

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**COUNTY LINE 3107-07H**

**Wellbore #1**

**Plan: Design #3**

## **Standard Planning Report**

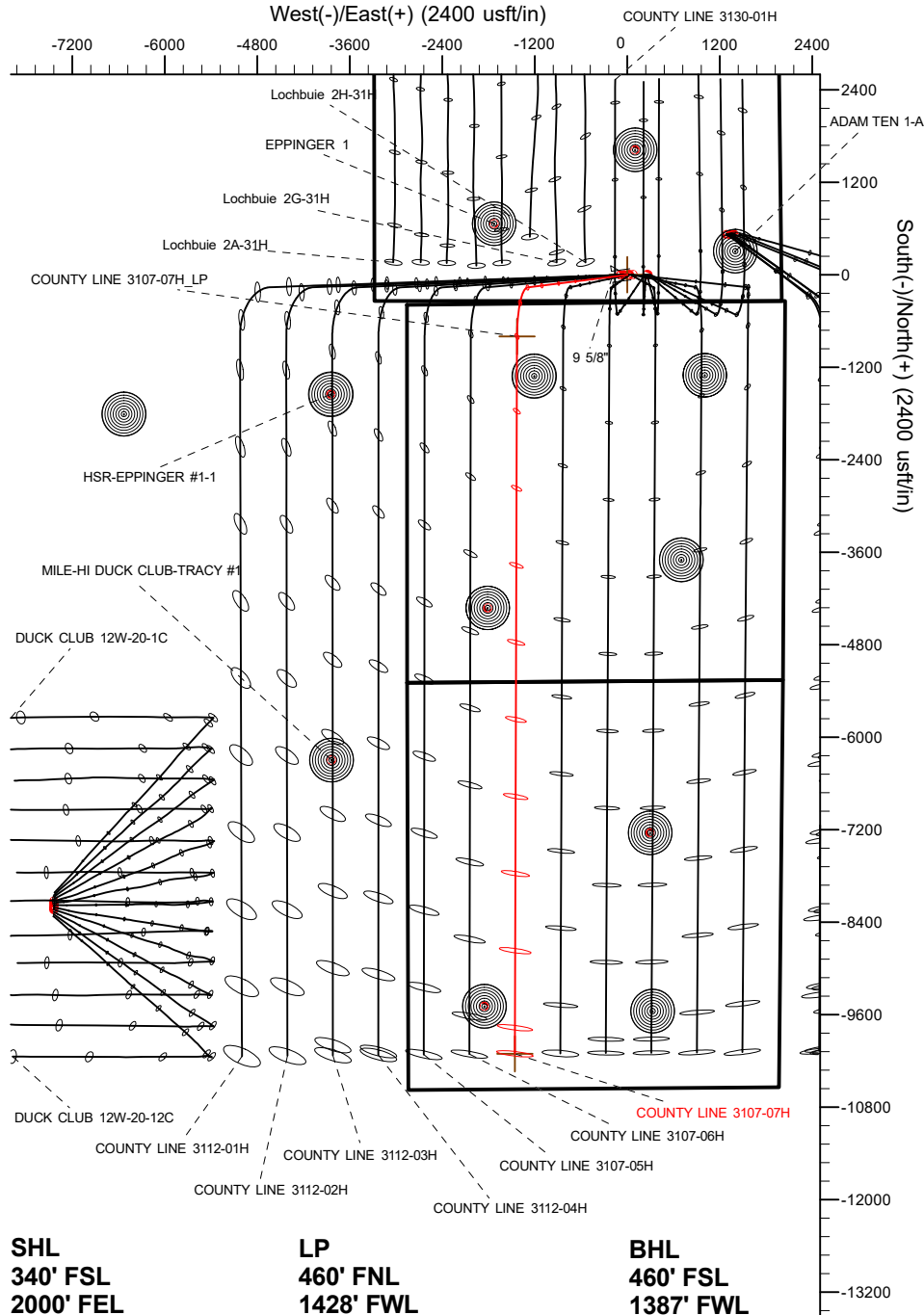
**02 June, 2020**

Project: WATTENBERG FIELD  
Site: 1N-65W-31 COUNTY LINE 3107 PAD  
Well: COUNTY LINE 3107-07H  
Wellbore: Wellbore #1  
Design: Design #3

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1719.49	9 5/8"	9-5/8

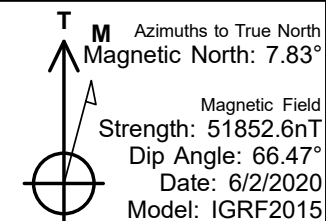
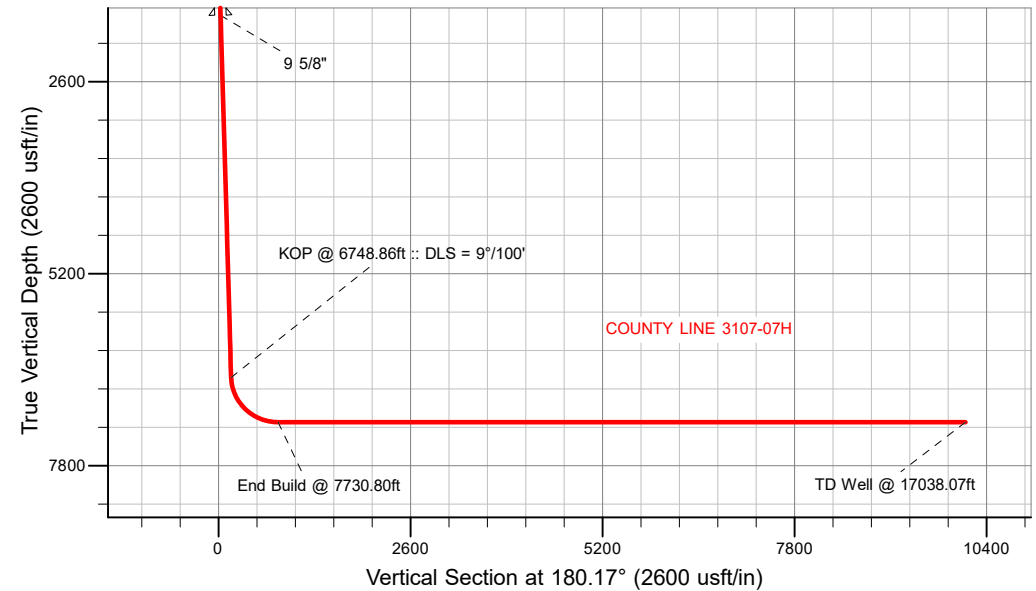


## SECTION DETAILS

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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	1135.00	12.70	262.76	1129.81	-8.83	-69.53	2.00	262.76	9.04	
4	6748.86	12.70	262.76	6608.33	-164.37	-1293.88	0.00	0.00	168.21	
5	7730.80	90.00	180.17	7210.00	-800.33	-1430.69	9.00	-82.77	804.57	
6	17038.07	90.00	180.17	7210.00	-10107.55	-1458.62	0.00	0.00	10111.84	COUNTY LINE 3107-07H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3107-07H_SHL	0.00	0.00	0.00	40.001456	-104.704415
COUNTY LINE 3107-07H_BHL	7210.00	-10107.55	-1458.62	39.973709	-104.709619



## WELL DETAILS: COUNTY LINE 3107-07H

GL = 5041'

RKB = 24' @ 5065.00usft (RIG)

Plan: Design #3 (COUNTY LINE 3107-07H/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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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 3107-07H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,244,377.18 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,222,878.39 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		0.51 °	<b>Ground Level:</b>	5,041.00 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	51,852.58284276

<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	180.17

<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	17,038.07	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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,135.00	12.70	262.76	1,129.81	-8.83	-69.53	2.00	2.00	0.00	262.76	
6,748.86	12.70	262.76	6,606.33	-164.37	-1,293.88	0.00	0.00	0.00	0.00	
7,730.80	90.00	180.17	7,210.00	-800.33	-1,430.69	9.00	7.87	-8.41	-82.77	
17,038.07	90.00	180.17	7,210.00	-10,107.55	-1,458.62	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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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
Begin Nudge @ 500.00ft									
600.00	2.00	262.76	599.98	-0.22	-1.73	0.23	2.00	2.00	0.00
700.00	4.00	262.76	699.84	-0.88	-6.92	0.90	2.00	2.00	0.00
800.00	6.00	262.76	799.45	-1.98	-15.57	2.02	2.00	2.00	0.00
900.00	8.00	262.76	898.70	-3.51	-27.66	3.60	2.00	2.00	0.00
1,000.00	10.00	262.76	997.47	-5.48	-43.18	5.61	2.00	2.00	0.00
1,100.00	12.00	262.76	1,095.62	-7.89	-62.10	8.07	2.00	2.00	0.00
1,135.00	12.70	262.76	1,129.81	-8.83	-69.53	9.04	2.00	2.00	0.00
Hold Tangent @ 1135.00ft									
1,200.00	12.70	262.76	1,193.22	-10.63	-83.71	10.88	0.00	0.00	0.00
1,300.00	12.70	262.76	1,290.78	-13.40	-105.51	13.72	0.00	0.00	0.00
1,400.00	12.70	262.76	1,388.33	-16.18	-127.32	16.55	0.00	0.00	0.00
1,500.00	12.70	262.76	1,485.88	-18.95	-149.13	19.39	0.00	0.00	0.00
1,600.00	12.70	262.76	1,583.44	-21.72	-170.94	22.22	0.00	0.00	0.00
1,700.00	12.70	262.76	1,680.99	-24.49	-192.75	25.06	0.00	0.00	0.00
1,719.49	12.70	262.76	1,700.00	-25.03	-197.00	25.61	0.00	0.00	0.00
9 5/8"									
1,800.00	12.70	262.76	1,778.54	-27.26	-214.56	27.89	0.00	0.00	0.00
1,900.00	12.70	262.76	1,876.10	-30.03	-236.37	30.73	0.00	0.00	0.00
2,000.00	12.70	262.76	1,973.65	-32.80	-258.18	33.56	0.00	0.00	0.00
2,100.00	12.70	262.76	2,071.20	-35.57	-279.99	36.40	0.00	0.00	0.00
2,200.00	12.70	262.76	2,168.76	-38.34	-301.80	39.24	0.00	0.00	0.00
2,300.00	12.70	262.76	2,266.31	-41.11	-323.61	42.07	0.00	0.00	0.00
2,400.00	12.70	262.76	2,363.86	-43.88	-345.42	44.91	0.00	0.00	0.00
2,500.00	12.70	262.76	2,461.42	-46.65	-367.23	47.74	0.00	0.00	0.00
2,600.00	12.70	262.76	2,558.97	-49.42	-389.04	50.58	0.00	0.00	0.00
2,700.00	12.70	262.76	2,656.52	-52.19	-410.85	53.41	0.00	0.00	0.00
2,800.00	12.70	262.76	2,754.08	-54.96	-432.66	56.25	0.00	0.00	0.00
2,900.00	12.70	262.76	2,851.63	-57.73	-454.46	59.08	0.00	0.00	0.00
3,000.00	12.70	262.76	2,949.18	-60.51	-476.27	61.92	0.00	0.00	0.00
3,100.00	12.70	262.76	3,046.74	-63.28	-498.08	64.75	0.00	0.00	0.00
3,200.00	12.70	262.76	3,144.29	-66.05	-519.89	67.59	0.00	0.00	0.00
3,300.00	12.70	262.76	3,241.85	-68.82	-541.70	70.42	0.00	0.00	0.00
3,400.00	12.70	262.76	3,339.40	-71.59	-563.51	73.26	0.00	0.00	0.00
3,500.00	12.70	262.76	3,436.95	-74.36	-585.32	76.09	0.00	0.00	0.00
3,600.00	12.70	262.76	3,534.51	-77.13	-607.13	78.93	0.00	0.00	0.00
3,700.00	12.70	262.76	3,632.06	-79.90	-628.94	81.77	0.00	0.00	0.00
3,800.00	12.70	262.76	3,729.61	-82.67	-650.75	84.60	0.00	0.00	0.00
3,900.00	12.70	262.76	3,827.17	-85.44	-672.56	87.44	0.00	0.00	0.00
4,000.00	12.70	262.76	3,924.72	-88.21	-694.37	90.27	0.00	0.00	0.00
4,100.00	12.70	262.76	4,022.27	-90.98	-716.18	93.11	0.00	0.00	0.00
4,200.00	12.70	262.76	4,119.83	-93.75	-737.99	95.94	0.00	0.00	0.00
4,300.00	12.70	262.76	4,217.38	-96.52	-759.80	98.78	0.00	0.00	0.00
4,400.00	12.70	262.76	4,314.93	-99.29	-781.60	101.61	0.00	0.00	0.00
4,500.00	12.70	262.76	4,412.49	-102.06	-803.41	104.45	0.00	0.00	0.00
4,600.00	12.70	262.76	4,510.04	-104.84	-825.22	107.28	0.00	0.00	0.00
4,700.00	12.70	262.76	4,607.59	-107.61	-847.03	110.12	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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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	12.70	262.76	4,705.15	-110.38	-868.84	112.95	0.00	0.00	0.00
4,900.00	12.70	262.76	4,802.70	-113.15	-890.65	115.79	0.00	0.00	0.00
5,000.00	12.70	262.76	4,900.25	-115.92	-912.46	118.62	0.00	0.00	0.00
5,100.00	12.70	262.76	4,997.81	-118.69	-934.27	121.46	0.00	0.00	0.00
5,200.00	12.70	262.76	5,095.36	-121.46	-956.08	124.30	0.00	0.00	0.00
5,300.00	12.70	262.76	5,192.91	-124.23	-977.89	127.13	0.00	0.00	0.00
5,400.00	12.70	262.76	5,290.47	-127.00	-999.70	129.97	0.00	0.00	0.00
5,500.00	12.70	262.76	5,388.02	-129.77	-1,021.51	132.80	0.00	0.00	0.00
5,600.00	12.70	262.76	5,485.57	-132.54	-1,043.32	135.64	0.00	0.00	0.00
5,700.00	12.70	262.76	5,583.13	-135.31	-1,065.13	138.47	0.00	0.00	0.00
5,800.00	12.70	262.76	5,680.68	-138.08	-1,086.94	141.31	0.00	0.00	0.00
5,900.00	12.70	262.76	5,778.24	-140.85	-1,108.74	144.14	0.00	0.00	0.00
6,000.00	12.70	262.76	5,875.79	-143.62	-1,130.55	146.98	0.00	0.00	0.00
6,100.00	12.70	262.76	5,973.34	-146.39	-1,152.36	149.81	0.00	0.00	0.00
6,200.00	12.70	262.76	6,070.90	-149.17	-1,174.17	152.65	0.00	0.00	0.00
6,300.00	12.70	262.76	6,168.45	-151.94	-1,195.98	155.48	0.00	0.00	0.00
6,400.00	12.70	262.76	6,266.00	-154.71	-1,217.79	158.32	0.00	0.00	0.00
6,500.00	12.70	262.76	6,363.56	-157.48	-1,239.60	161.15	0.00	0.00	0.00
6,600.00	12.70	262.76	6,461.11	-160.25	-1,261.41	163.99	0.00	0.00	0.00
6,700.00	12.70	262.76	6,558.66	-163.02	-1,283.22	166.83	0.00	0.00	0.00
6,748.86	12.70	262.76	6,606.33	-164.37	-1,293.88	168.21	0.00	0.00	0.00
<b>KOP @ 6748.86ft :: DLS = 9°/100'</b>									
6,800.00	14.03	243.59	6,656.11	-167.84	-1,305.01	171.71	9.00	2.60	-37.48
6,900.00	19.67	218.87	6,751.89	-186.37	-1,326.47	190.31	9.00	5.64	-24.72
7,000.00	27.13	206.03	6,843.66	-220.03	-1,347.08	224.03	9.00	7.46	-12.84
7,100.00	35.28	198.59	6,929.16	-267.99	-1,366.33	272.04	9.00	8.15	-7.44
7,200.00	43.73	193.68	7,006.27	-329.06	-1,383.75	333.17	9.00	8.45	-4.90
7,300.00	52.33	190.11	7,073.09	-401.75	-1,398.90	405.90	9.00	8.60	-3.58
7,400.00	61.01	187.28	7,127.99	-484.27	-1,411.42	488.45	9.00	8.69	-2.82
7,500.00	69.75	184.90	7,169.62	-574.58	-1,420.99	578.79	9.00	8.74	-2.38
7,600.00	78.52	182.77	7,196.93	-670.45	-1,427.38	674.69	9.00	8.77	-2.13
7,700.00	87.29	180.78	7,209.27	-769.54	-1,430.44	773.78	9.00	8.78	-2.00
7,730.80	90.00	180.17	7,210.00	-800.33	-1,430.69	804.57	9.00	8.78	-1.96
<b>End Build @ 7730.80ft</b>									
7,800.00	90.00	180.17	7,210.00	-869.53	-1,430.90	873.77	0.00	0.00	0.00
7,900.00	90.00	180.17	7,210.00	-969.52	-1,431.20	973.77	0.00	0.00	0.00
8,000.00	90.00	180.17	7,210.00	-1,069.52	-1,431.50	1,073.77	0.00	0.00	0.00
8,100.00	90.00	180.17	7,210.00	-1,169.52	-1,431.80	1,173.77	0.00	0.00	0.00
8,200.00	90.00	180.17	7,210.00	-1,269.52	-1,432.10	1,273.77	0.00	0.00	0.00
8,300.00	90.00	180.17	7,210.00	-1,369.52	-1,432.40	1,373.77	0.00	0.00	0.00
8,400.00	90.00	180.17	7,210.00	-1,469.52	-1,432.70	1,473.77	0.00	0.00	0.00
8,500.00	90.00	180.17	7,210.00	-1,569.52	-1,433.00	1,573.77	0.00	0.00	0.00
8,600.00	90.00	180.17	7,210.00	-1,669.52	-1,433.30	1,673.77	0.00	0.00	0.00
8,700.00	90.00	180.17	7,210.00	-1,769.52	-1,433.60	1,773.77	0.00	0.00	0.00
8,800.00	90.00	180.17	7,210.00	-1,869.52	-1,433.90	1,873.77	0.00	0.00	0.00
8,900.00	90.00	180.17	7,210.00	-1,969.52	-1,434.20	1,973.77	0.00	0.00	0.00
9,000.00	90.00	180.17	7,210.00	-2,069.52	-1,434.50	2,073.77	0.00	0.00	0.00
9,100.00	90.00	180.17	7,210.00	-2,169.52	-1,434.80	2,173.77	0.00	0.00	0.00
9,200.00	90.00	180.17	7,210.00	-2,269.52	-1,435.10	2,273.77	0.00	0.00	0.00
9,300.00	90.00	180.17	7,210.00	-2,369.52	-1,435.40	2,373.77	0.00	0.00	0.00
9,400.00	90.00	180.17	7,210.00	-2,469.52	-1,435.70	2,473.77	0.00	0.00	0.00
9,500.00	90.00	180.17	7,210.00	-2,569.52	-1,436.00	2,573.77	0.00	0.00	0.00
9,600.00	90.00	180.17	7,210.00	-2,669.52	-1,436.30	2,673.77	0.00	0.00	0.00
9,700.00	90.00	180.17	7,210.00	-2,769.52	-1,436.60	2,773.77	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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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	180.17	7,210.00	-2,869.52	-1,436.90	2,873.77	0.00	0.00	0.00	
9,900.00	90.00	180.17	7,210.00	-2,969.52	-1,437.20	2,973.77	0.00	0.00	0.00	
10,000.00	90.00	180.17	7,210.00	-3,069.52	-1,437.50	3,073.77	0.00	0.00	0.00	
10,100.00	90.00	180.17	7,210.00	-3,169.51	-1,437.80	3,173.77	0.00	0.00	0.00	
10,200.00	90.00	180.17	7,210.00	-3,269.51	-1,438.10	3,273.77	0.00	0.00	0.00	
10,300.00	90.00	180.17	7,210.00	-3,369.51	-1,438.40	3,373.77	0.00	0.00	0.00	
10,400.00	90.00	180.17	7,210.00	-3,469.51	-1,438.70	3,473.77	0.00	0.00	0.00	
10,500.00	90.00	180.17	7,210.00	-3,569.51	-1,439.00	3,573.77	0.00	0.00	0.00	
10,600.00	90.00	180.17	7,210.00	-3,669.51	-1,439.30	3,673.77	0.00	0.00	0.00	
10,700.00	90.00	180.17	7,210.00	-3,769.51	-1,439.60	3,773.77	0.00	0.00	0.00	
10,800.00	90.00	180.17	7,210.00	-3,869.51	-1,439.90	3,873.77	0.00	0.00	0.00	
10,900.00	90.00	180.17	7,210.00	-3,969.51	-1,440.20	3,973.77	0.00	0.00	0.00	
11,000.00	90.00	180.17	7,210.00	-4,069.51	-1,440.50	4,073.77	0.00	0.00	0.00	
11,100.00	90.00	180.17	7,210.00	-4,169.51	-1,440.80	4,173.77	0.00	0.00	0.00	
11,200.00	90.00	180.17	7,210.00	-4,269.51	-1,441.10	4,273.77	0.00	0.00	0.00	
11,300.00	90.00	180.17	7,210.00	-4,369.51	-1,441.40	4,373.77	0.00	0.00	0.00	
11,400.00	90.00	180.17	7,210.00	-4,469.51	-1,441.70	4,473.77	0.00	0.00	0.00	
11,500.00	90.00	180.17	7,210.00	-4,569.51	-1,442.00	4,573.77	0.00	0.00	0.00	
11,600.00	90.00	180.17	7,210.00	-4,669.51	-1,442.30	4,673.77	0.00	0.00	0.00	
11,700.00	90.00	180.17	7,210.00	-4,769.51	-1,442.60	4,773.77	0.00	0.00	0.00	
11,800.00	90.00	180.17	7,210.00	-4,869.51	-1,442.90	4,873.77	0.00	0.00	0.00	
11,900.00	90.00	180.17	7,210.00	-4,969.51	-1,443.20	4,973.77	0.00	0.00	0.00	
12,000.00	90.00	180.17	7,210.00	-5,069.51	-1,443.50	5,073.77	0.00	0.00	0.00	
12,100.00	90.00	180.17	7,210.00	-5,169.51	-1,443.80	5,173.77	0.00	0.00	0.00	
12,200.00	90.00	180.17	7,210.00	-5,269.51	-1,444.10	5,273.77	0.00	0.00	0.00	
12,300.00	90.00	180.17	7,210.00	-5,369.51	-1,444.40	5,373.77	0.00	0.00	0.00	
12,400.00	90.00	180.17	7,210.00	-5,469.50	-1,444.70	5,473.77	0.00	0.00	0.00	
12,500.00	90.00	180.17	7,210.00	-5,569.50	-1,445.00	5,573.77	0.00	0.00	0.00	
12,600.00	90.00	180.17	7,210.00	-5,669.50	-1,445.30	5,673.77	0.00	0.00	0.00	
12,700.00	90.00	180.17	7,210.00	-5,769.50	-1,445.60	5,773.77	0.00	0.00	0.00	
12,800.00	90.00	180.17	7,210.00	-5,869.50	-1,445.90	5,873.77	0.00	0.00	0.00	
12,900.00	90.00	180.17	7,210.00	-5,969.50	-1,446.20	5,973.77	0.00	0.00	0.00	
13,000.00	90.00	180.17	7,210.00	-6,069.50	-1,446.50	6,073.77	0.00	0.00	0.00	
13,100.00	90.00	180.17	7,210.00	-6,169.50	-1,446.80	6,173.77	0.00	0.00	0.00	
13,200.00	90.00	180.17	7,210.00	-6,269.50	-1,447.10	6,273.77	0.00	0.00	0.00	
13,300.00	90.00	180.17	7,210.00	-6,369.50	-1,447.40	6,373.77	0.00	0.00	0.00	
13,400.00	90.00	180.17	7,210.00	-6,469.50	-1,447.70	6,473.77	0.00	0.00	0.00	
13,500.00	90.00	180.17	7,210.00	-6,569.50	-1,448.00	6,573.77	0.00	0.00	0.00	
13,600.00	90.00	180.17	7,210.00	-6,669.50	-1,448.30	6,673.77	0.00	0.00	0.00	
13,700.00	90.00	180.17	7,210.00	-6,769.50	-1,448.60	6,773.77	0.00	0.00	0.00	
13,800.00	90.00	180.17	7,210.00	-6,869.50	-1,448.90	6,873.77	0.00	0.00	0.00	
13,900.00	90.00	180.17	7,210.00	-6,969.50	-1,449.20	6,973.77	0.00	0.00	0.00	
14,000.00	90.00	180.17	7,210.00	-7,069.50	-1,449.50	7,073.77	0.00	0.00	0.00	
14,100.00	90.00	180.17	7,210.00	-7,169.50	-1,449.80	7,173.77	0.00	0.00	0.00	
14,200.00	90.00	180.17	7,210.00	-7,269.50	-1,450.10	7,273.77	0.00	0.00	0.00	
14,300.00	90.00	180.17	7,210.00	-7,369.50	-1,450.40	7,373.77	0.00	0.00	0.00	
14,400.00	90.00	180.17	7,210.00	-7,469.50	-1,450.70	7,473.77	0.00	0.00	0.00	
14,500.00	90.00	180.17	7,210.00	-7,569.50	-1,451.01	7,573.77	0.00	0.00	0.00	
14,600.00	90.00	180.17	7,210.00	-7,669.49	-1,451.31	7,673.77	0.00	0.00	0.00	
14,700.00	90.00	180.17	7,210.00	-7,769.49	-1,451.61	7,773.77	0.00	0.00	0.00	
14,800.00	90.00	180.17	7,210.00	-7,869.49	-1,451.91	7,873.77	0.00	0.00	0.00	
14,900.00	90.00	180.17	7,210.00	-7,969.49	-1,452.21	7,973.77	0.00	0.00	0.00	
15,000.00	90.00	180.17	7,210.00	-8,069.49	-1,452.51	8,073.77	0.00	0.00	0.00	
15,100.00	90.00	180.17	7,210.00	-8,169.49	-1,452.81	8,173.77	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 3107-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5065.00usft (RIG)
<b>Site:</b>	1N-65W-31 COUNTY LINE 3107 PAD	<b>North Reference:</b>	True
<b>Well:</b>	COUNTY LINE 3107-07H	<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	180.17	7,210.00	-8,269.49	-1,453.11	8,273.77	0.00	0.00	0.00
15,300.00	90.00	180.17	7,210.00	-8,369.49	-1,453.41	8,373.77	0.00	0.00	0.00
15,400.00	90.00	180.17	7,210.00	-8,469.49	-1,453.71	8,473.77	0.00	0.00	0.00
15,500.00	90.00	180.17	7,210.00	-8,569.49	-1,454.01	8,573.77	0.00	0.00	0.00
15,600.00	90.00	180.17	7,210.00	-8,669.49	-1,454.31	8,673.77	0.00	0.00	0.00
15,700.00	90.00	180.17	7,210.00	-8,769.49	-1,454.61	8,773.77	0.00	0.00	0.00
15,800.00	90.00	180.17	7,210.00	-8,869.49	-1,454.91	8,873.77	0.00	0.00	0.00
15,900.00	90.00	180.17	7,210.00	-8,969.49	-1,455.21	8,973.77	0.00	0.00	0.00
16,000.00	90.00	180.17	7,210.00	-9,069.49	-1,455.51	9,073.77	0.00	0.00	0.00
16,100.00	90.00	180.17	7,210.00	-9,169.49	-1,455.81	9,173.77	0.00	0.00	0.00
16,200.00	90.00	180.17	7,210.00	-9,269.49	-1,456.11	9,273.77	0.00	0.00	0.00
16,300.00	90.00	180.17	7,210.00	-9,369.49	-1,456.41	9,373.77	0.00	0.00	0.00
16,400.00	90.00	180.17	7,210.00	-9,469.49	-1,456.71	9,473.77	0.00	0.00	0.00
16,500.00	90.00	180.17	7,210.00	-9,569.49	-1,457.01	9,573.77	0.00	0.00	0.00
16,600.00	90.00	180.17	7,210.00	-9,669.49	-1,457.31	9,673.77	0.00	0.00	0.00
16,700.00	90.00	180.17	7,210.00	-9,769.49	-1,457.61	9,773.77	0.00	0.00	0.00
16,800.00	90.00	180.17	7,210.00	-9,869.48	-1,457.91	9,873.77	0.00	0.00	0.00
16,900.00	90.00	180.17	7,210.00	-9,969.48	-1,458.21	9,973.77	0.00	0.00	0.00
17,000.00	90.00	180.17	7,210.00	-10,069.48	-1,458.51	10,073.77	0.00	0.00	0.00
17,038.07	90.00	180.17	7,210.00	-10,107.55	-1,458.62	10,111.84	0.00	0.00	0.00
TD Well @ 17038.07ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,719.49	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)	
500.00	500.00	0.00	0.00	Begin Nudge @ 500.00ft
1,135.00	1,129.81	-8.83	-69.53	Hold Tangent @ 1135.00ft
6,748.86	6,606.33	-164.37	-1,293.88	KOP @ 6748.86ft :: DLS = 9°/100'
7,730.80	7,210.00	-800.33	-1,430.69	End Build @ 7730.80ft
17,038.07	7,210.00	-10,107.55	-1,458.62	TD Well @ 17038.07ft