

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-65W-31 COUNTY LINE 3108 PAD**

**COUNTY LINE 3108-14H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

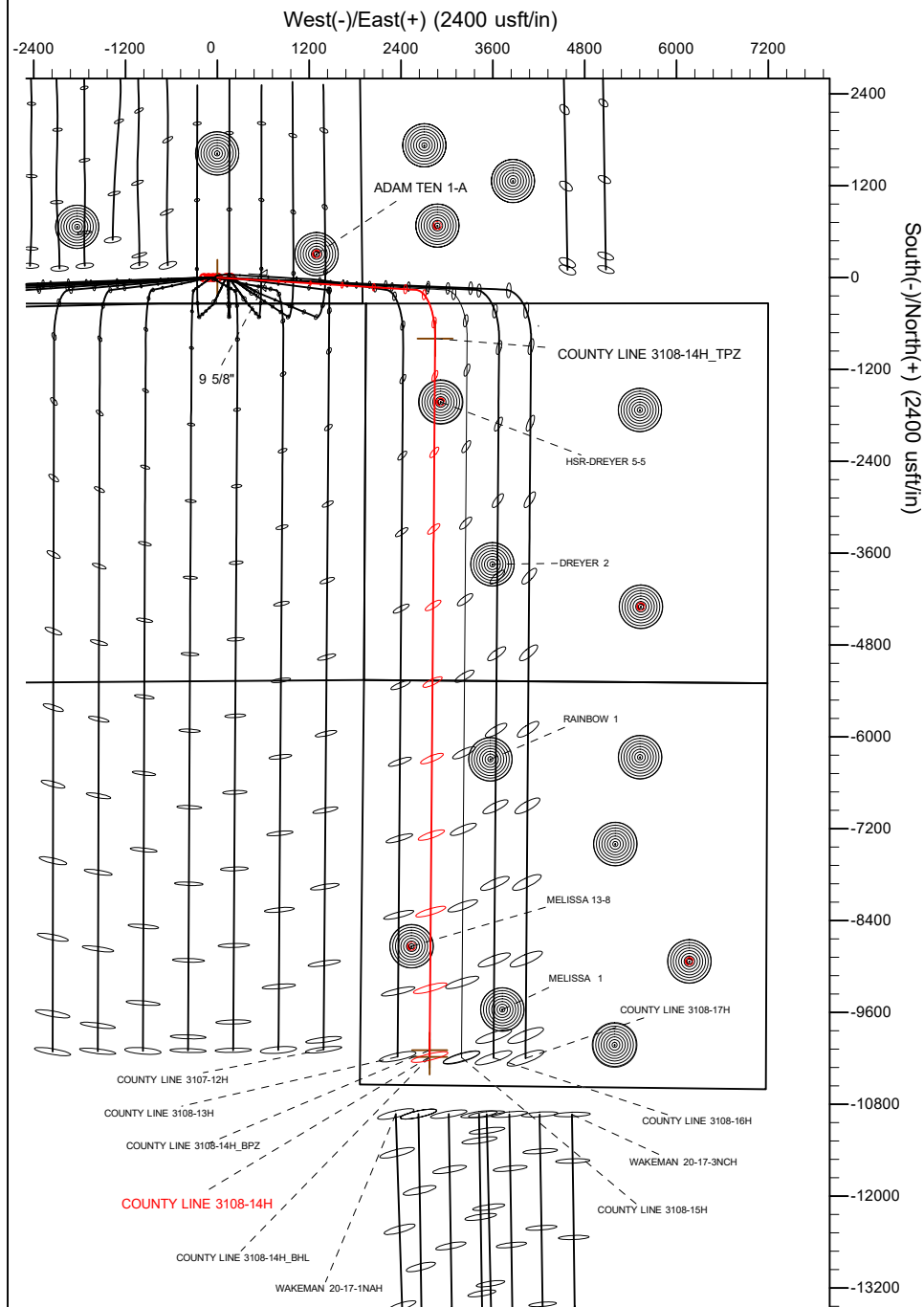
**10 September, 2021**

Project: WATTENBERG FIELD  
 Site: 1N-65W-31 COUNTY LINE 3108 PAD  
 Well: COUNTY LINE 3108-14H  
 Wellbore: Wellbore #1  
 Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
2296.00	2416.86	9 5/8"	9-5/8



SHL  
340' FSL  
1895' FEL

TPZ  
460' FNL  
907' FWL

BPZ  
460' FSL  
907' FWL

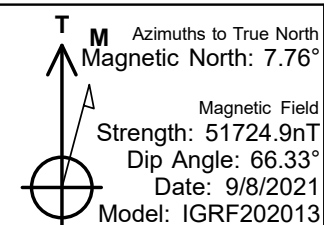
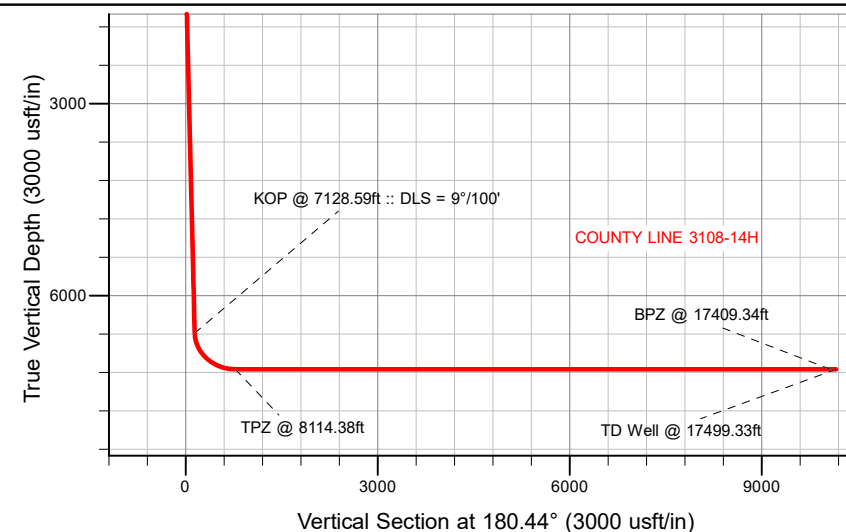
BHL  
370' FSL  
907' FWL

## 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	260.40	0.00	0.00	260.40	0.00	0.00	0.00	0.00	0.00	
3	1485.40	24.50	93.53	1448.41	-15.88	257.45	2.00	93.53	13.90	
4	7128.59	24.50	93.53	6583.49	-159.97	2593.21	0.00	0.00	140.05	
5	8114.38	90.00	180.44	7150.00	-798.41	2846.07	9.00	87.19	776.53	
6	17499.33	90.00	180.44	7150.00	-10183.08	2773.37	0.00	0.00	10161.49	COUNTY LINE 3108-14H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3108-14H_SHL	0.00	0.00	0.00	40.001457	-104.704040
COUNTY LINE 3108-14H_BHL	7150.00	-10183.08	2773.37	39.973502	-104.694144
COUNTY LINE 3108-14H_BPZ	7150.00	-10093.09	2774.07	39.973749	-104.694142
COUNTY LINE 3108-14H_TPZ	7150.00	-798.41	2846.07	39.999265	-104.693881



## WELL DETAILS: COUNTY LINE 3108-14H

GL = 504'

RKB = 24' @ 5068.00usft (RIG)

Plan: Design #1 ( COUNTY LINE 3108-14H/Wellbore #1)

Date: 9/10/2021

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3108-14H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<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 3108 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,244,378.03 usft	<b>Latitude:</b> 40.001457
<b>From:</b>	Map	<b>Easting:</b>	3,222,968.37 usft	<b>Longitude:</b> -104.704094
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	

<b>Well</b>	COUNTY LINE 3108-14H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,244,378.18 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,222,983.37 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		0.51 °	<b>Ground Level:</b>	5,044.00 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>
	IGRF202013	9/8/2021	7.76	66.33	51,724.85924276

<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	180.44	

<b>Plan Survey Tool Program</b>	<b>Date</b>	9/10/2021			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	2,296.00	Design #1 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,296.00	17,499.33	Design #1 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3108-14H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5068.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5068.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-14H	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	
260.40	0.00	0.00	260.40	0.00	0.00	0.00	0.00	0.00	0.00	
1,485.40	24.50	93.53	1,448.41	-15.88	257.45	2.00	2.00	0.00	93.53	
7,128.59	24.50	93.53	6,583.49	-159.97	2,593.21	0.00	0.00	0.00	0.00	
8,114.38	90.00	180.44	7,150.00	-798.41	2,846.07	9.00	6.64	8.82	87.19	
17,499.33	90.00	180.44	7,150.00	-10,183.08	2,773.37	0.00	0.00	0.00	0.00	COUNTY LINE 3108-

# Planning Report

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<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<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
260.40	0.00	0.00	260.40	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 260.40ft									
300.00	0.79	93.53	300.00	-0.02	0.27	0.01	2.00	2.00	0.00
400.00	2.79	93.53	399.94	-0.21	3.39	0.18	2.00	2.00	0.00
500.00	4.79	93.53	499.72	-0.62	9.99	0.54	2.00	2.00	0.00
600.00	6.79	93.53	599.21	-1.24	20.07	1.08	2.00	2.00	0.00
700.00	8.79	93.53	698.28	-2.07	33.60	1.81	2.00	2.00	0.00
800.00	10.79	93.53	796.82	-3.12	50.57	2.73	2.00	2.00	0.00
900.00	12.79	93.53	894.70	-4.38	70.97	3.83	2.00	2.00	0.00
1,000.00	14.79	93.53	991.81	-5.85	94.76	5.12	2.00	2.00	0.00
1,100.00	16.79	93.53	1,088.03	-7.52	121.92	6.58	2.00	2.00	0.00
1,200.00	18.79	93.53	1,183.24	-9.40	152.42	8.23	2.00	2.00	0.00
1,300.00	20.79	93.53	1,277.33	-11.49	186.21	10.06	2.00	2.00	0.00
1,400.00	22.79	93.53	1,370.18	-13.77	223.27	12.06	2.00	2.00	0.00
1,485.40	24.50	93.53	1,448.41	-15.88	257.45	13.90	2.00	2.00	0.00
Hold Tangent @ 1485.40ft									
1,500.00	24.50	93.53	1,461.69	-16.25	263.50	14.23	0.00	0.00	0.00
1,600.00	24.50	93.53	1,552.69	-18.81	304.89	16.47	0.00	0.00	0.00
1,700.00	24.50	93.53	1,643.69	-21.36	346.28	18.70	0.00	0.00	0.00
1,800.00	24.50	93.53	1,734.68	-23.91	387.67	20.94	0.00	0.00	0.00
1,900.00	24.50	93.53	1,825.68	-26.47	429.06	23.17	0.00	0.00	0.00
2,000.00	24.50	93.53	1,916.67	-29.02	470.45	25.41	0.00	0.00	0.00
2,100.00	24.50	93.53	2,007.67	-31.57	511.84	27.64	0.00	0.00	0.00
2,200.00	24.50	93.53	2,098.67	-34.13	553.23	29.88	0.00	0.00	0.00
2,300.00	24.50	93.53	2,189.66	-36.68	594.62	32.11	0.00	0.00	0.00
2,400.00	24.50	93.53	2,280.66	-39.23	636.01	34.35	0.00	0.00	0.00
2,416.86	24.50	93.53	2,296.00	-39.66	642.99	34.73	0.00	0.00	0.00
9 5/8"									
2,500.00	24.50	93.53	2,371.66	-41.79	677.40	36.58	0.00	0.00	0.00
2,600.00	24.50	93.53	2,462.65	-44.34	718.79	38.82	0.00	0.00	0.00
2,700.00	24.50	93.53	2,553.65	-46.89	760.18	41.06	0.00	0.00	0.00
2,800.00	24.50	93.53	2,644.64	-49.45	801.57	43.29	0.00	0.00	0.00
2,900.00	24.50	93.53	2,735.64	-52.00	842.96	45.53	0.00	0.00	0.00
3,000.00	24.50	93.53	2,826.64	-54.55	884.36	47.76	0.00	0.00	0.00
3,100.00	24.50	93.53	2,917.63	-57.11	925.75	50.00	0.00	0.00	0.00
3,200.00	24.50	93.53	3,008.63	-59.66	967.14	52.23	0.00	0.00	0.00
3,300.00	24.50	93.53	3,099.62	-62.21	1,008.53	54.47	0.00	0.00	0.00
3,400.00	24.50	93.53	3,190.62	-64.77	1,049.92	56.70	0.00	0.00	0.00
3,500.00	24.50	93.53	3,281.62	-67.32	1,091.31	58.94	0.00	0.00	0.00
3,600.00	24.50	93.53	3,372.61	-69.87	1,132.70	61.17	0.00	0.00	0.00
3,700.00	24.50	93.53	3,463.61	-72.43	1,174.09	63.41	0.00	0.00	0.00
3,800.00	24.50	93.53	3,554.61	-74.98	1,215.48	65.64	0.00	0.00	0.00
3,900.00	24.50	93.53	3,645.60	-77.53	1,256.87	67.88	0.00	0.00	0.00
4,000.00	24.50	93.53	3,736.60	-80.09	1,298.26	70.12	0.00	0.00	0.00
4,100.00	24.50	93.53	3,827.59	-82.64	1,339.65	72.35	0.00	0.00	0.00
4,200.00	24.50	93.53	3,918.59	-85.19	1,381.04	74.59	0.00	0.00	0.00
4,300.00	24.50	93.53	4,009.59	-87.75	1,422.43	76.82	0.00	0.00	0.00
4,400.00	24.50	93.53	4,100.58	-90.30	1,463.82	79.06	0.00	0.00	0.00
4,500.00	24.50	93.53	4,191.58	-92.85	1,505.21	81.29	0.00	0.00	0.00
4,600.00	24.50	93.53	4,282.57	-95.41	1,546.61	83.53	0.00	0.00	0.00

# Planning Report

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<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<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	24.50	93.53	4,373.57	-97.96	1,588.00	85.76	0.00	0.00	0.00
4,800.00	24.50	93.53	4,464.57	-100.51	1,629.39	88.00	0.00	0.00	0.00
4,900.00	24.50	93.53	4,555.56	-103.07	1,670.78	90.23	0.00	0.00	0.00
5,000.00	24.50	93.53	4,646.56	-105.62	1,712.17	92.47	0.00	0.00	0.00
5,100.00	24.50	93.53	4,737.55	-108.17	1,753.56	94.70	0.00	0.00	0.00
5,200.00	24.50	93.53	4,828.55	-110.73	1,794.95	96.94	0.00	0.00	0.00
5,300.00	24.50	93.53	4,919.55	-113.28	1,836.34	99.18	0.00	0.00	0.00
5,400.00	24.50	93.53	5,010.54	-115.83	1,877.73	101.41	0.00	0.00	0.00
5,500.00	24.50	93.53	5,101.54	-118.39	1,919.12	103.65	0.00	0.00	0.00
5,600.00	24.50	93.53	5,192.54	-120.94	1,960.51	105.88	0.00	0.00	0.00
5,700.00	24.50	93.53	5,283.53	-123.49	2,001.90	108.12	0.00	0.00	0.00
5,800.00	24.50	93.53	5,374.53	-126.05	2,043.29	110.35	0.00	0.00	0.00
5,900.00	24.50	93.53	5,465.52	-128.60	2,084.68	112.59	0.00	0.00	0.00
6,000.00	24.50	93.53	5,556.52	-131.15	2,126.07	114.82	0.00	0.00	0.00
6,100.00	24.50	93.53	5,647.52	-133.71	2,167.47	117.06	0.00	0.00	0.00
6,200.00	24.50	93.53	5,738.51	-136.26	2,208.86	119.29	0.00	0.00	0.00
6,300.00	24.50	93.53	5,829.51	-138.81	2,250.25	121.53	0.00	0.00	0.00
6,400.00	24.50	93.53	5,920.50	-141.37	2,291.64	123.76	0.00	0.00	0.00
6,500.00	24.50	93.53	6,011.50	-143.92	2,333.03	126.00	0.00	0.00	0.00
6,600.00	24.50	93.53	6,102.50	-146.47	2,374.42	128.24	0.00	0.00	0.00
6,700.00	24.50	93.53	6,193.49	-149.03	2,415.81	130.47	0.00	0.00	0.00
6,800.00	24.50	93.53	6,284.49	-151.58	2,457.20	132.71	0.00	0.00	0.00
6,900.00	24.50	93.53	6,375.49	-154.13	2,498.59	134.94	0.00	0.00	0.00
7,000.00	24.50	93.53	6,466.48	-156.69	2,539.98	137.18	0.00	0.00	0.00
7,100.00	24.50	93.53	6,557.48	-159.24	2,581.37	139.41	0.00	0.00	0.00
7,128.59	24.50	93.53	6,583.49	-159.97	2,593.21	140.05	0.00	0.00	0.00
KOP @ 7128.59ft :: DLS = 9°/100'									
7,150.00	24.66	98.15	6,602.96	-160.88	2,602.06	140.89	9.00	0.77	21.56
7,200.00	25.58	108.54	6,648.26	-165.79	2,622.63	145.64	9.00	1.83	20.78
7,250.00	27.18	118.02	6,693.07	-174.59	2,642.96	154.29	9.00	3.19	18.97
7,300.00	29.33	126.37	6,737.13	-187.22	2,662.91	166.77	9.00	4.32	16.70
7,350.00	31.95	133.57	6,780.16	-203.61	2,682.36	183.01	9.00	5.22	14.40
7,400.00	34.90	139.74	6,821.89	-223.66	2,701.20	202.91	9.00	5.92	12.32
7,450.00	38.13	145.01	6,862.08	-247.23	2,719.31	226.34	9.00	6.45	10.55
7,500.00	41.56	149.56	6,900.47	-274.19	2,736.57	253.17	9.00	6.86	9.10
7,550.00	45.15	153.53	6,936.83	-304.37	2,752.88	283.22	9.00	7.17	7.92
7,600.00	48.85	157.01	6,970.93	-337.58	2,768.14	316.32	9.00	7.41	6.98
7,650.00	52.66	160.13	7,002.56	-373.63	2,782.26	352.25	9.00	7.60	6.22
7,700.00	56.53	162.94	7,031.53	-412.27	2,795.14	390.80	9.00	7.75	5.62
7,750.00	60.46	165.50	7,057.65	-453.29	2,806.71	431.72	9.00	7.87	5.13
7,800.00	64.44	167.87	7,080.77	-496.42	2,816.90	474.77	9.00	7.96	4.75
7,850.00	68.46	170.09	7,100.75	-541.40	2,825.64	519.69	9.00	8.03	4.44
7,900.00	72.50	172.19	7,117.46	-587.95	2,832.89	566.18	9.00	8.08	4.20
7,950.00	76.56	174.20	7,130.79	-635.79	2,838.58	613.97	9.00	8.13	4.02
8,000.00	80.64	176.14	7,140.67	-684.62	2,842.70	662.77	9.00	8.16	3.88
8,050.00	84.73	178.04	7,147.04	-734.13	2,845.22	712.26	9.00	8.18	3.79
8,100.00	88.82	179.91	7,149.85	-784.03	2,846.11	762.16	9.00	8.19	3.74
8,114.38	90.00	180.44	7,150.00	-798.41	2,846.07	776.53	9.00	8.19	3.73
TPZ @ 8114.38ft									
8,200.00	90.00	180.44	7,150.00	-884.03	2,845.40	862.15	0.00	0.00	0.00
8,300.00	90.00	180.44	7,150.00	-984.03	2,844.63	962.15	0.00	0.00	0.00
8,400.00	90.00	180.44	7,150.00	-1,084.02	2,843.85	1,062.15	0.00	0.00	0.00
8,500.00	90.00	180.44	7,150.00	-1,184.02	2,843.08	1,162.15	0.00	0.00	0.00
8,600.00	90.00	180.44	7,150.00	-1,284.02	2,842.30	1,262.15	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3108-14H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<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	180.44	7,150.00	-1,384.02	2,841.53	1,362.15	0.00	0.00	0.00	
8,800.00	90.00	180.44	7,150.00	-1,484.01	2,840.75	1,462.15	0.00	0.00	0.00	
8,900.00	90.00	180.44	7,150.00	-1,584.01	2,839.98	1,562.15	0.00	0.00	0.00	
9,000.00	90.00	180.44	7,150.00	-1,684.01	2,839.20	1,662.15	0.00	0.00	0.00	
9,100.00	90.00	180.44	7,150.00	-1,784.00	2,838.43	1,762.15	0.00	0.00	0.00	
9,200.00	90.00	180.44	7,150.00	-1,884.00	2,837.66	1,862.15	0.00	0.00	0.00	
9,300.00	90.00	180.44	7,150.00	-1,984.00	2,836.88	1,962.15	0.00	0.00	0.00	
9,400.00	90.00	180.44	7,150.00	-2,083.99	2,836.11	2,062.15	0.00	0.00	0.00	
9,500.00	90.00	180.44	7,150.00	-2,183.99	2,835.33	2,162.15	0.00	0.00	0.00	
9,600.00	90.00	180.44	7,150.00	-2,283.99	2,834.56	2,262.15	0.00	0.00	0.00	
9,700.00	90.00	180.44	7,150.00	-2,383.99	2,833.78	2,362.15	0.00	0.00	0.00	
9,800.00	90.00	180.44	7,150.00	-2,483.98	2,833.01	2,462.15	0.00	0.00	0.00	
9,900.00	90.00	180.44	7,150.00	-2,583.98	2,832.23	2,562.15	0.00	0.00	0.00	
10,000.00	90.00	180.44	7,150.00	-2,683.98	2,831.46	2,662.15	0.00	0.00	0.00	
10,100.00	90.00	180.44	7,150.00	-2,783.97	2,830.68	2,762.15	0.00	0.00	0.00	
10,200.00	90.00	180.44	7,150.00	-2,883.97	2,829.91	2,862.15	0.00	0.00	0.00	
10,300.00	90.00	180.44	7,150.00	-2,983.97	2,829.14	2,962.15	0.00	0.00	0.00	
10,400.00	90.00	180.44	7,150.00	-3,083.97	2,828.36	3,062.15	0.00	0.00	0.00	
10,500.00	90.00	180.44	7,150.00	-3,183.96	2,827.59	3,162.15	0.00	0.00	0.00	
10,600.00	90.00	180.44	7,150.00	-3,283.96	2,826.81	3,262.15	0.00	0.00	0.00	
10,700.00	90.00	180.44	7,150.00	-3,383.96	2,826.04	3,362.15	0.00	0.00	0.00	
10,800.00	90.00	180.44	7,150.00	-3,483.95	2,825.26	3,462.15	0.00	0.00	0.00	
10,900.00	90.00	180.44	7,150.00	-3,583.95	2,824.49	3,562.15	0.00	0.00	0.00	
11,000.00	90.00	180.44	7,150.00	-3,683.95	2,823.71	3,662.15	0.00	0.00	0.00	
11,100.00	90.00	180.44	7,150.00	-3,783.94	2,822.94	3,762.15	0.00	0.00	0.00	
11,200.00	90.00	180.44	7,150.00	-3,883.94	2,822.16	3,862.15	0.00	0.00	0.00	
11,300.00	90.00	180.44	7,150.00	-3,983.94	2,821.39	3,962.15	0.00	0.00	0.00	
11,400.00	90.00	180.44	7,150.00	-4,083.94	2,820.61	4,062.15	0.00	0.00	0.00	
11,500.00	90.00	180.44	7,150.00	-4,183.93	2,819.84	4,162.15	0.00	0.00	0.00	
11,600.00	90.00	180.44	7,150.00	-4,283.93	2,819.07	4,262.15	0.00	0.00	0.00	
11,700.00	90.00	180.44	7,150.00	-4,383.93	2,818.29	4,362.15	0.00	0.00	0.00	
11,800.00	90.00	180.44	7,150.00	-4,483.92	2,817.52	4,462.15	0.00	0.00	0.00	
11,900.00	90.00	180.44	7,150.00	-4,583.92	2,816.74	4,562.15	0.00	0.00	0.00	
12,000.00	90.00	180.44	7,150.00	-4,683.92	2,815.97	4,662.15	0.00	0.00	0.00	
12,100.00	90.00	180.44	7,150.00	-4,783.91	2,815.19	4,762.15	0.00	0.00	0.00	
12,200.00	90.00	180.44	7,150.00	-4,883.91	2,814.42	4,862.15	0.00	0.00	0.00	
12,300.00	90.00	180.44	7,150.00	-4,983.91	2,813.64	4,962.15	0.00	0.00	0.00	
12,400.00	90.00	180.44	7,150.00	-5,083.91	2,812.87	5,062.15	0.00	0.00	0.00	
12,500.00	90.00	180.44	7,150.00	-5,183.90	2,812.09	5,162.15	0.00	0.00	0.00	
12,600.00	90.00	180.44	7,150.00	-5,283.90	2,811.32	5,262.15	0.00	0.00	0.00	
12,700.00	90.00	180.44	7,150.00	-5,383.90	2,810.54	5,362.15	0.00	0.00	0.00	
12,800.00	90.00	180.44	7,150.00	-5,483.89	2,809.77	5,462.15	0.00	0.00	0.00	
12,900.00	90.00	180.44	7,150.00	-5,583.89	2,809.00	5,562.15	0.00	0.00	0.00	
13,000.00	90.00	180.44	7,150.00	-5,683.89	2,808.22	5,662.15	0.00	0.00	0.00	
13,100.00	90.00	180.44	7,150.00	-5,783.88	2,807.45	5,762.15	0.00	0.00	0.00	
13,200.00	90.00	180.44	7,150.00	-5,883.88	2,806.67	5,862.15	0.00	0.00	0.00	
13,300.00	90.00	180.44	7,150.00	-5,983.88	2,805.90	5,962.15	0.00	0.00	0.00	
13,400.00	90.00	180.44	7,150.00	-6,083.88	2,805.12	6,062.15	0.00	0.00	0.00	
13,500.00	90.00	180.44	7,150.00	-6,183.87	2,804.35	6,162.15	0.00	0.00	0.00	
13,600.00	90.00	180.44	7,150.00	-6,283.87	2,803.57	6,262.15	0.00	0.00	0.00	
13,700.00	90.00	180.44	7,150.00	-6,383.87	2,802.80	6,362.15	0.00	0.00	0.00	
13,800.00	90.00	180.44	7,150.00	-6,483.86	2,802.02	6,462.15	0.00	0.00	0.00	
13,900.00	90.00	180.44	7,150.00	-6,583.86	2,801.25	6,562.15	0.00	0.00	0.00	
14,000.00	90.00	180.44	7,150.00	-6,683.86	2,800.47	6,662.15	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3108-14H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,100.00	90.00	180.44	7,150.00	-6,783.85	2,799.70	6,762.15	0.00	0.00	0.00	
14,200.00	90.00	180.44	7,150.00	-6,883.85	2,798.93	6,862.15	0.00	0.00	0.00	
14,300.00	90.00	180.44	7,150.00	-6,983.85	2,798.15	6,962.15	0.00	0.00	0.00	
14,400.00	90.00	180.44	7,150.00	-7,083.85	2,797.38	7,062.15	0.00	0.00	0.00	
14,500.00	90.00	180.44	7,150.00	-7,183.84	2,796.60	7,162.15	0.00	0.00	0.00	
14,600.00	90.00	180.44	7,150.00	-7,283.84	2,795.83	7,262.15	0.00	0.00	0.00	
14,700.00	90.00	180.44	7,150.00	-7,383.84	2,795.05	7,362.15	0.00	0.00	0.00	
14,800.00	90.00	180.44	7,150.00	-7,483.83	2,794.28	7,462.15	0.00	0.00	0.00	
14,900.00	90.00	180.44	7,150.00	-7,583.83	2,793.50	7,562.15	0.00	0.00	0.00	
15,000.00	90.00	180.44	7,150.00	-7,683.83	2,792.73	7,662.15	0.00	0.00	0.00	
15,100.00	90.00	180.44	7,150.00	-7,783.82	2,791.95	7,762.15	0.00	0.00	0.00	
15,200.00	90.00	180.44	7,150.00	-7,883.82	2,791.18	7,862.15	0.00	0.00	0.00	
15,300.00	90.00	180.44	7,150.00	-7,983.82	2,790.40	7,962.15	0.00	0.00	0.00	
15,400.00	90.00	180.44	7,150.00	-8,083.82	2,789.63	8,062.15	0.00	0.00	0.00	
15,500.00	90.00	180.44	7,150.00	-8,183.81	2,788.86	8,162.15	0.00	0.00	0.00	
15,600.00	90.00	180.44	7,150.00	-8,283.81	2,788.08	8,262.15	0.00	0.00	0.00	
15,700.00	90.00	180.44	7,150.00	-8,383.81	2,787.31	8,362.15	0.00	0.00	0.00	
15,800.00	90.00	180.44	7,150.00	-8,483.80	2,786.53	8,462.15	0.00	0.00	0.00	
15,900.00	90.00	180.44	7,150.00	-8,583.80	2,785.76	8,562.15	0.00	0.00	0.00	
16,000.00	90.00	180.44	7,150.00	-8,683.80	2,784.98	8,662.15	0.00	0.00	0.00	
16,100.00	90.00	180.44	7,150.00	-8,783.79	2,784.21	8,762.15	0.00	0.00	0.00	
16,200.00	90.00	180.44	7,150.00	-8,883.79	2,783.43	8,862.15	0.00	0.00	0.00	
16,300.00	90.00	180.44	7,150.00	-8,983.79	2,782.66	8,962.15	0.00	0.00	0.00	
16,400.00	90.00	180.44	7,150.00	-9,083.79	2,781.88	9,062.15	0.00	0.00	0.00	
16,500.00	90.00	180.44	7,150.00	-9,183.78	2,781.11	9,162.15	0.00	0.00	0.00	
16,600.00	90.00	180.44	7,150.00	-9,283.78	2,780.33	9,262.15	0.00	0.00	0.00	
16,700.00	90.00	180.44	7,150.00	-9,383.78	2,779.56	9,362.15	0.00	0.00	0.00	
16,800.00	90.00	180.44	7,150.00	-9,483.77	2,778.79	9,462.15	0.00	0.00	0.00	
16,900.00	90.00	180.44	7,150.00	-9,583.77	2,778.01	9,562.15	0.00	0.00	0.00	
17,000.00	90.00	180.44	7,150.00	-9,683.77	2,777.24	9,662.15	0.00	0.00	0.00	
17,100.00	90.00	180.44	7,150.00	-9,783.76	2,776.46	9,762.15	0.00	0.00	0.00	
17,200.00	90.00	180.44	7,150.00	-9,883.76	2,775.69	9,862.15	0.00	0.00	0.00	
17,300.00	90.00	180.44	7,150.00	-9,983.76	2,774.91	9,962.15	0.00	0.00	0.00	
17,400.00	90.00	180.44	7,150.00	-10,083.76	2,774.14	10,062.15	0.00	0.00	0.00	
17,409.34	90.00	180.44	7,150.00	-10,093.09	2,774.07	10,071.49	0.00	0.00	0.00	
BPZ @ 17409.34ft										
17,499.33	90.00	180.44	7,150.00	-10,183.08	2,773.37	10,161.48	0.00	0.00	0.00	
TD Well @ 17499.33ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,416.86	2,296.00	9 5/8"		9-5/8	13-1/2



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well COUNTY LINE 3108-14H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5068.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3108 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3108-14H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
260.40	260.40	0.00	0.00	Begin Nudge @ 260.40ft
1,485.40	1,448.41	-15.88	257.45	Hold Tangent @ 1485.40ft
7,128.59	6,583.49	-159.97	2,593.21	KOP @ 7128.59ft :: DLS = 9°/100'
8,114.38	7,150.00	-798.41	2,846.07	TPZ @ 8114.38ft
17,409.34	7,150.00	-10,093.09	2,774.07	BPZ @ 17409.34ft
17,499.33	7,150.00	-10,183.08	2,773.37	TD Well @ 17499.33ft