

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**COUNTY LINE 3130-01H**

**Wellbore #1**

**Plan: Design #3**

## **Standard Planning Report**

**02 June, 2020**

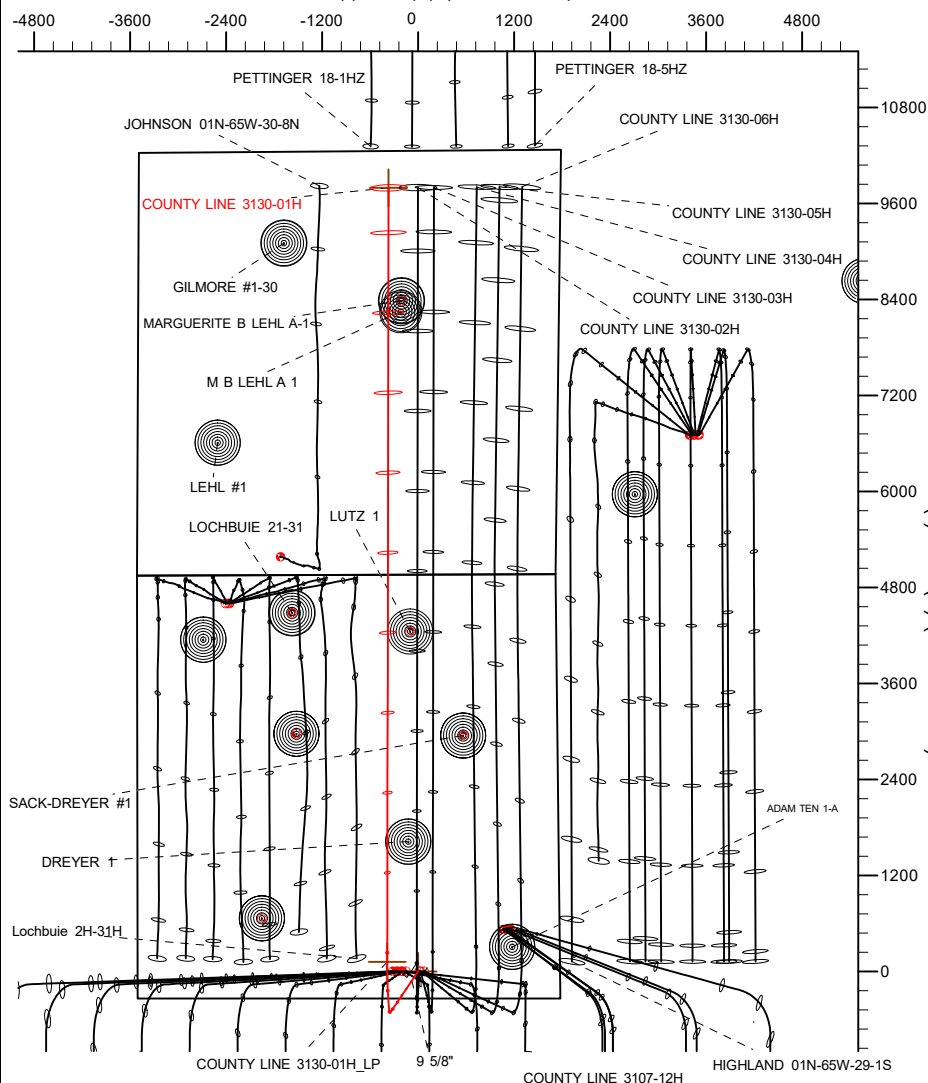
Project: WATTENBERG FIELD  
 Site: 1N-65W-31 COUNTY LINE 3130 PAD  
 Well: COUNTY LINE 3130-01H  
 Wellbore: Wellbore #1  
 Design: Design #3

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1706.85	9 5/8"	9-5/8

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



**SHL**  
 340' FSL  
 1775' FEL

**LP**  
 460' FSL  
 2159' FEL

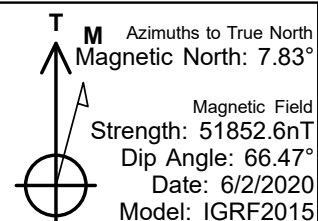
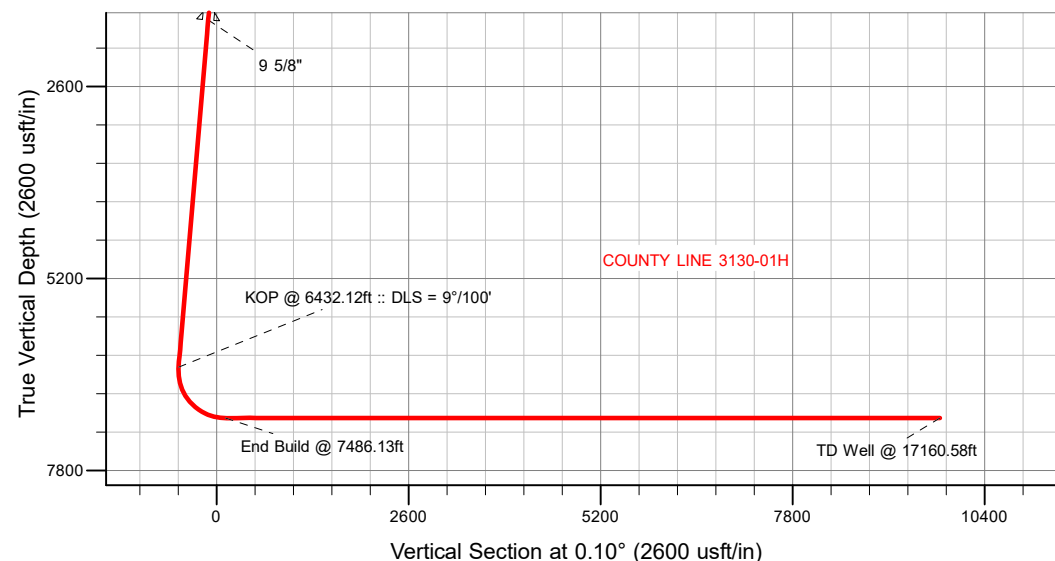
**BHL**  
 460' FNL  
 2150' FEL

## 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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	493.00	5.86	214.01	492.49	-12.41	-8.37	2.00	214.01	-12.42	
4	6432.12	5.86	214.01	6400.57	-515.06	-347.54	0.00	0.00	-515.66	
5	7486.13	90.00	0.10	7090.00	119.34	-385.96	9.00	145.95	118.67	
6	17160.58	90.00	0.10	7090.00	9793.78	-369.73	0.00	0.00	9793.12	COUNTY LINE 3130-01H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3130-01H_SHL	0.00	0.00	0.00	40.001457	-104.703611
COUNTY LINE 3130-01H_BHL	7090.00	9793.78	-369.73	40.028343	-104.704931



## WELL DETAILS: COUNTY LINE 3130-01H

GL = 5045'
RKB = 24' @ 5069.00usft (RIG)
Plan: Design #3 (COUNTY LINE 3130-01H/Wellbore #1)
Created By: Clinton Eshelman Date: 6/02/2020

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-01H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3		

<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>Well</b>	COUNTY LINE 3130-01H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,244,379.39 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,223,103.62 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		0.51 °	<b>Ground Level:</b>	5,045.00 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	6/2/2020	7.83	66.47	51,852.63500721

<b>Design</b>	Design #3				
<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	0.10

<b>Plan Survey Tool Program</b>		<b>Date</b>	6/2/2020		
<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 #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	
2	1,700.00	17,160.58	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

HP  
Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3130-01H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3130 PAD	North Reference:	True
Well:	COUNTY LINE 3130-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
493.00	5.86	214.01	492.49	-12.41	-8.37	2.00	2.00	0.00	214.01	
6,432.12	5.86	214.01	6,400.57	-515.06	-347.54	0.00	0.00	0.00	0.00	
7,486.13	90.00	0.10	7,090.00	119.34	-385.96	9.00	7.98	13.86	145.95	
17,160.58	90.00	0.10	7,090.00	9,793.78	-369.73	0.00	0.00	0.00	0.00	COUNTY LINE 3130-

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-01H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3		

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
Begin Nudge @ 200.00ft									
300.00	2.00	214.01	299.98	-1.45	-0.98	-1.45	2.00	2.00	0.00
400.00	4.00	214.01	399.84	-5.78	-3.90	-5.79	2.00	2.00	0.00
493.00	5.86	214.01	492.49	-12.41	-8.37	-12.42	2.00	2.00	0.00
Hold Tangent @ 493.00ft									
500.00	5.86	214.01	499.45	-13.00	-8.77	-13.02	0.00	0.00	0.00
600.00	5.86	214.01	598.93	-21.47	-14.48	-21.49	0.00	0.00	0.00
700.00	5.86	214.01	698.41	-29.93	-20.19	-29.96	0.00	0.00	0.00
800.00	5.86	214.01	797.89	-38.39	-25.91	-38.44	0.00	0.00	0.00
900.00	5.86	214.01	897.36	-46.86	-31.62	-46.91	0.00	0.00	0.00
1,000.00	5.86	214.01	996.84	-55.32	-37.33	-55.38	0.00	0.00	0.00
1,100.00	5.86	214.01	1,096.32	-63.78	-43.04	-63.86	0.00	0.00	0.00
1,200.00	5.86	214.01	1,195.79	-72.25	-48.75	-72.33	0.00	0.00	0.00
1,300.00	5.86	214.01	1,295.27	-80.71	-54.46	-80.80	0.00	0.00	0.00
1,400.00	5.86	214.01	1,394.75	-89.17	-60.17	-89.28	0.00	0.00	0.00
1,500.00	5.86	214.01	1,494.23	-97.64	-65.88	-97.75	0.00	0.00	0.00
1,600.00	5.86	214.01	1,593.70	-106.10	-71.59	-106.22	0.00	0.00	0.00
1,700.00	5.86	214.01	1,693.18	-114.56	-77.30	-114.70	0.00	0.00	0.00
1,706.85	5.86	214.01	1,700.00	-115.14	-77.69	-115.28	0.00	0.00	0.00
9 5/8"									
1,800.00	5.86	214.01	1,792.66	-123.03	-83.01	-123.17	0.00	0.00	0.00
1,900.00	5.86	214.01	1,892.14	-131.49	-88.72	-131.64	0.00	0.00	0.00
2,000.00	5.86	214.01	1,991.61	-139.95	-94.43	-140.12	0.00	0.00	0.00
2,100.00	5.86	214.01	2,091.09	-148.42	-100.14	-148.59	0.00	0.00	0.00
2,200.00	5.86	214.01	2,190.57	-156.88	-105.86	-157.06	0.00	0.00	0.00
2,300.00	5.86	214.01	2,290.05	-165.34	-111.57	-165.54	0.00	0.00	0.00
2,400.00	5.86	214.01	2,389.52	-173.81	-117.28	-174.01	0.00	0.00	0.00
2,500.00	5.86	214.01	2,489.00	-182.27	-122.99	-182.48	0.00	0.00	0.00
2,600.00	5.86	214.01	2,588.48	-190.73	-128.70	-190.96	0.00	0.00	0.00
2,700.00	5.86	214.01	2,687.96	-199.20	-134.41	-199.43	0.00	0.00	0.00
2,800.00	5.86	214.01	2,787.43	-207.66	-140.12	-207.90	0.00	0.00	0.00
2,900.00	5.86	214.01	2,886.91	-216.12	-145.83	-216.38	0.00	0.00	0.00
3,000.00	5.86	214.01	2,986.39	-224.58	-151.54	-224.85	0.00	0.00	0.00
3,100.00	5.86	214.01	3,085.87	-233.05	-157.25	-233.32	0.00	0.00	0.00
3,200.00	5.86	214.01	3,185.34	-241.51	-162.96	-241.80	0.00	0.00	0.00
3,300.00	5.86	214.01	3,284.82	-249.97	-168.67	-250.27	0.00	0.00	0.00
3,400.00	5.86	214.01	3,384.30	-258.44	-174.38	-258.74	0.00	0.00	0.00
3,500.00	5.86	214.01	3,483.78	-266.90	-180.10	-267.22	0.00	0.00	0.00
3,600.00	5.86	214.01	3,583.25	-275.36	-185.81	-275.69	0.00	0.00	0.00
3,700.00	5.86	214.01	3,682.73	-283.83	-191.52	-284.16	0.00	0.00	0.00
3,800.00	5.86	214.01	3,782.21	-292.29	-197.23	-292.64	0.00	0.00	0.00
3,900.00	5.86	214.01	3,881.69	-300.75	-202.94	-301.11	0.00	0.00	0.00
4,000.00	5.86	214.01	3,981.16	-309.22	-208.65	-309.58	0.00	0.00	0.00
4,100.00	5.86	214.01	4,080.64	-317.68	-214.36	-318.06	0.00	0.00	0.00
4,200.00	5.86	214.01	4,180.12	-326.14	-220.07	-326.53	0.00	0.00	0.00
4,300.00	5.86	214.01	4,279.60	-334.61	-225.78	-335.00	0.00	0.00	0.00
4,400.00	5.86	214.01	4,379.07	-343.07	-231.49	-343.47	0.00	0.00	0.00
4,500.00	5.86	214.01	4,478.55	-351.53	-237.20	-351.95	0.00	0.00	0.00
4,600.00	5.86	214.01	4,578.03	-360.00	-242.91	-360.42	0.00	0.00	0.00
4,700.00	5.86	214.01	4,677.51	-368.46	-248.62	-368.89	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-01H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3		

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)
4,800.00	5.86	214.01	4,776.98	-376.92	-254.33	-377.37	0.00	0.00	0.00
4,900.00	5.86	214.01	4,876.46	-385.39	-260.05	-385.84	0.00	0.00	0.00
5,000.00	5.86	214.01	4,975.94	-393.85	-265.76	-394.31	0.00	0.00	0.00
5,100.00	5.86	214.01	5,075.41	-402.31	-271.47	-402.79	0.00	0.00	0.00
5,200.00	5.86	214.01	5,174.89	-410.78	-277.18	-411.26	0.00	0.00	0.00
5,300.00	5.86	214.01	5,274.37	-419.24	-282.89	-419.73	0.00	0.00	0.00
5,400.00	5.86	214.01	5,373.85	-427.70	-288.60	-428.21	0.00	0.00	0.00
5,500.00	5.86	214.01	5,473.32	-436.17	-294.31	-436.68	0.00	0.00	0.00
5,600.00	5.86	214.01	5,572.80	-444.63	-300.02	-445.15	0.00	0.00	0.00
5,700.00	5.86	214.01	5,672.28	-453.09	-305.73	-453.63	0.00	0.00	0.00
5,800.00	5.86	214.01	5,771.76	-461.56	-311.44	-462.10	0.00	0.00	0.00
5,900.00	5.86	214.01	5,871.23	-470.02	-317.15	-470.57	0.00	0.00	0.00
6,000.00	5.86	214.01	5,970.71	-478.48	-322.86	-479.05	0.00	0.00	0.00
6,100.00	5.86	214.01	6,070.19	-486.95	-328.57	-487.52	0.00	0.00	0.00
6,200.00	5.86	214.01	6,169.67	-495.41	-334.28	-495.99	0.00	0.00	0.00
6,300.00	5.86	214.01	6,269.14	-503.87	-340.00	-504.47	0.00	0.00	0.00
6,400.00	5.86	214.01	6,368.62	-512.34	-345.71	-512.94	0.00	0.00	0.00
6,432.12	5.86	214.01	6,400.57	-515.06	-347.54	-515.66	0.00	0.00	0.00
KOP @ 6432.12ft :: DLS = 9°/100'									
6,500.00	3.51	290.97	6,468.28	-517.19	-351.42	-517.80	9.00	-3.47	113.37
6,600.00	10.75	342.55	6,567.51	-507.17	-357.09	-507.79	9.00	7.25	51.58
6,700.00	19.52	350.80	6,663.96	-481.73	-362.57	-482.36	9.00	8.76	8.25
6,800.00	28.42	354.02	6,755.25	-441.49	-367.73	-442.13	9.00	8.91	3.22
6,900.00	37.37	355.80	6,839.13	-387.44	-372.44	-388.09	9.00	8.95	1.77
7,000.00	46.34	356.96	6,913.54	-320.92	-376.59	-321.57	9.00	8.97	1.17
7,100.00	55.31	357.82	6,976.64	-243.55	-380.07	-244.22	9.00	8.98	0.86
7,200.00	64.29	358.52	7,026.88	-157.25	-382.81	-157.92	9.00	8.98	0.69
7,300.00	73.28	359.11	7,063.03	-64.15	-384.72	-64.82	9.00	8.98	0.59
7,400.00	82.26	359.65	7,084.20	33.48	-385.77	32.80	9.00	8.98	0.54
7,486.13	90.00	0.10	7,090.00	119.34	-385.96	118.67	9.00	8.99	0.52
End Build @ 7486.13ft									
7,500.00	90.00	0.10	7,090.00	133.21	-385.93	132.54	0.00	0.00	0.00
7,600.00	90.00	0.10	7,090.00	233.21	-385.77	232.54	0.00	0.00	0.00
7,700.00	90.00	0.10	7,090.00	333.21	-385.60	332.54	0.00	0.00	0.00
7,800.00	90.00	0.10	7,090.00	433.21	-385.43	432.54	0.00	0.00	0.00
7,900.00	90.00	0.10	7,090.00	533.21	-385.26	532.54	0.00	0.00	0.00
8,000.00	90.00	0.10	7,090.00	633.21	-385.09	632.54	0.00	0.00	0.00
8,100.00	90.00	0.10	7,090.00	733.21	-384.93	732.54	0.00	0.00	0.00
8,200.00	90.00	0.10	7,090.00	833.21	-384.76	832.54	0.00	0.00	0.00
8,300.00	90.00	0.10	7,090.00	933.21	-384.59	932.54	0.00	0.00	0.00
8,400.00	90.00	0.10	7,090.00	1,033.21	-384.42	1,032.54	0.00	0.00	0.00
8,500.00	90.00	0.10	7,090.00	1,133.21	-384.26	1,132.54	0.00	0.00	0.00
8,600.00	90.00	0.10	7,090.00	1,233.21	-384.09	1,232.54	0.00	0.00	0.00
8,700.00	90.00	0.10	7,090.00	1,333.21	-383.92	1,332.54	0.00	0.00	0.00
8,800.00	90.00	0.10	7,090.00	1,433.21	-383.75	1,432.54	0.00	0.00	0.00
8,900.00	90.00	0.10	7,090.00	1,533.21	-383.59	1,532.54	0.00	0.00	0.00
9,000.00	90.00	0.10	7,090.00	1,633.21	-383.42	1,632.54	0.00	0.00	0.00
9,100.00	90.00	0.10	7,090.00	1,733.21	-383.25	1,732.54	0.00	0.00	0.00
9,200.00	90.00	0.10	7,090.00	1,833.21	-383.08	1,832.54	0.00	0.00	0.00
9,300.00	90.00	0.10	7,090.00	1,933.21	-382.91	1,932.54	0.00	0.00	0.00
9,400.00	90.00	0.10	7,090.00	2,033.21	-382.75	2,032.54	0.00	0.00	0.00
9,500.00	90.00	0.10	7,090.00	2,133.21	-382.58	2,132.54	0.00	0.00	0.00
9,600.00	90.00	0.10	7,090.00	2,233.21	-382.41	2,232.54	0.00	0.00	0.00
9,700.00	90.00	0.10	7,090.00	2,333.21	-382.24	2,332.54	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-01H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3		

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)	
9,800.00	90.00	0.10	7,090.00	2,433.21	-382.08	2,432.54	0.00	0.00	0.00	
9,900.00	90.00	0.10	7,090.00	2,533.21	-381.91	2,532.54	0.00	0.00	0.00	
10,000.00	90.00	0.10	7,090.00	2,633.21	-381.74	2,632.54	0.00	0.00	0.00	
10,100.00	90.00	0.10	7,090.00	2,733.21	-381.57	2,732.54	0.00	0.00	0.00	
10,200.00	90.00	0.10	7,090.00	2,833.21	-381.41	2,832.54	0.00	0.00	0.00	
10,300.00	90.00	0.10	7,090.00	2,933.21	-381.24	2,932.54	0.00	0.00	0.00	
10,400.00	90.00	0.10	7,090.00	3,033.21	-381.07	3,032.54	0.00	0.00	0.00	
10,500.00	90.00	0.10	7,090.00	3,133.21	-380.90	3,132.54	0.00	0.00	0.00	
10,600.00	90.00	0.10	7,090.00	3,233.21	-380.73	3,232.54	0.00	0.00	0.00	
10,700.00	90.00	0.10	7,090.00	3,333.21	-380.57	3,332.54	0.00	0.00	0.00	
10,800.00	90.00	0.10	7,090.00	3,433.21	-380.40	3,432.54	0.00	0.00	0.00	
10,900.00	90.00	0.10	7,090.00	3,533.21	-380.23	3,532.54	0.00	0.00	0.00	
11,000.00	90.00	0.10	7,090.00	3,633.21	-380.06	3,632.54	0.00	0.00	0.00	
11,100.00	90.00	0.10	7,090.00	3,733.21	-379.90	3,732.54	0.00	0.00	0.00	
11,200.00	90.00	0.10	7,090.00	3,833.21	-379.73	3,832.54	0.00	0.00	0.00	
11,300.00	90.00	0.10	7,090.00	3,933.21	-379.56	3,932.54	0.00	0.00	0.00	
11,400.00	90.00	0.10	7,090.00	4,033.21	-379.39	4,032.54	0.00	0.00	0.00	
11,500.00	90.00	0.10	7,090.00	4,133.21	-379.23	4,132.54	0.00	0.00	0.00	
11,600.00	90.00	0.10	7,090.00	4,233.21	-379.06	4,232.54	0.00	0.00	0.00	
11,700.00	90.00	0.10	7,090.00	4,333.21	-378.89	4,332.54	0.00	0.00	0.00	
11,800.00	90.00	0.10	7,090.00	4,433.21	-378.72	4,432.54	0.00	0.00	0.00	
11,900.00	90.00	0.10	7,090.00	4,533.21	-378.55	4,532.54	0.00	0.00	0.00	
12,000.00	90.00	0.10	7,090.00	4,633.21	-378.39	4,632.54	0.00	0.00	0.00	
12,100.00	90.00	0.10	7,090.00	4,733.21	-378.22	4,732.54	0.00	0.00	0.00	
12,200.00	90.00	0.10	7,090.00	4,833.21	-378.05	4,832.54	0.00	0.00	0.00	
12,300.00	90.00	0.10	7,090.00	4,933.21	-377.88	4,932.54	0.00	0.00	0.00	
12,400.00	90.00	0.10	7,090.00	5,033.21	-377.72	5,032.54	0.00	0.00	0.00	
12,500.00	90.00	0.10	7,090.00	5,133.21	-377.55	5,132.54	0.00	0.00	0.00	
12,600.00	90.00	0.10	7,090.00	5,233.21	-377.38	5,232.54	0.00	0.00	0.00	
12,700.00	90.00	0.10	7,090.00	5,333.21	-377.21	5,332.54	0.00	0.00	0.00	
12,800.00	90.00	0.10	7,090.00	5,433.21	-377.05	5,432.54	0.00	0.00	0.00	
12,900.00	90.00	0.10	7,090.00	5,533.21	-376.88	5,532.54	0.00	0.00	0.00	
13,000.00	90.00	0.10	7,090.00	5,633.21	-376.71	5,632.54	0.00	0.00	0.00	
13,100.00	90.00	0.10	7,090.00	5,733.21	-376.54	5,732.54	0.00	0.00	0.00	
13,200.00	90.00	0.10	7,090.00	5,833.21	-376.37	5,832.54	0.00	0.00	0.00	
13,300.00	90.00	0.10	7,090.00	5,933.21	-376.21	5,932.54	0.00	0.00	0.00	
13,400.00	90.00	0.10	7,090.00	6,033.21	-376.04	6,032.54	0.00	0.00	0.00	
13,500.00	90.00	0.10	7,090.00	6,133.21	-375.87	6,132.54	0.00	0.00	0.00	
13,600.00	90.00	0.10	7,090.00	6,233.21	-375.70	6,232.54	0.00	0.00	0.00	
13,700.00	90.00	0.10	7,090.00	6,333.21	-375.54	6,332.54	0.00	0.00	0.00	
13,800.00	90.00	0.10	7,090.00	6,433.21	-375.37	6,432.54	0.00	0.00	0.00	
13,900.00	90.00	0.10	7,090.00	6,533.21	-375.20	6,532.54	0.00	0.00	0.00	
14,000.00	90.00	0.10	7,090.00	6,633.21	-375.03	6,632.54	0.00	0.00	0.00	
14,100.00	90.00	0.10	7,090.00	6,733.21	-374.87	6,732.54	0.00	0.00	0.00	
14,200.00	90.00	0.10	7,090.00	6,833.21	-374.70	6,832.54	0.00	0.00	0.00	
14,300.00	90.00	0.10	7,090.00	6,933.21	-374.53	6,932.54	0.00	0.00	0.00	
14,400.00	90.00	0.10	7,090.00	7,033.21	-374.36	7,032.54	0.00	0.00	0.00	
14,500.00	90.00	0.10	7,090.00	7,133.21	-374.19	7,132.54	0.00	0.00	0.00	
14,600.00	90.00	0.10	7,090.00	7,233.21	-374.03	7,232.54	0.00	0.00	0.00	
14,700.00	90.00	0.10	7,090.00	7,333.20	-373.86	7,332.54	0.00	0.00	0.00	
14,800.00	90.00	0.10	7,090.00	7,433.20	-373.69	7,432.54	0.00	0.00	0.00	
14,900.00	90.00	0.10	7,090.00	7,533.20	-373.52	7,532.54	0.00	0.00	0.00	
15,000.00	90.00	0.10	7,090.00	7,633.20	-373.36	7,632.54	0.00	0.00	0.00	
15,100.00	90.00	0.10	7,090.00	7,733.20	-373.19	7,732.54	0.00	0.00	0.00	

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3130-01H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3130 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3130-01H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3		

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)	
15,200.00	90.00	0.10	7,090.00	7,833.20	-373.02	7,832.54	0.00	0.00	0.00	
15,300.00	90.00	0.10	7,090.00	7,933.20	-372.85	7,932.54	0.00	0.00	0.00	
15,400.00	90.00	0.10	7,090.00	8,033.20	-372.69	8,032.54	0.00	0.00	0.00	
15,500.00	90.00	0.10	7,090.00	8,133.20	-372.52	8,132.54	0.00	0.00	0.00	
15,600.00	90.00	0.10	7,090.00	8,233.20	-372.35	8,232.54	0.00	0.00	0.00	
15,700.00	90.00	0.10	7,090.00	8,333.20	-372.18	8,332.54	0.00	0.00	0.00	
15,800.00	90.00	0.10	7,090.00	8,433.20	-372.01	8,432.54	0.00	0.00	0.00	
15,900.00	90.00	0.10	7,090.00	8,533.20	-371.85	8,532.54	0.00	0.00	0.00	
16,000.00	90.00	0.10	7,090.00	8,633.20	-371.68	8,632.54	0.00	0.00	0.00	
16,100.00	90.00	0.10	7,090.00	8,733.20	-371.51	8,732.54	0.00	0.00	0.00	
16,200.00	90.00	0.10	7,090.00	8,833.20	-371.34	8,832.54	0.00	0.00	0.00	
16,300.00	90.00	0.10	7,090.00	8,933.20	-371.18	8,932.54	0.00	0.00	0.00	
16,400.00	90.00	0.10	7,090.00	9,033.20	-371.01	9,032.54	0.00	0.00	0.00	
16,500.00	90.00	0.10	7,090.00	9,133.20	-370.84	9,132.54	0.00	0.00	0.00	
16,600.00	90.00	0.10	7,090.00	9,233.20	-370.67	9,232.54	0.00	0.00	0.00	
16,700.00	90.00	0.10	7,090.00	9,333.20	-370.51	9,332.54	0.00	0.00	0.00	
16,800.00	90.00	0.10	7,090.00	9,433.20	-370.34	9,432.54	0.00	0.00	0.00	
16,900.00	90.00	0.10	7,090.00	9,533.20	-370.17	9,532.54	0.00	0.00	0.00	
17,000.00	90.00	0.10	7,090.00	9,633.20	-370.00	9,632.54	0.00	0.00	0.00	
17,100.00	90.00	0.10	7,090.00	9,733.20	-369.83	9,732.54	0.00	0.00	0.00	
17,160.58	90.00	0.10	7,090.00	9,793.78	-369.73	9,793.12	0.00	0.00	0.00	
TD Well @ 17160.58ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,706.85	1,700.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft	
493.00	492.49	-12.41	-8.37	Hold Tangent @ 493.00ft	
6,432.12	6,400.57	-515.06	-347.54	KOP @ 6432.12ft :: DLS = 9°/100'	
7,486.13	7,090.00	119.34	-385.96	End Build @ 7486.13ft	
17,160.58	7,090.00	9,793.78	-369.73	TD Well @ 17160.58ft	