.1         | 1,119.7                 | 1.21                    | 0.74                   | -0.96                 |
| 12,644.0              | 90.70           | 179.20      | 11,659.0              | -1,213.9     | 30.6         | 1,213.7                 | 0.96                    | 0.11                   | -0.96                 |
| 12,739.0              | 91.40           | 180.10      | 11,657.2              | -1,308.9     | 31.2         | 1,308.7                 | 1.20                    | 0.74                   | 0.95                  |
| 12,833.0              | 90.00           | 180.70      | 11,656.1              | -1,402.9     | 30.6         | 1,402.6                 | 1.62                    | -1.49                  | 0.64                  |
| 12,928.0              | 90.00           | 180.70      | 11,656.1              | -1,497.9     | 29.4         | 1,497.6                 | 0.00                    | 0.00                   | 0.00                  |
| 13,022.0              | 90.20           | 179.80      | 11,655.9              | -1,591.9     | 29.0         | 1,591.6                 | 0.98                    | 0.21                   | -0.96                 |
| 13,117.0              | 91.40           | 180.10      | 11,654.6              | -1,686.9     | 29.1         | 1,686.6                 | 1.30                    | 1.26                   | 0.32                  |
| 13,211.0              | 90.70           | 180.70      | 11,652.9              | -1,780.9     | 28.4         | 1,780.6                 | 0.98                    | -0.74                  | 0.64                  |
| 13,306.0              | 90.70           | 181.40      | 11,651.7              | -1,875.8     | 26.7         | 1,875.6                 | 0.74                    | 0.00                   | 0.74                  |
| 13,400.0              | 90.70           | 181.00      | 11,650.6              | -1,969.8     | 24.7         | 1,969.6                 | 0.43                    | 0.00                   | -0.43                 |
| 13,495.0              | 90.70           | 180.10      | 11,649.4              | -2,064.8     | 23.8         | 2,064.6                 | 0.95                    | 0.00                   | -0.95                 |
| 13,543.0              | 90.70           | 179.90      | 11,648.8              | -2,112.8     | 23.8         | 2,112.6                 | 0.42                    | 0.00                   | -0.42                 |
| 13,590.0              | 90.40           | 179.90      | 11,648.4              | -2,159.8     | 23.9         | 2,159.6                 | 0.64                    | -0.64                  | 0.00                  |
| 13,620.0              | 89.90           | 179.90      | 11,648.3              | -2,189.8     | 23.9         | 2,189.6                 | 1.67                    | -1.67                  | 0.00                  |
| 13,685.0              | 89.40           | 179.90      | 11,648.7              | -2,254.8     | 24.0         | 2,254.6                 | 0.77                    | -0.77                  | 0.00                  |
| 13,731.0              | 89.00           | 180.10      | 11,649.3              | -2,300.8     | 24.0         | 2,300.6                 | 0.97                    | -0.87                  | 0.43                  |
| 13,780.0              | 88.80           | 180.30      | 11,650.3              | -2,349.8     | 23.9         | 2,349.5                 | 0.58                    | -0.41                  | 0.41                  |
| 13,826.0              | 88.50           | 180.30      | 11,651.4              | -2,395.8     | 23.6         | 2,395.5                 | 0.65                    | -0.65                  | 0.00                  |
| 13,875.0              | 88.60           | 180.70      | 11,652.6              | -2,444.7     | 23.2         | 2,444.5                 | 0.84                    | 0.20                   | 0.82                  |
| 13,921.0              | 89.30           | 181.00      | 11,653.4              | -2,490.7     | 22.5         | 2,490.5                 | 1.66                    | 1.52                   | 0.65                  |
| 13,970.0              | 89.10           | 180.80      | 11,654.1              | -2,539.7     | 21.8         | 2,539.5                 | 0.58                    | -0.41                  | -0.41                 |
| 14,032.0              | 88.30           | 180.70      | 11,655.5              | -2,601.7     | 20.9         | 2,601.5                 | 1.30                    | -1.29                  | -0.16                 |
| 14,064.0              | 88.00           | 180.80      | 11,656.6              | -2,633.7     | 20.5         | 2,633.5                 | 0.99                    | -0.94                  | 0.31                  |
| 14,105.0              | 88.50           | 180.10      | 11,657.8              | -2,674.7     | 20.2         | 2,674.4                 | 2.10                    | 1.22                   | -1.71                 |
| 14,158.0              | 88.50           | 180.10      | 11,659.2              | -2,727.6     | 20.1         | 2,727.4                 | 0.00                    | 0.00                   | 0.00                  |
| 14,252.0              | 89.00           | 180.10      | 11,661.2              | -2,821.6     | 19.9         | 2,821.4                 | 0.53                    | 0.53                   | 0.00                  |
| 14,347.0              | 89.50           | 180.10      | 11,662.5              | -2,916.6     | 19.8         | 2,916.4                 | 0.53                    | 0.53                   | 0.00                  |
| 14,442.0              | 90.30           | 180.30      | 11,662.7              | -3,011.6     | 19.5         | 3,011.4                 | 0.87                    | 0.84                   | 0.21                  |
| 14,537.0              | 91.20           | 180.30      | 11,661.4              | -3,106.6     | 19.0         | 3,106.4                 | 0.95                    | 0.95                   | 0.00                  |
| 14,631.0              | 91.20           | 180.10      | 11,659.4              | -3,200.6     | 18.6         | 3,200.4                 | 0.21                    | 0.00                   | -0.21                 |
| 14,726.0              | 90.70           | 180.30      | 11,657.9              | -3,295.6     | 18.3         | 3,295.4                 | 0.57                    | -0.53                  | 0.21                  |
| 14,820.0              | 90.50           | 180.10      | 11,656.9              | -3,389.6     | 18.0         | 3,389.3                 | 0.30                    | -0.21                  | -0.21                 |
| 14,915.0              | 89.30           | 179.90      | 11,657.1              | -3,484.6     | 18.0         | 3,484.3                 | 1.28                    | -1.26                  | -0.21                 |
| 15,010.0              | 89.10           | 180.10      | 11,658.4              | -3,579.5     | 18.0         | 3,579.3                 | 0.30                    | -0.21                  | 0.21                  |
| 15,104.0              | 88.40           | 180.10      | 11,660.4              | -3,673.5     | 17.8         | 3,673.3                 | 0.74                    | -0.74                  | 0.00                  |
| 15,199.0              | 88.70           | 179.60      | 11,662.8              | -3,768.5     | 18.1         | 3,768.3                 | 0.61                    | 0.32                   | -0.53                 |
| 15,294.0              | 89.30           | 179.20      | 11,664.5              | -3,863.5     | 19.0         | 3,863.2                 | 0.76                    | 0.63                   | -0.42                 |



|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| 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) |
| 15,389.0                                                                                  | 90.80           | 179.80      | 11,664.4              | -3,958.5     | 19.9         | 3,958.2                 | 1.70                    | 1.58                   | 0.63                  |
| 15,484.0                                                                                  | 90.00           | 179.40      | 11,663.7              | -4,053.5     | 20.5         | 4,053.2                 | 0.94                    | -0.84                  | -0.42                 |
| 15,578.0                                                                                  | 90.10           | 179.20      | 11,663.7              | -4,147.4     | 21.7         | 4,147.2                 | 0.24                    | 0.11                   | -0.21                 |
| 15,673.0                                                                                  | 90.10           | 179.20      | 11,663.5              | -4,242.4     | 23.0         | 4,242.2                 | 0.00                    | 0.00                   | 0.00                  |
| 15,774.0                                                                                  | 89.60           | 179.20      | 11,663.8              | -4,343.4     | 24.4         | 4,343.2                 | 0.50                    | -0.50                  | 0.00                  |
| 15,869.0                                                                                  | 89.50           | 178.90      | 11,664.5              | -4,438.4     | 26.0         | 4,438.1                 | 0.33                    | -0.11                  | -0.32                 |
| 15,964.0                                                                                  | 88.70           | 179.10      | 11,666.0              | -4,533.4     | 27.7         | 4,533.1                 | 0.87                    | -0.84                  | 0.21                  |
| 16,059.0                                                                                  | 89.90           | 179.40      | 11,667.2              | -4,628.4     | 28.9         | 4,628.1                 | 1.30                    | 1.26                   | 0.32                  |
| 16,164.0                                                                                  | 89.30           | 179.60      | 11,667.9              | -4,733.4     | 29.8         | 4,733.0                 | 0.60                    | -0.57                  | 0.19                  |
| 16,219.0                                                                                  | 89.30           | 179.60      | 11,668.6              | -4,788.4     | 30.2         | 4,788.0                 | 0.00                    | 0.00                   | 0.00                  |
| BHL - 16219.0' MD, 11668.6' TVD, 89.30° INC, 179.60° AZI, -4788.4' N, 30.2' E, 4788.0' VS |                 |             |                       |              |              |                         |                         |                        |                       |

| Design Annotations    |                       |                   |              |                                                                                |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------------------------------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                                                                        |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                                                                |
| 11,121.0              | 11,117.0              | -0.3              | 41.3         | KOP - 11121.0' MD, 11117.0' TVD, 1.70° INC, 0.1' VS                            |
| 11,595.0              | 11,532.8              | -193.1            | 41.4         | Cross into 330' Lease - 11595.0' MD, 11532.8' TVD, 50.78° INC, 192.8' VS       |
| 12,046.0              | 11,662.0              | -616.0            | 38.1         | EOC - 12046.0' MD, 11662.0' TVD, 91.10° INC, 615.7' VS                         |
| 16,219.0              | 11,668.6              | -4,788.4          | 30.2         | BHL - 16219.0' MD, 11668.6' TVD, 89.30° INC, 179.60° AZI, -4788.4' N, 30.2' E, |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|





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## **Yates Petroleum**

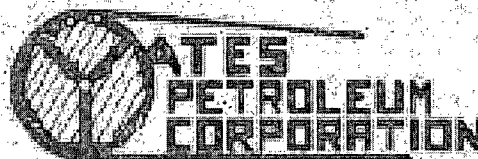
Lea County, NM (NAD-83)  
September Grass BSG State Com  
#1H

OH

Design: OH

## **Survey Report - Geographic**

08 July, 2013



|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD-83)   |                      |                |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone   |                      |                |

|                       |                               |              |                 |                   |                   |
|-----------------------|-------------------------------|--------------|-----------------|-------------------|-------------------|
| Site                  | September Grass BSG State Com |              |                 |                   |                   |
| Site Position:        |                               | Northing:    | 549,372.07 usft | Latitude:         | 32° 30' 26.843 N  |
| From:                 | Map                           | Easting:     | 801,366.95 usft | Longitude:        | 103° 29' 23.390 W |
| Position Uncertainty: | 2.0 usft                      | Slot Radius: | 13-3/16 "       | Grid Convergence: | 0.45 °            |

|                      |       |          |                     |                 |               |                   |
|----------------------|-------|----------|---------------------|-----------------|---------------|-------------------|
| Well                 | #1H   |          |                     |                 |               |                   |
| Well Position        | +N/-S | 0.0 usft | Northing:           | 549,372.07 usft | Latitude:     | 32° 30' 26.843 N  |
|                      | +E/-W | 0.0 usft | Easting:            | 801,366.95 usft | Longitude:    | 103° 29' 23.390 W |
| Position Uncertainty |       | 0.0 usft | Wellhead Elevation: | usft            | Ground Level: | 3,714.0 usft      |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | OH                |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2010          | 5/14/2013          | 7.33               | 60.42            | 48,602                |

|                   |  |                  |               |        |        |
|-------------------|--|------------------|---------------|--------|--------|
| Design            |  | OH               |               |        |        |
| Audit Notes:      |  |                  |               |        |        |
| Version:          |  | 1.0              | Phase:        |        | ACTUAL |
|                   |  |                  | Tie On Depth: |        | 0.0    |
| Vertical Section: |  | Depth From (TVD) |               | +N/-S  | +E/-W  |
|                   |  | (usft)           |               | (usft) | (usft) |
|                   |  | 0.0              |               | 0.0    | 0.0    |
|                   |  |                  |               |        | 180.40 |

|                       |                      |                            |                  |                                          |
|-----------------------|----------------------|----------------------------|------------------|------------------------------------------|
| <b>Survey Program</b> | <b>Date</b> 7/8/2013 |                            |                  |                                          |
| <b>From</b>           | <b>To</b>            | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b>                       |
| (usft)                | (usft)               |                            |                  |                                          |
| 151.0                 | 16,164.0             | Survey #1 - Crescent1 (OH) | MWD              | MWD - Standard                           |
| 16,219.0              | 16,219.0             | Survey #2 - PTB (OH)       | BLIND            | Blind drilling, where no tool is applied |

|                 |                    |                |                 |              |              |                 |                |                  |                   |  |
|-----------------|--------------------|----------------|-----------------|--------------|--------------|-----------------|----------------|------------------|-------------------|--|
| <b>Survey</b>   |                    |                |                 |              |              |                 |                |                  |                   |  |
| <b>Measured</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Map</b>      | <b>Map</b>     | <b>Latitude</b>  | <b>Longitude</b>  |  |
| <b>Depth</b>    | (°)                | (°)            | <b>Depth</b>    | (usft)       | (usft)       | <b>Northing</b> | <b>Easting</b> |                  |                   |  |
| (usft)          |                    |                | (usft)          |              |              | (usft)          | (usft)         |                  |                   |  |
| 0.0             | 0.00               | 0.00           | 0.0             | 0.0          | 0.0          | 549,372.07      | 801,366.95     | 32° 30' 26.843 N | 103° 29' 23.390 W |  |
| 151.0           | 0.30               | 63.00          | 151.0           | 0.2          | 0.4          | 549,372.25      | 801,367.31     | 32° 30' 26.845 N | 103° 29' 23.386 W |  |
| 303.0           | 0.30               | 68.90          | 303.0           | 0.5          | 1.1          | 549,372.58      | 801,368.03     | 32° 30' 26.848 N | 103° 29' 23.377 W |  |
| 422.0           | 0.40               | 80.50          | 422.0           | 0.7          | 1.8          | 549,372.76      | 801,368.73     | 32° 30' 26.850 N | 103° 29' 23.369 W |  |
| 481.0           | 0.40               | 89.60          | 481.0           | 0.7          | 2.2          | 549,372.79      | 801,369.14     | 32° 30' 26.850 N | 103° 29' 23.364 W |  |
| 541.0           | 0.50               | 75.30          | 541.0           | 0.8          | 2.7          | 549,372.86      | 801,369.60     | 32° 30' 26.851 N | 103° 29' 23.359 W |  |
| 598.0           | 1.10               | 88.50          | 598.0           | 0.9          | 3.4          | 549,372.94      | 801,370.39     | 32° 30' 26.851 N | 103° 29' 23.350 W |  |
| 658.0           | 1.60               | 83.00          | 658.0           | 1.0          | 4.8          | 549,373.06      | 801,371.80     | 32° 30' 26.852 N | 103° 29' 23.333 W |  |
| 716.0           | 2.30               | 88.30          | 715.9           | 1.1          | 6.8          | 549,373.19      | 801,373.76     | 32° 30' 26.854 N | 103° 29' 23.310 W |  |
| 778.0           | 2.50               | 85.10          | 777.9           | 1.3          | 9.4          | 549,373.34      | 801,376.36     | 32° 30' 26.855 N | 103° 29' 23.280 W |  |
| 835.0           | 2.40               | 86.50          | 834.8           | 1.4          | 11.8         | 549,373.52      | 801,378.79     | 32° 30' 26.857 N | 103° 29' 23.251 W |  |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                      |                    |                |                             |                 |                 |                           |                          |                  |                   |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|-------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         | Longitude         |
| 928.0                       | 3.10               | 86.00          | 927.7                       | 1.7             | 16.3            | 549,373.81                | 801,383.24               | 32° 30' 26.859 N | 103° 29' 23.199 W |
| 1,023.0                     | 3.10               | 85.50          | 1,022.6                     | 2.1             | 21.4            | 549,374.19                | 801,388.36               | 32° 30' 26.862 N | 103° 29' 23.140 W |
| 1,118.0                     | 3.00               | 87.70          | 1,117.4                     | 2.4             | 26.5            | 549,374.50                | 801,393.41               | 32° 30' 26.865 N | 103° 29' 23.081 W |
| 1,213.0                     | 2.30               | 84.20          | 1,212.3                     | 2.7             | 30.8            | 549,374.79                | 801,397.79               | 32° 30' 26.868 N | 103° 29' 23.029 W |
| 1,308.0                     | 2.70               | 87.30          | 1,307.3                     | 3.0             | 35.0            | 549,375.09                | 801,401.92               | 32° 30' 26.870 N | 103° 29' 22.981 W |
| 1,403.0                     | 2.70               | 84.80          | 1,402.1                     | 3.3             | 39.4            | 549,375.39                | 801,406.38               | 32° 30' 26.873 N | 103° 29' 22.929 W |
| 1,498.0                     | 2.40               | 88.00          | 1,497.1                     | 3.6             | 43.6            | 549,375.67                | 801,410.60               | 32° 30' 26.875 N | 103° 29' 22.880 W |
| 1,593.0                     | 1.80               | 88.70          | 1,592.0                     | 3.7             | 47.1            | 549,375.77                | 801,414.08               | 32° 30' 26.876 N | 103° 29' 22.839 W |
| 1,688.0                     | 1.00               | 92.10          | 1,687.0                     | 3.7             | 49.4            | 549,375.77                | 801,416.40               | 32° 30' 26.876 N | 103° 29' 22.812 W |
| 1,783.0                     | 0.80               | 116.80         | 1,782.0                     | 3.4             | 50.9            | 549,375.44                | 801,417.82               | 32° 30' 26.873 N | 103° 29' 22.796 W |
| 1,974.0                     | 0.60               | 126.50         | 1,972.9                     | 2.2             | 52.9            | 549,374.25                | 801,419.81               | 32° 30' 26.861 N | 103° 29' 22.772 W |
| 2,069.0                     | 0.60               | 108.80         | 2,067.9                     | 1.7             | 53.7            | 549,373.79                | 801,420.68               | 32° 30' 26.856 N | 103° 29' 22.762 W |
| 2,258.0                     | 0.40               | 71.50          | 2,256.9                     | 1.6             | 55.3            | 549,373.68                | 801,422.24               | 32° 30' 26.855 N | 103° 29' 22.744 W |
| 2,448.0                     | 0.30               | 83.60          | 2,446.9                     | 1.9             | 56.4            | 549,373.95                | 801,423.37               | 32° 30' 26.857 N | 103° 29' 22.731 W |
| 2,637.0                     | 0.10               | 176.20         | 2,635.9                     | 1.8             | 56.9            | 549,373.84                | 801,423.87               | 32° 30' 26.856 N | 103° 29' 22.725 W |
| 2,827.0                     | 0.20               | 128.70         | 2,825.9                     | 1.4             | 57.2            | 549,373.47                | 801,424.14               | 32° 30' 26.852 N | 103° 29' 22.722 W |
| 2,922.0                     | 0.40               | 85.70          | 2,920.9                     | 1.3             | 57.6            | 549,373.39                | 801,424.60               | 32° 30' 26.852 N | 103° 29' 22.716 W |
| 3,016.0                     | 0.70               | 70.50          | 3,014.9                     | 1.5             | 58.5            | 549,373.60                | 801,425.47               | 32° 30' 26.854 N | 103° 29' 22.706 W |
| 3,111.0                     | 0.50               | 88.90          | 3,109.9                     | 1.7             | 59.5            | 549,373.81                | 801,426.43               | 32° 30' 26.856 N | 103° 29' 22.695 W |
| 3,206.0                     | 0.20               | 158.40         | 3,204.9                     | 1.6             | 60.0            | 549,373.66                | 801,426.91               | 32° 30' 26.854 N | 103° 29' 22.690 W |
| 3,301.0                     | 0.10               | 174.60         | 3,299.9                     | 1.3             | 60.0            | 549,373.42                | 801,426.97               | 32° 30' 26.852 N | 103° 29' 22.689 W |
| 3,395.0                     | 0.20               | 188.10         | 3,393.9                     | 1.1             | 60.0            | 549,373.18                | 801,426.96               | 32° 30' 26.849 N | 103° 29' 22.689 W |
| 3,490.0                     | 0.70               | 227.30         | 3,488.9                     | 0.5             | 59.6            | 549,372.62                | 801,426.51               | 32° 30' 26.844 N | 103° 29' 22.694 W |
| 3,585.0                     | 0.90               | 236.70         | 3,583.9                     | -0.3            | 58.5            | 549,371.82                | 801,425.46               | 32° 30' 26.836 N | 103° 29' 22.707 W |
| 3,680.0                     | 0.80               | 238.70         | 3,678.9                     | -1.0            | 57.3            | 549,371.06                | 801,424.27               | 32° 30' 26.829 N | 103° 29' 22.721 W |
| 3,774.0                     | 0.60               | 243.60         | 3,772.9                     | -1.6            | 56.3            | 549,370.50                | 801,423.27               | 32° 30' 26.823 N | 103° 29' 22.732 W |
| 3,964.0                     | 0.30               | 256.10         | 3,962.9                     | -2.1            | 54.9            | 549,369.94                | 801,421.89               | 32° 30' 26.818 N | 103° 29' 22.748 W |
| 4,154.0                     | 0.20               | 274.40         | 4,152.9                     | -2.2            | 54.1            | 549,369.85                | 801,421.08               | 32° 30' 26.817 N | 103° 29' 22.758 W |
| 4,342.0                     | 0.40               | 78.70          | 4,340.9                     | -2.1            | 54.4            | 549,370.00                | 801,421.40               | 32° 30' 26.818 N | 103° 29' 22.754 W |
| 4,532.0                     | 3.20               | 92.80          | 4,530.8                     | -2.2            | 60.4            | 549,369.87                | 801,427.34               | 32° 30' 26.817 N | 103° 29' 22.685 W |
| 4,721.0                     | 4.80               | 97.00          | 4,719.3                     | -3.4            | 73.5            | 549,368.65                | 801,440.46               | 32° 30' 26.804 N | 103° 29' 22.532 W |
| 4,816.0                     | 4.70               | 98.70          | 4,814.0                     | -4.5            | 81.3            | 549,367.58                | 801,448.26               | 32° 30' 26.792 N | 103° 29' 22.441 W |
| 4,911.0                     | 3.80               | 108.40         | 4,908.7                     | -6.1            | 88.1            | 549,366.00                | 801,455.09               | 32° 30' 26.776 N | 103° 29' 22.361 W |
| 5,005.0                     | 3.00               | 121.00         | 5,002.5                     | -8.3            | 93.2            | 549,363.75                | 801,460.15               | 32° 30' 26.753 N | 103° 29' 22.302 W |
| 5,099.0                     | 2.20               | 140.10         | 5,096.4                     | -11.0           | 96.5            | 549,361.09                | 801,463.42               | 32° 30' 26.727 N | 103° 29' 22.264 W |
| 5,194.0                     | 1.50               | 161.00         | 5,191.4                     | -13.6           | 98.0            | 549,358.52                | 801,464.99               | 32° 30' 26.701 N | 103° 29' 22.246 W |
| 5,290.0                     | 1.10               | 165.70         | 5,287.4                     | -15.6           | 98.7            | 549,356.44                | 801,465.63               | 32° 30' 26.681 N | 103° 29' 22.239 W |
| 5,384.0                     | 0.70               | 188.50         | 5,381.4                     | -17.1           | 98.8            | 549,355.00                | 801,465.77               | 32° 30' 26.666 N | 103° 29' 22.237 W |
| 5,478.0                     | 0.70               | 153.20         | 5,475.3                     | -18.2           | 99.0            | 549,353.92                | 801,465.94               | 32° 30' 26.656 N | 103° 29' 22.236 W |
| 5,573.0                     | 0.40               | 164.80         | 5,570.3                     | -19.0           | 99.3            | 549,353.08                | 801,466.29               | 32° 30' 26.647 N | 103° 29' 22.232 W |
| 5,667.0                     | 0.70               | 158.70         | 5,664.3                     | -19.8           | 99.6            | 549,352.23                | 801,466.59               | 32° 30' 26.639 N | 103° 29' 22.228 W |
| 5,761.0                     | 0.50               | 129.10         | 5,758.3                     | -20.6           | 100.2           | 549,351.43                | 801,467.11               | 32° 30' 26.631 N | 103° 29' 22.222 W |
| 5,869.0                     | 0.70               | 128.30         | 5,866.3                     | -21.3           | 101.0           | 549,350.73                | 801,468.00               | 32° 30' 26.624 N | 103° 29' 22.212 W |
| 6,011.0                     | 0.50               | 155.30         | 6,008.3                     | -22.4           | 102.0           | 549,349.63                | 801,468.94               | 32° 30' 26.613 N | 103° 29' 22.201 W |
| 6,106.0                     | 1.00               | 310.90         | 6,103.3                     | -22.3           | 101.5           | 549,349.79                | 801,468.48               | 32° 30' 26.615 N | 103° 29' 22.206 W |
| 6,233.0                     | 1.80               | 303.20         | 6,230.3                     | -20.5           | 99.0            | 549,351.61                | 801,465.98               | 32° 30' 26.633 N | 103° 29' 22.235 W |
| 6,328.0                     | 1.80               | 310.20         | 6,325.2                     | -18.7           | 96.6            | 549,353.39                | 801,463.59               | 32° 30' 26.651 N | 103° 29' 22.263 W |
| 6,422.0                     | 1.70               | 312.30         | 6,419.2                     | -16.8           | 94.5            | 549,355.28                | 801,461.43               | 32° 30' 26.670 N | 103° 29' 22.288 W |
| 6,516.0                     | 1.40               | 316.70         | 6,513.2                     | -15.0           | 92.7            | 549,357.06                | 801,459.61               | 32° 30' 26.687 N | 103° 29' 22.309 W |
| 6,611.0                     | 1.20               | 316.70         | 6,608.1                     | -13.4           | 91.2            | 549,358.62                | 801,458.13               | 32° 30' 26.703 N | 103° 29' 22.326 W |
| 6,706.0                     | 1.30               | 299.50         | 6,703.1                     | -12.2           | 89.6            | 549,359.88                | 801,456.51               | 32° 30' 26.715 N | 103° 29' 22.345 W |
| 6,801.0                     | 1.80               | 286.10         | 6,798.1                     | -11.3           | 87.2            | 549,360.82                | 801,454.14               | 32° 30' 26.725 N | 103° 29' 22.373 W |
| 6,895.0                     | 1.30               | 281.50         | 6,892.0                     | -10.6           | 84.7            | 549,361.45                | 801,451.68               | 32° 30' 26.731 N | 103° 29' 22.401 W |
| 6,991.0                     | 2.30               | 268.90         | 6,988.0                     | -10.4           | 81.7            | 549,361.63                | 801,448.68               | 32° 30' 26.733 N | 103° 29' 22.436 W |
| 7,086.0                     | 1.90               | 262.20         | 7,082.9                     | -10.7           | 78.3            | 549,361.37                | 801,445.22               | 32° 30' 26.731 N | 103° 29' 22.477 W |

|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                                             |                    |                |                             |                 |                 |                           |                          |                  |                   |
|----------------------------------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|-------------------|
| Measured<br>Depth<br>(usft)                        | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         | Longitude         |
| 7,180.0                                            | 2.10               | 257.30         | 7,176.9                     | -11.3           | 75.0            | 549,360.78                | 801,441.99               | 32° 30' 26.726 N | 103° 29' 22.515 W |
| 7,275.0                                            | 2.10               | 252.00         | 7,271.8                     | -12.2           | 71.7            | 549,359.86                | 801,438.64               | 32° 30' 26.717 N | 103° 29' 22.554 W |
| 7,370.0                                            | 1.90               | 253.20         | 7,366.7                     | -13.2           | 68.5            | 549,358.87                | 801,435.48               | 32° 30' 26.707 N | 103° 29' 22.591 W |
| 7,465.0                                            | 2.60               | 279.40         | 7,461.7                     | -13.3           | 64.9            | 549,358.77                | 801,431.84               | 32° 30' 26.706 N | 103° 29' 22.633 W |
| 7,559.0                                            | 2.80               | 299.70         | 7,555.6                     | -11.8           | 60.8            | 549,360.25                | 801,427.75               | 32° 30' 26.721 N | 103° 29' 22.681 W |
| 7,655.0                                            | 2.10               | 328.50         | 7,651.5                     | -9.2            | 57.8            | 549,362.92                | 801,424.79               | 32° 30' 26.748 N | 103° 29' 22.715 W |
| 7,749.0                                            | 1.90               | 356.60         | 7,745.4                     | -6.1            | 56.8            | 549,365.94                | 801,423.80               | 32° 30' 26.778 N | 103° 29' 22.727 W |
| 7,844.0                                            | 1.00               | 3.30           | 7,840.4                     | -3.7            | 56.8            | 549,368.34                | 801,423.75               | 32° 30' 26.802 N | 103° 29' 22.727 W |
| 7,939.0                                            | 0.80               | 2.60           | 7,935.4                     | -2.2            | 56.9            | 549,369.83                | 801,423.83               | 32° 30' 26.816 N | 103° 29' 22.726 W |
| 8,034.0                                            | 0.90               | 6.50           | 8,030.4                     | -0.8            | 57.0            | 549,371.23                | 801,423.94               | 32° 30' 26.830 N | 103° 29' 22.724 W |
| 8,129.0                                            | 0.70               | 13.80          | 8,125.4                     | 0.5             | 57.2            | 549,372.54                | 801,424.17               | 32° 30' 26.843 N | 103° 29' 22.722 W |
| 8,223.0                                            | 0.80               | 40.00          | 8,219.4                     | 1.5             | 57.8            | 549,373.60                | 801,424.73               | 32° 30' 26.854 N | 103° 29' 22.715 W |
| 8,319.0                                            | 0.60               | 59.00          | 8,315.4                     | 2.3             | 58.6            | 549,374.37                | 801,425.59               | 32° 30' 26.861 N | 103° 29' 22.705 W |
| 8,413.0                                            | 0.40               | 45.30          | 8,409.4                     | 2.8             | 59.3            | 549,374.85                | 801,426.24               | 32° 30' 26.866 N | 103° 29' 22.697 W |
| 8,508.0                                            | 0.40               | 77.60          | 8,504.3                     | 3.1             | 59.8            | 549,375.16                | 801,426.80               | 32° 30' 26.869 N | 103° 29' 22.691 W |
| 8,603.0                                            | 0.40               | 329.20         | 8,599.3                     | 3.4             | 60.0            | 549,375.52                | 801,426.96               | 32° 30' 26.873 N | 103° 29' 22.689 W |
| 8,698.0                                            | 0.40               | 46.70          | 8,694.3                     | 4.0             | 60.1            | 549,376.03                | 801,427.03               | 32° 30' 26.878 N | 103° 29' 22.688 W |
| 8,793.0                                            | 0.40               | 111.00         | 8,789.3                     | 4.1             | 60.6            | 549,376.14                | 801,427.58               | 32° 30' 26.879 N | 103° 29' 22.681 W |
| 8,888.0                                            | 0.90               | 151.50         | 8,884.3                     | 3.3             | 61.3            | 549,375.36                | 801,428.24               | 32° 30' 26.871 N | 103° 29' 22.674 W |
| 8,983.0                                            | 1.40               | 177.00         | 8,979.3                     | 1.5             | 61.7            | 549,373.55                | 801,428.66               | 32° 30' 26.853 N | 103° 29' 22.669 W |
| 9,078.0                                            | 0.60               | 258.20         | 9,074.3                     | 0.2             | 61.3            | 549,372.29                | 801,428.24               | 32° 30' 26.840 N | 103° 29' 22.674 W |
| 9,172.0                                            | 1.50               | 254.10         | 9,168.3                     | -0.2            | 59.6            | 549,371.85                | 801,426.57               | 32° 30' 26.836 N | 103° 29' 22.694 W |
| 9,267.0                                            | 1.20               | 307.00         | 9,263.3                     | 0.0             | 57.6            | 549,372.11                | 801,424.58               | 32° 30' 26.839 N | 103° 29' 22.717 W |
| 9,362.0                                            | 0.70               | 292.60         | 9,358.3                     | 0.9             | 56.3            | 549,372.93                | 801,423.25               | 32° 30' 26.847 N | 103° 29' 22.732 W |
| 9,456.0                                            | 1.60               | 291.70         | 9,452.2                     | 1.6             | 54.5            | 549,373.63                | 801,421.50               | 32° 30' 26.854 N | 103° 29' 22.753 W |
| 9,555.0                                            | 2.10               | 298.20         | 9,551.2                     | 2.9             | 51.7            | 549,375.00                | 801,418.62               | 32° 30' 26.868 N | 103° 29' 22.786 W |
| 9,650.0                                            | 2.00               | 336.90         | 9,646.1                     | 5.3             | 49.5            | 549,377.35                | 801,416.43               | 32° 30' 26.891 N | 103° 29' 22.811 W |
| 9,744.0                                            | 0.40               | 346.60         | 9,740.1                     | 7.1             | 48.8            | 549,379.18                | 801,415.71               | 32° 30' 26.910 N | 103° 29' 22.820 W |
| 9,839.0                                            | 0.80               | 348.30         | 9,835.1                     | 8.1             | 48.5            | 549,380.15                | 801,415.50               | 32° 30' 26.919 N | 103° 29' 22.822 W |
| 9,934.0                                            | 0.30               | 342.40         | 9,930.1                     | 9.0             | 48.3            | 549,381.04                | 801,415.29               | 32° 30' 26.928 N | 103° 29' 22.824 W |
| 10,029.0                                           | 0.20               | 248.30         | 10,025.1                    | 9.1             | 48.1            | 549,381.21                | 801,415.06               | 32° 30' 26.930 N | 103° 29' 22.827 W |
| 10,124.0                                           | 0.40               | 289.50         | 10,120.1                    | 9.2             | 47.6            | 549,381.26                | 801,414.60               | 32° 30' 26.930 N | 103° 29' 22.833 W |
| 10,218.0                                           | 0.40               | 245.70         | 10,214.1                    | 9.2             | 47.0            | 549,381.24                | 801,413.99               | 32° 30' 26.930 N | 103° 29' 22.840 W |
| 10,313.0                                           | 0.40               | 230.00         | 10,309.1                    | 8.8             | 46.5            | 549,380.89                | 801,413.43               | 32° 30' 26.927 N | 103° 29' 22.846 W |
| 10,408.0                                           | 0.90               | 210.70         | 10,404.1                    | 8.0             | 45.8            | 549,380.03                | 801,412.80               | 32° 30' 26.918 N | 103° 29' 22.854 W |
| 10,503.0                                           | 1.10               | 237.30         | 10,499.1                    | 6.8             | 44.7            | 549,378.90                | 801,411.65               | 32° 30' 26.907 N | 103° 29' 22.867 W |
| 10,598.0                                           | 0.40               | 262.60         | 10,594.1                    | 6.3             | 43.6            | 549,378.36                | 801,410.55               | 32° 30' 26.902 N | 103° 29' 22.880 W |
| 10,692.0                                           | 0.40               | 274.70         | 10,688.1                    | 6.3             | 42.9            | 549,378.35                | 801,409.90               | 32° 30' 26.902 N | 103° 29' 22.888 W |
| 10,787.0                                           | 0.50               | 181.70         | 10,783.1                    | 5.9             | 42.6            | 549,377.96                | 801,409.56               | 32° 30' 26.898 N | 103° 29' 22.892 W |
| 10,882.0                                           | 1.10               | 191.90         | 10,878.0                    | 4.6             | 42.4            | 549,376.65                | 801,409.36               | 32° 30' 26.885 N | 103° 29' 22.894 W |
| 10,976.0                                           | 1.00               | 186.50         | 10,972.0                    | 2.9             | 42.1            | 549,374.96                | 801,409.08               | 32° 30' 26.868 N | 103° 29' 22.898 W |
| 11,071.0                                           | 1.40               | 195.60         | 11,067.0                    | 0.9             | 41.7            | 549,373.01                | 801,408.67               | 32° 30' 26.849 N | 103° 29' 22.903 W |
| 11,121.0                                           | 1.70               | 199.80         | 11,117.0                    | -0.3            | 41.3            | 549,371.73                | 801,408.26               | 32° 30' 26.836 N | 103° 29' 22.907 W |
| KOP: 11121.0' MD: 11117.0' TVD: 1.70° INC: 0.1' VS |                    |                |                             |                 |                 |                           |                          |                  |                   |
| 11,197.0                                           | 4.70               | 174.10         | 11,192.9                    | -4.5            | 41.2            | 549,367.57                | 801,408.19               | 32° 30' 26.795 N | 103° 29' 22.909 W |
| 11,229.0                                           | 9.60               | 172.90         | 11,224.6                    | -8.5            | 41.7            | 549,363.61                | 801,408.66               | 32° 30' 26.756 N | 103° 29' 22.904 W |
| 11,260.0                                           | 15.20              | 174.00         | 11,254.9                    | -15.1           | 42.5            | 549,357.00                | 801,409.40               | 32° 30' 26.691 N | 103° 29' 22.895 W |
| 11,292.0                                           | 19.20              | 177.10         | 11,285.4                    | -24.5           | 43.2            | 549,347.57                | 801,410.11               | 32° 30' 26.597 N | 103° 29' 22.888 W |
| 11,323.0                                           | 22.20              | 179.40         | 11,314.4                    | -35.5           | 43.5            | 549,336.62                | 801,410.43               | 32° 30' 26.489 N | 103° 29' 22.885 W |
| 11,355.0                                           | 25.20              | 180.70         | 11,343.7                    | -48.3           | 43.5            | 549,323.76                | 801,410.41               | 32° 30' 26.362 N | 103° 29' 22.887 W |
| 11,386.0                                           | 28.40              | 180.80         | 11,371.4                    | -62.3           | 43.3            | 549,309.79                | 801,410.23               | 32° 30' 26.223 N | 103° 29' 22.890 W |
| 11,418.0                                           | 31.80              | 181.40         | 11,399.1                    | -78.3           | 43.0            | 549,293.74                | 801,409.91               | 32° 30' 26.065 N | 103° 29' 22.895 W |
| 11,450.0                                           | 35.30              | 181.40         | 11,425.7                    | -96.0           | 42.5            | 549,276.07                | 801,409.48               | 32° 30' 25.890 N | 103° 29' 22.902 W |
| 11,481.0                                           | 37.70              | 181.00         | 11,450.7                    | -114.4          | 42.1            | 549,257.63                | 801,409.10               | 32° 30' 25.708 N | 103° 29' 22.908 W |
| 11,513.0                                           | 40.40              | 180.70         | 11,475.5                    | -134.6          | 41.8            | 549,237.48                | 801,408.80               | 32° 30' 25.508 N | 103° 29' 22.914 W |

|           |                               |                              |                                          |
|-----------|-------------------------------|------------------------------|------------------------------------------|
| Company:  | Yates Petroleum               | Local Co-ordinate Reference: | Well #1H                                 |
| Project:  | Lea County, NM (NAD-83)       | TVD Reference:               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| Site:     | September Grass BSG State Com | MD Reference:                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| Well:     | #1H                           | North Reference:             | Grid                                     |
| Wellbore: | OH                            | Survey Calculation Method:   | Minimum Curvature                        |
| Design:   | OH                            | Database:                    | Houston R5000 Database                   |

| Survey                                                                   |                    |                |                             |                 |                 |                           |                          |                  |                   |
|--------------------------------------------------------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|-------------------|
| Measured<br>Depth<br>(usft)                                              | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         | Longitude         |
| 11,544.0                                                                 | 44.30              | 180.50         | 11,498.4                    | -155.5          | 41.6            | 549,216.60                | 801,408.58               | 32° 30' 25.302 N | 103° 29' 22.918 W |
| 11,576.0                                                                 | 48.40              | 180.30         | 11,520.5                    | -178.6          | 41.5            | 549,193.45                | 801,408.42               | 32° 30' 25.073 N | 103° 29' 22.922 W |
| 11,595.0                                                                 | 50.78              | 180.30         | 11,532.8                    | -193.1          | 41.4            | 549,178.98                | 801,408.35               | 32° 30' 24.929 N | 103° 29' 22.924 W |
| Cross into 330' Lease - 11595.0' MD, 11532.8' TVD, 50.78' INC, 192.8' VS |                    |                |                             |                 |                 |                           |                          |                  |                   |
| 11,608.0                                                                 | 52.40              | 180.30         | 11,540.9                    | -203.3          | 41.3            | 549,168.80                | 801,408.29               | 32° 30' 24.829 N | 103° 29' 22.926 W |
| 11,639.0                                                                 | 56.50              | 180.10         | 11,558.9                    | -228.5          | 41.3            | 549,143.58                | 801,408.21               | 32° 30' 24.579 N | 103° 29' 22.929 W |
| 11,671.0                                                                 | 60.10              | 180.10         | 11,575.7                    | -255.7          | 41.2            | 549,116.36                | 801,408.16               | 32° 30' 24.310 N | 103° 29' 22.932 W |
| 11,703.0                                                                 | 63.10              | 180.10         | 11,590.9                    | -283.9          | 41.2            | 549,088.22                | 801,408.11               | 32° 30' 24.031 N | 103° 29' 22.935 W |
| 11,733.0                                                                 | 66.10              | 180.50         | 11,603.8                    | -311.0          | 41.0            | 549,061.12                | 801,407.97               | 32° 30' 23.763 N | 103° 29' 22.940 W |
| 11,762.0                                                                 | 69.30              | 181.50         | 11,614.8                    | -337.8          | 40.5            | 549,034.30                | 801,407.50               | 32° 30' 23.498 N | 103° 29' 22.948 W |
| 11,794.0                                                                 | 71.70              | 181.70         | 11,625.5                    | -367.9          | 39.7            | 549,004.15                | 801,406.65               | 32° 30' 23.200 N | 103° 29' 22.960 W |
| 11,825.0                                                                 | 74.20              | 181.20         | 11,634.6                    | -397.6          | 39.0            | 548,974.52                | 801,405.90               | 32° 30' 22.906 N | 103° 29' 22.972 W |
| 11,857.0                                                                 | 76.90              | 180.80         | 11,642.6                    | -428.5          | 38.4            | 548,943.54                | 801,405.36               | 32° 30' 22.600 N | 103° 29' 22.981 W |
| 11,888.0                                                                 | 79.20              | 180.30         | 11,649.0                    | -458.9          | 38.1            | 548,913.22                | 801,405.07               | 32° 30' 22.300 N | 103° 29' 22.987 W |
| 11,920.0                                                                 | 81.50              | 179.90         | 11,654.3                    | -490.4          | 38.1            | 548,881.67                | 801,405.02               | 32° 30' 21.988 N | 103° 29' 22.991 W |
| 11,952.0                                                                 | 84.10              | 179.80         | 11,658.4                    | -522.1          | 38.1            | 548,849.93                | 801,405.10               | 32° 30' 21.674 N | 103° 29' 22.993 W |
| 11,983.0                                                                 | 86.80              | 179.90         | 11,660.8                    | -553.0          | 38.2            | 548,819.03                | 801,405.18               | 32° 30' 21.368 N | 103° 29' 22.994 W |
| 12,046.0                                                                 | 91.10              | 180.30         | 11,662.0                    | -616.0          | 38.1            | 548,756.05                | 801,405.07               | 32° 30' 20.745 N | 103° 29' 23.002 W |
| EOC - 12046.0' MD, 11662.0' TVD, 91.10' INC, 615.7' VS                   |                    |                |                             |                 |                 |                           |                          |                  |                   |
| 12,078.0                                                                 | 91.00              | 180.70         | 11,661.4                    | -648.0          | 37.8            | 548,724.06                | 801,404.79               | 32° 30' 20.428 N | 103° 29' 23.008 W |
| 12,141.0                                                                 | 90.50              | 181.40         | 11,660.6                    | -711.0          | 36.7            | 548,661.08                | 801,403.64               | 32° 30' 19.805 N | 103° 29' 23.027 W |
| 12,172.0                                                                 | 90.20              | 181.40         | 11,660.4                    | -742.0          | 35.9            | 548,630.09                | 801,402.88               | 32° 30' 19.499 N | 103° 29' 23.039 W |
| 12,267.0                                                                 | 89.90              | 180.80         | 11,660.3                    | -837.0          | 34.1            | 548,535.10                | 801,401.06               | 32° 30' 18.559 N | 103° 29' 23.069 W |
| 12,361.0                                                                 | 90.00              | 181.00         | 11,660.4                    | -931.0          | 32.6            | 548,441.11                | 801,399.58               | 32° 30' 17.629 N | 103° 29' 23.095 W |
| 12,456.0                                                                 | 89.90              | 181.00         | 11,660.5                    | -1,025.9        | 31.0            | 548,346.13                | 801,397.92               | 32° 30' 16.689 N | 103° 29' 23.123 W |
| 12,550.0                                                                 | 90.60              | 180.10         | 11,660.0                    | -1,119.9        | 30.1            | 548,252.14                | 801,397.02               | 32° 30' 15.760 N | 103° 29' 23.142 W |
| 12,644.0                                                                 | 90.70              | 179.20         | 11,659.0                    | -1,213.9        | 30.6            | 548,158.14                | 801,397.59               | 32° 30' 14.829 N | 103° 29' 23.144 W |
| 12,739.0                                                                 | 91.40              | 180.10         | 11,657.2                    | -1,308.9        | 31.2            | 548,063.16                | 801,398.18               | 32° 30' 13.890 N | 103° 29' 23.146 W |
| 12,833.0                                                                 | 90.00              | 180.70         | 11,656.1                    | -1,402.9        | 30.6            | 547,969.18                | 801,397.52               | 32° 30' 12.960 N | 103° 29' 23.162 W |
| 12,928.0                                                                 | 90.00              | 180.70         | 11,656.1                    | -1,497.9        | 29.4            | 547,874.18                | 801,396.36               | 32° 30' 12.020 N | 103° 29' 23.185 W |
| 13,022.0                                                                 | 90.20              | 179.80         | 11,655.9                    | -1,591.9        | 29.0            | 547,780.19                | 801,395.95               | 32° 30' 11.090 N | 103° 29' 23.198 W |
| 13,117.0                                                                 | 91.40              | 180.10         | 11,654.6                    | -1,686.9        | 29.1            | 547,685.20                | 801,396.03               | 32° 30' 10.150 N | 103° 29' 23.206 W |
| 13,211.0                                                                 | 90.70              | 180.70         | 11,652.9                    | -1,780.9        | 28.4            | 547,591.22                | 801,395.37               | 32° 30' 9.220 N  | 103° 29' 23.222 W |
| 13,306.0                                                                 | 90.70              | 181.40         | 11,651.7                    | -1,875.8        | 26.7            | 547,496.24                | 801,393.63               | 32° 30' 8.281 N  | 103° 29' 23.252 W |
| 13,400.0                                                                 | 90.70              | 181.00         | 11,650.6                    | -1,969.8        | 24.7            | 547,402.27                | 801,391.67               | 32° 30' 7.351 N  | 103° 29' 23.283 W |
| 13,495.0                                                                 | 90.70              | 180.10         | 11,649.4                    | -2,064.8        | 23.8            | 547,307.28                | 801,390.75               | 32° 30' 6.411 N  | 103° 29' 23.303 W |
| 13,543.0                                                                 | 90.70              | 179.90         | 11,648.8                    | -2,112.8        | 23.8            | 547,259.28                | 801,390.75               | 32° 30' 5.936 N  | 103° 29' 23.307 W |
| 13,590.0                                                                 | 90.40              | 179.90         | 11,648.4                    | -2,159.8        | 23.9            | 547,212.29                | 801,390.84               | 32° 30' 5.471 N  | 103° 29' 23.310 W |
| 13,620.0                                                                 | 89.90              | 179.90         | 11,648.3                    | -2,189.8        | 23.9            | 547,182.29                | 801,390.89               | 32° 30' 5.174 N  | 103° 29' 23.313 W |
| 13,685.0                                                                 | 89.40              | 179.90         | 11,648.7                    | -2,254.8        | 24.0            | 547,117.29                | 801,391.00               | 32° 30' 4.531 N  | 103° 29' 23.317 W |
| 13,731.0                                                                 | 89.00              | 180.10         | 11,649.3                    | -2,300.8        | 24.0            | 547,071.29                | 801,391.00               | 32° 30' 4.076 N  | 103° 29' 23.322 W |
| 13,780.0                                                                 | 88.80              | 180.30         | 11,650.3                    | -2,349.8        | 23.9            | 547,022.30                | 801,390.83               | 32° 30' 3.591 N  | 103° 29' 23.328 W |
| 13,826.0                                                                 | 88.50              | 180.30         | 11,651.4                    | -2,395.8        | 23.6            | 546,976.31                | 801,390.59               | 32° 30' 3.136 N  | 103° 29' 23.335 W |
| 13,875.0                                                                 | 88.60              | 180.70         | 11,652.6                    | -2,444.7        | 23.2            | 546,927.33                | 801,390.16               | 32° 30' 2.652 N  | 103° 29' 23.345 W |
| 13,921.0                                                                 | 89.30              | 181.00         | 11,653.4                    | -2,490.7        | 22.5            | 546,881.35                | 801,389.48               | 32° 30' 2.197 N  | 103° 29' 23.357 W |
| 13,970.0                                                                 | 89.10              | 180.80         | 11,654.1                    | -2,539.7        | 21.8            | 546,832.36                | 801,388.71               | 32° 30' 1.712 N  | 103° 29' 23.370 W |
| 14,032.0                                                                 | 88.30              | 180.70         | 11,655.5                    | -2,601.7        | 20.9            | 546,770.38                | 801,387.90               | 32° 30' 1.099 N  | 103° 29' 23.386 W |
| 14,064.0                                                                 | 88.00              | 180.80         | 11,656.6                    | -2,633.7        | 20.5            | 546,738.40                | 801,387.48               | 32° 30' 0.783 N  | 103° 29' 23.393 W |
| 14,105.0                                                                 | 88.50              | 180.10         | 11,657.8                    | -2,674.7        | 20.2            | 546,697.42                | 801,387.16               | 32° 30' 0.377 N  | 103° 29' 23.401 W |
| 14,158.0                                                                 | 88.50              | 180.10         | 11,659.2                    | -2,727.6        | 20.1            | 546,644.44                | 801,387.07               | 32° 29' 59.853 N | 103° 29' 23.407 W |
| 14,252.0                                                                 | 89.00              | 180.10         | 11,661.2                    | -2,821.6        | 19.9            | 546,550.46                | 801,386.90               | 32° 29' 58.923 N | 103° 29' 23.417 W |
| 14,347.0                                                                 | 89.50              | 180.10         | 11,662.5                    | -2,916.6        | 19.8            | 546,455.47                | 801,386.74               | 32° 29' 57.983 N | 103° 29' 23.428 W |
| 14,442.0                                                                 | 90.30              | 180.30         | 11,662.7                    | -3,011.6        | 19.5            | 546,360.47                | 801,386.40               | 32° 29' 57.043 N | 103° 29' 23.441 W |
| 14,537.0                                                                 | 91.20              | 180.30         | 11,661.4                    | -3,106.6        | 19.0            | 546,265.48                | 801,385.91               | 32° 29' 56.103 N | 103° 29' 23.455 W |
| 14,631.0                                                                 | 91.20              | 180.10         | 11,659.4                    | -3,200.6        | 18.6            | 546,171.50                | 801,385.58               | 32° 29' 55.173 N | 103° 29' 23.468 W |



|                  |                               |                                     |                                          |
|------------------|-------------------------------|-------------------------------------|------------------------------------------|
| <b>Company:</b>  | Yates Petroleum               | <b>Local Co-ordinate Reference:</b> | Well #1H                                 |
| <b>Project:</b>  | Lea County, NM (NAD-83)       | <b>TVD Reference:</b>               | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Site:</b>     | September Grass BSG State Com | <b>MD Reference:</b>                | WELL @ 3739.0usft (Cactus #124 - 25' KB) |
| <b>Well:</b>     | #1H                           | <b>North Reference:</b>             | Grid                                     |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                            | <b>Database:</b>                    | Houston R5000 Database                   |

| Survey                                                                                    |                 |             |                       |              |              |                     |                    |                  |                   |
|-------------------------------------------------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| Measured Depth (usft)                                                                     | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |
| 14,726.0                                                                                  | 90.70           | 180.30      | 11,657.9              | -3,295.6     | 18.3         | 546,076.52          | 801,385.25         | 32° 29' 54.234 N | 103° 29' 23.481 W |
| 14,820.0                                                                                  | 90.50           | 180.10      | 11,656.9              | -3,389.6     | 18.0         | 545,982.52          | 801,384.92         | 32° 29' 53.304 N | 103° 29' 23.493 W |
| 14,915.0                                                                                  | 89.30           | 179.90      | 11,657.1              | -3,484.6     | 18.0         | 545,887.52          | 801,384.92         | 32° 29' 52.364 N | 103° 29' 23.502 W |
| 15,010.0                                                                                  | 89.10           | 180.10      | 11,658.4              | -3,579.5     | 18.0         | 545,792.53          | 801,384.92         | 32° 29' 51.424 N | 103° 29' 23.511 W |
| 15,104.0                                                                                  | 88.40           | 180.10      | 11,660.4              | -3,673.5     | 17.8         | 545,698.56          | 801,384.76         | 32° 29' 50.494 N | 103° 29' 23.521 W |
| 15,199.0                                                                                  | 88.70           | 179.60      | 11,662.8              | -3,768.5     | 18.1         | 545,603.59          | 801,385.00         | 32° 29' 49.554 N | 103° 29' 23.527 W |
| 15,294.0                                                                                  | 89.30           | 179.20      | 11,664.5              | -3,863.5     | 19.0         | 545,508.61          | 801,386.00         | 32° 29' 48.614 N | 103° 29' 23.524 W |
| 15,389.0                                                                                  | 90.80           | 179.80      | 11,664.4              | -3,958.5     | 19.9         | 545,413.61          | 801,386.83         | 32° 29' 47.674 N | 103° 29' 23.523 W |
| 15,484.0                                                                                  | 90.00           | 179.40      | 11,663.7              | -4,053.5     | 20.5         | 545,318.62          | 801,387.49         | 32° 29' 46.734 N | 103° 29' 23.524 W |
| 15,578.0                                                                                  | 90.10           | 179.20      | 11,663.7              | -4,147.4     | 21.7         | 545,224.63          | 801,388.64         | 32° 29' 45.804 N | 103° 29' 23.520 W |
| 15,673.0                                                                                  | 90.10           | 179.20      | 11,663.5              | -4,242.4     | 23.0         | 545,129.64          | 801,389.97         | 32° 29' 44.864 N | 103° 29' 23.513 W |
| 15,774.0                                                                                  | 89.60           | 179.20      | 11,663.8              | -4,343.4     | 24.4         | 545,028.65          | 801,391.38         | 32° 29' 43.865 N | 103° 29' 23.506 W |
| 15,869.0                                                                                  | 89.50           | 178.90      | 11,664.5              | -4,438.4     | 26.0         | 544,933.66          | 801,392.95         | 32° 29' 42.925 N | 103° 29' 23.496 W |
| 15,964.0                                                                                  | 88.70           | 179.10      | 11,666.0              | -4,533.4     | 27.7         | 544,838.69          | 801,394.61         | 32° 29' 41.985 N | 103° 29' 23.486 W |
| 16,059.0                                                                                  | 89.90           | 179.40      | 11,667.2              | -4,628.4     | 28.9         | 544,743.71          | 801,395.85         | 32° 29' 41.045 N | 103° 29' 23.480 W |
| 16,164.0                                                                                  | 89.30           | 179.60      | 11,667.9              | -4,733.4     | 29.8         | 544,638.71          | 801,396.77         | 32° 29' 40.006 N | 103° 29' 23.479 W |
| 16,219.0                                                                                  | 89.30           | 179.60      | 11,668.6              | -4,788.4     | 30.2         | 544,583.72          | 801,397.15         | 32° 29' 39.462 N | 103° 29' 23.479 W |
| BHL - 16219.0' MD, 11668.6' TVD, 89.30° INC, 179.60° AZI, -4788.4' N, 30.2' E, 4788.0' VS |                 |             |                       |              |              |                     |                    |                  |                   |

| Design Annotations    |                       |                   |              |                                                                                |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------------------------------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                                                                        |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                                                                |
| 11,121.0              | 11,117.0              | -0.3              | 41.3         | KOP - 11121.0' MD, 11117.0' TVD, 1.70° INC, 0.1' VS                            |
| 11,595.0              | 11,532.8              | -193.1            | 41.4         | Cross into 330' Lease - 11595.0' MD, 11532.8' TVD, 50.78° INC, 192.8' VS       |
| 12,046.0              | 11,662.0              | -616.0            | 38.1         | EOC - 12046.0' MD, 11662.0' TVD, 91.10° INC, 615.7' VS                         |
| 16,219.0              | 11,668.6              | -4,788.4          | 30.2         | BHL - 16219.0' MD, 11668.6' TVD, 89.30° INC, 179.60° AZI, -4788.4' N, 30.2' E, |

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



Yates Petroleum  
Project: Lea County, NM (NAD-83)  
Site: September Grass BSG State Com  
Well: #1H  
Wellbore: OH  
Plan: Plan #4 (#1H/OH)

### WELL DETAILS: #1H

Ground Elevation:: 3714.0  
RKB Elevation: WELL @ 3739.0usft (Cactus #124 - 25' KB)  
Rig Name: Cactus #124 - 25' KB

### Surface Hole Location

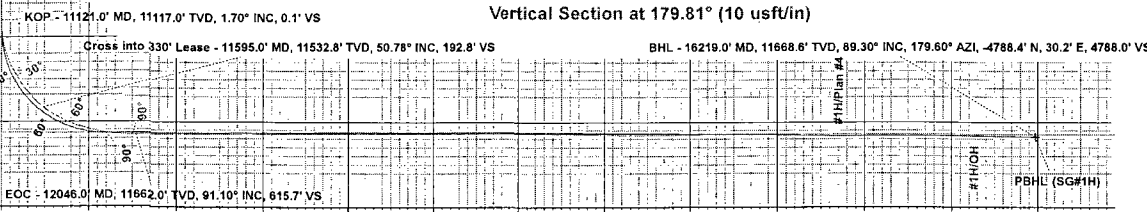
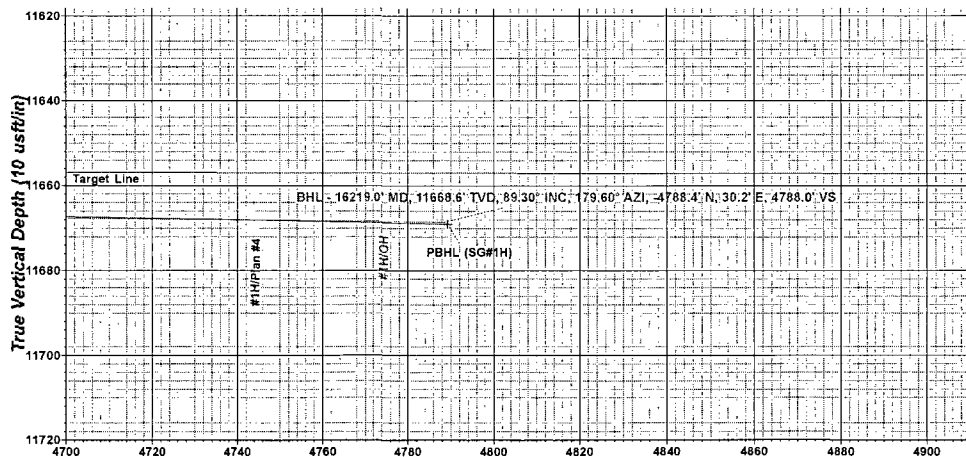
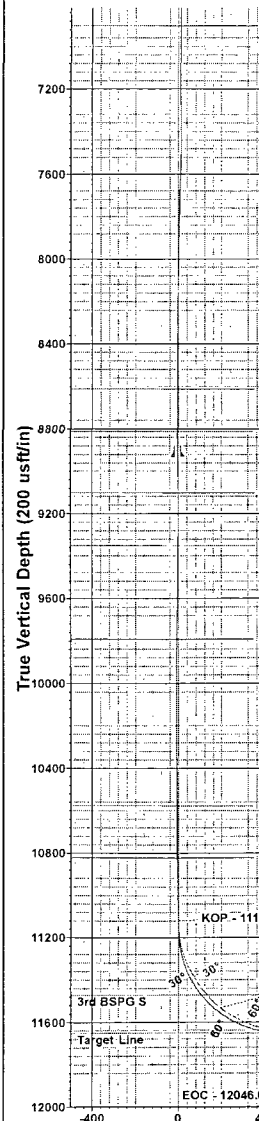
Northing Easting Latitude Longitude  
549372.07 801366.95 32° 30' 26.843 N 103° 29' 23.390 W

### DESIGN TARGET DETAILS

| Name         | TVD     | +N/-S   | +E/-W | Northing  | Easting   |
|--------------|---------|---------|-------|-----------|-----------|
| PBHL (SG#1H) | 11669.0 | -4789.2 | 16.2  | 544582.89 | 801383.16 |

### Section Details

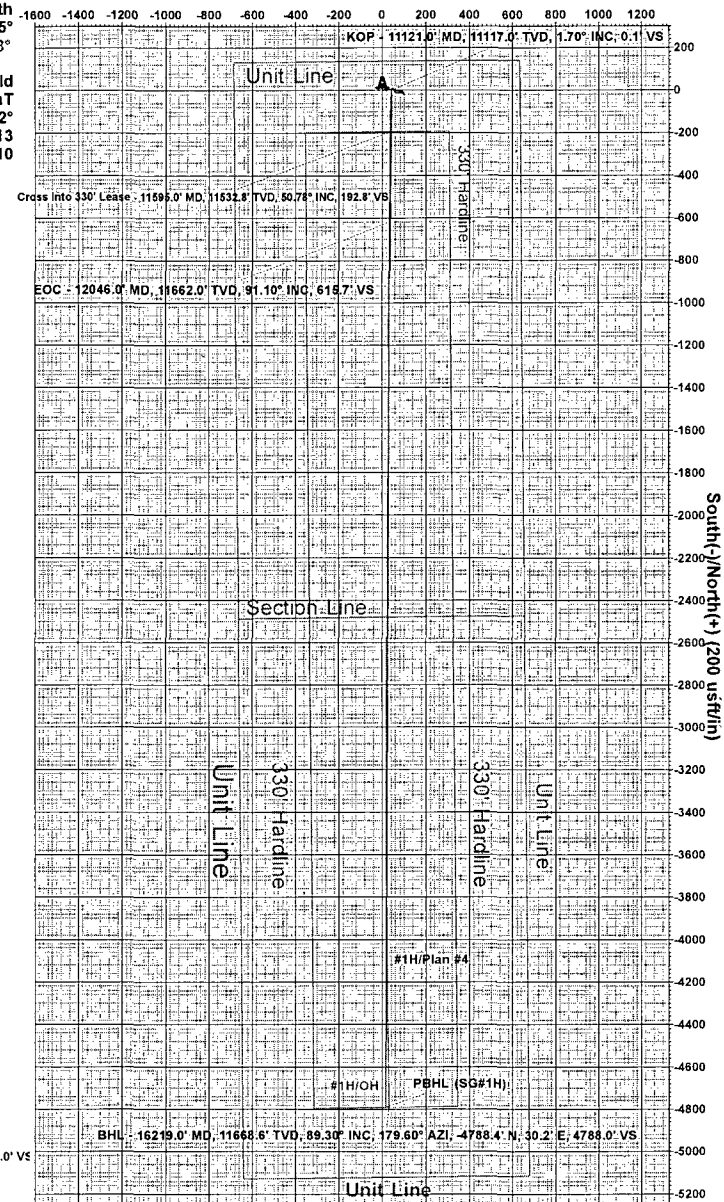
|    | MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W | Dleg  | TFace   | VSect  | Target       |
|----|---------|-------|--------|---------|---------|-------|-------|---------|--------|--------------|
| 1  | 11121.0 | 1.70  | 199.80 | 11117.0 | -0.3    | 41.3  | 0.00  | 0.00    | 0.5    |              |
| 2  | 11194.0 | 1.70  | 199.80 | 11190.0 | -2.4    | 40.6  | 0.00  | 0.00    | 2.5    |              |
| 3  | 11930.6 | 90.00 | 180.24 | 11654.0 | -479.6  | 34.0  | 12.00 | -19.57  | 479.7  |              |
| 4  | 12450.9 | 90.00 | 180.24 | 11654.0 | -999.9  | 31.8  | 0.00  | 0.00    | 1000.0 |              |
| 5  | 12479.4 | 90.57 | 180.24 | 11653.9 | -1028.4 | 31.7  | 2.00  | 0.00    | 1028.5 |              |
| 6  | 12950.9 | 90.57 | 180.24 | 11649.2 | -1499.9 | 29.7  | 0.00  | 0.00    | 1500.0 |              |
| 7  | 12979.4 | 90.00 | 180.24 | 11649.0 | -1528.4 | 29.6  | 2.00  | -180.00 | 1528.5 |              |
| 8  | 13951.0 | 90.00 | 180.24 | 11649.0 | -2499.9 | 25.5  | 0.00  | 0.00    | 2500.0 |              |
| 9  | 13980.5 | 89.41 | 180.24 | 11649.2 | -2529.4 | 25.4  | 2.00  | -180.00 | 2529.5 |              |
| 10 | 14451.0 | 89.41 | 180.24 | 11654.0 | -2999.9 | 23.4  | 0.00  | 0.00    | 3000.0 |              |
| 11 | 14452.0 | 89.43 | 180.24 | 11654.0 | -3000.9 | 23.4  | 2.00  | 0.00    | 3001.0 |              |
| 12 | 15441.1 | 89.43 | 180.24 | 11663.9 | -3990.0 | 19.3  | 0.00  | 0.00    | 3990.0 |              |
| 13 | 15469.6 | 90.00 | 180.25 | 11664.0 | -4018.5 | 19.1  | 2.00  | 1.01    | 4018.5 |              |
| 14 | 15951.1 | 90.00 | 180.25 | 11664.0 | -4500.0 | 17.0  | 0.00  | 0.00    | 4500.0 |              |
| 15 | 16005.8 | 88.91 | 180.15 | 11664.5 | -4554.7 | 16.8  | 2.00  | -175.01 | 4554.7 |              |
| 16 | 16240.4 | 88.91 | 180.15 | 11669.0 | -4789.2 | 16.2  | 0.00  | 0.00    | 4789.2 | PBHL (SG#1H) |



Azimuths to Grid North  
True North: -0.45°  
Magnetic North: 6.88°

Magnetic Field  
Strength: 48602.3snT  
Dip Angle: 60.42°  
Date: 5/14/2013  
Model: IGRF2010

West(-)/East(+) (200 usft/in)



PROJECT DETAILS: Lea County, NM (NAD-83)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level  
Local North: Grid



Crescent Directional Drilling  
7715 West Industrial Ave. Midland, Tx 79706  
Phone: 432-618-1135

Plan: Plan #4 (#1H/OH)  
Created By: Matt Higgins Date: 9:24, July 08 2013