

VERDAD RESOURCES

WATTENBERG FIELD

1N-65W-31 COUNTY LINE 3108 PAD

COUNTY LINE 3108-13H

Wellbore #1

Plan: Design #1

Standard Planning Report

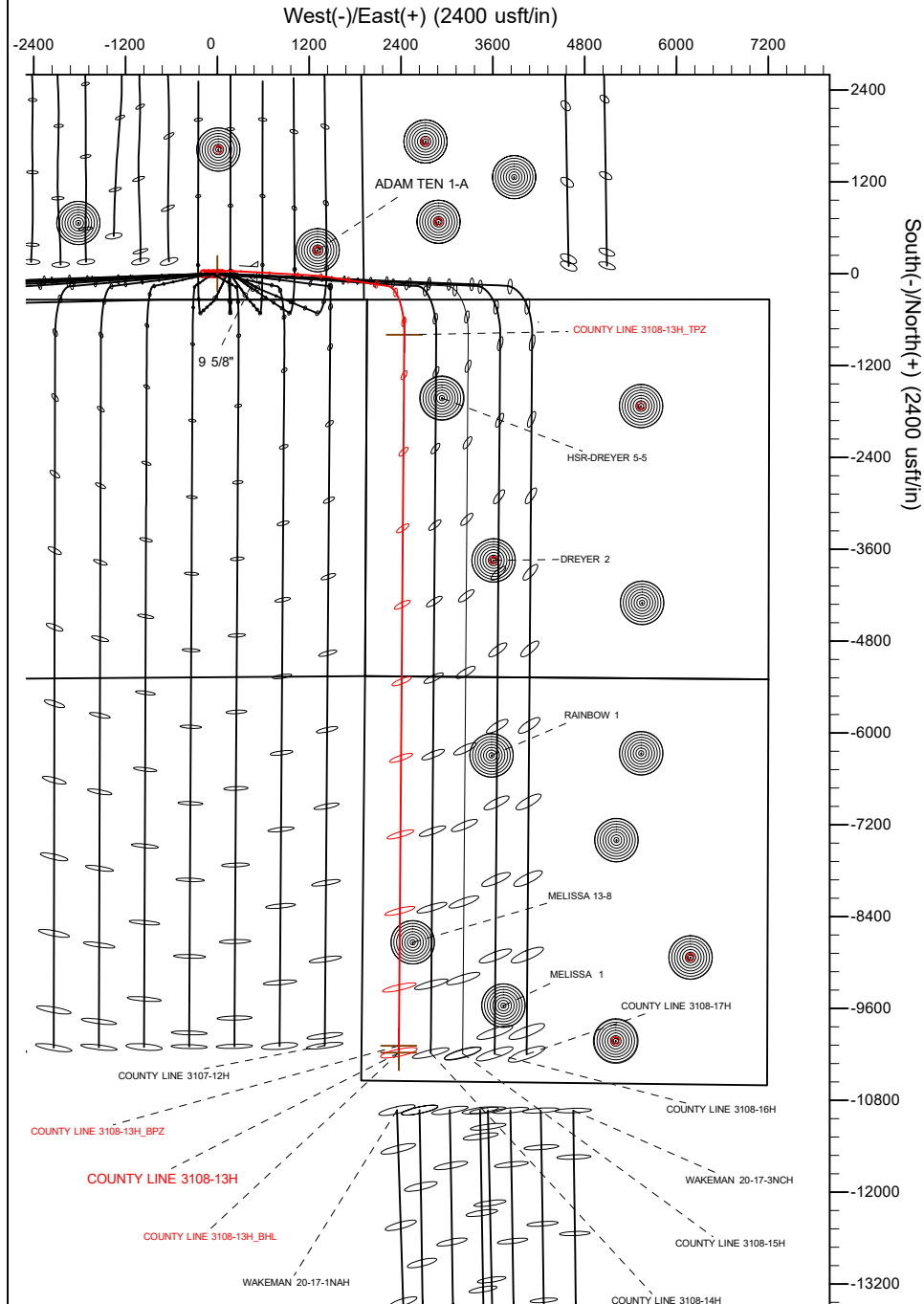
10 September, 2021

Project: WATTENBERG FIELD
Site: 1N-65W-31 COUNTY LINE 3108 PAD
Well: COUNTY LINE 3108-13H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
2296.00	2384.43	9 5/8"	9-5/8



SHL
340' FSL
1910' FEL

TPZ
460' FNL
489' FWL

BPZ
460' FSL
489' FWL

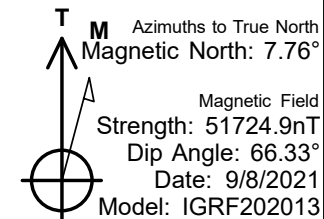
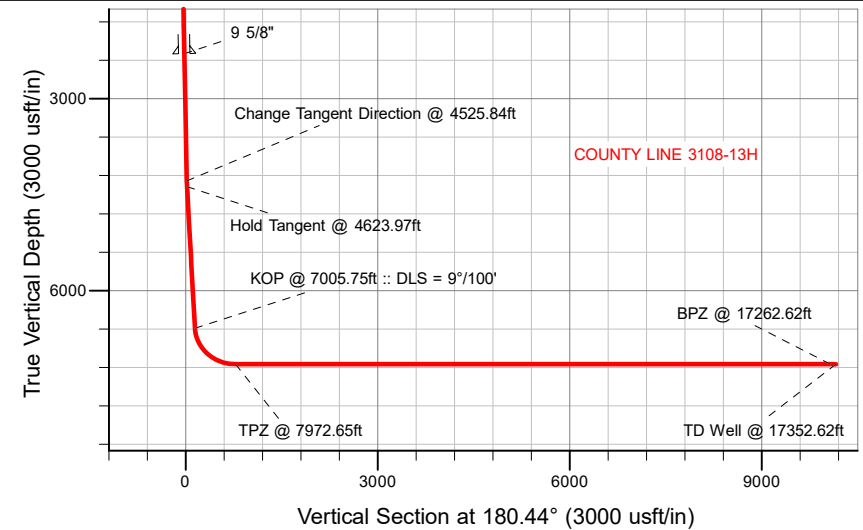
BHL
370' FSL
489' FWL

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	200.50	0.00	0.00	200.50	0.00	0.00	0.00	0.00	0.00	
3	400.50	4.00	0.00	400.34	6.98	0.00	2.00	0.00	-6.98	
4	411.50	4.00	0.00	411.31	7.75	0.00	0.00	0.00	-7.75	
5	1526.84	21.74	93.21	1499.41	35.43	208.88	2.00	103.02	-37.03	
6	4525.84	21.74	93.21	4285.10	-26.77	1317.95	0.00	0.00	16.65	
7	4623.97	21.74	98.51	4376.26	-30.48	1354.07	2.00	92.46	20.08	
8	7005.75	21.74	98.51	6588.63	-161.03	2226.56	0.00	0.00	143.92	
9	7972.65	90.00	180.44	7150.00	-798.48	2443.27	9.00	82.50	779.70	
10	17352.62	90.00	180.44	7150.00	-10178.18	2370.70	0.00	0.00	10159.67	COUNTY LINE 3108-13H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3108-13H_SHL	0.00	0.00	0.00	40.001456	-104.704093
COUNTY LINE 3108-13H_BHL	7150.00	-10178.18	2370.70	39.973515	-104.695634
COUNTY LINE 3108-13H_BPZ	7150.00	-10088.18	2371.40	39.973762	-104.695632
COUNTY LINE 3108-13H_TPZ	7150.00	-798.48	2443.27	39.999264	-104.695372



WELL DETAILS: COUNTY LINE 3108-13H

GL = 5043'

RKB = 24' @ 5067.00usft (RIG)

Plan: Design #1 (COUNTY LINE 3108-13H/Wellbore #1)

Date: 9/10/2021

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3108-13H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5067.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5067.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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 3108 PAD			
Site Position:		Northing:	1,244,378.03 usft	Latitude: 40.001457
From:	Map	Easting:	3,222,968.37 usft	Longitude: -104.704094
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	COUNTY LINE 3108-13H			
Well Position	+N/-S	0.00 usft	Northing:	1,244,378.03 usft
	+E/-W	0.00 usft	Easting:	3,222,968.37 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.51 °	Ground Level:	5,043.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	9/8/2021	7.76	66.33	51,724.86159148

Design	Design #1				
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	180.44	

Plan Survey Tool Program		Date	9/10/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,296.00	Design #1 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,296.00	17,352.62	Design #1 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

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Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	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	
200.50	0.00	0.00	200.50	0.00	0.00	0.00	0.00	0.00	0.00	
400.50	4.00	0.00	400.34	6.98	0.00	2.00	2.00	0.00	0.00	
411.50	4.00	0.00	411.31	7.75	0.00	0.00	0.00	0.00	0.00	
1,526.84	21.74	93.21	1,499.41	35.43	208.88	2.00	1.59	8.36	103.02	
4,525.84	21.74	93.21	4,285.10	-26.77	1,317.95	0.00	0.00	0.00	0.00	
4,623.97	21.74	98.51	4,376.26	-30.48	1,354.07	2.00	0.00	5.40	92.46	
7,005.75	21.74	98.51	6,588.63	-161.03	2,226.56	0.00	0.00	0.00	0.00	
7,972.65	90.00	180.44	7,150.00	-798.48	2,443.27	9.00	7.06	8.47	82.50	
17,352.62	90.00	180.44	7,150.00	-10,178.18	2,370.70	0.00	0.00	0.00	0.00	COUNTY LINE 3108-

Planning Report

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Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
200.50	0.00	0.00	200.50	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 200.50ft									
300.00	1.99	0.00	299.98	1.73	0.00	-1.73	2.00	2.00	0.00
400.50	4.00	0.00	400.34	6.98	0.00	-6.98	2.00	2.00	0.00
Hold Tangent @ 400.50ft									
411.50	4.00	0.00	411.31	7.75	0.00	-7.75	0.00	0.00	0.00
Change Tangent Direction @ 411.50ft									
500.00	3.99	25.61	499.60	13.61	1.33	-13.62	2.00	-0.01	28.94
600.00	4.84	49.44	599.31	19.49	6.04	-19.54	2.00	0.84	23.83
700.00	6.23	64.45	698.85	24.58	14.14	-24.68	2.00	1.40	15.02
800.00	7.89	73.61	798.09	28.85	25.63	-29.05	2.00	1.66	9.16
900.00	9.68	79.51	896.92	32.32	40.48	-32.63	2.00	1.79	5.90
1,000.00	11.54	83.55	995.20	34.98	58.69	-35.43	2.00	1.86	4.04
1,100.00	13.44	86.48	1,092.83	36.81	80.22	-37.43	2.00	1.90	2.93
1,200.00	15.36	88.69	1,189.69	37.83	105.06	-38.64	2.00	1.92	2.21
1,300.00	17.30	90.41	1,285.65	38.03	133.17	-39.05	2.00	1.94	1.73
1,400.00	19.25	91.80	1,380.60	37.40	164.52	-38.67	2.00	1.95	1.39
1,500.00	21.21	92.94	1,474.43	35.96	199.07	-37.49	2.00	1.96	1.14
1,526.84	21.74	93.21	1,499.41	35.43	208.88	-37.03	2.00	1.97	1.01
Hold Tangent @ 1526.84ft									
1,600.00	21.74	93.21	1,567.36	33.91	235.94	-35.72	0.00	0.00	0.00
1,700.00	21.74	93.21	1,660.25	31.84	272.92	-33.93	0.00	0.00	0.00
1,800.00	21.74	93.21	1,753.14	29.77	309.90	-32.14	0.00	0.00	0.00
1,900.00	21.74	93.21	1,846.03	27.69	346.88	-30.35	0.00	0.00	0.00
2,000.00	21.74	93.21	1,938.91	25.62	383.86	-28.56	0.00	0.00	0.00
2,100.00	21.74	93.21	2,031.80	23.54	420.84	-26.77	0.00	0.00	0.00
2,200.00	21.74	93.21	2,124.69	21.47	457.82	-24.98	0.00	0.00	0.00
2,300.00	21.74	93.21	2,217.57	19.40	494.80	-23.19	0.00	0.00	0.00
2,384.43	21.74	93.21	2,296.00	17.64	526.03	-21.68	0.00	0.00	0.00
9 5/8"									
2,400.00	21.74	93.21	2,310.46	17.32	531.79	-21.40	0.00	0.00	0.00
2,500.00	21.74	93.21	2,403.35	15.25	568.77	-19.61	0.00	0.00	0.00
2,600.00	21.74	93.21	2,496.24	13.17	605.75	-17.82	0.00	0.00	0.00
2,700.00	21.74	93.21	2,589.12	11.10	642.73	-16.03	0.00	0.00	0.00
2,800.00	21.74	93.21	2,682.01	9.03	679.71	-14.24	0.00	0.00	0.00
2,900.00	21.74	93.21	2,774.90	6.95	716.69	-12.45	0.00	0.00	0.00
3,000.00	21.74	93.21	2,867.79	4.88	753.67	-10.66	0.00	0.00	0.00
3,100.00	21.74	93.21	2,960.67	2.80	790.66	-8.87	0.00	0.00	0.00
3,200.00	21.74	93.21	3,053.56	0.73	827.64	-7.08	0.00	0.00	0.00
3,300.00	21.74	93.21	3,146.45	-1.35	864.62	-5.29	0.00	0.00	0.00
3,400.00	21.74	93.21	3,239.34	-3.42	901.60	-3.50	0.00	0.00	0.00
3,500.00	21.74	93.21	3,332.22	-5.49	938.58	-1.71	0.00	0.00	0.00
3,600.00	21.74	93.21	3,425.11	-7.57	975.56	0.08	0.00	0.00	0.00
3,700.00	21.74	93.21	3,518.00	-9.64	1,012.54	1.87	0.00	0.00	0.00
3,800.00	21.74	93.21	3,610.89	-11.72	1,049.53	3.66	0.00	0.00	0.00
3,900.00	21.74	93.21	3,703.77	-13.79	1,086.51	5.45	0.00	0.00	0.00
4,000.00	21.74	93.21	3,796.66	-15.86	1,123.49	7.24	0.00	0.00	0.00
4,100.00	21.74	93.21	3,889.55	-17.94	1,160.47	9.03	0.00	0.00	0.00
4,200.00	21.74	93.21	3,982.44	-20.01	1,197.45	10.82	0.00	0.00	0.00
4,300.00	21.74	93.21	4,075.32	-22.09	1,234.43	12.61	0.00	0.00	0.00
4,400.00	21.74	93.21	4,168.21	-24.16	1,271.41	14.40	0.00	0.00	0.00
4,500.00	21.74	93.21	4,261.10	-26.23	1,308.40	16.19	0.00	0.00	0.00

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5067.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
4,525.84	21.74	93.21	4,285.10	-26.77	1,317.95	16.65	0.00	0.00	0.00	
Change Tangent Direction @ 4525.84ft										
4,600.00	21.72	97.22	4,353.99	-29.26	1,345.28	18.93	2.00	-0.02	5.40	
4,623.97	21.74	98.51	4,376.26	-30.48	1,354.07	20.08	2.00	0.06	5.40	
Hold Tangent @ 4623.97ft										
4,700.00	21.74	98.51	4,446.88	-34.64	1,381.93	24.03	0.00	0.00	0.00	
4,800.00	21.74	98.51	4,539.77	-40.13	1,418.56	29.23	0.00	0.00	0.00	
4,900.00	21.74	98.51	4,632.66	-45.61	1,455.19	34.43	0.00	0.00	0.00	
5,000.00	21.74	98.51	4,725.54	-51.09	1,491.82	39.63	0.00	0.00	0.00	
5,100.00	21.74	98.51	4,818.43	-56.57	1,528.45	44.83	0.00	0.00	0.00	
5,200.00	21.74	98.51	4,911.32	-62.05	1,565.08	50.03	0.00	0.00	0.00	
5,300.00	21.74	98.51	5,004.21	-67.53	1,601.72	55.23	0.00	0.00	0.00	
5,400.00	21.74	98.51	5,097.09	-73.01	1,638.35	60.43	0.00	0.00	0.00	
5,500.00	21.74	98.51	5,189.98	-78.49	1,674.98	65.63	0.00	0.00	0.00	
5,600.00	21.74	98.51	5,282.87	-83.98	1,711.61	70.83	0.00	0.00	0.00	
5,700.00	21.74	98.51	5,375.76	-89.46	1,748.24	76.03	0.00	0.00	0.00	
5,800.00	21.74	98.51	5,468.64	-94.94	1,784.87	81.23	0.00	0.00	0.00	
5,900.00	21.74	98.51	5,561.53	-100.42	1,821.51	86.43	0.00	0.00	0.00	
6,000.00	21.74	98.51	5,654.42	-105.90	1,858.14	91.63	0.00	0.00	0.00	
6,100.00	21.74	98.51	5,747.31	-111.38	1,894.77	96.83	0.00	0.00	0.00	
6,200.00	21.74	98.51	5,840.19	-116.86	1,931.40	102.03	0.00	0.00	0.00	
6,300.00	21.74	98.51	5,933.08	-122.34	1,968.03	107.23	0.00	0.00	0.00	
6,400.00	21.74	98.51	6,025.97	-127.82	2,004.66	112.43	0.00	0.00	0.00	
6,500.00	21.74	98.51	6,118.86	-133.31	2,041.30	117.63	0.00	0.00	0.00	
6,600.00	21.74	98.51	6,211.74	-138.79	2,077.93	122.83	0.00	0.00	0.00	
6,700.00	21.74	98.51	6,304.63	-144.27	2,114.56	128.03	0.00	0.00	0.00	
6,800.00	21.74	98.51	6,397.52	-149.75	2,151.19	133.23	0.00	0.00	0.00	
6,900.00	21.74	98.51	6,490.41	-155.23	2,187.82	138.42	0.00	0.00	0.00	
7,005.75	21.74	98.51	6,588.63	-161.03	2,226.56	143.92	0.00	0.00	0.00	
KOP @ 7005.75ft :: DLS = 9°/100'										
7,050.00	22.59	108.84	6,629.63	-164.99	2,242.72	147.76	9.00	1.92	23.34	
7,100.00	24.28	119.35	6,675.52	-173.13	2,260.77	155.76	9.00	3.37	21.02	
7,150.00	26.59	128.36	6,720.69	-185.11	2,278.52	167.61	9.00	4.62	18.02	
7,200.00	29.37	135.90	6,764.86	-200.87	2,295.83	183.23	9.00	5.58	15.08	
7,250.00	32.52	142.17	6,807.75	-220.30	2,312.61	202.54	9.00	6.28	12.55	
7,300.00	35.92	147.42	6,849.10	-243.29	2,328.76	225.39	9.00	6.81	10.48	
7,350.00	39.51	151.84	6,888.65	-269.68	2,344.17	251.67	9.00	7.19	8.85	
7,400.00	43.25	155.63	6,926.16	-299.33	2,358.76	281.20	9.00	7.48	7.58	
7,450.00	47.10	158.92	6,961.41	-332.04	2,372.42	313.81	9.00	7.70	6.58	
7,500.00	51.04	161.82	6,994.16	-367.61	2,385.07	349.29	9.00	7.86	5.80	
7,550.00	55.03	164.41	7,024.23	-405.83	2,396.65	387.42	9.00	7.99	5.18	
7,600.00	59.08	166.76	7,051.42	-446.46	2,407.07	427.97	9.00	8.09	4.70	
7,650.00	63.16	168.92	7,075.56	-489.25	2,416.27	470.68	9.00	8.17	4.31	
7,700.00	67.28	170.93	7,096.52	-533.94	2,424.20	515.31	9.00	8.23	4.01	
7,750.00	71.42	172.81	7,114.15	-580.24	2,430.80	561.56	9.00	8.28	3.78	
7,800.00	75.57	174.61	7,128.36	-627.88	2,436.04	609.16	9.00	8.31	3.60	
7,850.00	79.74	176.35	7,139.04	-676.56	2,439.89	657.81	9.00	8.34	3.47	
7,900.00	83.92	178.03	7,146.15	-725.98	2,442.31	707.21	9.00	8.36	3.37	
7,950.00	88.10	179.69	7,149.62	-775.84	2,443.30	757.05	9.00	8.37	3.32	
7,972.65	90.00	180.44	7,150.00	-798.48	2,443.27	779.70	9.00	8.37	3.31	
TPZ @ 7972.65ft										
8,000.00	90.00	180.44	7,150.00	-825.84	2,443.06	807.05	0.00	0.00	0.00	
8,100.00	90.00	180.44	7,150.00	-925.83	2,442.28	907.05	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3108-13H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5067.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5067.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
8,200.00	90.00	180.44	7,150.00	-1,025.83	2,441.51	1,007.05	0.00	0.00	0.00	
8,300.00	90.00	180.44	7,150.00	-1,125.83	2,440.74	1,107.05	0.00	0.00	0.00	
8,400.00	90.00	180.44	7,150.00	-1,225.82	2,439.96	1,207.05	0.00	0.00	0.00	
8,500.00	90.00	180.44	7,150.00	-1,325.82	2,439.19	1,307.05	0.00	0.00	0.00	
8,600.00	90.00	180.44	7,150.00	-1,425.82	2,438.42	1,407.05	0.00	0.00	0.00	
8,700.00	90.00	180.44	7,150.00	-1,525.81	2,437.64	1,507.05	0.00	0.00	0.00	
8,800.00	90.00	180.44	7,150.00	-1,625.81	2,436.87	1,607.05	0.00	0.00	0.00	
8,900.00	90.00	180.44	7,150.00	-1,725.81	2,436.09	1,707.05	0.00	0.00	0.00	
9,000.00	90.00	180.44	7,150.00	-1,825.81	2,435.32	1,807.05	0.00	0.00	0.00	
9,100.00	90.00	180.44	7,150.00	-1,925.80	2,434.55	1,907.05	0.00	0.00	0.00	
9,200.00	90.00	180.44	7,150.00	-2,025.80	2,433.77	2,007.05	0.00	0.00	0.00	
9,300.00	90.00	180.44	7,150.00	-2,125.80	2,433.00	2,107.05	0.00	0.00	0.00	
9,400.00	90.00	180.44	7,150.00	-2,225.79	2,432.23	2,207.05	0.00	0.00	0.00	
9,500.00	90.00	180.44	7,150.00	-2,325.79	2,431.45	2,307.05	0.00	0.00	0.00	
9,600.00	90.00	180.44	7,150.00	-2,425.79	2,430.68	2,407.05	0.00	0.00	0.00	
9,700.00	90.00	180.44	7,150.00	-2,525.78	2,429.91	2,507.05	0.00	0.00	0.00	
9,800.00	90.00	180.44	7,150.00	-2,625.78	2,429.13	2,607.05	0.00	0.00	0.00	
9,900.00	90.00	180.44	7,150.00	-2,725.78	2,428.36	2,707.05	0.00	0.00	0.00	
10,000.00	90.00	180.44	7,150.00	-2,825.78	2,427.58	2,807.05	0.00	0.00	0.00	
10,100.00	90.00	180.44	7,150.00	-2,925.77	2,426.81	2,907.05	0.00	0.00	0.00	
10,200.00	90.00	180.44	7,150.00	-3,025.77	2,426.04	3,007.05	0.00	0.00	0.00	
10,300.00	90.00	180.44	7,150.00	-3,125.77	2,425.26	3,107.05	0.00	0.00	0.00	
10,400.00	90.00	180.44	7,150.00	-3,225.76	2,424.49	3,207.05	0.00	0.00	0.00	
10,500.00	90.00	180.44	7,150.00	-3,325.76	2,423.72	3,307.05	0.00	0.00	0.00	
10,600.00	90.00	180.44	7,150.00	-3,425.76	2,422.94	3,407.05	0.00	0.00	0.00	
10,700.00	90.00	180.44	7,150.00	-3,525.75	2,422.17	3,507.05	0.00	0.00	0.00	
10,800.00	90.00	180.44	7,150.00	-3,625.75	2,421.40	3,607.05	0.00	0.00	0.00	
10,900.00	90.00	180.44	7,150.00	-3,725.75	2,420.62	3,707.05	0.00	0.00	0.00	
11,000.00	90.00	180.44	7,150.00	-3,825.75	2,419.85	3,807.05	0.00	0.00	0.00	
11,100.00	90.00	180.44	7,150.00	-3,925.74	2,419.07	3,907.05	0.00	0.00	0.00	
11,200.00	90.00	180.44	7,150.00	-4,025.74	2,418.30	4,007.05	0.00	0.00	0.00	
11,300.00	90.00	180.44	7,150.00	-4,125.74	2,417.53	4,107.05	0.00	0.00	0.00	
11,400.00	90.00	180.44	7,150.00	-4,225.73	2,416.75	4,207.05	0.00	0.00	0.00	
11,500.00	90.00	180.44	7,150.00	-4,325.73	2,415.98	4,307.05	0.00	0.00	0.00	
11,600.00	90.00	180.44	7,150.00	-4,425.73	2,415.21	4,407.05	0.00	0.00	0.00	
11,700.00	90.00	180.44	7,150.00	-4,525.72	2,414.43	4,507.05	0.00	0.00	0.00	
11,800.00	90.00	180.44	7,150.00	-4,625.72	2,413.66	4,607.05	0.00	0.00	0.00	
11,900.00	90.00	180.44	7,150.00	-4,725.72	2,412.89	4,707.05	0.00	0.00	0.00	
12,000.00	90.00	180.44	7,150.00	-4,825.72	2,412.11	4,807.05	0.00	0.00	0.00	
12,100.00	90.00	180.44	7,150.00	-4,925.71	2,411.34	4,907.05	0.00	0.00	0.00	
12,200.00	90.00	180.44	7,150.00	-5,025.71	2,410.56	5,007.05	0.00	0.00	0.00	
12,300.00	90.00	180.44	7,150.00	-5,125.71	2,409.79	5,107.05	0.00	0.00	0.00	
12,400.00	90.00	180.44	7,150.00	-5,225.70	2,409.02	5,207.05	0.00	0.00	0.00	
12,500.00	90.00	180.44	7,150.00	-5,325.70	2,408.24	5,307.05	0.00	0.00	0.00	
12,600.00	90.00	180.44	7,150.00	-5,425.70	2,407.47	5,407.05	0.00	0.00	0.00	
12,700.00	90.00	180.44	7,150.00	-5,525.69	2,406.70	5,507.05	0.00	0.00	0.00	
12,800.00	90.00	180.44	7,150.00	-5,625.69	2,405.92	5,607.05	0.00	0.00	0.00	
12,900.00	90.00	180.44	7,150.00	-5,725.69	2,405.15	5,707.05	0.00	0.00	0.00	
13,000.00	90.00	180.44	7,150.00	-5,825.69	2,404.38	5,807.05	0.00	0.00	0.00	
13,100.00	90.00	180.44	7,150.00	-5,925.68	2,403.60	5,907.05	0.00	0.00	0.00	
13,200.00	90.00	180.44	7,150.00	-6,025.68	2,402.83	6,007.05	0.00	0.00	0.00	
13,300.00	90.00	180.44	7,150.00	-6,125.68	2,402.05	6,107.05	0.00	0.00	0.00	
13,400.00	90.00	180.44	7,150.00	-6,225.67	2,401.28	6,207.05	0.00	0.00	0.00	
13,500.00	90.00	180.44	7,150.00	-6,325.67	2,400.51	6,307.05	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3108-13H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5067.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5067.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
13,600.00	90.00	180.44	7,150.00	-6,425.67	2,399.73	6,407.05	0.00	0.00	0.00	
13,700.00	90.00	180.44	7,150.00	-6,525.66	2,398.96	6,507.05	0.00	0.00	0.00	
13,800.00	90.00	180.44	7,150.00	-6,625.66	2,398.19	6,607.05	0.00	0.00	0.00	
13,900.00	90.00	180.44	7,150.00	-6,725.66	2,397.41	6,707.05	0.00	0.00	0.00	
14,000.00	90.00	180.44	7,150.00	-6,825.66	2,396.64	6,807.05	0.00	0.00	0.00	
14,100.00	90.00	180.44	7,150.00	-6,925.65	2,395.87	6,907.05	0.00	0.00	0.00	
14,200.00	90.00	180.44	7,150.00	-7,025.65	2,395.09	7,007.05	0.00	0.00	0.00	
14,300.00	90.00	180.44	7,150.00	-7,125.65	2,394.32	7,107.05	0.00	0.00	0.00	
14,400.00	90.00	180.44	7,150.00	-7,225.64	2,393.54	7,207.05	0.00	0.00	0.00	
14,500.00	90.00	180.44	7,150.00	-7,325.64	2,392.77	7,307.05	0.00	0.00	0.00	
14,600.00	90.00	180.44	7,150.00	-7,425.64	2,392.00	7,407.05	0.00	0.00	0.00	
14,700.00	90.00	180.44	7,150.00	-7,525.63	2,391.22	7,507.05	0.00	0.00	0.00	
14,800.00	90.00	180.44	7,150.00	-7,625.63	2,390.45	7,607.05	0.00	0.00	0.00	
14,900.00	90.00	180.44	7,150.00	-7,725.63	2,389.68	7,707.05	0.00	0.00	0.00	
15,000.00	90.00	180.44	7,150.00	-7,825.63	2,388.90	7,807.05	0.00	0.00	0.00	
15,100.00	90.00	180.44	7,150.00	-7,925.62	2,388.13	7,907.05	0.00	0.00	0.00	
15,200.00	90.00	180.44	7,150.00	-8,025.62	2,387.36	8,007.05	0.00	0.00	0.00	
15,300.00	90.00	180.44	7,150.00	-8,125.62	2,386.58	8,107.05	0.00	0.00	0.00	
15,400.00	90.00	180.44	7,150.00	-8,225.61	2,385.81	8,207.05	0.00	0.00	0.00	
15,500.00	90.00	180.44	7,150.00	-8,325.61	2,385.03	8,307.05	0.00	0.00	0.00	
15,600.00	90.00	180.44	7,150.00	-8,425.61	2,384.26	8,407.05	0.00	0.00	0.00	
15,700.00	90.00	180.44	7,150.00	-8,525.60	2,383.49	8,507.05	0.00	0.00	0.00	
15,800.00	90.00	180.44	7,150.00	-8,625.60	2,382.71	8,607.05	0.00	0.00	0.00	
15,900.00	90.00	180.44	7,150.00	-8,725.60	2,381.94	8,707.05	0.00	0.00	0.00	
16,000.00	90.00	180.44	7,150.00	-8,825.60	2,381.17	8,807.05	0.00	0.00	0.00	
16,100.00	90.00	180.44	7,150.00	-8,925.59	2,380.39	8,907.05	0.00	0.00	0.00	
16,200.00	90.00	180.44	7,150.00	-9,025.59	2,379.62	9,007.05	0.00	0.00	0.00	
16,300.00	90.00	180.44	7,150.00	-9,125.59	2,378.85	9,107.05	0.00	0.00	0.00	
16,400.00	90.00	180.44	7,150.00	-9,225.58	2,378.07	9,207.05	0.00	0.00	0.00	
16,500.00	90.00	180.44	7,150.00	-9,325.58	2,377.30	9,307.05	0.00	0.00	0.00	
16,600.00	90.00	180.44	7,150.00	-9,425.58	2,376.52	9,407.05	0.00	0.00	0.00	
16,700.00	90.00	180.44	7,150.00	-9,525.57	2,375.75	9,507.05	0.00	0.00	0.00	
16,800.00	90.00	180.44	7,150.00	-9,625.57	2,374.98	9,607.05	0.00	0.00	0.00	
16,900.00	90.00	180.44	7,150.00	-9,725.57	2,374.20	9,707.05	0.00	0.00	0.00	
17,000.00	90.00	180.44	7,150.00	-9,825.57	2,373.43	9,807.05	0.00	0.00	0.00	
17,100.00	90.00	180.44	7,150.00	-9,925.56	2,372.66	9,907.05	0.00	0.00	0.00	
17,200.00	90.00	180.44	7,150.00	-10,025.56	2,371.88	10,007.05	0.00	0.00	0.00	
17,262.62	90.00	180.44	7,150.00	-10,088.18	2,371.40	10,069.67	0.00	0.00	0.00	
BPZ @ 17262.62ft										
17,300.00	90.00	180.44	7,150.00	-10,125.56	2,371.11	10,107.05	0.00	0.00	0.00	
17,352.62	90.00	180.44	7,150.00	-10,178.18	2,370.70	10,159.67	0.00	0.00	0.00	
TD Well @ 17352.62ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,384.43	2,296.00	9 5/8"		9-5/8	13-1/2

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3108-13H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5067.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5067.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3108 PAD	North Reference:	True
Well:	COUNTY LINE 3108-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.50	200.50	0.00	0.00	Begin Nudge @ 200.50ft
400.50	400.34	6.98	0.00	Hold Tangent @ 400.50ft
411.50	411.31	7.75	0.00	Change Tangent Direction @ 411.50ft
1,526.84	1,499.41	35.43	208.88	Hold Tangent @ 1526.84ft
4,525.84	4,285.10	-26.77	1,317.95	Change Tangent Direction @ 4525.84ft
4,623.97	4,376.26	-30.48	1,354.07	Hold Tangent @ 4623.97ft
7,005.75	6,588.63	-161.03	2,226.56	KOP @ 7005.75ft :: DLS = 9°/100'
7,972.65	7,150.00	-798.48	2,443.27	TPZ @ 7972.65ft
17,262.62	7,150.00	-10,088.18	2,371.40	BPZ @ 17262.62ft
17,352.62	7,150.00	-10,178.18	2,370.70	TD Well @ 17352.62ft