

VERDAD RESOURCES

WATTENBERG FIELD

1N-65W-31 COUNTY LINE 3107 PAD

COUNTY LINE 3107-08H

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 3107-08H
Wellbore: Wellbore #1
Design: Design #3

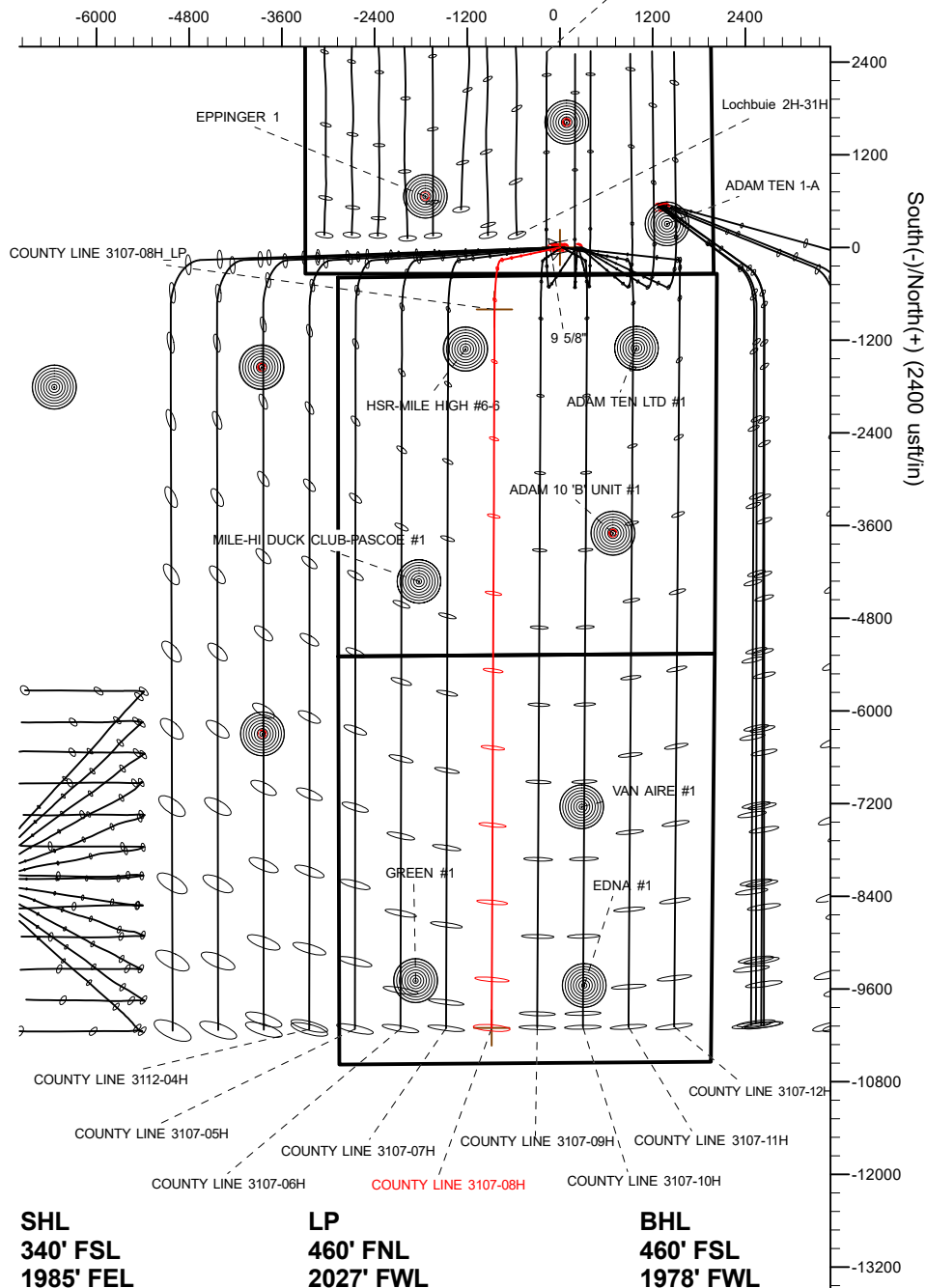
VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1707.34	9 5/8"	9-5/8

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

COUNTY LINE 3130-01H

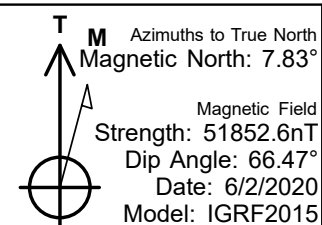
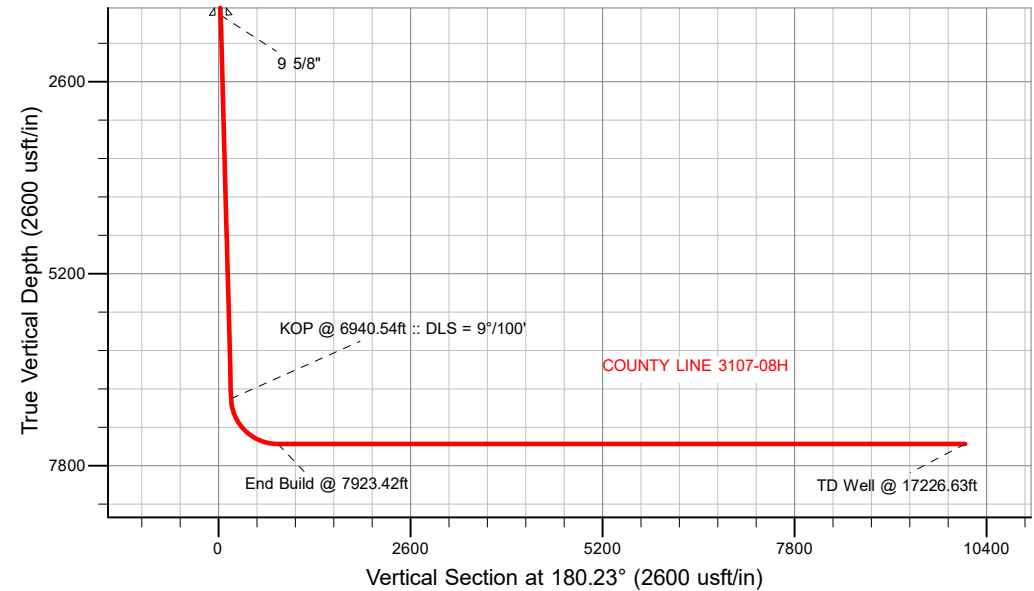


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	
3	913.00	7.26	257.94	912.03	-4.80	-22.46	2.00	257.94	4.89	
4	6940.54	7.26	257.94	6891.25	-163.95	-767.36	0.00	0.00	167.03	
5	7923.42	90.00	180.23	7506.00	-800.03	-846.42	9.00	-77.81	803.42	
6	17226.63	90.00	180.23	7506.00	-10103.17	-883.47	0.00	0.00	10106.64	COUNTY LINE 3107-08H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3107-08H_SHL	0.00	0.00	0.00	40.001456	-104.704361
COUNTY LINE 3107-08H_BHL	7506.00	-10103.17	-883.47	39.973721	-104.707513



WELL DETAILS: COUNTY LINE 3107-08H

GL = 5042'

RKB = 24' @ 5066.00usft (RIG)

Plan: Design #3 (COUNTY LINE 3107-08H/Wellbore #1)

Created By: Clinton Eshelman
Date: 6/03/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3107-08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5066.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5066.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Project	WATTENBERG FIELD		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		1N-65W-31 COUNTY LINE 3107 PAD				
Site Position:		Northing:	1,244,335.38	usft	Latitude:	40.001349
From:	Lat/Long	Easting:	3,222,602.81	usft	Longitude:	-104.705400
Position Uncertainty:	0.00	usft	Slot Radius:	13-3/16	"	

Well		COUNTY LINE 3107-08H				
Well Position	+N/-S	0.00 usft	Northing:	1,244,377.32 usft	Latitude:	40.001456
	+E/-W	0.00 usft	Easting:	3,222,893.37 usft	Longitude:	-104.704361
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,042.00 usft
Grid Convergence:		0.51 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/2/2020	7.83	66.47	51,852.58044299

Design	Design #3				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	180.23	

Plan Survey Tool Program		Date	6/2/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,700.00	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination	
2	1,700.00	17,226.63	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination	

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Well:	COUNTY LINE 3107-08H	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	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
913.00	7.26	257.94	912.03	-4.80	-22.46	2.00	2.00	0.00	257.94	
6,940.54	7.26	257.94	6,891.25	-163.95	-767.36	0.00	0.00	0.00	0.00	
7,923.42	90.00	180.23	7,506.00	-800.03	-846.42	9.00	8.42	-7.91	-77.81	
17,226.64	90.00	180.23	7,506.00	-10,103.17	-883.47	0.00	0.00	0.00	0.00	COUNTY LINE 3107-

HP

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5066.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 550.00ft									
600.00	1.00	257.94	600.00	-0.09	-0.43	0.09	2.00	2.00	0.00
700.00	3.00	257.94	699.93	-0.82	-3.84	0.84	2.00	2.00	0.00
800.00	5.00	257.94	799.68	-2.28	-10.66	2.32	2.00	2.00	0.00
900.00	7.00	257.94	899.13	-4.46	-20.88	4.55	2.00	2.00	0.00
913.00	7.26	257.94	912.03	-4.80	-22.46	4.89	2.00	2.00	0.00
Hold Tangent @ 913.00ft									
1,000.00	7.26	257.94	998.33	-7.10	-33.21	7.23	0.00	0.00	0.00
1,100.00	7.26	257.94	1,097.53	-9.74	-45.57	9.92	0.00	0.00	0.00
1,200.00	7.26	257.94	1,196.73	-12.38	-57.93	12.61	0.00	0.00	0.00
1,300.00	7.26	257.94	1,295.93	-15.02	-70.29	15.30	0.00	0.00	0.00
1,400.00	7.26	257.94	1,395.13	-17.66	-82.65	17.99	0.00	0.00	0.00
1,500.00	7.26	257.94	1,494.32	-20.30	-95.00	20.68	0.00	0.00	0.00
1,600.00	7.26	257.94	1,593.52	-22.94	-107.36	23.37	0.00	0.00	0.00
1,700.00	7.26	257.94	1,692.72	-25.58	-119.72	26.06	0.00	0.00	0.00
1,707.34	7.26	257.94	1,700.00	-25.77	-120.63	26.26	0.00	0.00	0.00
9 5/8"									
1,800.00	7.26	257.94	1,791.92	-28.22	-132.08	28.75	0.00	0.00	0.00
1,900.00	7.26	257.94	1,891.12	-30.86	-144.44	31.44	0.00	0.00	0.00
2,000.00	7.26	257.94	1,990.31	-33.50	-156.80	34.13	0.00	0.00	0.00
2,100.00	7.26	257.94	2,089.51	-36.14	-169.15	36.82	0.00	0.00	0.00
2,200.00	7.26	257.94	2,188.71	-38.78	-181.51	39.51	0.00	0.00	0.00
2,300.00	7.26	257.94	2,287.91	-41.42	-193.87	42.20	0.00	0.00	0.00
2,400.00	7.26	257.94	2,387.11	-44.06	-206.23	44.89	0.00	0.00	0.00
2,500.00	7.26	257.94	2,486.31	-46.70	-218.59	47.58	0.00	0.00	0.00
2,600.00	7.26	257.94	2,585.50	-49.34	-230.94	50.27	0.00	0.00	0.00
2,700.00	7.26	257.94	2,684.70	-51.98	-243.30	52.96	0.00	0.00	0.00
2,800.00	7.26	257.94	2,783.90	-54.62	-255.66	55.65	0.00	0.00	0.00
2,900.00	7.26	257.94	2,883.10	-57.26	-268.02	58.34	0.00	0.00	0.00
3,000.00	7.26	257.94	2,982.30	-59.90	-280.38	61.03	0.00	0.00	0.00
3,100.00	7.26	257.94	3,081.50	-62.54	-292.74	63.72	0.00	0.00	0.00
3,200.00	7.26	257.94	3,180.69	-65.18	-305.09	66.41	0.00	0.00	0.00
3,300.00	7.26	257.94	3,279.89	-67.82	-317.45	69.10	0.00	0.00	0.00
3,400.00	7.26	257.94	3,379.09	-70.46	-329.81	71.79	0.00	0.00	0.00
3,500.00	7.26	257.94	3,478.29	-73.10	-342.17	74.48	0.00	0.00	0.00
3,600.00	7.26	257.94	3,577.49	-75.75	-354.53	77.17	0.00	0.00	0.00
3,700.00	7.26	257.94	3,676.69	-78.39	-366.89	79.86	0.00	0.00	0.00
3,800.00	7.26	257.94	3,775.88	-81.03	-379.24	82.55	0.00	0.00	0.00
3,900.00	7.26	257.94	3,875.08	-83.67	-391.60	85.24	0.00	0.00	0.00
4,000.00	7.26	257.94	3,974.28	-86.31	-403.96	87.93	0.00	0.00	0.00
4,100.00	7.26	257.94	4,073.48	-88.95	-416.32	90.62	0.00	0.00	0.00
4,200.00	7.26	257.94	4,172.68	-91.59	-428.68	93.31	0.00	0.00	0.00
4,300.00	7.26	257.94	4,271.88	-94.23	-441.04	96.00	0.00	0.00	0.00
4,400.00	7.26	257.94	4,371.07	-96.87	-453.39	98.69	0.00	0.00	0.00
4,500.00	7.26	257.94	4,470.27	-99.51	-465.75	101.38	0.00	0.00	0.00
4,600.00	7.26	257.94	4,569.47	-102.15	-478.11	104.07	0.00	0.00	0.00

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5066.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5066.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	7.26	257.94	4,668.67	-104.79	-490.47	106.76	0.00	0.00	0.00
4,800.00	7.26	257.94	4,767.87	-107.43	-502.83	109.45	0.00	0.00	0.00
4,900.00	7.26	257.94	4,867.07	-110.07	-515.19	112.14	0.00	0.00	0.00
5,000.00	7.26	257.94	4,966.26	-112.71	-527.54	114.83	0.00	0.00	0.00
5,100.00	7.26	257.94	5,065.46	-115.35	-539.90	117.52	0.00	0.00	0.00
5,200.00	7.26	257.94	5,164.66	-117.99	-552.26	120.21	0.00	0.00	0.00
5,300.00	7.26	257.94	5,263.86	-120.63	-564.62	122.90	0.00	0.00	0.00
5,400.00	7.26	257.94	5,363.06	-123.27	-576.98	125.59	0.00	0.00	0.00
5,500.00	7.26	257.94	5,462.26	-125.91	-589.34	128.28	0.00	0.00	0.00
5,600.00	7.26	257.94	5,561.45	-128.55	-601.69	130.97	0.00	0.00	0.00
5,700.00	7.26	257.94	5,660.65	-131.19	-614.05	133.66	0.00	0.00	0.00
5,800.00	7.26	257.94	5,759.85	-133.83	-626.41	136.35	0.00	0.00	0.00
5,900.00	7.26	257.94	5,859.05	-136.47	-638.77	139.04	0.00	0.00	0.00
6,000.00	7.26	257.94	5,958.25	-139.11	-651.13	141.73	0.00	0.00	0.00
6,100.00	7.26	257.94	6,057.44	-141.75	-663.49	144.42	0.00	0.00	0.00
6,200.00	7.26	257.94	6,156.64	-144.39	-675.84	147.11	0.00	0.00	0.00
6,300.00	7.26	257.94	6,255.84	-147.04	-688.20	149.80	0.00	0.00	0.00
6,400.00	7.26	257.94	6,355.04	-149.68	-700.56	152.49	0.00	0.00	0.00
6,500.00	7.26	257.94	6,454.24	-152.32	-712.92	155.18	0.00	0.00	0.00
6,600.00	7.26	257.94	6,553.44	-154.96	-725.28	157.87	0.00	0.00	0.00
6,700.00	7.26	257.94	6,652.63	-157.60	-737.64	160.56	0.00	0.00	0.00
6,800.00	7.26	257.94	6,751.83	-160.24	-749.99	163.25	0.00	0.00	0.00
6,900.00	7.26	257.94	6,851.03	-162.88	-762.35	165.94	0.00	0.00	0.00
6,940.54	7.26	257.94	6,891.25	-163.95	-767.36	167.03	0.00	0.00	0.00
KOP @ 6940.54ft :: DLS = 9°/100'									
7,000.00	9.88	225.85	6,950.07	-168.29	-774.70	171.40	9.00	4.41	-53.97
7,100.00	17.37	203.68	7,047.25	-187.97	-786.88	191.13	9.00	7.49	-22.17
7,200.00	25.82	195.13	7,140.17	-222.74	-798.58	225.94	9.00	8.45	-8.55
7,300.00	34.54	190.65	7,226.54	-271.72	-809.53	274.97	9.00	8.72	-4.49
7,400.00	43.36	187.80	7,304.24	-333.72	-819.45	337.01	9.00	8.82	-2.85
7,500.00	52.24	185.76	7,371.35	-407.22	-828.09	410.54	9.00	8.87	-2.04
7,600.00	61.14	184.16	7,426.22	-490.39	-835.25	493.74	9.00	8.90	-1.60
7,700.00	70.05	182.82	7,467.49	-581.19	-840.75	584.56	9.00	8.92	-1.34
7,800.00	78.98	181.62	7,494.17	-677.39	-844.46	680.77	9.00	8.93	-1.20
7,900.00	87.91	180.49	7,505.57	-776.62	-846.27	780.01	9.00	8.93	-1.13
7,923.42	90.00	180.23	7,506.00	-800.03	-846.42	803.42	9.00	8.93	-1.11
End Build @ 7923.42ft									
8,000.00	90.00	180.23	7,506.00	-876.61	-846.72	880.00	0.00	0.00	0.00
8,100.00	90.00	180.23	7,506.00	-976.61	-847.12	980.00	0.00	0.00	0.00
8,200.00	90.00	180.23	7,506.00	-1,076.61	-847.52	1,080.00	0.00	0.00	0.00
8,300.00	90.00	180.23	7,506.00	-1,176.61	-847.92	1,180.00	0.00	0.00	0.00
8,400.00	90.00	180.23	7,506.00	-1,276.61	-848.32	1,280.00	0.00	0.00	0.00
8,500.00	90.00	180.23	7,506.00	-1,376.61	-848.71	1,380.00	0.00	0.00	0.00
8,600.00	90.00	180.23	7,506.00	-1,476.61	-849.11	1,480.00	0.00	0.00	0.00
8,700.00	90.00	180.23	7,506.00	-1,576.61	-849.51	1,580.00	0.00	0.00	0.00
8,800.00	90.00	180.23	7,506.00	-1,676.60	-849.91	1,680.00	0.00	0.00	0.00
8,900.00	90.00	180.23	7,506.00	-1,776.60	-850.31	1,780.00	0.00	0.00	0.00
9,000.00	90.00	180.23	7,506.00	-1,876.60	-850.70	1,880.00	0.00	0.00	0.00
9,100.00	90.00	180.23	7,506.00	-1,976.60	-851.10	1,980.00	0.00	0.00	0.00
9,200.00	90.00	180.23	7,506.00	-2,076.60	-851.50	2,080.00	0.00	0.00	0.00
9,300.00	90.00	180.23	7,506.00	-2,176.60	-851.90	2,180.00	0.00	0.00	0.00
9,400.00	90.00	180.23	7,506.00	-2,276.60	-852.30	2,280.00	0.00	0.00	0.00
9,500.00	90.00	180.23	7,506.00	-2,376.60	-852.70	2,380.00	0.00	0.00	0.00
9,600.00	90.00	180.23	7,506.00	-2,476.60	-853.09	2,480.00	0.00	0.00	0.00

HP

Planning Report

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Well:	COUNTY LINE 3107-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	180.23	7,506.00	-2,576.60	-853.49	2,580.00	0.00	0.00	0.00
9,800.00	90.00	180.23	7,506.00	-2,676.60	-853.89	2,680.00	0.00	0.00	0.00
9,900.00	90.00	180.23	7,506.00	-2,776.60	-854.29	2,780.00	0.00	0.00	0.00
10,000.00	90.00	180.23	7,506.00	-2,876.60	-854.69	2,880.00	0.00	0.00	0.00
10,100.00	90.00	180.23	7,506.00	-2,976.59	-855.09	2,980.00	0.00	0.00	0.00
10,200.00	90.00	180.23	7,506.00	-3,076.59	-855.48	3,080.00	0.00	0.00	0.00
10,300.00	90.00	180.23	7,506.00	-3,176.59	-855.88	3,180.00	0.00	0.00	0.00
10,400.00	90.00	180.23	7,506.00	-3,276.59	-856.28	3,280.00	0.00	0.00	0.00
10,500.00	90.00	180.23	7,506.00	-3,376.59	-856.68	3,380.00	0.00	0.00	0.00
10,600.00	90.00	180.23	7,506.00	-3,476.59	-857.08	3,480.00	0.00	0.00	0.00
10,700.00	90.00	180.23	7,506.00	-3,576.59	-857.48	3,580.00	0.00	0.00	0.00
10,800.00	90.00	180.23	7,506.00	-3,676.59	-857.87	3,680.00	0.00	0.00	0.00
10,900.00	90.00	180.23	7,506.00	-3,776.59	-858.27	3,780.00	0.00	0.00	0.00
11,000.00	90.00	180.23	7,506.00	-3,876.59	-858.67	3,880.00	0.00	0.00	0.00
11,100.00	90.00	180.23	7,506.00	-3,976.59	-859.07	3,980.00	0.00	0.00	0.00
11,200.00	90.00	180.23	7,506.00	-4,076.59	-859.47	4,080.00	0.00	0.00	0.00
11,300.00	90.00	180.23	7,506.00	-4,176.59	-859.86	4,180.00	0.00	0.00	0.00
11,400.00	90.00	180.23	7,506.00	-4,276.58	-860.26	4,280.00	0.00	0.00	0.00
11,500.00	90.00	180.23	7,506.00	-4,376.58	-860.66	4,380.00	0.00	0.00	0.00
11,600.00	90.00	180.23	7,506.00	-4,476.58	-861.06	4,480.00	0.00	0.00	0.00
11,700.00	90.00	180.23	7,506.00	-4,576.58	-861.46	4,580.00	0.00	0.00	0.00
11,800.00	90.00	180.23	7,506.00	-4,676.58	-861.86	4,680.00	0.00	0.00	0.00
11,900.00	90.00	180.23	7,506.00	-4,776.58	-862.25	4,780.00	0.00	0.00	0.00
12,000.00	90.00	180.23	7,506.00	-4,876.58	-862.65	4,880.00	0.00	0.00	0.00
12,100.00	90.00	180.23	7,506.00	-4,976.58	-863.05	4,980.00	0.00	0.00	0.00
12,200.00	90.00	180.23	7,506.00	-5,076.58	-863.45	5,080.00	0.00	0.00	0.00
12,300.00	90.00	180.23	7,506.00	-5,176.58	-863.85	5,180.00	0.00	0.00	0.00
12,400.00	90.00	180.23	7,506.00	-5,276.58	-864.25	5,280.00	0.00	0.00	0.00
12,500.00	90.00	180.23	7,506.00	-5,376.58	-864.64	5,380.00	0.00	0.00	0.00
12,600.00	90.00	180.23	7,506.00	-5,476.57	-865.04	5,480.00	0.00	0.00	0.00
12,700.00	90.00	180.23	7,506.00	-5,576.57	-865.44	5,580.00	0.00	0.00	0.00
12,800.00	90.00	180.23	7,506.00	-5,676.57	-865.84	5,680.00	0.00	0.00	0.00
12,900.00	90.00	180.23	7,506.00	-5,776.57	-866.24	5,780.00	0.00	0.00	0.00
13,000.00	90.00	180.23	7,506.00	-5,876.57	-866.64	5,880.00	0.00	0.00	0.00
13,100.00	90.00	180.23	7,506.00	-5,976.57	-867.03	5,980.00	0.00	0.00	0.00
13,200.00	90.00	180.23	7,506.00	-6,076.57	-867.43	6,080.00	0.00	0.00	0.00
13,300.00	90.00	180.23	7,506.00	-6,176.57	-867.83	6,180.00	0.00	0.00	0.00
13,400.00	90.00	180.23	7,506.00	-6,276.57	-868.23	6,280.00	0.00	0.00	0.00
13,500.00	90.00	180.23	7,506.00	-6,376.57	-868.63	6,380.00	0.00	0.00	0.00
13,600.00	90.00	180.23	7,506.00	-6,476.57	-869.02	6,480.00	0.00	0.00	0.00
13,700.00	90.00	180.23	7,506.00	-6,576.57	-869.42	6,580.00	0.00	0.00	0.00
13,800.00	90.00	180.23	7,506.00	-6,676.57	-869.82	6,680.00	0.00	0.00	0.00
13,900.00	90.00	180.23	7,506.00	-6,776.56	-870.22	6,780.00	0.00	0.00	0.00
14,000.00	90.00	180.23	7,506.00	-6,876.56	-870.62	6,880.00	0.00	0.00	0.00
14,100.00	90.00	180.23	7,506.00	-6,976.56	-871.02	6,980.00	0.00	0.00	0.00
14,200.00	90.00	180.23	7,506.00	-7,076.56	-871.41	7,080.00	0.00	0.00	0.00
14,300.00	90.00	180.23	7,506.00	-7,176.56	-871.81	7,180.00	0.00	0.00	0.00
14,400.00	90.00	180.23	7,506.00	-7,276.56	-872.21	7,280.00	0.00	0.00	0.00
14,500.00	90.00	180.23	7,506.00	-7,376.56	-872.61	7,380.00	0.00	0.00	0.00
14,600.00	90.00	180.23	7,506.00	-7,476.56	-873.01	7,480.00	0.00	0.00	0.00
14,700.00	90.00	180.23	7,506.00	-7,576.56	-873.41	7,580.00	0.00	0.00	0.00
14,800.00	90.00	180.23	7,506.00	-7,676.56	-873.80	7,680.00	0.00	0.00	0.00
14,900.00	90.00	180.23	7,506.00	-7,776.56	-874.20	7,780.00	0.00	0.00	0.00
15,000.00	90.00	180.23	7,506.00	-7,876.56	-874.60	7,880.00	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3107-08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5066.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5066.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	180.23	7,506.00	-7,976.56	-875.00	7,980.00	0.00	0.00	0.00	
15,200.00	90.00	180.23	7,506.00	-8,076.55	-875.40	8,080.00	0.00	0.00	0.00	
15,300.00	90.00	180.23	7,506.00	-8,176.55	-875.80	8,180.00	0.00	0.00	0.00	
15,400.00	90.00	180.23	7,506.00	-8,276.55	-876.19	8,280.00	0.00	0.00	0.00	
15,500.00	90.00	180.23	7,506.00	-8,376.55	-876.59	8,380.00	0.00	0.00	0.00	
15,600.00	90.00	180.23	7,506.00	-8,476.55	-876.99	8,480.00	0.00	0.00	0.00	
15,700.00	90.00	180.23	7,506.00	-8,576.55	-877.39	8,580.00	0.00	0.00	0.00	
15,800.00	90.00	180.23	7,506.00	-8,676.55	-877.79	8,680.00	0.00	0.00	0.00	
15,900.00	90.00	180.23	7,506.00	-8,776.55	-878.18	8,780.00	0.00	0.00	0.00	
16,000.00	90.00	180.23	7,506.00	-8,876.55	-878.58	8,880.00	0.00	0.00	0.00	
16,100.00	90.00	180.23	7,506.00	-8,976.55	-878.98	8,980.00	0.00	0.00	0.00	
16,200.00	90.00	180.23	7,506.00	-9,076.55	-879.38	9,080.00	0.00	0.00	0.00	
16,300.00	90.00	180.23	7,506.00	-9,176.55	-879.78	9,180.00	0.00	0.00	0.00	
16,400.00	90.00	180.23	7,506.00	-9,276.54	-880.18	9,280.00	0.00	0.00	0.00	
16,500.00	90.00	180.23	7,506.00	-9,376.54	-880.57	9,380.00	0.00	0.00	0.00	
16,600.00	90.00	180.23	7,506.00	-9,476.54	-880.97	9,480.00	0.00	0.00	0.00	
16,700.00	90.00	180.23	7,506.00	-9,576.54	-881.37	9,580.00	0.00	0.00	0.00	
16,800.00	90.00	180.23	7,506.00	-9,676.54	-881.77	9,680.00	0.00	0.00	0.00	
16,900.00	90.00	180.23	7,506.00	-9,776.54	-882.17	9,780.00	0.00	0.00	0.00	
17,000.00	90.00	180.23	7,506.00	-9,876.54	-882.57	9,880.00	0.00	0.00	0.00	
17,100.00	90.00	180.23	7,506.00	-9,976.54	-882.96	9,980.00	0.00	0.00	0.00	
17,200.00	90.00	180.23	7,506.00	-10,076.54	-883.36	10,080.00	0.00	0.00	0.00	
17,226.64	90.00	180.23	7,506.00	-10,103.17	-883.47	10,106.64	0.00	0.00	0.00	
TD Well @ 17226.63ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,707.34	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)		
550.00	550.00	0.00	0.00	Begin Nudge @ 550.00ft	
913.00	912.03	-4.80	-22.46	Hold Tangent @ 913.00ft	
6,940.54	6,891.25	-163.95	-767.36	KOP @ 6940.54ft :: DLS = 9°/100'	
7,923.42	7,506.00	-800.03	-846.42	End Build @ 7923.42ft	
17,226.64	7,506.00	-10,103.17	-883.47	TD Well @ 17226.63ft	