

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
1N-65W-10 HDI KF PAD  
HDI KF 10-10H**

**Wellbore #1**

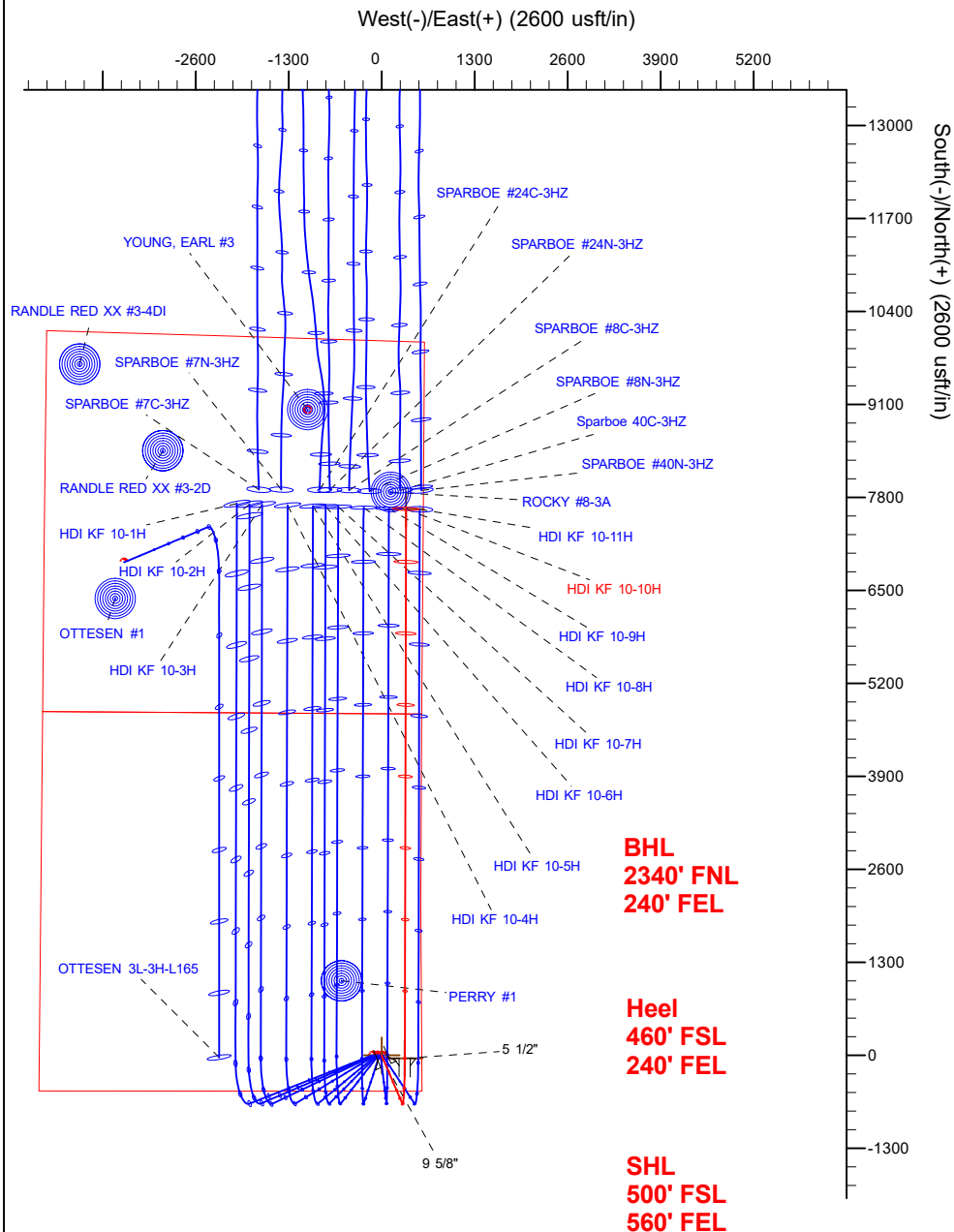
**Plan: Design #1**

## **Standard Planning Report**

**18 January, 2018**

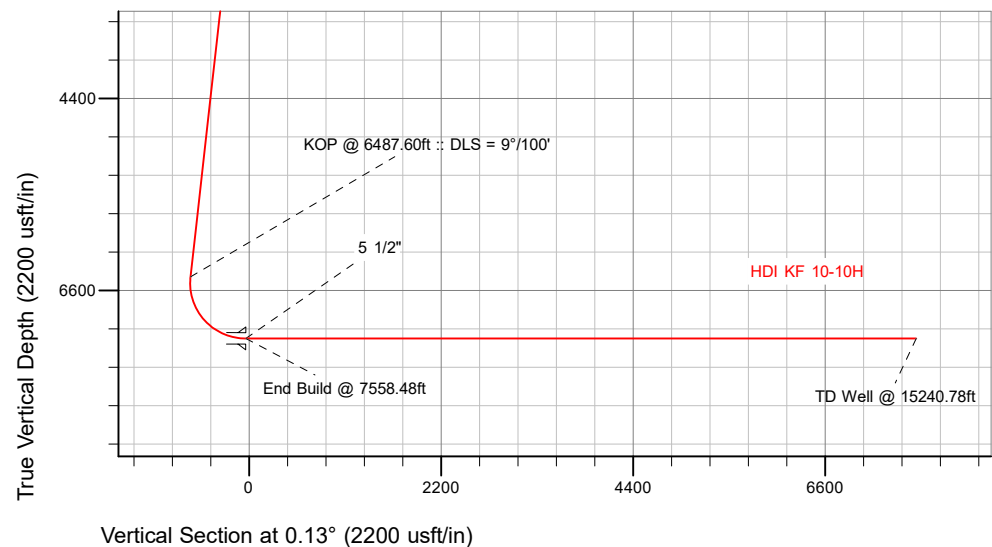
# VERDAD RESOURCES


| CASING DETAILS |         |        |       |
|----------------|---------|--------|-------|
| TVD            | MD      | Name   | Size  |
| 1700.00        | 1709.02 | 9 5/8" | 9-5/8 |
| 7150.00        | 7558.48 | 5 1/2" | 5-1/2 |



| SECTION DETAILS |          |       |        |         |         |        |      |         |         |                   |
|-----------------|----------|-------|--------|---------|---------|--------|------|---------|---------|-------------------|
| Sec             | MD       | Inc   | Azi    | TVD     | +N/-S   | +E/-W  | Dleg | TFace   | VSect   | Target            |
| 1               | 0.00     | 0.00  | 0.00   | 0.00    | 0.00    | 0.00   | 0.00 | 0.00    | 0.00    |                   |
| 2               | 250.00   | 0.00  | 0.00   | 250.00  | 0.00    | 0.00   | 0.00 | 0.00    | 0.00    |                   |
| 3               | 597.50   | 6.95  | 156.80 | 596.65  | -19.35  | 8.29   | 2.00 | 156.80  | -19.33  |                   |
| 4               | 6487.60  | 6.95  | 156.80 | 6443.47 | -674.43 | 289.06 | 0.00 | 0.00    | -673.78 |                   |
| 5               | 7558.48  | 90.00 | 0.13   | 7150.00 | -41.83  | 324.55 | 9.00 | -156.52 | -41.10  |                   |
| 6               | 15240.78 | 90.00 | 0.13   | 7150.00 | 7640.44 | 341.38 | 0.00 | 0.00    | 7641.20 | HDI KF 10-10H_BHL |

| WELLBORE TARGET DETAILS (LAT/LONG) |         |         |        |           |             |
|------------------------------------|---------|---------|--------|-----------|-------------|
| Name                               | TVD     | +N/-S   | +E/-W  | Latitude  |             |
| HDI KF 10-10H_SHL                  | 0.00    | 0.00    | 0.00   | 40.060105 | -104.642497 |
| HDI KF 10-10H_BHL                  | 7150.00 | 7640.44 | 341.38 | 40.081079 | -104.641277 |
|                                    |         |         |        |           |             |



|   |  |
|---|--|
|  <p> <b>M</b> Azimuths to True North<br/> <b>Magnetic North: 7.88°</b><br/> <br/> Magnetic Field<br/> <b>Strength: 52270.2snT</b><br/> <b>Dip Angle: 66.57°</b><br/> <b>Date: 1/17/2018</b><br/> <b>Model: IGRF2010</b> </p> | <b>WELL DETAILS: HDI KF 10-10H</b>                 |
|   | <b>GL = 5014'</b>                                  |
|   | <b>RKB = 20' @ 5034.00usft (RIG)</b>               |
|   | <b>Plan: Design #1 (HDI KF 10-10H/Wellbore #1)</b> |
| <b>Created By: _____ Date: 1/18/2018</b><br><b>Reviewed: _____ Date: _____</b>  |  |

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## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well HDI KF 10-10H            |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 5034.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 5034.00usft (RIG) |
| <b>Site:</b>     | 1N-65W-10 HDI KF PAD       | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | HDI KF 10-10H              | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Design #1                  |                                     |                               |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | WATTENBERG FIELD          |                      |                |
| <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>   | Colorado Northern Zone    |                      |                |

|                              |                      |                     |                   |                                 |
|------------------------------|----------------------|---------------------|-------------------|---------------------------------|
| <b>Site</b>                  | 1N-65W-10 HDI KF PAD |                     |                   |                                 |
| <b>Site Position:</b>        |                      | <b>Northing:</b>    | 1,265,900.79 usft | <b>Latitude:</b> 40.060105      |
| <b>From:</b>                 | Lat/Long             | <b>Easting:</b>     | 3,239,881.89 usft | <b>Longitude:</b> -104.642980   |
| <b>Position Uncertainty:</b> | 0.00 usft            | <b>Slot Radius:</b> | 13-3/16 "         | <b>Grid Convergence:</b> 0.55 ° |

|                             |               |             |                            |                                    |
|-----------------------------|---------------|-------------|----------------------------|------------------------------------|
| <b>Well</b>                 | HDI KF 10-10H |             |                            |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>  | -0.10 usft  | <b>Northing:</b>           | 1,265,901.99 usft                  |
|                             | <b>+E/-W</b>  | 135.19 usft | <b>Easting:</b>            | 3,240,017.08 usft                  |
| <b>Position Uncertainty</b> |               | 3.28 usft   | <b>Wellhead Elevation:</b> | <b>Ground Level:</b> 5,014.00 usft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 1/17/2018          | 7.88                   | 66.57                | 52,270.24839627            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Design #1                      |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.00                           | 0.00                | 0.00                 | 0.13                 |

|                                 |                        |                          |                         |   |
|---------------------------------|------------------------|--------------------------|-------------------------|---|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 1/18/2018                |                         |   |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>        | <b>Remarks</b>                                    |
| 1                               | 0.00                   | 1,700.00                 | Design #1 (Wellbore #1) | ISCWSA REV 2 MWD<br>Fixed:v2:standard declination |
| 2                               | 1,700.00               | 15,240.78                | Design #1 (Wellbore #1) | ISCWSA REV 2 MWD<br>Fixed:v2:standard declination |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                   |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|-------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                                |                               |                              |                |                   |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> | <b>TFO (°)</b> | <b>Target</b>     |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.00           |                   |
| 250.00                       | 0.00                   | 0.00               | 250.00                       | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.00           |                   |
| 597.50                       | 6.95                   | 156.80             | 596.65                       | -19.35              | 8.29                | 2.00                           | 2.00                          | 0.00                         | 156.80         |                   |
| 6,487.60                     | 6.95                   | 156.80             | 6,443.47                     | -674.43             | 289.06              | 0.00                           | 0.00                          | 0.00                         | 0.00           |                   |
| 7,558.48                     | 90.00                  | 0.13               | 7,150.00                     | -41.83              | 324.55              | 9.00                           | 7.76                          | -14.63                       | -156.52        |                   |
| 15,240.78                    | 90.00                  | 0.13               | 7,150.00                     | 7,640.44            | 341.38              | 0.00                           | 0.00                          | 0.00                         | 0.00           | HDI KF 10-10H_BHL |

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## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well HDI KF 10-10H            |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 5034.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 5034.00usft (RIG) |
| <b>Site:</b>     | 1N-65W-10 HDI KF PAD       | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | HDI KF 10-10H              | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Design #1                  |                                     |                               |

| Planned 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) |
| 0.00                   | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 100.00                 | 0.00            | 0.00        | 100.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 200.00                 | 0.00            | 0.00        | 200.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 250.00                 | 0.00            | 0.00        | 250.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| Begin Nudge @ 250.00ft |                 |             |                       |              |              |                         |                         |                        |                       |
| 300.00                 | 1.00            | 156.80      | 300.00                | -0.40        | 0.17         | -0.40                   | 2.00                    | 2.00                   | 0.00                  |
| 400.00                 | 3.00            | 156.80      | 399.93                | -3.61        | 1.55         | -3.61                   | 2.00                    | 2.00                   | 0.00                  |
| 500.00                 | 5.00            | 156.80      | 499.68                | -10.02       | 4.29         | -10.01                  | 2.00                    | 2.00                   | 0.00                  |
| 597.50                 | 6.95            | 156.80      | 596.65                | -19.35       | 8.29         | -19.33                  | 2.00                    | 2.00                   | 0.00                  |
| End Nudge @ 597.50ft   |                 |             |                       |              |              |                         |                         |                        |                       |
| 600.00                 | 6.95            | 156.80      | 599.13                | -19.63       | 8.41         | -19.61                  | 0.00                    | 0.00                   | 0.00                  |
| 700.00                 | 6.95            | 156.80      | 698.40                | -30.75       | 13.18        | -30.72                  | 0.00                    | 0.00                   | 0.00                  |
| 800.00                 | 6.95            | 156.80      | 797.66                | -41.87       | 17.95        | -41.83                  | 0.00                    | 0.00                   | 0.00                  |
| 900.00                 | 6.95            | 156.80      | 896.93                | -52.99       | 22.71        | -52.94                  | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00               | 6.95            | 156.80      | 996.19                | -64.11       | 27.48        | -64.05                  | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00               | 6.95            | 156.80      | 1,095.46              | -75.24       | 32.25        | -75.16                  | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00               | 6.95            | 156.80      | 1,194.72              | -86.36       | 37.01        | -86.27                  | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00               | 6.95            | 156.80      | 1,293.99              | -97.48       | 41.78        | -97.38                  | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00               | 6.95            | 156.80      | 1,393.25              | -108.60      | 46.55        | -108.49                 | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00               | 6.95            | 156.80      | 1,492.52              | -119.72      | 51.31        | -119.61                 | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00               | 6.95            | 156.80      | 1,591.78              | -130.84      | 56.08        | -130.72                 | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00               | 6.95            | 156.80      | 1,691.05              | -141.97      | 60.85        | -141.83                 | 0.00                    | 0.00                   | 0.00                  |
| 1,709.02               | 6.95            | 156.80      | 1,700.00              | -142.97      | 61.28        | -142.83                 | 0.00                    | 0.00                   | 0.00                  |
| 9 5/8"                 |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,800.00               | 6.95            | 156.80      | 1,790.31              | -153.09      | 65.61        | -152.94                 | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00               | 6.95            | 156.80      | 1,889.58              | -164.21      | 70.38        | -164.05                 | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00               | 6.95            | 156.80      | 1,988.84              | -175.33      | 75.15        | -175.16                 | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00               | 6.95            | 156.80      | 2,088.11              | -186.45      | 79.91        | -186.27                 | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00               | 6.95            | 156.80      | 2,187.37              | -197.58      | 84.68        | -197.38                 | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00               | 6.95            | 156.80      | 2,286.64              | -208.70      | 89.45        | -208.49                 | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00               | 6.95            | 156.80      | 2,385.90              | -219.82      | 94.21        | -219.60                 | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00               | 6.95            | 156.80      | 2,485.17              | -230.94      | 98.98        | -230.72                 | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00               | 6.95            | 156.80      | 2,584.43              | -242.06      | 103.75       | -241.83                 | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00               | 6.95            | 156.80      | 2,683.70              | -253.18      | 108.51       | -252.94                 | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00               | 6.95            | 156.80      | 2,782.96              | -264.31      | 113.28       | -264.05                 | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00               | 6.95            | 156.80      | 2,882.23              | -275.43      | 118.05       | -275.16                 | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00               | 6.95            | 156.80      | 2,981.50              | -286.55      | 122.82       | -286.27                 | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00               | 6.95            | 156.80      | 3,080.76              | -297.67      | 127.58       | -297.38                 | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00               | 6.95            | 156.80      | 3,180.03              | -308.79      | 132.35       | -308.49                 | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00               | 6.95            | 156.80      | 3,279.29              | -319.92      | 137.12       | -319.60                 | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00               | 6.95            | 156.80      | 3,378.56              | -331.04      | 141.88       | -330.71                 | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00               | 6.95            | 156.80      | 3,477.82              | -342.16      | 146.65       | -341.83                 | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00               | 6.95            | 156.80      | 3,577.09              | -353.28      | 151.42       | -352.94                 | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00               | 6.95            | 156.80      | 3,676.35              | -364.40      | 156.18       | -364.05                 | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00               | 6.95            | 156.80      | 3,775.62              | -375.52      | 160.95       | -375.16                 | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00               | 6.95            | 156.80      | 3,874.88              | -386.65      | 165.72       | -386.27                 | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00               | 6.95            | 156.80      | 3,974.15              | -397.77      | 170.48       | -397.38                 | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00               | 6.95            | 156.80      | 4,073.41              | -408.89      | 175.25       | -408.49                 | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00               | 6.95            | 156.80      | 4,172.68              | -420.01      | 180.02       | -419.60                 | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00               | 6.95            | 156.80      | 4,271.94              | -431.13      | 184.78       | -430.71                 | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00               | 6.95            | 156.80      | 4,371.21              | -442.26      | 189.55       | -441.82                 | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00               | 6.95            | 156.80      | 4,470.47              | -453.38      | 194.32       | -452.94                 | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00               | 6.95            | 156.80      | 4,569.74              | -464.50      | 199.08       | -464.05                 | 0.00                    | 0.00                   | 0.00                  |

# Hewlett-Packard

## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well HDI KF 10-10H            |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 5034.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 5034.00usft (RIG) |
| <b>Site:</b>     | 1N-65W-10 HDI KF PAD       | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | HDI KF 10-10H              | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Design #1                  |                                     |                               |

| Planned 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) |
| 4,700.00                         | 6.95            | 156.80      | 4,669.00              | -475.62      | 203.85       | -475.16                 | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                         | 6.95            | 156.80      | 4,768.27              | -486.74      | 208.62       | -486.27                 | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                         | 6.95            | 156.80      | 4,867.53              | -497.86      | 213.38       | -497.38                 | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                         | 6.95            | 156.80      | 4,966.80              | -508.99      | 218.15       | -508.49                 | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                         | 6.95            | 156.80      | 5,066.06              | -520.11      | 222.92       | -519.60                 | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00                         | 6.95            | 156.80      | 5,165.33              | -531.23      | 227.69       | -530.71                 | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                         | 6.95            | 156.80      | 5,264.60              | -542.35      | 232.45       | -541.82                 | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                         | 6.95            | 156.80      | 5,363.86              | -553.47      | 237.22       | -552.93                 | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                         | 6.95            | 156.80      | 5,463.13              | -564.60      | 241.99       | -564.04                 | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                         | 6.95            | 156.80      | 5,562.39              | -575.72      | 246.75       | -575.16                 | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                         | 6.95            | 156.80      | 5,661.66              | -586.84      | 251.52       | -586.27                 | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                         | 6.95            | 156.80      | 5,760.92              | -597.96      | 256.29       | -597.38                 | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                         | 6.95            | 156.80      | 5,860.19              | -609.08      | 261.05       | -608.49                 | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                         | 6.95            | 156.80      | 5,959.45              | -620.20      | 265.82       | -619.60                 | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                         | 6.95            | 156.80      | 6,058.72              | -631.33      | 270.59       | -630.71                 | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                         | 6.95            | 156.80      | 6,157.98              | -642.45      | 275.35       | -641.82                 | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00                         | 6.95            | 156.80      | 6,257.25              | -653.57      | 280.12       | -652.93                 | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                         | 6.95            | 156.80      | 6,356.51              | -664.69      | 284.89       | -664.04                 | 0.00                    | 0.00                   | 0.00                  |
| 6,487.60                         | 6.95            | 156.80      | 6,443.47              | -674.43      | 289.06       | -673.78                 | 0.00                    | 0.00                   | 0.00                  |
| KOP @ 6487.60ft :: DLS = 9°/100' |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,500.00                         | 5.94            | 152.50      | 6,455.79              | -675.69      | 289.65       | -675.03                 | 9.00                    | -8.12                  | -34.66                |
| 6,550.00                         | 2.87            | 105.58      | 6,505.65              | -678.33      | 292.06       | -677.66                 | 9.00                    | -6.15                  | -93.85                |
| 6,600.00                         | 4.65            | 36.56       | 6,555.56              | -677.04      | 294.47       | -676.37                 | 9.00                    | 3.56                   | -138.03               |
| 6,650.00                         | 8.68            | 18.55       | 6,605.22              | -671.83      | 296.88       | -671.15                 | 9.00                    | 8.08                   | -36.03                |
| 6,700.00                         | 13.03           | 12.17       | 6,654.31              | -662.73      | 299.27       | -662.05                 | 9.00                    | 8.69                   | -12.76                |
| 6,750.00                         | 17.45           | 8.96        | 6,702.55              | -649.81      | 301.62       | -649.13                 | 9.00                    | 8.84                   | -6.42                 |
| 6,800.00                         | 21.90           | 7.02        | 6,749.61              | -633.14      | 303.93       | -632.45                 | 9.00                    | 8.91                   | -3.88                 |
| 6,850.00                         | 26.37           | 5.71        | 6,795.23              | -612.83      | 306.18       | -612.13                 | 9.00                    | 8.94                   | -2.62                 |
| 6,900.00                         | 30.85           | 4.76        | 6,839.12              | -588.99      | 308.35       | -588.29                 | 9.00                    | 8.95                   | -1.90                 |
| 6,950.00                         | 35.33           | 4.03        | 6,881.00              | -561.78      | 310.43       | -561.07                 | 9.00                    | 8.96                   | -1.46                 |
| 7,000.00                         | 39.82           | 3.44        | 6,920.61              | -531.36      | 312.41       | -530.65                 | 9.00                    | 8.97                   | -1.17                 |
| 7,050.00                         | 44.30           | 2.96        | 6,957.73              | -497.93      | 314.27       | -497.21                 | 9.00                    | 8.98                   | -0.97                 |
| 7,100.00                         | 48.79           | 2.55        | 6,992.10              | -461.68      | 316.01       | -460.96                 | 9.00                    | 8.98                   | -0.82                 |
| 7,150.00                         | 53.29           | 2.19        | 7,023.53              | -422.84      | 317.61       | -422.12                 | 9.00                    | 8.98                   | -0.72                 |
| 7,200.00                         | 57.78           | 1.87        | 7,051.82              | -381.66      | 319.07       | -380.93                 | 9.00                    | 8.98                   | -0.64                 |
| 7,250.00                         | 62.27           | 1.58        | 7,076.80              | -338.38      | 320.37       | -337.65                 | 9.00                    | 8.99                   | -0.58                 |
| 7,300.00                         | 66.77           | 1.31        | 7,098.31              | -293.27      | 321.50       | -292.54                 | 9.00                    | 8.99                   | -0.53                 |
| 7,350.00                         | 71.26           | 1.06        | 7,116.21              | -246.61      | 322.47       | -245.87                 | 9.00                    | 8.99                   | -0.50                 |
| 7,400.00                         | 75.75           | 0.83        | 7,130.40              | -198.68      | 323.26       | -197.95                 | 9.00                    | 8.99                   | -0.47                 |
| 7,450.00                         | 80.25           | 0.60        | 7,140.79              | -149.79      | 323.87       | -149.06                 | 9.00                    | 8.99                   | -0.45                 |
| 7,500.00                         | 84.74           | 0.38        | 7,147.32              | -100.23      | 324.29       | -99.50                  | 9.00                    | 8.99                   | -0.44                 |
| 7,550.00                         | 89.24           | 0.16        | 7,149.95              | -50.32       | 324.53       | -49.58                  | 9.00                    | 8.99                   | -0.44                 |
| 7,558.48                         | 90.00           | 0.13        | 7,150.00              | -41.84       | 324.55       | -41.10                  | 9.00                    | 8.99                   | -0.43                 |
| End Build @ 7558.48ft - 5 1/2"   |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,600.00                         | 90.00           | 0.13        | 7,150.00              | -0.32        | 324.64       | 0.42                    | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                         | 90.00           | 0.13        | 7,150.00              | 99.68        | 324.86       | 100.42                  | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                         | 90.00           | 0.13        | 7,150.00              | 199.68       | 325.08       | 200.42                  | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00                         | 90.00           | 0.13        | 7,150.00              | 299.68       | 325.30       | 300.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00                         | 90.00           | 0.13        | 7,150.00              | 399.68       | 325.52       | 400.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00                         | 90.00           | 0.13        | 7,150.00              | 499.68       | 325.74       | 500.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00                         | 90.00           | 0.13        | 7,150.00              | 599.68       | 325.96       | 600.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00                         | 90.00           | 0.13        | 7,150.00              | 699.68       | 326.18       | 700.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00                         | 90.00           | 0.13        | 7,150.00              | 799.68       | 326.39       | 800.42                  | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                         | 90.00           | 0.13        | 7,150.00              | 899.68       | 326.61       | 900.42                  | 0.00                    | 0.00                   | 0.00                  |

# Hewlett-Packard

## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well HDI KF 10-10H            |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 5034.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 5034.00usft (RIG) |
| <b>Site:</b>     | 1N-65W-10 HDI KF PAD       | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | HDI KF 10-10H              | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Design #1                  |                                     |                               |

| Planned 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) |  |
| 8,600.00              | 90.00           | 0.13        | 7,150.00              | 999.68       | 326.83       | 1,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.00              | 90.00           | 0.13        | 7,150.00              | 1,099.68     | 327.05       | 1,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.00              | 90.00           | 0.13        | 7,150.00              | 1,199.68     | 327.27       | 1,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.00              | 90.00           | 0.13        | 7,150.00              | 1,299.68     | 327.49       | 1,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.00              | 90.00           | 0.13        | 7,150.00              | 1,399.68     | 327.71       | 1,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.00              | 90.00           | 0.13        | 7,150.00              | 1,499.68     | 327.93       | 1,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.00              | 90.00           | 0.13        | 7,150.00              | 1,599.68     | 328.15       | 1,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.00              | 90.00           | 0.13        | 7,150.00              | 1,699.68     | 328.37       | 1,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.00              | 90.00           | 0.13        | 7,150.00              | 1,799.68     | 328.59       | 1,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.00              | 90.00           | 0.13        | 7,150.00              | 1,899.68     | 328.80       | 1,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.00              | 90.00           | 0.13        | 7,150.00              | 1,999.68     | 329.02       | 2,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.00              | 90.00           | 0.13        | 7,150.00              | 2,099.68     | 329.24       | 2,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.00              | 90.00           | 0.13        | 7,150.00              | 2,199.68     | 329.46       | 2,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.00              | 90.00           | 0.13        | 7,150.00              | 2,299.68     | 329.68       | 2,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.00             | 90.00           | 0.13        | 7,150.00              | 2,399.68     | 329.90       | 2,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.00             | 90.00           | 0.13        | 7,150.00              | 2,499.68     | 330.12       | 2,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.00             | 90.00           | 0.13        | 7,150.00              | 2,599.68     | 330.34       | 2,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.00             | 90.00           | 0.13        | 7,150.00              | 2,699.68     | 330.56       | 2,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.00             | 90.00           | 0.13        | 7,150.00              | 2,799.68     | 330.78       | 2,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,500.00             | 90.00           | 0.13        | 7,150.00              | 2,899.68     | 331.00       | 2,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,600.00             | 90.00           | 0.13        | 7,150.00              | 2,999.68     | 331.21       | 3,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,700.00             | 90.00           | 0.13        | 7,150.00              | 3,099.68     | 331.43       | 3,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,800.00             | 90.00           | 0.13        | 7,150.00              | 3,199.68     | 331.65       | 3,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,900.00             | 90.00           | 0.13        | 7,150.00              | 3,299.68     | 331.87       | 3,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,000.00             | 90.00           | 0.13        | 7,150.00              | 3,399.68     | 332.09       | 3,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,100.00             | 90.00           | 0.13        | 7,150.00              | 3,499.67     | 332.31       | 3,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,200.00             | 90.00           | 0.13        | 7,150.00              | 3,599.67     | 332.53       | 3,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,300.00             | 90.00           | 0.13        | 7,150.00              | 3,699.67     | 332.75       | 3,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,400.00             | 90.00           | 0.13        | 7,150.00              | 3,799.67     | 332.97       | 3,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,500.00             | 90.00           | 0.13        | 7,150.00              | 3,899.67     | 333.19       | 3,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,600.00             | 90.00           | 0.13        | 7,150.00              | 3,999.67     | 333.40       | 4,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,700.00             | 90.00           | 0.13        | 7,150.00              | 4,099.67     | 333.62       | 4,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,800.00             | 90.00           | 0.13        | 7,150.00              | 4,199.67     | 333.84       | 4,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,900.00             | 90.00           | 0.13        | 7,150.00              | 4,299.67     | 334.06       | 4,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,000.00             | 90.00           | 0.13        | 7,150.00              | 4,399.67     | 334.28       | 4,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,100.00             | 90.00           | 0.13        | 7,150.00              | 4,499.67     | 334.50       | 4,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,200.00             | 90.00           | 0.13        | 7,150.00              | 4,599.67     | 334.72       | 4,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,300.00             | 90.00           | 0.13        | 7,150.00              | 4,699.67     | 334.94       | 4,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,400.00             | 90.00           | 0.13        | 7,150.00              | 4,799.67     | 335.16       | 4,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,500.00             | 90.00           | 0.13        | 7,150.00              | 4,899.67     | 335.38       | 4,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,600.00             | 90.00           | 0.13        | 7,150.00              | 4,999.67     | 335.60       | 5,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,700.00             | 90.00           | 0.13        | 7,150.00              | 5,099.67     | 335.81       | 5,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,800.00             | 90.00           | 0.13        | 7,150.00              | 5,199.67     | 336.03       | 5,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,900.00             | 90.00           | 0.13        | 7,150.00              | 5,299.67     | 336.25       | 5,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,000.00             | 90.00           | 0.13        | 7,150.00              | 5,399.67     | 336.47       | 5,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,100.00             | 90.00           | 0.13        | 7,150.00              | 5,499.67     | 336.69       | 5,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,200.00             | 90.00           | 0.13        | 7,150.00              | 5,599.67     | 336.91       | 5,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,300.00             | 90.00           | 0.13        | 7,150.00              | 5,699.67     | 337.13       | 5,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,400.00             | 90.00           | 0.13        | 7,150.00              | 5,799.67     | 337.35       | 5,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,500.00             | 90.00           | 0.13        | 7,150.00              | 5,899.67     | 337.57       | 5,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,600.00             | 90.00           | 0.13        | 7,150.00              | 5,999.67     | 337.79       | 6,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,700.00             | 90.00           | 0.13        | 7,150.00              | 6,099.67     | 338.01       | 6,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,800.00             | 90.00           | 0.13        | 7,150.00              | 6,199.67     | 338.22       | 6,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,900.00             | 90.00           | 0.13        | 7,150.00              | 6,299.67     | 338.44       | 6,300.42                | 0.00                    | 0.00                   | 0.00                  |  |

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## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well HDI KF 10-10H            |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 5034.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 5034.00usft (RIG) |
| <b>Site:</b>     | 1N-65W-10 HDI KF PAD       | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | HDI KF 10-10H              | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Design #1                  |                                     |                               |

| Planned 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) |  |
| 14,000.00             | 90.00           | 0.13        | 7,150.00              | 6,399.67     | 338.66       | 6,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,100.00             | 90.00           | 0.13        | 7,150.00              | 6,499.67     | 338.88       | 6,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,200.00             | 90.00           | 0.13        | 7,150.00              | 6,599.67     | 339.10       | 6,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,300.00             | 90.00           | 0.13        | 7,150.00              | 6,699.67     | 339.32       | 6,700.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,400.00             | 90.00           | 0.13        | 7,150.00              | 6,799.67     | 339.54       | 6,800.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,500.00             | 90.00           | 0.13        | 7,150.00              | 6,899.67     | 339.76       | 6,900.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,600.00             | 90.00           | 0.13        | 7,150.00              | 6,999.67     | 339.98       | 7,000.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,700.00             | 90.00           | 0.13        | 7,150.00              | 7,099.67     | 340.20       | 7,100.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,800.00             | 90.00           | 0.13        | 7,150.00              | 7,199.67     | 340.42       | 7,200.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,900.00             | 90.00           | 0.13        | 7,150.00              | 7,299.67     | 340.63       | 7,300.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 15,000.00             | 90.00           | 0.13        | 7,150.00              | 7,399.67     | 340.85       | 7,400.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 15,100.00             | 90.00           | 0.13        | 7,150.00              | 7,499.67     | 341.07       | 7,500.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 15,200.00             | 90.00           | 0.13        | 7,150.00              | 7,599.67     | 341.29       | 7,600.42                | 0.00                    | 0.00                   | 0.00                  |  |
| 15,240.78             | 90.00           | 0.13        | 7,150.00              | 7,640.44     | 341.38       | 7,641.20                | 0.00                    | 0.00                   | 0.00                  |  |
| TD Well @ 15240.78ft  |                 |             |                       |              |              |                         |                         |                        |                       |  |

| Casing Points         |                       |        |  |                     |                   |
|-----------------------|-----------------------|--------|--|---------------------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name   |  | Casing Diameter (") | Hole Diameter (") |
| 1,709.02              | 1,700.00              | 9 5/8" |  | 9-5/8               | 13-1/2            |
| 7,558.48              | 7,150.00              | 5 1/2" |  | 5-1/2               | 8-1/2             |

| Plan Annotations      |                       |                   |              |                                  |  |
|-----------------------|-----------------------|-------------------|--------------|----------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                          |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                  |  |
| 250.00                | 250.00                | 0.00              | 0.00         | Begin Nudge @ 250.00ft           |  |
| 597.50                | 596.65                | -19.35            | 8.29         | End Nudge @ 597.50ft             |  |
| 6,487.60              | 6,443.47              | -674.43           | 289.06       | KOP @ 6487.60ft :: DLS = 9°/100' |  |
| 7,558.48              | 7,150.00              | -41.83            | 324.55       | End Build @ 7558.48ft            |  |
| 15,240.78             | 7,150.00              | 7,640.44          | 341.38       | TD Well @ 15240.78ft             |  |