

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-65W-31 COUNTY LINE 3107 PAD**

**COUNTY LINE 3107-10H**

**Wellbore #1**

**Plan: Design #3**

## **Standard Planning Report**

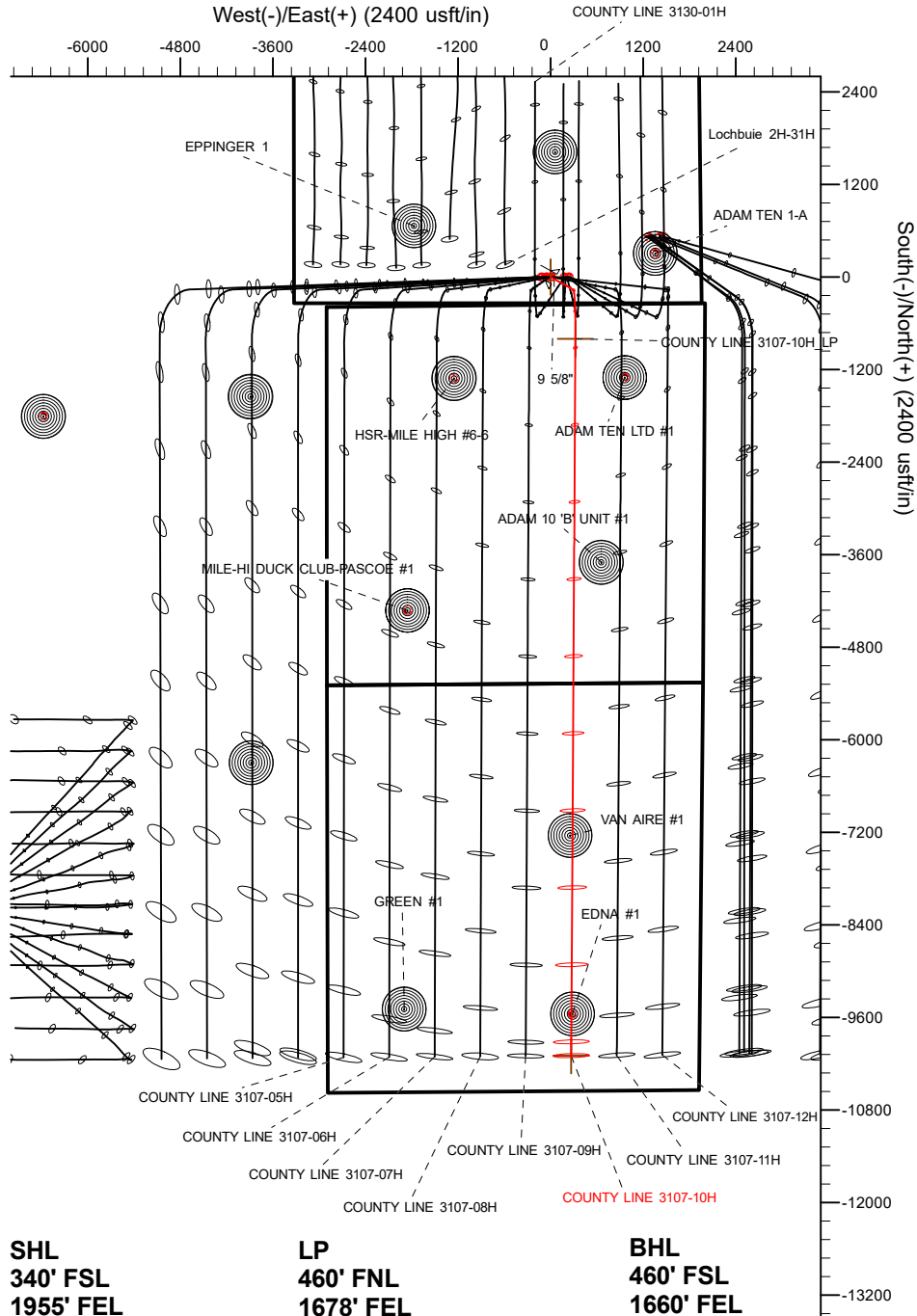
**02 June, 2020**

Project: WATTENBERG FIELD  
Site: 1N-65W-31 COUNTY LINE 3107 PAD  
Well: COUNTY LINE 3107-10H  
Wellbore: Wellbore #1  
Design: Design #3

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1701.54	9 5/8"	9-5/8

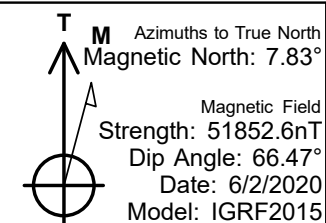
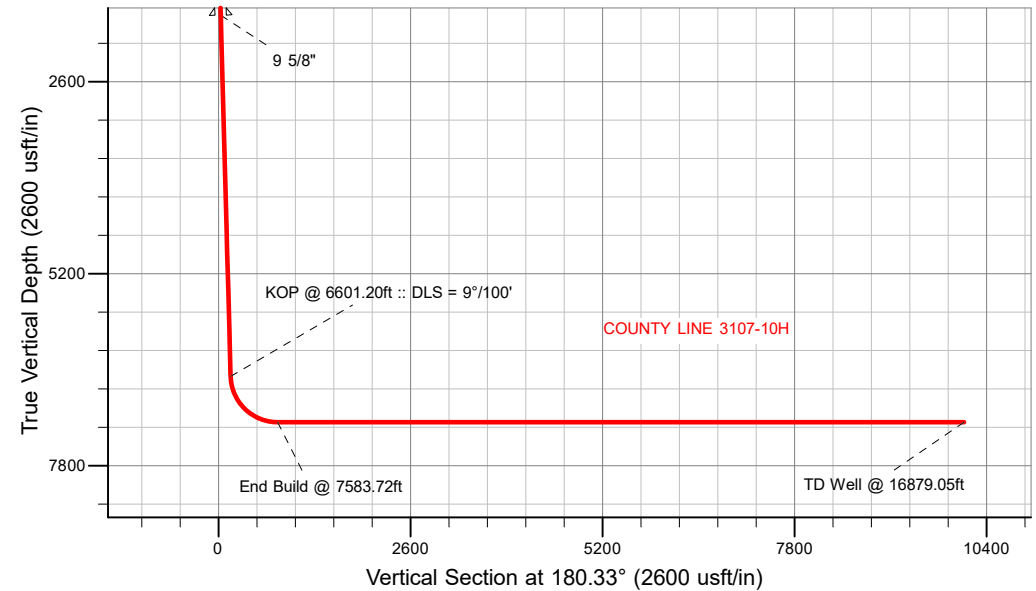


## SECTION DETAILS

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	650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	
3	814.00	3.28	119.00	813.91	-2.28	4.10	2.00	119.00	2.25	
4	6601.20	3.28	119.00	6591.63	-162.80	293.71	0.00	0.00	161.11	
5	7583.72	90.00	180.33	7210.00	-799.35	321.09	9.00	61.37	797.49	
6	16879.05	90.00	180.33	7210.00	-10094.52	266.86	0.00	0.00	10092.81	COUNTY LINE 3107-10H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3107-10H_SHL	0.00	0.00	0.00	40.001456	-104.704254
COUNTY LINE 3107-10H_BHL	7210.00	-10094.52	266.86	39.973745	-104.703302



## WELL DETAILS: COUNTY LINE 3107-10H

GL = 5042'
RKB = 24' @ 5066.00usft (RIG)
Plan: Design #3 (COUNTY LINE 3107-10H/Wellbore #1)
Created By: Clinton Eshelman Date: 6/03/2020

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<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 3107 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,244,335.38 usft	<b>Latitude:</b> 40.001349
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,222,602.81 usft	<b>Longitude:</b> -104.705400
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	

<b>Well</b>	COUNTY LINE 3107-10H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,244,377.59 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,222,923.38 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		0.51 °	<b>Ground Level:</b>	5,042.00 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	51,852.59160770

<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	180.33

<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	16,879.05	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

HP  
Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
814.00	3.28	119.00	813.91	-2.28	4.10	2.00	2.00	0.00	119.00	
6,601.20	3.28	119.00	6,591.63	-162.80	293.71	0.00	0.00	0.00	0.00	
7,583.72	90.00	180.33	7,210.00	-799.35	321.09	9.00	8.83	6.24	61.37	
16,879.05	90.00	180.33	7,210.00	-10,094.52	266.86	0.00	0.00	0.00	0.00	COUNTY LINE 3107-

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 650.00ft									
700.00	1.00	119.00	700.00	-0.21	0.38	0.21	2.00	2.00	0.00
800.00	3.00	119.00	799.93	-1.90	3.43	1.88	2.00	2.00	0.00
814.00	3.28	119.00	813.91	-2.28	4.10	2.25	2.00	2.00	0.00
Hold Tangent @ 814.00ft									
900.00	3.28	119.00	899.77	-4.66	8.41	4.61	0.00	0.00	0.00
1,000.00	3.28	119.00	999.61	-7.43	13.41	7.36	0.00	0.00	0.00
1,100.00	3.28	119.00	1,099.44	-10.21	18.42	10.10	0.00	0.00	0.00
1,200.00	3.28	119.00	1,199.28	-12.98	23.42	12.85	0.00	0.00	0.00
1,300.00	3.28	119.00	1,299.11	-15.76	28.42	15.59	0.00	0.00	0.00
1,400.00	3.28	119.00	1,398.95	-18.53	33.43	18.34	0.00	0.00	0.00
1,500.00	3.28	119.00	1,498.79	-21.30	38.43	21.08	0.00	0.00	0.00
1,600.00	3.28	119.00	1,598.62	-24.08	43.44	23.83	0.00	0.00	0.00
1,700.00	3.28	119.00	1,698.46	-26.85	48.44	26.57	0.00	0.00	0.00
1,701.54	3.28	119.00	1,700.00	-26.89	48.52	26.61	0.00	0.00	0.00
9 5/8"									
1,800.00	3.28	119.00	1,798.30	-29.63	53.45	29.32	0.00	0.00	0.00
1,900.00	3.28	119.00	1,898.13	-32.40	58.45	32.06	0.00	0.00	0.00
2,000.00	3.28	119.00	1,997.97	-35.17	63.45	34.81	0.00	0.00	0.00
2,100.00	3.28	119.00	2,097.80	-37.95	68.46	37.55	0.00	0.00	0.00
2,200.00	3.28	119.00	2,197.64	-40.72	73.46	40.30	0.00	0.00	0.00
2,300.00	3.28	119.00	2,297.48	-43.49	78.47	43.04	0.00	0.00	0.00
2,400.00	3.28	119.00	2,397.31	-46.27	83.47	45.79	0.00	0.00	0.00
2,500.00	3.28	119.00	2,497.15	-49.04	88.48	48.53	0.00	0.00	0.00
2,600.00	3.28	119.00	2,596.98	-51.82	93.48	51.28	0.00	0.00	0.00
2,700.00	3.28	119.00	2,696.82	-54.59	98.48	54.02	0.00	0.00	0.00
2,800.00	3.28	119.00	2,796.66	-57.36	103.49	56.77	0.00	0.00	0.00
2,900.00	3.28	119.00	2,896.49	-60.14	108.49	59.51	0.00	0.00	0.00
3,000.00	3.28	119.00	2,996.33	-62.91	113.50	62.26	0.00	0.00	0.00
3,100.00	3.28	119.00	3,096.17	-65.69	118.50	65.00	0.00	0.00	0.00
3,200.00	3.28	119.00	3,196.00	-68.46	123.50	67.75	0.00	0.00	0.00
3,300.00	3.28	119.00	3,295.84	-71.23	128.51	70.49	0.00	0.00	0.00
3,400.00	3.28	119.00	3,395.67	-74.01	133.51	73.24	0.00	0.00	0.00
3,500.00	3.28	119.00	3,495.51	-76.78	138.52	75.98	0.00	0.00	0.00
3,600.00	3.28	119.00	3,595.35	-79.56	143.52	78.73	0.00	0.00	0.00
3,700.00	3.28	119.00	3,695.18	-82.33	148.53	81.47	0.00	0.00	0.00
3,800.00	3.28	119.00	3,795.02	-85.10	153.53	84.22	0.00	0.00	0.00
3,900.00	3.28	119.00	3,894.86	-87.88	158.53	86.96	0.00	0.00	0.00
4,000.00	3.28	119.00	3,994.69	-90.65	163.54	89.71	0.00	0.00	0.00
4,100.00	3.28	119.00	4,094.53	-93.42	168.54	92.45	0.00	0.00	0.00
4,200.00	3.28	119.00	4,194.36	-96.20	173.55	95.20	0.00	0.00	0.00
4,300.00	3.28	119.00	4,294.20	-98.97	178.55	97.94	0.00	0.00	0.00
4,400.00	3.28	119.00	4,394.04	-101.75	183.55	100.69	0.00	0.00	0.00
4,500.00	3.28	119.00	4,493.87	-104.52	188.56	103.43	0.00	0.00	0.00
4,600.00	3.28	119.00	4,593.71	-107.29	193.56	106.18	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 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<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)
4,700.00	3.28	119.00	4,693.54	-110.07	198.57	108.92	0.00	0.00	0.00
4,800.00	3.28	119.00	4,793.38	-112.84	203.57	111.67	0.00	0.00	0.00
4,900.00	3.28	119.00	4,893.22	-115.62	208.58	114.41	0.00	0.00	0.00
5,000.00	3.28	119.00	4,993.05	-118.39	213.58	117.16	0.00	0.00	0.00
5,100.00	3.28	119.00	5,092.89	-121.16	218.58	119.90	0.00	0.00	0.00
5,200.00	3.28	119.00	5,192.73	-123.94	223.59	122.65	0.00	0.00	0.00
5,300.00	3.28	119.00	5,292.56	-126.71	228.59	125.39	0.00	0.00	0.00
5,400.00	3.28	119.00	5,392.40	-129.48	233.60	128.14	0.00	0.00	0.00
5,500.00	3.28	119.00	5,492.23	-132.26	238.60	130.88	0.00	0.00	0.00
5,600.00	3.28	119.00	5,592.07	-135.03	243.60	133.63	0.00	0.00	0.00
5,700.00	3.28	119.00	5,691.91	-137.81	248.61	136.37	0.00	0.00	0.00
5,800.00	3.28	119.00	5,791.74	-140.58	253.61	139.12	0.00	0.00	0.00
5,900.00	3.28	119.00	5,891.58	-143.35	258.62	141.86	0.00	0.00	0.00
6,000.00	3.28	119.00	5,991.42	-146.13	263.62	144.61	0.00	0.00	0.00
6,100.00	3.28	119.00	6,091.25	-148.90	268.63	147.35	0.00	0.00	0.00
6,200.00	3.28	119.00	6,191.09	-151.68	273.63	150.10	0.00	0.00	0.00
6,300.00	3.28	119.00	6,290.92	-154.45	278.63	152.84	0.00	0.00	0.00
6,400.00	3.28	119.00	6,390.76	-157.22	283.64	155.59	0.00	0.00	0.00
6,500.00	3.28	119.00	6,490.60	-160.00	288.64	158.33	0.00	0.00	0.00
6,600.00	3.28	119.00	6,590.43	-162.77	293.65	161.08	0.00	0.00	0.00
6,601.20	3.28	119.00	6,591.63	-162.80	293.71	161.11	0.00	0.00	0.00
<b>KOP @ 6601.20ft :: DLS = 9°/100'</b>									
6,700.00	10.85	165.12	6,689.66	-173.18	298.58	171.46	9.00	7.66	46.68
6,800.00	19.67	172.25	6,786.05	-199.01	303.27	197.26	9.00	8.82	7.12
6,900.00	28.60	175.04	6,877.22	-239.61	307.62	237.83	9.00	8.93	2.80
7,000.00	37.56	176.58	6,960.93	-293.99	311.51	292.19	9.00	8.96	1.54
7,100.00	46.53	177.60	7,035.12	-360.81	314.85	358.99	9.00	8.97	1.02
7,200.00	55.51	178.35	7,097.95	-438.42	317.56	436.58	9.00	8.98	0.75
7,300.00	64.50	178.96	7,147.89	-524.92	319.57	523.07	9.00	8.98	0.61
7,400.00	73.49	179.48	7,183.70	-618.16	320.82	616.31	9.00	8.99	0.52
7,500.00	82.47	179.95	7,204.51	-715.87	321.30	714.01	9.00	8.99	0.47
7,583.72	90.00	180.33	7,210.00	-799.35	321.09	797.49	9.00	8.99	0.45
<b>End Build @ 7583.72ft</b>									
7,600.00	90.00	180.33	7,210.00	-815.63	320.99	813.77	0.00	0.00	0.00
7,700.00	90.00	180.33	7,210.00	-915.63	320.41	913.77	0.00	0.00	0.00
7,800.00	90.00	180.33	7,210.00	-1,015.63	319.83	1,013.77	0.00	0.00	0.00
7,900.00	90.00	180.33	7,210.00	-1,115.62	319.24	1,113.77	0.00	0.00	0.00
8,000.00	90.00	180.33	7,210.00	-1,215.62	318.66	1,213.77	0.00	0.00	0.00
8,100.00	90.00	180.33	7,210.00	-1,315.62	318.08	1,313.77	0.00	0.00	0.00
8,200.00	90.00	180.33	7,210.00	-1,415.62	317.49	1,413.77	0.00	0.00	0.00
8,300.00	90.00	180.33	7,210.00	-1,515.62	316.91	1,513.77	0.00	0.00	0.00
8,400.00	90.00	180.33	7,210.00	-1,615.62	316.33	1,613.77	0.00	0.00	0.00
8,500.00	90.00	180.33	7,210.00	-1,715.61	315.74	1,713.77	0.00	0.00	0.00
8,600.00	90.00	180.33	7,210.00	-1,815.61	315.16	1,813.77	0.00	0.00	0.00
8,700.00	90.00	180.33	7,210.00	-1,915.61	314.58	1,913.77	0.00	0.00	0.00
8,800.00	90.00	180.33	7,210.00	-2,015.61	313.99	2,013.77	0.00	0.00	0.00
8,900.00	90.00	180.33	7,210.00	-2,115.61	313.41	2,113.77	0.00	0.00	0.00
9,000.00	90.00	180.33	7,210.00	-2,215.61	312.83	2,213.77	0.00	0.00	0.00
9,100.00	90.00	180.33	7,210.00	-2,315.60	312.24	2,313.77	0.00	0.00	0.00
9,200.00	90.00	180.33	7,210.00	-2,415.60	311.66	2,413.77	0.00	0.00	0.00
9,300.00	90.00	180.33	7,210.00	-2,515.60	311.08	2,513.77	0.00	0.00	0.00
9,400.00	90.00	180.33	7,210.00	-2,615.60	310.49	2,613.77	0.00	0.00	0.00
9,500.00	90.00	180.33	7,210.00	-2,715.60	309.91	2,713.77	0.00	0.00	0.00
9,600.00	90.00	180.33	7,210.00	-2,815.60	309.33	2,813.77	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 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<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)
9,700.00	90.00	180.33	7,210.00	-2,915.59	308.74	2,913.77	0.00	0.00	0.00
9,800.00	90.00	180.33	7,210.00	-3,015.59	308.16	3,013.77	0.00	0.00	0.00
9,900.00	90.00	180.33	7,210.00	-3,115.59	307.58	3,113.77	0.00	0.00	0.00
10,000.00	90.00	180.33	7,210.00	-3,215.59	306.99	3,213.77	0.00	0.00	0.00
10,100.00	90.00	180.33	7,210.00	-3,315.59	306.41	3,313.77	0.00	0.00	0.00
10,200.00	90.00	180.33	7,210.00	-3,415.59	305.83	3,413.77	0.00	0.00	0.00
10,300.00	90.00	180.33	7,210.00	-3,515.58	305.24	3,513.77	0.00	0.00	0.00
10,400.00	90.00	180.33	7,210.00	-3,615.58	304.66	3,613.77	0.00	0.00	0.00
10,500.00	90.00	180.33	7,210.00	-3,715.58	304.08	3,713.77	0.00	0.00	0.00
10,600.00	90.00	180.33	7,210.00	-3,815.58	303.49	3,813.77	0.00	0.00	0.00
10,700.00	90.00	180.33	7,210.00	-3,915.58	302.91	3,913.77	0.00	0.00	0.00
10,800.00	90.00	180.33	7,210.00	-4,015.58	302.33	4,013.77	0.00	0.00	0.00
10,900.00	90.00	180.33	7,210.00	-4,115.57	301.74	4,113.77	0.00	0.00	0.00
11,000.00	90.00	180.33	7,210.00	-4,215.57	301.16	4,213.77	0.00	0.00	0.00
11,100.00	90.00	180.33	7,210.00	-4,315.57	300.58	4,313.77	0.00	0.00	0.00
11,200.00	90.00	180.33	7,210.00	-4,415.57	299.99	4,413.77	0.00	0.00	0.00
11,300.00	90.00	180.33	7,210.00	-4,515.57	299.41	4,513.77	0.00	0.00	0.00
11,400.00	90.00	180.33	7,210.00	-4,615.56	298.83	4,613.77	0.00	0.00	0.00
11,500.00	90.00	180.33	7,210.00	-4,715.56	298.24	4,713.77	0.00	0.00	0.00
11,600.00	90.00	180.33	7,210.00	-4,815.56	297.66	4,813.77	0.00	0.00	0.00
11,700.00	90.00	180.33	7,210.00	-4,915.56	297.08	4,913.77	0.00	0.00	0.00
11,800.00	90.00	180.33	7,210.00	-5,015.56	296.49	5,013.77	0.00	0.00	0.00
11,900.00	90.00	180.33	7,210.00	-5,115.56	295.91	5,113.77	0.00	0.00	0.00
12,000.00	90.00	180.33	7,210.00	-5,215.55	295.33	5,213.77	0.00	0.00	0.00
12,100.00	90.00	180.33	7,210.00	-5,315.55	294.74	5,313.77	0.00	0.00	0.00
12,200.00	90.00	180.33	7,210.00	-5,415.55	294.16	5,413.77	0.00	0.00	0.00
12,300.00	90.00	180.33	7,210.00	-5,515.55	293.58	5,513.77	0.00	0.00	0.00
12,400.00	90.00	180.33	7,210.00	-5,615.55	292.99	5,613.77	0.00	0.00	0.00
12,500.00	90.00	180.33	7,210.00	-5,715.55	292.41	5,713.77	0.00	0.00	0.00
12,600.00	90.00	180.33	7,210.00	-5,815.54	291.83	5,813.77	0.00	0.00	0.00
12,700.00	90.00	180.33	7,210.00	-5,915.54	291.24	5,913.77	0.00	0.00	0.00
12,800.00	90.00	180.33	7,210.00	-6,015.54	290.66	6,013.77	0.00	0.00	0.00
12,900.00	90.00	180.33	7,210.00	-6,115.54	290.08	6,113.77	0.00	0.00	0.00
13,000.00	90.00	180.33	7,210.00	-6,215.54	289.49	6,213.77	0.00	0.00	0.00
13,100.00	90.00	180.33	7,210.00	-6,315.54	288.91	6,313.77	0.00	0.00	0.00
13,200.00	90.00	180.33	7,210.00	-6,415.53	288.33	6,413.77	0.00	0.00	0.00
13,300.00	90.00	180.33	7,210.00	-6,515.53	287.74	6,513.77	0.00	0.00	0.00
13,400.00	90.00	180.33	7,210.00	-6,615.53	287.16	6,613.77	0.00	0.00	0.00
13,500.00	90.00	180.33	7,210.00	-6,715.53	286.58	6,713.77	0.00	0.00	0.00
13,600.00	90.00	180.33	7,210.00	-6,815.53	285.99	6,813.77	0.00	0.00	0.00
13,700.00	90.00	180.33	7,210.00	-6,915.53	285.41	6,913.77	0.00	0.00	0.00
13,800.00	90.00	180.33	7,210.00	-7,015.52	284.83	7,013.77	0.00	0.00	0.00
13,900.00	90.00	180.33	7,210.00	-7,115.52	284.24	7,113.77	0.00	0.00	0.00
14,000.00	90.00	180.33	7,210.00	-7,215.52	283.66	7,213.77	0.00	0.00	0.00
14,100.00	90.00	180.33	7,210.00	-7,315.52	283.08	7,313.77	0.00	0.00	0.00
14,200.00	90.00	180.33	7,210.00	-7,415.52	282.49	7,413.77	0.00	0.00	0.00
14,300.00	90.00	180.33	7,210.00	-7,515.52	281.91	7,513.77	0.00	0.00	0.00
14,400.00	90.00	180.33	7,210.00	-7,615.51	281.33	7,613.77	0.00	0.00	0.00
14,500.00	90.00	180.33	7,210.00	-7,715.51	280.74	7,713.77	0.00	0.00	0.00
14,600.00	90.00	180.33	7,210.00	-7,815.51	280.16	7,813.77	0.00	0.00	0.00
14,700.00	90.00	180.33	7,210.00	-7,915.51	279.58	7,913.77	0.00	0.00	0.00
14,800.00	90.00	180.33	7,210.00	-8,015.51	278.99	8,013.77	0.00	0.00	0.00
14,900.00	90.00	180.33	7,210.00	-8,115.51	278.41	8,113.77	0.00	0.00	0.00
15,000.00	90.00	180.33	7,210.00	-8,215.50	277.83	8,213.77	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 3107-10H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5066.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-10H	<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)	
15,100.00	90.00	180.33	7,210.00	-8,315.50	277.24	8,313.77	0.00	0.00	0.00	
15,200.00	90.00	180.33	7,210.00	-8,415.50	276.66	8,413.77	0.00	0.00	0.00	
15,300.00	90.00	180.33	7,210.00	-8,515.50	276.08	8,513.77	0.00	0.00	0.00	
15,400.00	90.00	180.33	7,210.00	-8,615.50	275.49	8,613.77	0.00	0.00	0.00	
15,500.00	90.00	180.33	7,210.00	-8,715.50	274.91	8,713.77	0.00	0.00	0.00	
15,600.00	90.00	180.33	7,210.00	-8,815.49	274.33	8,813.77	0.00	0.00	0.00	
15,700.00	90.00	180.33	7,210.00	-8,915.49	273.74	8,913.77	0.00	0.00	0.00	
15,800.00	90.00	180.33	7,210.00	-9,015.49	273.16	9,013.77	0.00	0.00	0.00	
15,900.00	90.00	180.33	7,210.00	-9,115.49	272.58	9,113.77	0.00	0.00	0.00	
16,000.00	90.00	180.33	7,210.00	-9,215.49	271.99	9,213.77	0.00	0.00	0.00	
16,100.00	90.00	180.33	7,210.00	-9,315.49	271.41	9,313.77	0.00	0.00	0.00	
16,200.00	90.00	180.33	7,210.00	-9,415.48	270.83	9,413.77	0.00	0.00	0.00	
16,300.00	90.00	180.33	7,210.00	-9,515.48	270.24	9,513.77	0.00	0.00	0.00	
16,400.00	90.00	180.33	7,210.00	-9,615.48	269.66	9,613.77	0.00	0.00	0.00	
16,500.00	90.00	180.33	7,210.00	-9,715.48	269.08	9,713.77	0.00	0.00	0.00	
16,600.00	90.00	180.33	7,210.00	-9,815.48	268.49	9,813.77	0.00	0.00	0.00	
16,700.00	90.00	180.33	7,210.00	-9,915.47	267.91	9,913.77	0.00	0.00	0.00	
16,800.00	90.00	180.33	7,210.00	-10,015.47	267.33	10,013.77	0.00	0.00	0.00	
16,879.05	90.00	180.33	7,210.00	-10,094.52	266.86	10,092.81	0.00	0.00	0.00	
TD Well @ 16879.05ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,701.54	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	
650.00	650.00	0.00	0.00	Begin Nudge @ 650.00ft	
814.00	813.91	-2.28	4.10	Hold Tangent @ 814.00ft	
6,601.20	6,591.63	-162.80	293.71	KOP @ 6601.20ft :: DLS = 9°/100'	
7,583.72	7,210.00	-799.35	321.09	End Build @ 7583.72ft	
16,879.05	7,210.00	-10,094.52	266.86	TD Well @ 16879.05ft	