

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-31 COUNTY LINE 3112 PAD
COUNTY LINE 3112-03H**

Wellbore #1

Plan: Design #3

Standard Planning Report

02 June, 2020

Project: WATTENBERG FIELD
Site: 1N-65W-31 COUNTY LINE 3112 PAD
Well: COUNTY LINE 3112-03H
Wellbore: Wellbore #1
Design: Design #3

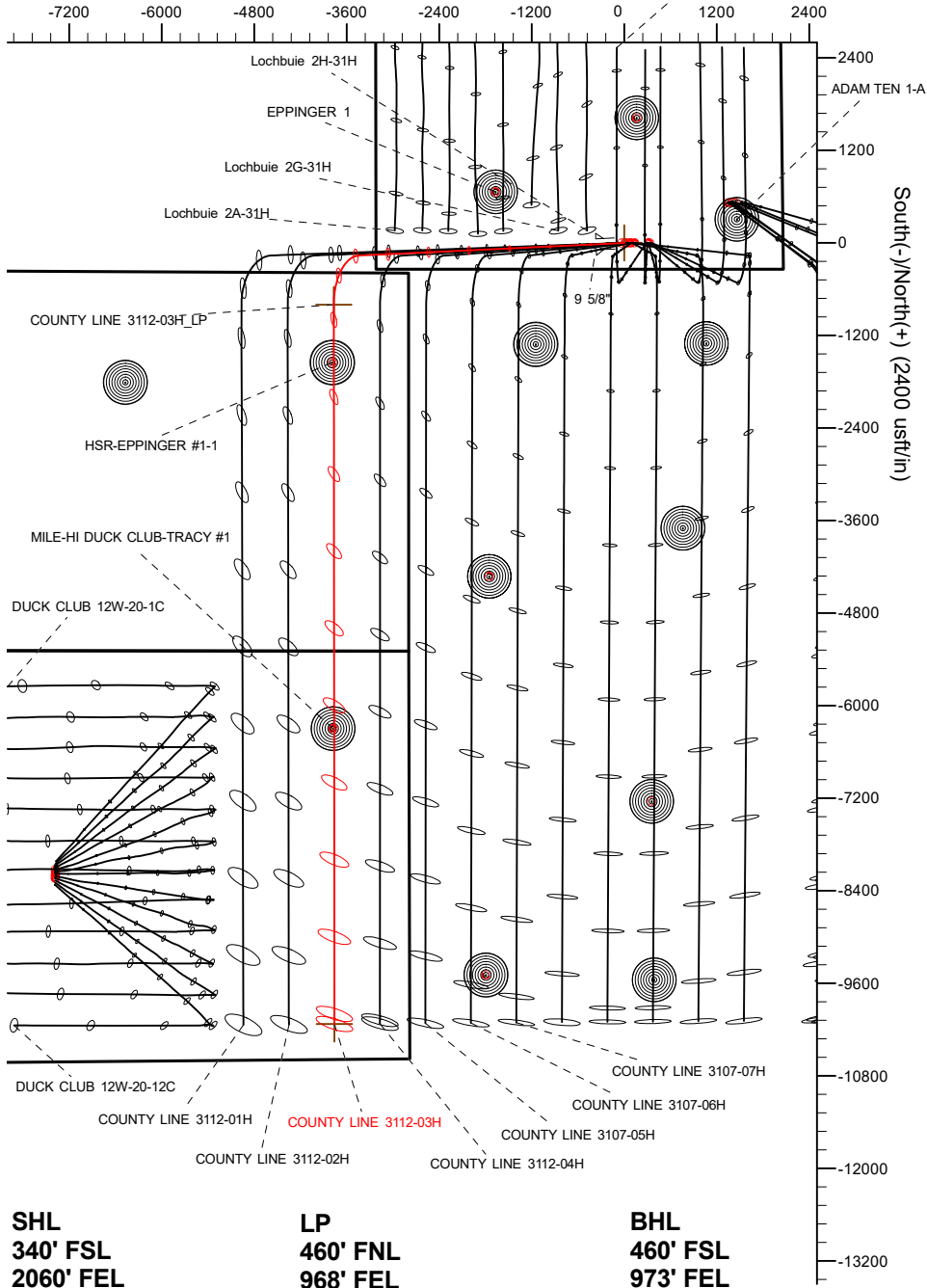
VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1762.73	9 5/8"	9-5/8

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

COUNTY LINE 3130-01H

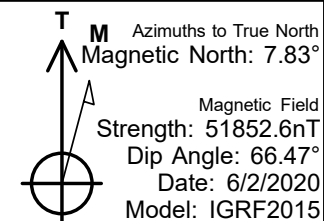
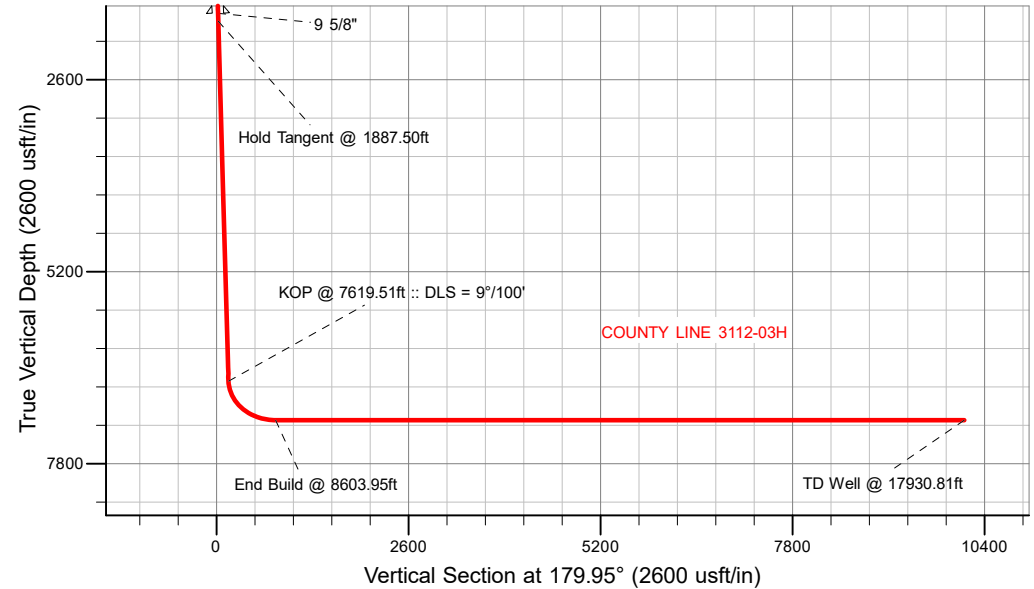


SECTION DETAILS

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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1887.50	31.75	267.29	1807.49	-20.27	-428.23	2.00	267.29	19.90	
4	7619.51	31.75	267.29	6881.72	-162.88	-3441.12	0.00	0.00	159.88	
5	8603.95	90.00	179.95	7210.00	-799.59	-3767.14	9.00	-87.74	796.30	
6	17930.81	90.00	179.95	7210.00	-10126.44	-3759.26	0.00	0.00	10123.16	COUNTY LINE 3112-03H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3112-03H_SHL	0.00	0.00	0.00	40.001456	-104.704629
COUNTY LINE 3112-03H_BHL	7210.00	-10126.44	-3759.26	39.973656	-104.718042



WELL DETAILS: COUNTY LINE 3112-03H

GL = 5039'

RKB = 24' @ 5063.00usft (RIG)

Plan: Design #3 (COUNTY LINE 3112-03H/Wellbore #1)

Created By: Clinton Eshelman
Date: 6/02/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3112-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5063.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5063.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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 3112 PAD			
Site Position:		Northing:	1,244,334.02 usft	Latitude: 40.001348
From:	Lat/Long	Easting:	3,222,467.81 usft	Longitude: -104.705882
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	COUNTY LINE 3112-03H			
Well Position	+N/-S	0.00 usft	Northing:	1,244,376.61 usft
	+E/-W	0.00 usft	Easting:	3,222,818.38 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.51 °	Ground Level:	5,039.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/2/2020	7.83	66.47	51,852.57642087

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	179.95

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	17,930.81	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

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Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,887.50	31.75	267.29	1,807.49	-20.27	-428.23	2.00	2.00	0.00	267.29	
7,619.51	31.75	267.29	6,681.72	-162.88	-3,441.12	0.00	0.00	0.00	0.00	
8,603.95	90.00	179.95	7,210.00	-799.59	-3,767.14	9.00	5.92	-8.87	-87.74	
17,930.81	90.00	179.95	7,210.00	-10,126.44	-3,759.26	0.00	0.00	0.00	0.00	COUNTY LINE 3112-I

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5063.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5063.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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
Begin Nudge @ 300.00ft									
400.00	2.00	267.29	399.98	-0.08	-1.74	0.08	2.00	2.00	0.00
500.00	4.00	267.29	499.84	-0.33	-6.97	0.32	2.00	2.00	0.00
600.00	6.00	267.29	599.45	-0.74	-15.68	0.73	2.00	2.00	0.00
700.00	8.00	267.29	698.70	-1.32	-27.85	1.29	2.00	2.00	0.00
800.00	10.00	267.29	797.47	-2.06	-43.47	2.02	2.00	2.00	0.00
900.00	12.00	267.29	895.62	-2.96	-62.53	2.91	2.00	2.00	0.00
1,000.00	14.00	267.29	993.06	-4.02	-85.00	3.95	2.00	2.00	0.00
1,100.00	16.00	267.29	1,089.64	-5.25	-110.85	5.15	2.00	2.00	0.00
1,200.00	18.00	267.29	1,185.27	-6.63	-140.06	6.51	2.00	2.00	0.00
1,300.00	20.00	267.29	1,279.82	-8.17	-172.57	8.02	2.00	2.00	0.00
1,400.00	22.00	267.29	1,373.17	-9.86	-208.37	9.68	2.00	2.00	0.00
1,500.00	24.00	267.29	1,465.21	-11.71	-247.40	11.49	2.00	2.00	0.00
1,600.00	26.00	267.29	1,555.84	-13.71	-289.61	13.46	2.00	2.00	0.00
1,700.00	28.00	267.29	1,644.94	-15.85	-334.96	15.56	2.00	2.00	0.00
1,762.73	29.25	267.29	1,700.00	-17.28	-364.98	16.96	2.00	2.00	0.00
9 5/8"									
1,800.00	30.00	267.29	1,732.39	-18.15	-383.38	17.81	2.00	2.00	0.00
1,887.50	31.75	267.29	1,807.49	-20.27	-428.23	19.90	2.00	2.00	0.00
Hold Tangent @ 1887.50ft									
1,900.00	31.75	267.29	1,818.12	-20.58	-434.80	20.20	0.00	0.00	0.00
2,000.00	31.75	267.29	1,903.16	-23.07	-487.36	22.64	0.00	0.00	0.00
2,100.00	31.75	267.29	1,988.19	-25.56	-539.93	25.09	0.00	0.00	0.00
2,200.00	31.75	267.29	2,073.23	-28.04	-592.49	27.53	0.00	0.00	0.00
2,300.00	31.75	267.29	2,158.26	-30.53	-645.05	29.97	0.00	0.00	0.00
2,400.00	31.75	267.29	2,243.30	-33.02	-697.61	32.41	0.00	0.00	0.00
2,500.00	31.75	267.29	2,328.33	-35.51	-750.18	34.85	0.00	0.00	0.00
2,600.00	31.75	267.29	2,413.37	-38.00	-802.74	37.30	0.00	0.00	0.00
2,700.00	31.75	267.29	2,498.40	-40.48	-855.30	39.74	0.00	0.00	0.00
2,800.00	31.75	267.29	2,583.44	-42.97	-907.86	42.18	0.00	0.00	0.00
2,900.00	31.75	267.29	2,668.47	-45.46	-960.43	44.62	0.00	0.00	0.00
3,000.00	31.75	267.29	2,753.51	-47.95	-1,012.99	47.06	0.00	0.00	0.00
3,100.00	31.75	267.29	2,838.54	-50.44	-1,065.55	49.51	0.00	0.00	0.00
3,200.00	31.75	267.29	2,923.58	-52.92	-1,118.11	51.95	0.00	0.00	0.00
3,300.00	31.75	267.29	3,008.61	-55.41	-1,170.68	54.39	0.00	0.00	0.00
3,400.00	31.75	267.29	3,093.65	-57.90	-1,223.24	56.83	0.00	0.00	0.00
3,500.00	31.75	267.29	3,178.68	-60.39	-1,275.80	59.28	0.00	0.00	0.00
3,600.00	31.75	267.29	3,263.72	-62.88	-1,328.36	61.72	0.00	0.00	0.00
3,700.00	31.75	267.29	3,348.76	-65.36	-1,380.93	64.16	0.00	0.00	0.00
3,800.00	31.75	267.29	3,433.79	-67.85	-1,433.49	66.60	0.00	0.00	0.00
3,900.00	31.75	267.29	3,518.83	-70.34	-1,486.05	69.04	0.00	0.00	0.00
4,000.00	31.75	267.29	3,603.86	-72.83	-1,538.61	71.49	0.00	0.00	0.00
4,100.00	31.75	267.29	3,688.90	-75.32	-1,591.18	73.93	0.00	0.00	0.00
4,200.00	31.75	267.29	3,773.93	-77.80	-1,643.74	76.37	0.00	0.00	0.00
4,300.00	31.75	267.29	3,858.97	-80.29	-1,696.30	78.81	0.00	0.00	0.00
4,400.00	31.75	267.29	3,944.00	-82.78	-1,748.86	81.25	0.00	0.00	0.00
4,500.00	31.75	267.29	4,029.04	-85.27	-1,801.43	83.70	0.00	0.00	0.00
4,600.00	31.75	267.29	4,114.07	-87.76	-1,853.99	86.14	0.00	0.00	0.00
4,700.00	31.75	267.29	4,199.11	-90.24	-1,906.55	88.58	0.00	0.00	0.00

HP

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5063.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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)
4,800.00	31.75	267.29	4,284.14	-92.73	-1,959.11	91.02	0.00	0.00	0.00
4,900.00	31.75	267.29	4,369.18	-95.22	-2,011.68	93.46	0.00	0.00	0.00
5,000.00	31.75	267.29	4,454.21	-97.71	-2,064.24	95.91	0.00	0.00	0.00
5,100.00	31.75	267.29	4,539.25	-100.20	-2,116.80	98.35	0.00	0.00	0.00
5,200.00	31.75	267.29	4,624.28	-102.68	-2,169.36	100.79	0.00	0.00	0.00
5,300.00	31.75	267.29	4,709.32	-105.17	-2,221.93	103.23	0.00	0.00	0.00
5,400.00	31.75	267.29	4,794.35	-107.66	-2,274.49	105.68	0.00	0.00	0.00
5,500.00	31.75	267.29	4,879.39	-110.15	-2,327.05	108.12	0.00	0.00	0.00
5,600.00	31.75	267.29	4,964.42	-112.64	-2,379.61	110.56	0.00	0.00	0.00
5,700.00	31.75	267.29	5,049.46	-115.12	-2,432.18	113.00	0.00	0.00	0.00
5,800.00	31.75	267.29	5,134.50	-117.61	-2,484.74	115.44	0.00	0.00	0.00
5,900.00	31.75	267.29	5,219.53	-120.10	-2,537.30	117.89	0.00	0.00	0.00
6,000.00	31.75	267.29	5,304.57	-122.59	-2,589.86	120.33	0.00	0.00	0.00
6,100.00	31.75	267.29	5,389.60	-125.08	-2,642.43	122.77	0.00	0.00	0.00
6,200.00	31.75	267.29	5,474.64	-127.56	-2,694.99	125.21	0.00	0.00	0.00
6,300.00	31.75	267.29	5,559.67	-130.05	-2,747.55	127.65	0.00	0.00	0.00
6,400.00	31.75	267.29	5,644.71	-132.54	-2,800.11	130.10	0.00	0.00	0.00
6,500.00	31.75	267.29	5,729.74	-135.03	-2,852.68	132.54	0.00	0.00	0.00
6,600.00	31.75	267.29	5,814.78	-137.52	-2,905.24	134.98	0.00	0.00	0.00
6,700.00	31.75	267.29	5,899.81	-140.00	-2,957.80	137.42	0.00	0.00	0.00
6,800.00	31.75	267.29	5,984.85	-142.49	-3,010.36	139.86	0.00	0.00	0.00
6,900.00	31.75	267.29	6,069.88	-144.98	-3,062.93	142.31	0.00	0.00	0.00
7,000.00	31.75	267.29	6,154.92	-147.47	-3,115.49	144.75	0.00	0.00	0.00
7,100.00	31.75	267.29	6,239.95	-149.96	-3,168.05	147.19	0.00	0.00	0.00
7,200.00	31.75	267.29	6,324.99	-152.44	-3,220.61	149.63	0.00	0.00	0.00
7,300.00	31.75	267.29	6,410.02	-154.93	-3,273.18	152.08	0.00	0.00	0.00
7,400.00	31.75	267.29	6,495.06	-157.42	-3,325.74	154.52	0.00	0.00	0.00
7,500.00	31.75	267.29	6,580.09	-159.91	-3,378.30	156.96	0.00	0.00	0.00
7,600.00	31.75	267.29	6,665.13	-162.40	-3,430.87	159.40	0.00	0.00	0.00
7,619.51	31.75	267.29	6,681.72	-162.88	-3,441.12	159.88	0.00	0.00	0.00
KOP @ 7619.51ft :: DLS = 9°/100'									
7,700.00	32.76	253.83	6,749.88	-169.96	-3,483.25	166.92	9.00	1.25	-16.73
7,800.00	35.85	238.78	6,832.62	-192.72	-3,534.38	189.63	9.00	3.09	-15.04
7,900.00	40.51	226.29	6,911.33	-230.41	-3,583.00	227.29	9.00	4.66	-12.49
8,000.00	46.27	216.20	6,984.05	-282.12	-3,627.91	278.95	9.00	5.76	-10.09
8,100.00	52.76	207.98	7,049.01	-346.56	-3,668.01	343.36	9.00	6.49	-8.22
8,200.00	59.72	201.11	7,104.60	-422.15	-3,702.30	418.91	9.00	6.96	-6.87
8,300.00	66.99	195.17	7,149.44	-507.02	-3,729.95	503.76	9.00	7.27	-5.94
8,400.00	74.46	189.85	7,182.45	-599.09	-3,750.28	595.82	9.00	7.47	-5.32
8,500.00	82.05	184.90	7,202.80	-696.09	-3,762.77	692.81	9.00	7.59	-4.95
8,600.00	89.70	180.14	7,209.99	-795.63	-3,767.14	792.35	9.00	7.65	-4.76
8,603.95	90.00	179.95	7,210.00	-799.59	-3,767.14	796.30	9.00	7.66	-4.73
End Build @ 8603.95ft									
8,700.00	90.00	179.95	7,210.00	-895.63	-3,767.06	892.35	0.00	0.00	0.00
8,800.00	90.00	179.95	7,210.00	-995.63	-3,766.97	992.35	0.00	0.00	0.00
8,900.00	90.00	179.95	7,210.00	-1,095.63	-3,766.89	1,092.35	0.00	0.00	0.00
9,000.00	90.00	179.95	7,210.00	-1,195.63	-3,766.81	1,192.35	0.00	0.00	0.00
9,100.00	90.00	179.95	7,210.00	-1,295.63	-3,766.72	1,292.35	0.00	0.00	0.00
9,200.00	90.00	179.95	7,210.00	-1,395.63	-3,766.64	1,392.35	0.00	0.00	0.00
9,300.00	90.00	179.95	7,210.00	-1,495.63	-3,766.55	1,492.35	0.00	0.00	0.00
9,400.00	90.00	179.95	7,210.00	-1,595.63	-3,766.47	1,592.35	0.00	0.00	0.00
9,500.00	90.00	179.95	7,210.00	-1,695.63	-3,766.38	1,692.35	0.00	0.00	0.00
9,600.00	90.00	179.95	7,210.00	-1,795.63	-3,766.30	1,792.35	0.00	0.00	0.00
9,700.00	90.00	179.95	7,210.00	-1,895.63	-3,766.21	1,892.35	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3112-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5063.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5063.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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)
9,800.00	90.00	179.95	7,210.00	-1,995.63	-3,766.13	1,992.35	0.00	0.00	0.00
9,900.00	90.00	179.95	7,210.00	-2,095.63	-3,766.05	2,092.35	0.00	0.00	0.00
10,000.00	90.00	179.95	7,210.00	-2,195.63	-3,765.96	2,192.35	0.00	0.00	0.00
10,100.00	90.00	179.95	7,210.00	-2,295.63	-3,765.88	2,292.35	0.00	0.00	0.00
10,200.00	90.00	179.95	7,210.00	-2,395.63	-3,765.79	2,392.35	0.00	0.00	0.00
10,300.00	90.00	179.95	7,210.00	-2,495.63	-3,765.71	2,492.35	0.00	0.00	0.00
10,400.00	90.00	179.95	7,210.00	-2,595.63	-3,765.62	2,592.35	0.00	0.00	0.00
10,500.00	90.00	179.95	7,210.00	-2,695.63	-3,765.54	2,692.35	0.00	0.00	0.00
10,600.00	90.00	179.95	7,210.00	-2,795.63	-3,765.45	2,792.35	0.00	0.00	0.00
10,700.00	90.00	179.95	7,210.00	-2,895.63	-3,765.37	2,892.35	0.00	0.00	0.00
10,800.00	90.00	179.95	7,210.00	-2,995.63	-3,765.29	2,992.35	0.00	0.00	0.00
10,900.00	90.00	179.95	7,210.00	-3,095.63	-3,765.20	3,092.35	0.00	0.00	0.00
11,000.00	90.00	179.95	7,210.00	-3,195.63	-3,765.12	3,192.35	0.00	0.00	0.00
11,100.00	90.00	179.95	7,210.00	-3,295.63	-3,765.03	3,292.35	0.00	0.00	0.00
11,200.00	90.00	179.95	7,210.00	-3,395.63	-3,764.95	3,392.35	0.00	0.00	0.00
11,300.00	90.00	179.95	7,210.00	-3,495.63	-3,764.86	3,492.35	0.00	0.00	0.00
11,400.00	90.00	179.95	7,210.00	-3,595.63	-3,764.78	3,592.35	0.00	0.00	0.00
11,500.00	90.00	179.95	7,210.00	-3,695.63	-3,764.69	3,692.35	0.00	0.00	0.00
11,600.00	90.00	179.95	7,210.00	-3,795.63	-3,764.61	3,792.35	0.00	0.00	0.00
11,700.00	90.00	179.95	7,210.00	-3,895.63	-3,764.53	3,892.35	0.00	0.00	0.00
11,800.00	90.00	179.95	7,210.00	-3,995.63	-3,764.44	3,992.35	0.00	0.00	0.00
11,900.00	90.00	179.95	7,210.00	-4,095.63	-3,764.36	4,092.35	0.00	0.00	0.00
12,000.00	90.00	179.95	7,210.00	-4,195.63	-3,764.27	4,192.35	0.00	0.00	0.00
12,100.00	90.00	179.95	7,210.00	-4,295.63	-3,764.19	4,292.35	0.00	0.00	0.00
12,200.00	90.00	179.95	7,210.00	-4,395.63	-3,764.10	4,392.35	0.00	0.00	0.00
12,300.00	90.00	179.95	7,210.00	-4,495.63	-3,764.02	4,492.35	0.00	0.00	0.00
12,400.00	90.00	179.95	7,210.00	-4,595.63	-3,763.93	4,592.35	0.00	0.00	0.00
12,500.00	90.00	179.95	7,210.00	-4,695.63	-3,763.85	4,692.35	0.00	0.00	0.00
12,600.00	90.00	179.95	7,210.00	-4,795.63	-3,763.77	4,792.35	0.00	0.00	0.00
12,700.00	90.00	179.95	7,210.00	-4,895.63	-3,763.68	4,892.35	0.00	0.00	0.00
12,800.00	90.00	179.95	7,210.00	-4,995.63	-3,763.60	4,992.35	0.00	0.00	0.00
12,900.00	90.00	179.95	7,210.00	-5,095.63	-3,763.51	5,092.35	0.00	0.00	0.00
13,000.00	90.00	179.95	7,210.00	-5,195.63	-3,763.43	5,192.35	0.00	0.00	0.00
13,100.00	90.00	179.95	7,210.00	-5,295.63	-3,763.34	5,292.35	0.00	0.00	0.00
13,200.00	90.00	179.95	7,210.00	-5,395.63	-3,763.26	5,392.35	0.00	0.00	0.00
13,300.00	90.00	179.95	7,210.00	-5,495.63	-3,763.17	5,492.35	0.00	0.00	0.00
13,400.00	90.00	179.95	7,210.00	-5,595.63	-3,763.09	5,592.35	0.00	0.00	0.00
13,500.00	90.00	179.95	7,210.00	-5,695.63	-3,763.01	5,692.35	0.00	0.00	0.00
13,600.00	90.00	179.95	7,210.00	-5,795.63	-3,762.92	5,792.35	0.00	0.00	0.00
13,700.00	90.00	179.95	7,210.00	-5,895.63	-3,762.84	5,892.35	0.00	0.00	0.00
13,800.00	90.00	179.95	7,210.00	-5,995.63	-3,762.75	5,992.35	0.00	0.00	0.00
13,900.00	90.00	179.95	7,210.00	-6,095.63	-3,762.67	6,092.35	0.00	0.00	0.00
14,000.00	90.00	179.95	7,210.00	-6,195.63	-3,762.58	6,192.35	0.00	0.00	0.00
14,100.00	90.00	179.95	7,210.00	-6,295.63	-3,762.50	6,292.35	0.00	0.00	0.00
14,200.00	90.00	179.95	7,210.00	-6,395.63	-3,762.41	6,392.35	0.00	0.00	0.00
14,300.00	90.00	179.95	7,210.00	-6,495.63	-3,762.33	6,492.35	0.00	0.00	0.00
14,400.00	90.00	179.95	7,210.00	-6,595.63	-3,762.25	6,592.35	0.00	0.00	0.00
14,500.00	90.00	179.95	7,210.00	-6,695.63	-3,762.16	6,692.35	0.00	0.00	0.00
14,600.00	90.00	179.95	7,210.00	-6,795.63	-3,762.08	6,792.35	0.00	0.00	0.00
14,700.00	90.00	179.95	7,210.00	-6,895.63	-3,761.99	6,892.35	0.00	0.00	0.00
14,800.00	90.00	179.95	7,210.00	-6,995.63	-3,761.91	6,992.35	0.00	0.00	0.00
14,900.00	90.00	179.95	7,210.00	-7,095.63	-3,761.82	7,092.35	0.00	0.00	0.00
15,000.00	90.00	179.95	7,210.00	-7,195.63	-3,761.74	7,192.35	0.00	0.00	0.00
15,100.00	90.00	179.95	7,210.00	-7,295.63	-3,761.65	7,292.35	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3112-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5063.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5063.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3112 PAD	North Reference:	True
Well:	COUNTY LINE 3112-03H	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)	
15,200.00	90.00	179.95	7,210.00	-7,395.63	-3,761.57	7,392.35	0.00	0.00	0.00	
15,300.00	90.00	179.95	7,210.00	-7,495.63	-3,761.49	7,492.35	0.00	0.00	0.00	
15,400.00	90.00	179.95	7,210.00	-7,595.63	-3,761.40	7,592.35	0.00	0.00	0.00	
15,500.00	90.00	179.95	7,210.00	-7,695.63	-3,761.32	7,692.35	0.00	0.00	0.00	
15,600.00	90.00	179.95	7,210.00	-7,795.63	-3,761.23	7,792.35	0.00	0.00	0.00	
15,700.00	90.00	179.95	7,210.00	-7,895.63	-3,761.15	7,892.35	0.00	0.00	0.00	
15,800.00	90.00	179.95	7,210.00	-7,995.63	-3,761.06	7,992.35	0.00	0.00	0.00	
15,900.00	90.00	179.95	7,210.00	-8,095.63	-3,760.98	8,092.35	0.00	0.00	0.00	
16,000.00	90.00	179.95	7,210.00	-8,195.63	-3,760.89	8,192.35	0.00	0.00	0.00	
16,100.00	90.00	179.95	7,210.00	-8,295.63	-3,760.81	8,292.35	0.00	0.00	0.00	
16,200.00	90.00	179.95	7,210.00	-8,395.63	-3,760.73	8,392.35	0.00	0.00	0.00	
16,300.00	90.00	179.95	7,210.00	-8,495.63	-3,760.64	8,492.35	0.00	0.00	0.00	
16,400.00	90.00	179.95	7,210.00	-8,595.63	-3,760.56	8,592.35	0.00	0.00	0.00	
16,500.00	90.00	179.95	7,210.00	-8,695.63	-3,760.47	8,692.35	0.00	0.00	0.00	
16,600.00	90.00	179.95	7,210.00	-8,795.63	-3,760.39	8,792.35	0.00	0.00	0.00	
16,700.00	90.00	179.95	7,210.00	-8,895.63	-3,760.30	8,892.35	0.00	0.00	0.00	
16,800.00	90.00	179.95	7,210.00	-8,995.63	-3,760.22	8,992.35	0.00	0.00	0.00	
16,900.00	90.00	179.95	7,210.00	-9,095.63	-3,760.13	9,092.35	0.00	0.00	0.00	
17,000.00	90.00	179.95	7,210.00	-9,195.63	-3,760.05	9,192.35	0.00	0.00	0.00	
17,100.00	90.00	179.95	7,210.00	-9,295.63	-3,759.97	9,292.35	0.00	0.00	0.00	
17,200.00	90.00	179.95	7,210.00	-9,395.63	-3,759.88	9,392.35	0.00	0.00	0.00	
17,300.00	90.00	179.95	7,210.00	-9,495.63	-3,759.80	9,492.35	0.00	0.00	0.00	
17,400.00	90.00	179.95	7,210.00	-9,595.63	-3,759.71	9,592.35	0.00	0.00	0.00	
17,500.00	90.00	179.95	7,210.00	-9,695.63	-3,759.63	9,692.35	0.00	0.00	0.00	
17,600.00	90.00	179.95	7,210.00	-9,795.63	-3,759.54	9,792.35	0.00	0.00	0.00	
17,700.00	90.00	179.95	7,210.00	-9,895.63	-3,759.46	9,892.35	0.00	0.00	0.00	
17,800.00	90.00	179.95	7,210.00	-9,995.63	-3,759.37	9,992.35	0.00	0.00	0.00	
17,900.00	90.00	179.95	7,210.00	-10,095.63	-3,759.29	10,092.35	0.00	0.00	0.00	
17,930.81	90.00	179.95	7,210.00	-10,126.44	-3,759.26	10,123.16	0.00	0.00	0.00	
TD Well @ 17930.81ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,762.73	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)		
300.00	300.00	0.00	0.00	Begin Nudge @ 300.00ft	
1,887.50	1,807.49	-20.27	-428.23	Hold Tangent @ 1887.50ft	
7,619.51	6,681.72	-162.88	-3,441.12	KOP @ 7619.51ft :: DLS = 9°/100'	
8,603.95	7,210.00	-799.59	-3,767.14	End Build @ 8603.95ft	
17,930.81	7,210.00	-10,126.44	-3,759.26	TD Well @ 17930.81ft	