

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
9N-60W-25 PEGGY PAD  
PEGGY 2501-04H**

**Wellbore #1**

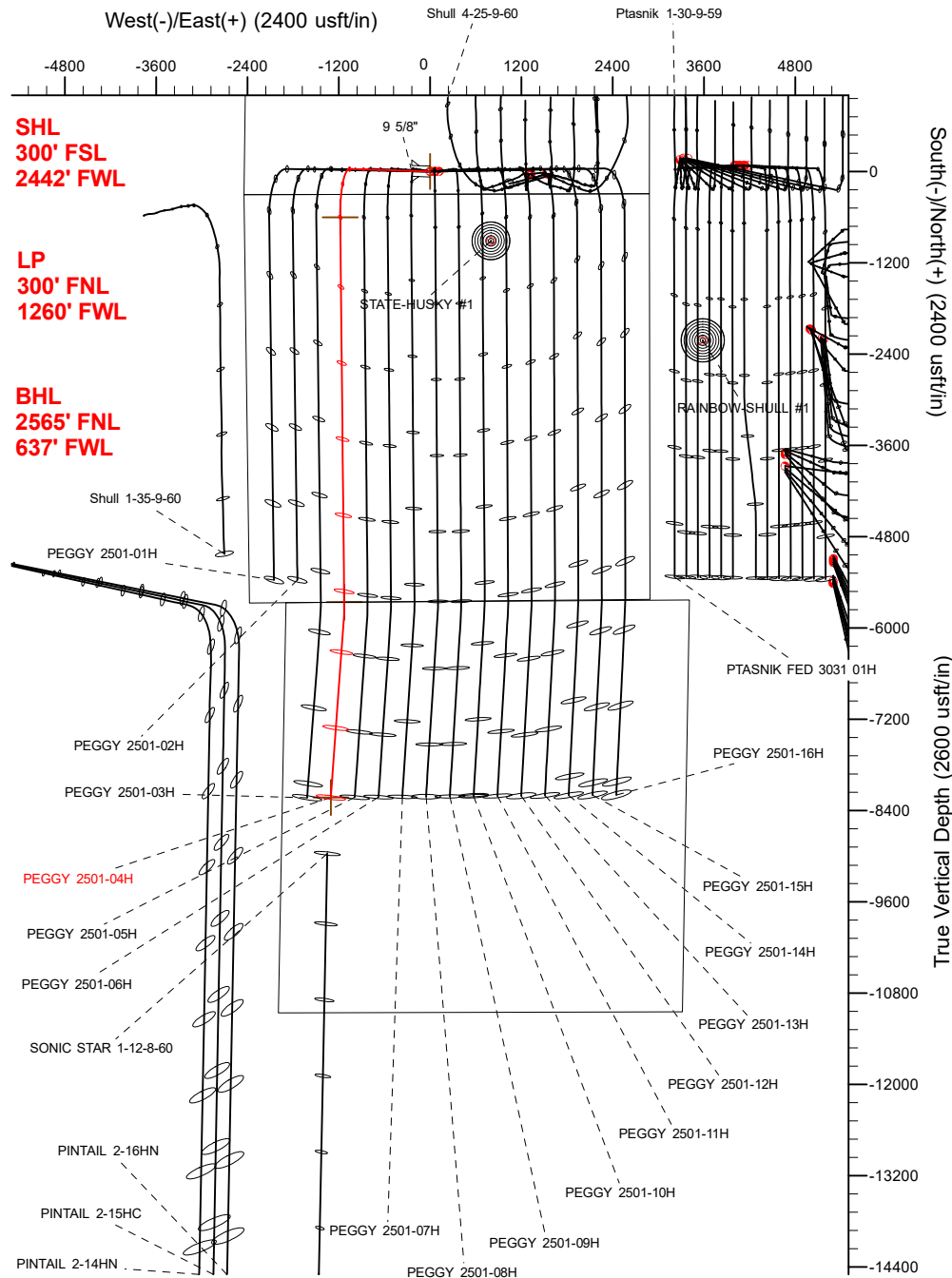
**Plan: Design #1**

## **Standard Planning Report**

**25 February, 2018**

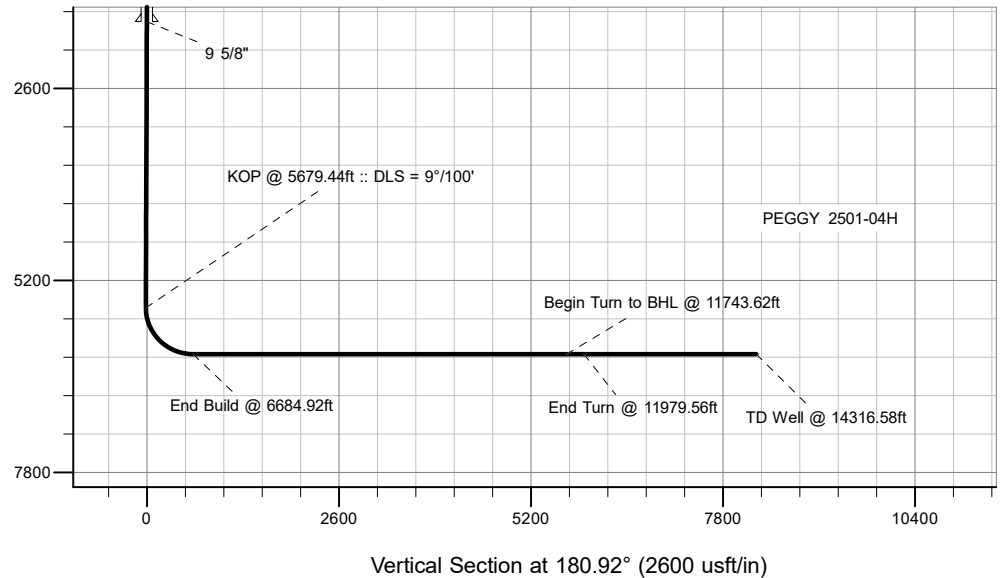
Project: WATTENBERG FIELD  
Site: 9N-60W-25 PEGGY PAD  
Well: PEGGY 2501-04H  
Wellbore: Wellbore #1  
Design: Design #1


# VERDAD RESOURCES



| 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               | 844.00   | 11.88 | 271.80 | 839.75  | 1.93     | -61.33   | 2.00 | 271.80 | -0.94   |                           |
| 4               | 5679.44  | 11.88 | 271.80 | 5571.62 | 33.19    | -1056.28 | 0.00 | 0.00   | -16.23  |                           |
| 5               | 6684.92  | 90.00 | 179.40 | 6200.00 | -604.74  | -1181.70 | 9.00 | -92.35 | 623.64  |                           |
| 6               | 11743.62 | 90.00 | 179.40 | 6200.00 | -5663.17 | -1128.89 | 0.00 | 0.00   | 5680.56 | PEGGY 2501-04H_Deflection |
| 7               | 11979.56 | 90.00 | 184.12 | 6200.00 | -5898.93 | -1136.14 | 2.00 | 90.00  | 5916.41 |                           |
| 8               | 14316.58 | 90.00 | 184.12 | 6200.00 | -8229.90 | -1304.08 | 0.00 | 0.00   | 8249.78 | PEGGY 2501-04H_BHL        |

| WELLBORE TARGET DETAILS (LAT/LONG) |         |          |          |           |             |
|------------------------------------|---------|----------|----------|-----------|-------------|
| Name                               | TVD     | +N/-S    | +E/-W    | Latitude  | Longitude   |
| PEGGY 2501-04H_SHL                 | 0.00    | 0.00     | 0.00     | 40.714775 | -104.040734 |
| PEGGY 2501-04H_BHL                 | 6200.00 | -8229.90 | -1304.08 | 40.692185 | -104.045437 |



|   |                                     |             |  |                 |
|---|-------------------------------------|-------------|--|-----------------|
|  | Azimuths to True North              |             | WELL DETAILS: PEGGY 2501-04H                 |                 |
|   | Magnetic North: 7.77°               |             | GL = 4894'                                   |                 |
|   | Magnetic Field Strength: 52548.6snT |             | RKB = 20' @ 4914.00usft (RIG)                |                 |
|   | Dip Angle: 67.20°                   |             | Plan: Design #1 (PEGGY 2501-04H/Wellbore #1) |                 |
| Date: 2/25/2018   |                                     | Created By: |  | Date: 2/25/2018 |
| Model: IGRF2015   |                                     | Reviewed:   |  | Date:           |

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## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well PEGGY 2501-04H           |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 4914.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 4914.00usft (RIG) |
| <b>Site:</b>     | 9N-60W-25 PEGGY PAD        | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | PEGGY 2501-04H             | <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>                  | 9N-60W-25 PEGGY PAD |                     |                   |                                 |
| <b>Site Position:</b>        |                     | <b>Northing:</b>    | 1,506,564.37 usft | <b>Latitude:</b> 40.714775      |
| <b>From:</b>                 | Lat/Long            | <b>Easting:</b>     | 3,404,485.26 usft | <b>Longitude:</b> -104.040843   |
| <b>Position Uncertainty:</b> | 0.00 usft           | <b>Slot Radius:</b> | 13-3/16 "         | <b>Grid Convergence:</b> 0.94 ° |

|                             |                |            |                            |                                    |
|-----------------------------|----------------|------------|----------------------------|------------------------------------|
| <b>Well</b>                 | PEGGY 2501-04H |            |                            |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>   | 0.03 usft  | <b>Northing:</b>           | 1,506,564.90 usft                  |
|                             | <b>+E/-W</b>   | 29.99 usft | <b>Easting:</b>            | 3,404,515.25 usft                  |
| <b>Position Uncertainty</b> |                | 3.28 usft  | <b>Wellhead Elevation:</b> | <b>Latitude:</b> 40.714775         |
|                             |                |            |                            | <b>Longitude:</b> -104.040734      |
|                             |                |            |                            | <b>Ground Level:</b> 4,894.00 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> |
|                  | IGRF2015          | 2/25/2018          | 7.77                   | 67.20                | 52,548.62251883            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <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                 | 180.92               |

|                                 |                        |                          |                         |                               |
|---------------------------------|------------------------|--------------------------|-------------------------|-------------------------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 2/25/2018                |                         |                               |
| <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              |
|                                 |                        |                          |                         | Fixed:v2:standard declination |
| 2                               | 1,700.00               | 14,316.58                | Design #1 (Wellbore #1) | ISCWSA REV 2 MWD              |
|                                 |                        |                          |                         | Fixed:v2:standard declination |

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Planning Report

|           |                            |                              |                               |
|-----------|----------------------------|------------------------------|-------------------------------|
| Database: | EDM 5000.14 Single User Db | Local Co-ordinate Reference: | Well PEGGY 2501-04H           |
| Company:  | VERDAD RESOURCES           | TVD Reference:               | RKB = 20' @ 4914.00usft (RIG) |
| Project:  | WATTENBERG FIELD           | MD Reference:                | RKB = 20' @ 4914.00usft (RIG) |
| Site:     | 9N-60W-25 PEGGY PAD        | North Reference:             | True                          |
| Well:     | PEGGY 2501-04H             | Survey Calculation Method:   | Minimum Curvature             |
| Wellbore: | Wellbore #1                |                              |                               |
| Design:   | Design #1                  |                              |                               |

| Plan Sections         |                 |             |                       |              |              |                         |                        |                       |         |                   |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target            |
| 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    |                   |
| 844.00                | 11.88           | 271.80      | 839.75                | 1.93         | -61.33       | 2.00                    | 2.00                   | 0.00                  | 271.80  |                   |
| 5,679.44              | 11.88           | 271.80      | 5,571.62              | 33.19        | -1,056.28    | 0.00                    | 0.00                   | 0.00                  | 0.00    |                   |
| 6,684.92              | 90.00           | 179.40      | 6,200.00              | -604.74      | -1,181.70    | 9.00                    | 7.77                   | -9.19                 | -92.35  |                   |
| 11,743.62             | 90.00           | 179.40      | 6,200.00              | -5,663.17    | -1,128.89    | 0.00                    | 0.00                   | 0.00                  | 0.00    | PEGGY 2501-04H_D  |
| 11,979.56             | 90.00           | 184.12      | 6,200.00              | -5,898.93    | -1,136.14    | 2.00                    | 0.00                   | 2.00                  | 90.00   |                   |
| 14,316.58             | 90.00           | 184.12      | 6,200.00              | -8,229.90    | -1,304.08    | 0.00                    | 0.00                   | 0.00                  | 0.00    | PEGGY 2501-04H_BI |

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## Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well PEGGY 2501-04H           |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 4914.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 4914.00usft (RIG) |
| <b>Site:</b>     | 9N-60W-25 PEGGY PAD        | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | PEGGY 2501-04H             | <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 Tangent @ 250.00ft |                 |             |                       |              |              |                         |                         |                        |                       |
| 300.00                   | 1.00            | 271.80      | 300.00                | 0.01         | -0.44        | -0.01                   | 2.00                    | 2.00                   | 0.00                  |
| 400.00                   | 3.00            | 271.80      | 399.93                | 0.12         | -3.92        | -0.06                   | 2.00                    | 2.00                   | 0.00                  |
| 500.00                   | 5.00            | 271.80      | 499.68                | 0.34         | -10.90       | -0.17                   | 2.00                    | 2.00                   | 0.00                  |
| 600.00                   | 7.00            | 271.80      | 599.13                | 0.67         | -21.34       | -0.33                   | 2.00                    | 2.00                   | 0.00                  |
| 700.00                   | 9.00            | 271.80      | 698.15                | 1.11         | -35.25       | -0.54                   | 2.00                    | 2.00                   | 0.00                  |
| 800.00                   | 11.00           | 271.80      | 796.63                | 1.65         | -52.61       | -0.81                   | 2.00                    | 2.00                   | 0.00                  |
| 844.00                   | 11.88           | 271.80      | 839.75                | 1.93         | -61.33       | -0.94                   | 2.00                    | 2.00                   | 0.00                  |
| End Tangent @ 844.00ft   |                 |             |                       |              |              |                         |                         |                        |                       |
| 900.00                   | 11.88           | 271.80      | 894.55                | 2.29         | -72.85       | -1.12                   | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00                 | 11.88           | 271.80      | 992.41                | 2.94         | -93.43       | -1.44                   | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00                 | 11.88           | 271.80      | 1,090.27              | 3.58         | -114.01      | -1.75                   | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00                 | 11.88           | 271.80      | 1,188.13              | 4.23         | -134.58      | -2.07                   | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00                 | 11.88           | 271.80      | 1,285.99              | 4.88         | -155.16      | -2.38                   | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00                 | 11.88           | 271.80      | 1,383.84              | 5.52         | -175.73      | -2.70                   | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00                 | 11.88           | 271.80      | 1,481.70              | 6.17         | -196.31      | -3.02                   | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00                 | 11.88           | 271.80      | 1,579.56              | 6.82         | -216.89      | -3.33                   | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00                 | 11.88           | 271.80      | 1,677.42              | 7.46         | -237.46      | -3.65                   | 0.00                    | 0.00                   | 0.00                  |
| 1,723.08                 | 11.88           | 271.80      | 1,700.00              | 7.61         | -242.21      | -3.72                   | 0.00                    | 0.00                   | 0.00                  |
| 9 5/8"                   |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,800.00                 | 11.88           | 271.80      | 1,775.28              | 8.11         | -258.04      | -3.96                   | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00                 | 11.88           | 271.80      | 1,873.13              | 8.76         | -278.61      | -4.28                   | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00                 | 11.88           | 271.80      | 1,970.99              | 9.40         | -299.19      | -4.60                   | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00                 | 11.88           | 271.80      | 2,068.85              | 10.05        | -319.77      | -4.91                   | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00                 | 11.88           | 271.80      | 2,166.71              | 10.70        | -340.34      | -5.23                   | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00                 | 11.88           | 271.80      | 2,264.57              | 11.34        | -360.92      | -5.55                   | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00                 | 11.88           | 271.80      | 2,362.42              | 11.99        | -381.50      | -5.86                   | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00                 | 11.88           | 271.80      | 2,460.28              | 12.64        | -402.07      | -6.18                   | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00                 | 11.88           | 271.80      | 2,558.14              | 13.28        | -422.65      | -6.49                   | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00                 | 11.88           | 271.80      | 2,656.00              | 13.93        | -443.22      | -6.81                   | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00                 | 11.88           | 271.80      | 2,753.86              | 14.58        | -463.80      | -7.13                   | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00                 | 11.88           | 271.80      | 2,851.72              | 15.22        | -484.38      | -7.44                   | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00                 | 11.88           | 271.80      | 2,949.57              | 15.87        | -504.95      | -7.76                   | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00                 | 11.88           | 271.80      | 3,047.43              | 16.52        | -525.53      | -8.08                   | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00                 | 11.88           | 271.80      | 3,145.29              | 17.16        | -546.10      | -8.39                   | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00                 | 11.88           | 271.80      | 3,243.15              | 17.81        | -566.68      | -8.71                   | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00                 | 11.88           | 271.80      | 3,341.01              | 18.46        | -587.26      | -9.02                   | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00                 | 11.88           | 271.80      | 3,438.86              | 19.10        | -607.83      | -9.34                   | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00                 | 11.88           | 271.80      | 3,536.72              | 19.75        | -628.41      | -9.66                   | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00                 | 11.88           | 271.80      | 3,634.58              | 20.40        | -648.98      | -9.97                   | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00                 | 11.88           | 271.80      | 3,732.44              | 21.04        | -669.56      | -10.29                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00                 | 11.88           | 271.80      | 3,830.30              | 21.69        | -690.14      | -10.60                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00                 | 11.88           | 271.80      | 3,928.15              | 22.34        | -710.71      | -10.92                  | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00                 | 11.88           | 271.80      | 4,026.01              | 22.98        | -731.29      | -11.24                  | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00                 | 11.88           | 271.80      | 4,123.87              | 23.63        | -751.86      | -11.55                  | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00                 | 11.88           | 271.80      | 4,221.73              | 24.27        | -772.44      | -11.87                  | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00                 | 11.88           | 271.80      | 4,319.59              | 24.92        | -793.02      | -12.19                  | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00                 | 11.88           | 271.80      | 4,417.44              | 25.57        | -813.59      | -12.50                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00                 | 11.88           | 271.80      | 4,515.30              | 26.21        | -834.17      | -12.82                  | 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 PEGGY 2501-04H           |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 4914.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 4914.00usft (RIG) |
| <b>Site:</b>     | 9N-60W-25 PEGGY PAD        | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | PEGGY 2501-04H             | <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                         | 11.88           | 271.80      | 4,613.16              | 26.86        | -854.75      | -13.13                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                         | 11.88           | 271.80      | 4,711.02              | 27.51        | -875.32      | -13.45                  | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                         | 11.88           | 271.80      | 4,808.88              | 28.15        | -895.90      | -13.77                  | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                         | 11.88           | 271.80      | 4,906.74              | 28.80        | -916.47      | -14.08                  | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                         | 11.88           | 271.80      | 5,004.59              | 29.45        | -937.05      | -14.40                  | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00                         | 11.88           | 271.80      | 5,102.45              | 30.09        | -957.63      | -14.71                  | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                         | 11.88           | 271.80      | 5,200.31              | 30.74        | -978.20      | -15.03                  | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                         | 11.88           | 271.80      | 5,298.17              | 31.39        | -998.78      | -15.35                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                         | 11.88           | 271.80      | 5,396.03              | 32.03        | -1,019.35    | -15.66                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                         | 11.88           | 271.80      | 5,493.88              | 32.68        | -1,039.93    | -15.98                  | 0.00                    | 0.00                   | 0.00                  |
| 5,679.44                         | 11.88           | 271.80      | 5,571.62              | 33.19        | -1,056.28    | -16.23                  | 0.00                    | 0.00                   | 0.00                  |
| KOP @ 5679.44ft :: DLS = 9°/100' |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,700.00                         | 11.95           | 262.83      | 5,591.74              | 33.00        | -1,060.50    | -15.96                  | 9.00                    | 0.32                   | -43.61                |
| 5,750.00                         | 13.22           | 242.90      | 5,640.56              | 29.74        | -1,070.73    | -12.55                  | 9.00                    | 2.54                   | -39.87                |
| 5,800.00                         | 15.70           | 227.78      | 5,688.99              | 22.59        | -1,080.84    | -5.23                   | 9.00                    | 4.97                   | -30.23                |
| 5,850.00                         | 18.93           | 217.19      | 5,736.73              | 11.57        | -1,090.76    | 5.94                    | 9.00                    | 6.46                   | -21.18                |
| 5,900.00                         | 22.59           | 209.75      | 5,783.48              | -3.23        | -1,100.43    | 20.90                   | 9.00                    | 7.31                   | -14.88                |
| 5,950.00                         | 26.49           | 204.35      | 5,828.97              | -21.74       | -1,109.80    | 39.55                   | 9.00                    | 7.81                   | -10.81                |
| 6,000.00                         | 30.55           | 200.26      | 5,872.89              | -43.83       | -1,118.80    | 61.79                   | 9.00                    | 8.12                   | -8.16                 |
| 6,050.00                         | 34.71           | 197.07      | 5,915.00              | -69.37       | -1,127.38    | 87.46                   | 9.00                    | 8.32                   | -6.39                 |
| 6,100.00                         | 38.93           | 194.48      | 5,955.02              | -98.20       | -1,135.49    | 116.42                  | 9.00                    | 8.45                   | -5.17                 |
| 6,150.00                         | 43.21           | 192.33      | 5,992.70              | -130.15      | -1,143.08    | 148.49                  | 9.00                    | 8.55                   | -4.30                 |
| 6,200.00                         | 47.51           | 190.50      | 6,027.83              | -165.02      | -1,150.10    | 183.46                  | 9.00                    | 8.61                   | -3.66                 |
| 6,250.00                         | 51.85           | 188.91      | 6,060.18              | -202.59      | -1,156.51    | 221.13                  | 9.00                    | 8.67                   | -3.19                 |
| 6,300.00                         | 56.20           | 187.49      | 6,089.54              | -242.63      | -1,162.26    | 261.26                  | 9.00                    | 8.70                   | -2.83                 |
| 6,350.00                         | 60.57           | 186.21      | 6,115.75              | -284.89      | -1,167.33    | 303.60                  | 9.00                    | 8.73                   | -2.56                 |
| 6,400.00                         | 64.94           | 185.04      | 6,138.63              | -329.12      | -1,171.68    | 347.89                  | 9.00                    | 8.76                   | -2.34                 |
| 6,450.00                         | 69.33           | 183.95      | 6,158.06              | -375.04      | -1,175.28    | 393.86                  | 9.00                    | 8.77                   | -2.18                 |
| 6,500.00                         | 73.72           | 182.92      | 6,173.90              | -422.36      | -1,178.12    | 441.23                  | 9.00                    | 8.79                   | -2.06                 |
| 6,550.00                         | 78.12           | 181.94      | 6,186.06              | -470.81      | -1,180.17    | 489.69                  | 9.00                    | 8.80                   | -1.97                 |
| 6,600.00                         | 82.52           | 180.98      | 6,194.46              | -520.07      | -1,181.42    | 538.97                  | 9.00                    | 8.80                   | -1.91                 |
| 6,650.00                         | 86.92           | 180.05      | 6,199.06              | -569.84      | -1,181.87    | 588.74                  | 9.00                    | 8.81                   | -1.87                 |
| 6,684.92                         | 90.00           | 179.40      | 6,200.00              | -604.74      | -1,181.70    | 623.64                  | 9.00                    | 8.81                   | -1.85                 |
| End Build @ 6684.92ft            |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,700.00                         | 90.00           | 179.40      | 6,200.00              | -619.82      | -1,181.54    | 638.71                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00                         | 90.00           | 179.40      | 6,200.00              | -719.82      | -1,180.50    | 738.68                  | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00                         | 90.00           | 179.40      | 6,200.00              | -819.81      | -1,179.45    | 838.64                  | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00                         | 90.00           | 179.40      | 6,200.00              | -919.80      | -1,178.41    | 938.61                  | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00                         | 90.00           | 179.40      | 6,200.00              | -1,019.80    | -1,177.37    | 1,038.57                | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00                         | 90.00           | 179.40      | 6,200.00              | -1,119.79    | -1,176.32    | 1,138.54                | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00                         | 90.00           | 179.40      | 6,200.00              | -1,219.79    | -1,175.28    | 1,238.50                | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00                         | 90.00           | 179.40      | 6,200.00              | -1,319.78    | -1,174.23    | 1,338.47                | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00                         | 90.00           | 179.40      | 6,200.00              | -1,419.78    | -1,173.19    | 1,438.43                | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00                         | 90.00           | 179.40      | 6,200.00              | -1,519.77    | -1,172.15    | 1,538.40                | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                         | 90.00           | 179.40      | 6,200.00              | -1,619.77    | -1,171.10    | 1,638.36                | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                         | 90.00           | 179.40      | 6,200.00              | -1,719.76    | -1,170.06    | 1,738.33                | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00                         | 90.00           | 179.40      | 6,200.00              | -1,819.76    | -1,169.01    | 1,838.29                | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00                         | 90.00           | 179.40      | 6,200.00              | -1,919.75    | -1,167.97    | 1,938.26                | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00                         | 90.00           | 179.40      | 6,200.00              | -2,019.74    | -1,166.93    | 2,038.22                | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00                         | 90.00           | 179.40      | 6,200.00              | -2,119.74    | -1,165.88    | 2,138.19                | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00                         | 90.00           | 179.40      | 6,200.00              | -2,219.73    | -1,164.84    | 2,238.15                | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00                         | 90.00           | 179.40      | 6,200.00              | -2,319.73    | -1,163.80    | 2,338.12                | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                         | 90.00           | 179.40      | 6,200.00              | -2,419.72    | -1,162.75    | 2,438.08                | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00                         | 90.00           | 179.40      | 6,200.00              | -2,519.72    | -1,161.71    | 2,538.05                | 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 PEGGY 2501-04H           |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 4914.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 4914.00usft (RIG) |
| <b>Site:</b>     | 9N-60W-25 PEGGY PAD        | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | PEGGY 2501-04H             | <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) |  |
| 8,700.00                       | 90.00           | 179.40      | 6,200.00              | -2,619.71    | -1,160.66    | 2,638.01                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.00                       | 90.00           | 179.40      | 6,200.00              | -2,719.71    | -1,159.62    | 2,737.98                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.00                       | 90.00           | 179.40      | 6,200.00              | -2,819.70    | -1,158.58    | 2,837.94                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.00                       | 90.00           | 179.40      | 6,200.00              | -2,919.70    | -1,157.53    | 2,937.90                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.00                       | 90.00           | 179.40      | 6,200.00              | -3,019.69    | -1,156.49    | 3,037.87                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.00                       | 90.00           | 179.40      | 6,200.00              | -3,119.68    | -1,155.45    | 3,137.83                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.00                       | 90.00           | 179.40      | 6,200.00              | -3,219.68    | -1,154.40    | 3,237.80                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.00                       | 90.00           | 179.40      | 6,200.00              | -3,319.67    | -1,153.36    | 3,337.76                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.00                       | 90.00           | 179.40      | 6,200.00              | -3,419.67    | -1,152.31    | 3,437.73                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.00                       | 90.00           | 179.40      | 6,200.00              | -3,519.66    | -1,151.27    | 3,537.69                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.00                       | 90.00           | 179.40      | 6,200.00              | -3,619.66    | -1,150.23    | 3,637.66                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.00                       | 90.00           | 179.40      | 6,200.00              | -3,719.65    | -1,149.18    | 3,737.62                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.00                       | 90.00           | 179.40      | 6,200.00              | -3,819.65    | -1,148.14    | 3,837.59                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.00                      | 90.00           | 179.40      | 6,200.00              | -3,919.64    | -1,147.09    | 3,937.55                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.00                      | 90.00           | 179.40      | 6,200.00              | -4,019.64    | -1,146.05    | 4,037.52                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.00                      | 90.00           | 179.40      | 6,200.00              | -4,119.63    | -1,145.01    | 4,137.48                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.00                      | 90.00           | 179.40      | 6,200.00              | -4,219.62    | -1,143.96    | 4,237.45                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.00                      | 90.00           | 179.40      | 6,200.00              | -4,319.62    | -1,142.92    | 4,337.41                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,500.00                      | 90.00           | 179.40      | 6,200.00              | -4,419.61    | -1,141.88    | 4,437.38                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,600.00                      | 90.00           | 179.40      | 6,200.00              | -4,519.61    | -1,140.83    | 4,537.34                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,700.00                      | 90.00           | 179.40      | 6,200.00              | -4,619.60    | -1,139.79    | 4,637.31                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,800.00                      | 90.00           | 179.40      | 6,200.00              | -4,719.60    | -1,138.74    | 4,737.27                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,900.00                      | 90.00           | 179.40      | 6,200.00              | -4,819.59    | -1,137.70    | 4,837.24                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,000.00                      | 90.00           | 179.40      | 6,200.00              | -4,919.59    | -1,136.66    | 4,937.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,100.00                      | 90.00           | 179.40      | 6,200.00              | -5,019.58    | -1,135.61    | 5,037.17                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,200.00                      | 90.00           | 179.40      | 6,200.00              | -5,119.58    | -1,134.57    | 5,137.13                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,300.00                      | 90.00           | 179.40      | 6,200.00              | -5,219.57    | -1,133.52    | 5,237.10                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,400.00                      | 90.00           | 179.40      | 6,200.00              | -5,319.56    | -1,132.48    | 5,337.06                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,500.00                      | 90.00           | 179.40      | 6,200.00              | -5,419.56    | -1,131.44    | 5,437.03                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,600.00                      | 90.00           | 179.40      | 6,200.00              | -5,519.55    | -1,130.39    | 5,536.99                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,700.00                      | 90.00           | 179.40      | 6,200.00              | -5,619.55    | -1,129.35    | 5,636.96                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,743.62                      | 90.00           | 179.40      | 6,200.00              | -5,663.17    | -1,128.89    | 5,680.56                | 0.00                    | 0.00                   | 0.00                  |  |
| Begin Turn to BHL @ 11743.62ft |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 11,800.00                      | 90.00           | 180.53      | 6,200.00              | -5,719.55    | -1,128.86    | 5,736.93                | 2.00                    | 0.00                   | 2.00                  |  |
| 11,900.00                      | 90.00           | 182.53      | 6,200.00              | -5,819.50    | -1,131.53    | 5,836.92                | 2.00                    | 0.00                   | 2.00                  |  |
| 11,979.56                      | 90.00           | 184.12      | 6,200.00              | -5,898.93    | -1,136.14    | 5,916.41                | 2.00                    | 0.00                   | 2.00                  |  |
| End Turn @ 11979.56ft          |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 12,000.00                      | 90.00           | 184.12      | 6,200.00              | -5,919.32    | -1,137.61    | 5,936.82                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,100.00                      | 90.00           | 184.12      | 6,200.00              | -6,019.06    | -1,144.80    | 6,036.66                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,200.00                      | 90.00           | 184.12      | 6,200.00              | -6,118.80    | -1,151.98    | 6,136.51                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,300.00                      | 90.00           | 184.12      | 6,200.00              | -6,218.54    | -1,159.17    | 6,236.35                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,400.00                      | 90.00           | 184.12      | 6,200.00              | -6,318.28    | -1,166.36    | 6,336.19                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,500.00                      | 90.00           | 184.12      | 6,200.00              | -6,418.02    | -1,173.54    | 6,436.04                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,600.00                      | 90.00           | 184.12      | 6,200.00              | -6,517.76    | -1,180.73    | 6,535.88                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,700.00                      | 90.00           | 184.12      | 6,200.00              | -6,617.51    | -1,187.91    | 6,635.73                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,800.00                      | 90.00           | 184.12      | 6,200.00              | -6,717.25    | -1,195.10    | 6,735.57                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,900.00                      | 90.00           | 184.12      | 6,200.00              | -6,816.99    | -1,202.28    | 6,835.41                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,000.00                      | 90.00           | 184.12      | 6,200.00              | -6,916.73    | -1,209.47    | 6,935.26                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,100.00                      | 90.00           | 184.12      | 6,200.00              | -7,016.47    | -1,216.66    | 7,035.10                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,200.00                      | 90.00           | 184.12      | 6,200.00              | -7,116.21    | -1,223.84    | 7,134.95                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,300.00                      | 90.00           | 184.12      | 6,200.00              | -7,215.95    | -1,231.03    | 7,234.79                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,400.00                      | 90.00           | 184.12      | 6,200.00              | -7,315.70    | -1,238.21    | 7,334.63                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,500.00                      | 90.00           | 184.12      | 6,200.00              | -7,415.44    | -1,245.40    | 7,434.48                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,600.00                      | 90.00           | 184.12      | 6,200.00              | -7,515.18    | -1,252.59    | 7,534.32                | 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 PEGGY 2501-04H           |
| <b>Company:</b>  | VERDAD RESOURCES           | <b>TVD Reference:</b>               | RKB = 20' @ 4914.00usft (RIG) |
| <b>Project:</b>  | WATTENBERG FIELD           | <b>MD Reference:</b>                | RKB = 20' @ 4914.00usft (RIG) |
| <b>Site:</b>     | 9N-60W-25 PEGGY PAD        | <b>North Reference:</b>             | True                          |
| <b>Well:</b>     | PEGGY 2501-04H             | <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) |  |
| 13,700.00             | 90.00           | 184.12      | 6,200.00              | -7,614.92    | -1,259.77    | 7,634.17                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,800.00             | 90.00           | 184.12      | 6,200.00              | -7,714.66    | -1,266.96    | 7,734.01                | 0.00                    | 0.00                   | 0.00                  |  |
| 13,900.00             | 90.00           | 184.12      | 6,200.00              | -7,814.40    | -1,274.14    | 7,833.85                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,000.00             | 90.00           | 184.12      | 6,200.00              | -7,914.14    | -1,281.33    | 7,933.70                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,100.00             | 90.00           | 184.12      | 6,200.00              | -8,013.89    | -1,288.51    | 8,033.54                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,200.00             | 90.00           | 184.12      | 6,200.00              | -8,113.63    | -1,295.70    | 8,133.39                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,300.00             | 90.00           | 184.12      | 6,200.00              | -8,213.37    | -1,302.89    | 8,233.23                | 0.00                    | 0.00                   | 0.00                  |  |
| 14,316.58             | 90.00           | 184.12      | 6,200.00              | -8,229.90    | -1,304.08    | 8,249.78                | 0.00                    | 0.00                   | 0.00                  |  |
| TD Well @ 14316.58ft  |                 |             |                       |              |              |                         |                         |                        |                       |  |

| Casing Points         |                       |        |                     |                   |  |
|-----------------------|-----------------------|--------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name   | Casing Diameter (") | Hole Diameter (") |  |
| 1,723.08              | 1,700.00              | 9 5/8" | 9-5/8               | 13-1/2            |  |

| Plan Annotations      |                       |                   |              |                                  |  |
|-----------------------|-----------------------|-------------------|--------------|----------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                                  |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                          |  |
| 250.00                | 250.00                | 0.00              | 0.00         | Begin Tangent @ 250.00ft         |  |
| 844.00                | 839.75                | 1.93              | -61.33       | End Tangent @ 844.00ft           |  |
| 5,679.44              | 5,571.62              | 33.19             | -1,056.28    | KOP @ 5679.44ft :: DLS = 9°/100' |  |
| 6,684.92              | 6,200.00              | -604.74           | -1,181.70    | End Build @ 6684.92ft            |  |
| 11,743.62             | 6,200.00              | -5,663.17         | -1,128.89    | Begin Turn to BHL @ 11743.62ft   |  |
| 11,979.56             | 6,200.00              | -5,898.93         | -1,136.14    | End Turn @ 11979.56ft            |  |
| 14,316.58             | 6,200.00              | -8,229.90         | -1,304.08    | TD Well @ 14316.58ft             |  |