

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-65W-31 COUNTY LINE 3130 PAD**

**COUNTY LINE 3130-03H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**13 July, 2018**

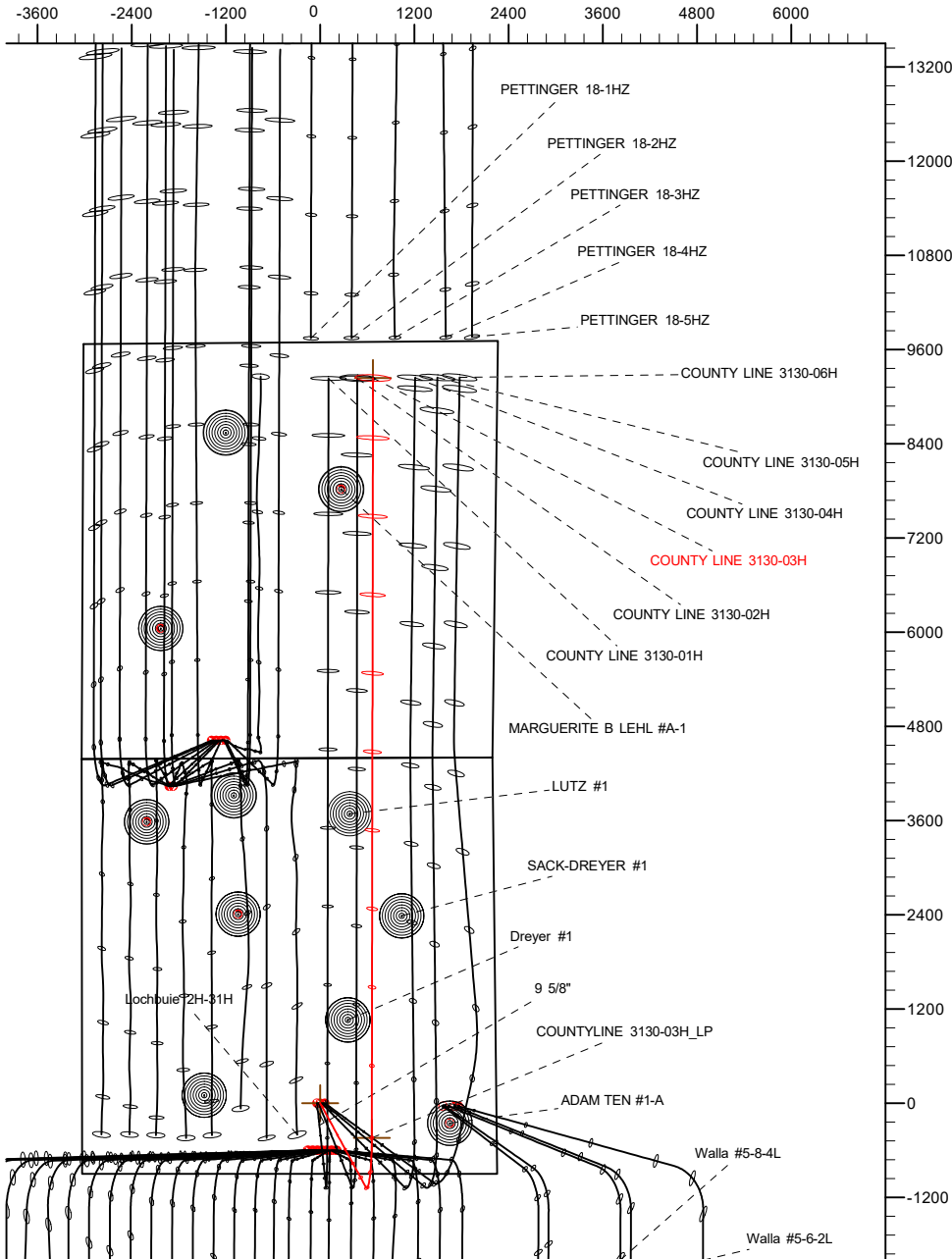
Project: WATTENBERG FIELD  
Site: 1N-65W-31 COUNTY LINE 3130 PAD  
Well: COUNTY LINE 3130-03H  
Wellbore: Wellbore #1  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1722.95	9 5/8"	9-5/8

West(-)/East(+) (2400 usft/in)

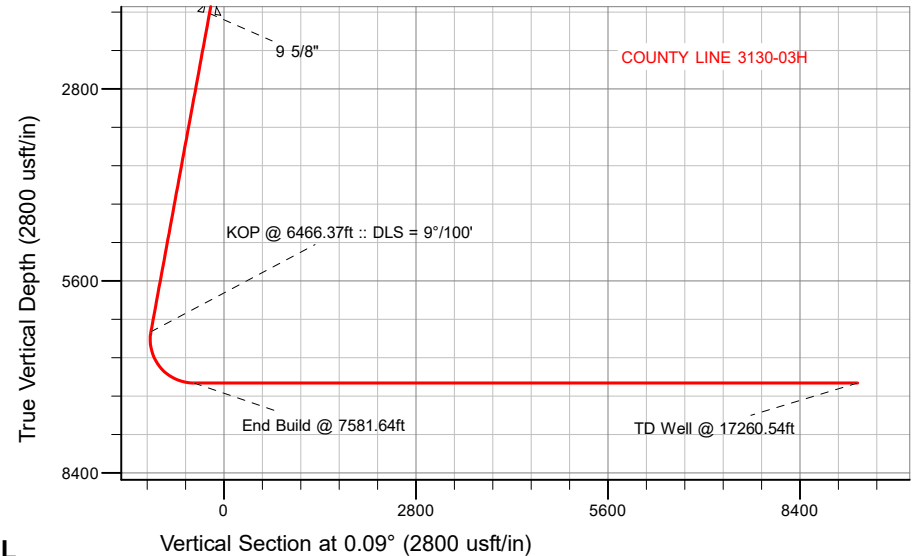


## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
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	
842.00	11.84	151.45	837.80	-53.54	29.13	2.00	151.45	-53.49	
6466.37	11.84	151.45	6342.50	-1067.22	580.66	0.00	0.00	-1066.30	
7581.64	90.00	0.09	7090.00	-441.13	656.78	9.00	-150.84	-440.09	
17260.54	90.00	0.09	7090.00	9237.76	672.34	0.00	0.00	9238.81	COUNTYLINE 3130-03H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

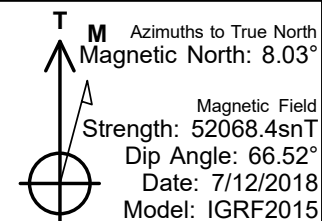
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTYLINE 3130-03H_SHL	0.00	0.00	0.00	40.002996	-104.705307
COUNTYLINE 3130-03H_BHL	7090.00	9237.76	672.34	40.028355	-104.702906



SHL  
901' FSL  
2243' FEL

LP  
460' FSL  
1592' FEL

BHL  
460' FNL  
1583' FEL



## WELL DETAILS: COUNTY LINE 3130-03H

GROUND LEVEL = 5028'

RKB = 20' @ 5048.00usft (RIG)

Plan: Design #1 (COUNTY LINE 3130-03H/Wellbore #1)

Date: 7/13/2018

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-03H	<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-31 COUNTY LINE 3130 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,244,936.30 usft	<b>Latitude:</b> 40.002996
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,222,683.37 usft	<b>Longitude:</b> -104.705093
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.51 °

<b>Well</b>	COUNTY LINE 3130-03H			
<b>Well Position</b>	<b>+N/-S</b>	-0.08 usft	<b>Northing:</b>	1,244,935.68 usft
	<b>+E/-W</b>	-60.01 usft	<b>Easting:</b>	3,222,623.37 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 5,028.00 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	7/12/2018	8.03	66.52	52,068.38304763

<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	0.09

<b>Plan Survey Tool Program</b>	<b>Date</b>	7/13/2018		
<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	17,260.54	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD 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	
842.00	11.84	151.45	837.80	-53.54	29.13	2.00	2.00	0.00	151.45	
6,466.37	11.84	151.45	6,342.50	-1,067.22	580.66	0.00	0.00	0.00	0.00	
7,581.64	90.00	0.09	7,090.00	-441.13	656.78	9.00	7.01	-13.57	-150.84	
17,260.54	90.00	0.09	7,090.00	9,237.76	672.34	0.00	0.00	0.00	0.00	COUNTYLINE 3130-C

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-03H	<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	151.45	300.00	-0.38	0.21	-0.38	2.00	2.00	0.00
400.00	3.00	151.45	399.93	-3.45	1.88	-3.45	2.00	2.00	0.00
500.00	5.00	151.45	499.68	-9.58	5.21	-9.57	2.00	2.00	0.00
600.00	7.00	151.45	599.13	-18.76	10.21	-18.74	2.00	2.00	0.00
700.00	9.00	151.45	698.15	-30.98	16.86	-30.95	2.00	2.00	0.00
800.00	11.00	151.45	796.63	-46.23	25.16	-46.19	2.00	2.00	0.00
842.00	11.84	151.45	837.80	-53.54	29.13	-53.49	2.00	2.00	0.00
End Tangent @ 842.00ft									
900.00	11.84	151.45	894.56	-63.99	34.82	-63.94	0.00	0.00	0.00
1,000.00	11.84	151.45	992.43	-82.01	44.62	-81.94	0.00	0.00	0.00
1,100.00	11.84	151.45	1,090.31	-100.04	54.43	-99.95	0.00	0.00	0.00
1,200.00	11.84	151.45	1,188.18	-118.06	64.24	-117.96	0.00	0.00	0.00
1,300.00	11.84	151.45	1,286.05	-136.08	74.04	-135.97	0.00	0.00	0.00
1,400.00	11.84	151.45	1,383.92	-154.11	83.85	-153.97	0.00	0.00	0.00
1,500.00	11.84	151.45	1,481.80	-172.13	93.65	-171.98	0.00	0.00	0.00
1,600.00	11.84	151.45	1,579.67	-190.15	103.46	-189.99	0.00	0.00	0.00
1,700.00	11.84	151.45	1,677.54	-208.18	113.27	-208.00	0.00	0.00	0.00
1,722.95	11.84	151.45	1,700.00	-212.31	115.52	-212.13	0.00	0.00	0.00
9 5/8"									
1,800.00	11.84	151.45	1,775.41	-226.20	123.07	-226.01	0.00	0.00	0.00
1,900.00	11.84	151.45	1,873.29	-244.22	132.88	-244.01	0.00	0.00	0.00
2,000.00	11.84	151.45	1,971.16	-262.24	142.68	-262.02	0.00	0.00	0.00
2,100.00	11.84	151.45	2,069.03	-280.27	152.49	-280.03	0.00	0.00	0.00
2,200.00	11.84	151.45	2,166.90	-298.29	162.30	-298.04	0.00	0.00	0.00
2,300.00	11.84	151.45	2,264.78	-316.31	172.10	-316.04	0.00	0.00	0.00
2,400.00	11.84	151.45	2,362.65	-334.34	181.91	-334.05	0.00	0.00	0.00
2,500.00	11.84	151.45	2,460.52	-352.36	191.71	-352.06	0.00	0.00	0.00
2,600.00	11.84	151.45	2,558.39	-370.38	201.52	-370.07	0.00	0.00	0.00
2,700.00	11.84	151.45	2,656.27	-388.41	211.33	-388.07	0.00	0.00	0.00
2,800.00	11.84	151.45	2,754.14	-406.43	221.13	-406.08	0.00	0.00	0.00
2,900.00	11.84	151.45	2,852.01	-424.45	230.94	-424.09	0.00	0.00	0.00
3,000.00	11.84	151.45	2,949.88	-442.47	240.74	-442.10	0.00	0.00	0.00
3,100.00	11.84	151.45	3,047.76	-460.50	250.55	-460.10	0.00	0.00	0.00
3,200.00	11.84	151.45	3,145.63	-478.52	260.36	-478.11	0.00	0.00	0.00
3,300.00	11.84	151.45	3,243.50	-496.54	270.16	-496.12	0.00	0.00	0.00
3,400.00	11.84	151.45	3,341.37	-514.57	279.97	-514.13	0.00	0.00	0.00
3,500.00	11.84	151.45	3,439.25	-532.59	289.77	-532.13	0.00	0.00	0.00
3,600.00	11.84	151.45	3,537.12	-550.61	299.58	-550.14	0.00	0.00	0.00
3,700.00	11.84	151.45	3,634.99	-568.63	309.39	-568.15	0.00	0.00	0.00
3,800.00	11.84	151.45	3,732.86	-586.66	319.19	-586.16	0.00	0.00	0.00
3,900.00	11.84	151.45	3,830.73	-604.68	329.00	-604.16	0.00	0.00	0.00
4,000.00	11.84	151.45	3,928.61	-622.70	338.80	-622.17	0.00	0.00	0.00
4,100.00	11.84	151.45	4,026.48	-640.73	348.61	-640.18	0.00	0.00	0.00
4,200.00	11.84	151.45	4,124.35	-658.75	358.42	-658.19	0.00	0.00	0.00
4,300.00	11.84	151.45	4,222.22	-676.77	368.22	-676.19	0.00	0.00	0.00
4,400.00	11.84	151.45	4,320.10	-694.80	378.03	-694.20	0.00	0.00	0.00
4,500.00	11.84	151.45	4,417.97	-712.82	387.83	-712.21	0.00	0.00	0.00
4,600.00	11.84	151.45	4,515.84	-730.84	397.64	-730.22	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

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<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-03H	<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	11.84	151.45	4,613.71	-748.86	407.45	-748.22	0.00	0.00	0.00
4,800.00	11.84	151.45	4,711.59	-766.89	417.25	-766.23	0.00	0.00	0.00
4,900.00	11.84	151.45	4,809.46	-784.91	427.06	-784.24	0.00	0.00	0.00
5,000.00	11.84	151.45	4,907.33	-802.93	436.87	-802.25	0.00	0.00	0.00
5,100.00	11.84	151.45	5,005.20	-820.96	446.67	-820.25	0.00	0.00	0.00
5,200.00	11.84	151.45	5,103.08	-838.98	456.48	-838.26	0.00	0.00	0.00
5,300.00	11.84	151.45	5,200.95	-857.00	466.28	-856.27	0.00	0.00	0.00
5,400.00	11.84	151.45	5,298.82	-875.03	476.09	-874.28	0.00	0.00	0.00
5,500.00	11.84	151.45	5,396.69	-893.05	485.90	-892.28	0.00	0.00	0.00
5,600.00	11.84	151.45	5,494.57	-911.07	495.70	-910.29	0.00	0.00	0.00
5,700.00	11.84	151.45	5,592.44	-929.09	505.51	-928.30	0.00	0.00	0.00
5,800.00	11.84	151.45	5,690.31	-947.12	515.31	-946.31	0.00	0.00	0.00
5,900.00	11.84	151.45	5,788.18	-965.14	525.12	-964.31	0.00	0.00	0.00
6,000.00	11.84	151.45	5,886.06	-983.16	534.93	-982.32	0.00	0.00	0.00
6,100.00	11.84	151.45	5,983.93	-1,001.19	544.73	-1,000.33	0.00	0.00	0.00
6,200.00	11.84	151.45	6,081.80	-1,019.21	554.54	-1,018.34	0.00	0.00	0.00
6,300.00	11.84	151.45	6,179.67	-1,037.23	564.34	-1,036.34	0.00	0.00	0.00
6,400.00	11.84	151.45	6,277.55	-1,055.26	574.15	-1,054.35	0.00	0.00	0.00
6,466.37	11.84	151.45	6,342.50	-1,067.22	580.66	-1,066.30	0.00	0.00	0.00
<b>KOP @ 6466.37ft :: DLS = 9°/100'</b>									
6,500.00	9.31	142.30	6,375.56	-1,072.40	583.97	-1,071.48	9.00	-7.51	-27.20
6,600.00	5.97	73.99	6,474.84	-1,077.38	593.94	-1,076.45	9.00	-3.34	-68.31
6,700.00	12.08	28.09	6,573.66	-1,066.69	603.89	-1,065.74	9.00	6.11	-45.91
6,800.00	20.44	15.73	6,669.60	-1,040.59	613.57	-1,039.63	9.00	8.36	-12.35
6,900.00	29.17	10.46	6,760.30	-999.73	622.75	-998.75	9.00	8.73	-5.27
7,000.00	38.02	7.48	6,843.51	-945.11	631.20	-944.12	9.00	8.85	-2.99
7,100.00	46.92	5.48	6,917.20	-878.08	638.71	-877.08	9.00	8.90	-1.99
7,200.00	55.85	4.00	6,979.55	-800.29	645.10	-799.28	9.00	8.93	-1.48
7,300.00	64.79	2.80	7,029.02	-713.65	650.21	-712.63	9.00	8.94	-1.20
7,400.00	73.74	1.77	7,064.39	-620.30	653.92	-619.27	9.00	8.95	-1.03
7,500.00	82.69	0.83	7,084.80	-522.54	656.13	-521.51	9.00	8.95	-0.94
7,581.64	90.00	0.09	7,090.00	-441.13	656.78	-440.09	9.00	8.95	-0.90
<b>End Build @ 7581.64ft</b>									
7,600.00	90.00	0.09	7,090.00	-422.76	656.81	-421.73	0.00	0.00	0.00
7,700.00	90.00	0.09	7,090.00	-322.76	656.97	-321.73	0.00	0.00	0.00
7,800.00	90.00	0.09	7,090.00	-222.76	657.13	-221.73	0.00	0.00	0.00
7,900.00	90.00	0.09	7,090.00	-122.76	657.29	-121.73	0.00	0.00	0.00
8,000.00	90.00	0.09	7,090.00	-22.76	657.45	-21.73	0.00	0.00	0.00
8,100.00	90.00	0.09	7,090.00	77.24	657.61	78.27	0.00	0.00	0.00
8,200.00	90.00	0.09	7,090.00	177.24	657.77	178.27	0.00	0.00	0.00
8,300.00	90.00	0.09	7,090.00	277.24	657.93	278.27	0.00	0.00	0.00
8,400.00	90.00	0.09	7,090.00	377.24	658.09	378.27	0.00	0.00	0.00
8,500.00	90.00	0.09	7,090.00	477.24	658.26	478.27	0.00	0.00	0.00
8,600.00	90.00	0.09	7,090.00	577.24	658.42	578.27	0.00	0.00	0.00
8,700.00	90.00	0.09	7,090.00	677.24	658.58	678.27	0.00	0.00	0.00
8,800.00	90.00	0.09	7,090.00	777.24	658.74	778.27	0.00	0.00	0.00
8,900.00	90.00	0.09	7,090.00	877.24	658.90	878.27	0.00	0.00	0.00
9,000.00	90.00	0.09	7,090.00	977.24	659.06	978.27	0.00	0.00	0.00
9,100.00	90.00	0.09	7,090.00	1,077.24	659.22	1,078.27	0.00	0.00	0.00
9,200.00	90.00	0.09	7,090.00	1,177.24	659.38	1,178.27	0.00	0.00	0.00
9,300.00	90.00	0.09	7,090.00	1,277.24	659.54	1,278.27	0.00	0.00	0.00
9,400.00	90.00	0.09	7,090.00	1,377.24	659.70	1,378.27	0.00	0.00	0.00
9,500.00	90.00	0.09	7,090.00	1,477.24	659.86	1,478.27	0.00	0.00	0.00
9,600.00	90.00	0.09	7,090.00	1,577.24	660.02	1,578.27	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 COUNTY LINE 3130-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-03H	<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)	
9,700.00	90.00	0.09	7,090.00	1,677.24	660.18	1,678.27	0.00	0.00	0.00	
9,800.00	90.00	0.09	7,090.00	1,777.24	660.35	1,778.27	0.00	0.00	0.00	
9,900.00	90.00	0.09	7,090.00	1,877.24	660.51	1,878.27	0.00	0.00	0.00	
10,000.00	90.00	0.09	7,090.00	1,977.24	660.67	1,978.27	0.00	0.00	0.00	
10,100.00	90.00	0.09	7,090.00	2,077.24	660.83	2,078.27	0.00	0.00	0.00	
10,200.00	90.00	0.09	7,090.00	2,177.24	660.99	2,178.27	0.00	0.00	0.00	
10,300.00	90.00	0.09	7,090.00	2,277.24	661.15	2,278.27	0.00	0.00	0.00	
10,400.00	90.00	0.09	7,090.00	2,377.24	661.31	2,378.27	0.00	0.00	0.00	
10,500.00	90.00	0.09	7,090.00	2,477.24	661.47	2,478.27	0.00	0.00	0.00	
10,600.00	90.00	0.09	7,090.00	2,577.23	661.63	2,578.27	0.00	0.00	0.00	
10,700.00	90.00	0.09	7,090.00	2,677.23	661.79	2,678.27	0.00	0.00	0.00	
10,800.00	90.00	0.09	7,090.00	2,777.23	661.95	2,778.27	0.00	0.00	0.00	
10,900.00	90.00	0.09	7,090.00	2,877.23	662.11	2,878.27	0.00	0.00	0.00	
11,000.00	90.00	0.09	7,090.00	2,977.23	662.28	2,978.27	0.00	0.00	0.00	
11,100.00	90.00	0.09	7,090.00	3,077.23	662.44	3,078.27	0.00	0.00	0.00	
11,200.00	90.00	0.09	7,090.00	3,177.23	662.60	3,178.27	0.00	0.00	0.00	
11,300.00	90.00	0.09	7,090.00	3,277.23	662.76	3,278.27	0.00	0.00	0.00	
11,400.00	90.00	0.09	7,090.00	3,377.23	662.92	3,378.27	0.00	0.00	0.00	
11,500.00	90.00	0.09	7,090.00	3,477.23	663.08	3,478.27	0.00	0.00	0.00	
11,600.00	90.00	0.09	7,090.00	3,577.23	663.24	3,578.27	0.00	0.00	0.00	
11,700.00	90.00	0.09	7,090.00	3,677.23	663.40	3,678.27	0.00	0.00	0.00	
11,800.00	90.00	0.09	7,090.00	3,777.23	663.56	3,778.27	0.00	0.00	0.00	
11,900.00	90.00	0.09	7,090.00	3,877.23	663.72	3,878.27	0.00	0.00	0.00	
12,000.00	90.00	0.09	7,090.00	3,977.23	663.88	3,978.27	0.00	0.00	0.00	
12,100.00	90.00	0.09	7,090.00	4,077.23	664.04	4,078.27	0.00	0.00	0.00	
12,200.00	90.00	0.09	7,090.00	4,177.23	664.20	4,178.27	0.00	0.00	0.00	
12,300.00	90.00	0.09	7,090.00	4,277.23	664.37	4,278.27	0.00	0.00	0.00	
12,400.00	90.00	0.09	7,090.00	4,377.23	664.53	4,378.27	0.00	0.00	0.00	
12,500.00	90.00	0.09	7,090.00	4,477.23	664.69	4,478.27	0.00	0.00	0.00	
12,600.00	90.00	0.09	7,090.00	4,577.23	664.85	4,578.27	0.00	0.00	0.00	
12,700.00	90.00	0.09	7,090.00	4,677.23	665.01	4,678.27	0.00	0.00	0.00	
12,800.00	90.00	0.09	7,090.00	4,777.23	665.17	4,778.27	0.00	0.00	0.00	
12,900.00	90.00	0.09	7,090.00	4,877.23	665.33	4,878.27	0.00	0.00	0.00	
13,000.00	90.00	0.09	7,090.00	4,977.23	665.49	4,978.27	0.00	0.00	0.00	
13,100.00	90.00	0.09	7,090.00	5,077.23	665.65	5,078.27	0.00	0.00	0.00	
13,200.00	90.00	0.09	7,090.00	5,177.23	665.81	5,178.27	0.00	0.00	0.00	
13,300.00	90.00	0.09	7,090.00	5,277.23	665.97	5,278.27	0.00	0.00	0.00	
13,400.00	90.00	0.09	7,090.00	5,377.23	666.13	5,378.27	0.00	0.00	0.00	
13,500.00	90.00	0.09	7,090.00	5,477.23	666.29	5,478.27	0.00	0.00	0.00	
13,600.00	90.00	0.09	7,090.00	5,577.23	666.46	5,578.27	0.00	0.00	0.00	
13,700.00	90.00	0.09	7,090.00	5,677.23	666.62	5,678.27	0.00	0.00	0.00	
13,800.00	90.00	0.09	7,090.00	5,777.23	666.78	5,778.27	0.00	0.00	0.00	
13,900.00	90.00	0.09	7,090.00	5,877.23	666.94	5,878.27	0.00	0.00	0.00	
14,000.00	90.00	0.09	7,090.00	5,977.23	667.10	5,978.27	0.00	0.00	0.00	
14,100.00	90.00	0.09	7,090.00	6,077.23	667.26	6,078.27	0.00	0.00	0.00	
14,200.00	90.00	0.09	7,090.00	6,177.23	667.42	6,178.27	0.00	0.00	0.00	
14,300.00	90.00	0.09	7,090.00	6,277.23	667.58	6,278.27	0.00	0.00	0.00	
14,400.00	90.00	0.09	7,090.00	6,377.23	667.74	6,378.27	0.00	0.00	0.00	
14,500.00	90.00	0.09	7,090.00	6,477.23	667.90	6,478.27	0.00	0.00	0.00	
14,600.00	90.00	0.09	7,090.00	6,577.23	668.06	6,578.27	0.00	0.00	0.00	
14,700.00	90.00	0.09	7,090.00	6,677.23	668.22	6,678.27	0.00	0.00	0.00	
14,800.00	90.00	0.09	7,090.00	6,777.23	668.38	6,778.27	0.00	0.00	0.00	
14,900.00	90.00	0.09	7,090.00	6,877.23	668.55	6,878.27	0.00	0.00	0.00	
15,000.00	90.00	0.09	7,090.00	6,977.23	668.71	6,978.27	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 COUNTY LINE 3130-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5048.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-03H	<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)	
15,100.00	90.00	0.09	7,090.00	7,077.23	668.87	7,078.27	0.00	0.00	0.00	
15,200.00	90.00	0.09	7,090.00	7,177.23	669.03	7,178.27	0.00	0.00	0.00	
15,300.00	90.00	0.09	7,090.00	7,277.23	669.19	7,278.27	0.00	0.00	0.00	
15,400.00	90.00	0.09	7,090.00	7,377.23	669.35	7,378.27	0.00	0.00	0.00	
15,500.00	90.00	0.09	7,090.00	7,477.23	669.51	7,478.27	0.00	0.00	0.00	
15,600.00	90.00	0.09	7,090.00	7,577.23	669.67	7,578.27	0.00	0.00	0.00	
15,700.00	90.00	0.09	7,090.00	7,677.23	669.83	7,678.27	0.00	0.00	0.00	
15,800.00	90.00	0.09	7,090.00	7,777.23	669.99	7,778.27	0.00	0.00	0.00	
15,900.00	90.00	0.09	7,090.00	7,877.23	670.15	7,878.27	0.00	0.00	0.00	
16,000.00	90.00	0.09	7,090.00	7,977.23	670.31	7,978.27	0.00	0.00	0.00	
16,100.00	90.00	0.09	7,090.00	8,077.23	670.48	8,078.27	0.00	0.00	0.00	
16,200.00	90.00	0.09	7,090.00	8,177.23	670.64	8,178.27	0.00	0.00	0.00	
16,300.00	90.00	0.09	7,090.00	8,277.23	670.80	8,278.27	0.00	0.00	0.00	
16,400.00	90.00	0.09	7,090.00	8,377.23	670.96	8,378.27	0.00	0.00	0.00	
16,500.00	90.00	0.09	7,090.00	8,477.23	671.12	8,478.27	0.00	0.00	0.00	
16,600.00	90.00	0.09	7,090.00	8,577.23	671.28	8,578.27	0.00	0.00	0.00	
16,700.00	90.00	0.09	7,090.00	8,677.23	671.44	8,678.27	0.00	0.00	0.00	
16,800.00	90.00	0.09	7,090.00	8,777.23	671.60	8,778.27	0.00	0.00	0.00	
16,900.00	90.00	0.09	7,090.00	8,877.23	671.76	8,878.27	0.00	0.00	0.00	
17,000.00	90.00	0.09	7,090.00	8,977.23	671.92	8,978.27	0.00	0.00	0.00	
17,100.00	90.00	0.09	7,090.00	9,077.23	672.08	9,078.27	0.00	0.00	0.00	
17,200.00	90.00	0.09	7,090.00	9,177.23	672.24	9,178.27	0.00	0.00	0.00	
17,260.54	90.00	0.09	7,090.00	9,237.76	672.34	9,238.81	0.00	0.00	0.00	
TD Well @ 17260.54ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,722.95	1,700.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
250.00	250.00	+N/-S (usft)	+E/-W (usft)	Begin Tangent @ 250.00ft	
842.00	837.80	-53.54	29.13	End Tangent @ 842.00ft	
6,466.37	6,342.50	-1,067.22	580.66	KOP @ 6466.37ft :: DLS = 9°/100'	
7,581.64	7,090.00	-441.13	656.78	End Build @ 7581.64ft	
17,260.54	7,090.00	9,237.76	672.34	TD Well @ 17260.54ft	