

VERDAD RESOURCES

WATTENBERG FIELD

1N-65W-31 COUNTY LINE 3107 PAD

COUNTY LINE 3107-05H

Wellbore #1

Plan: Design #3

Standard Planning Report

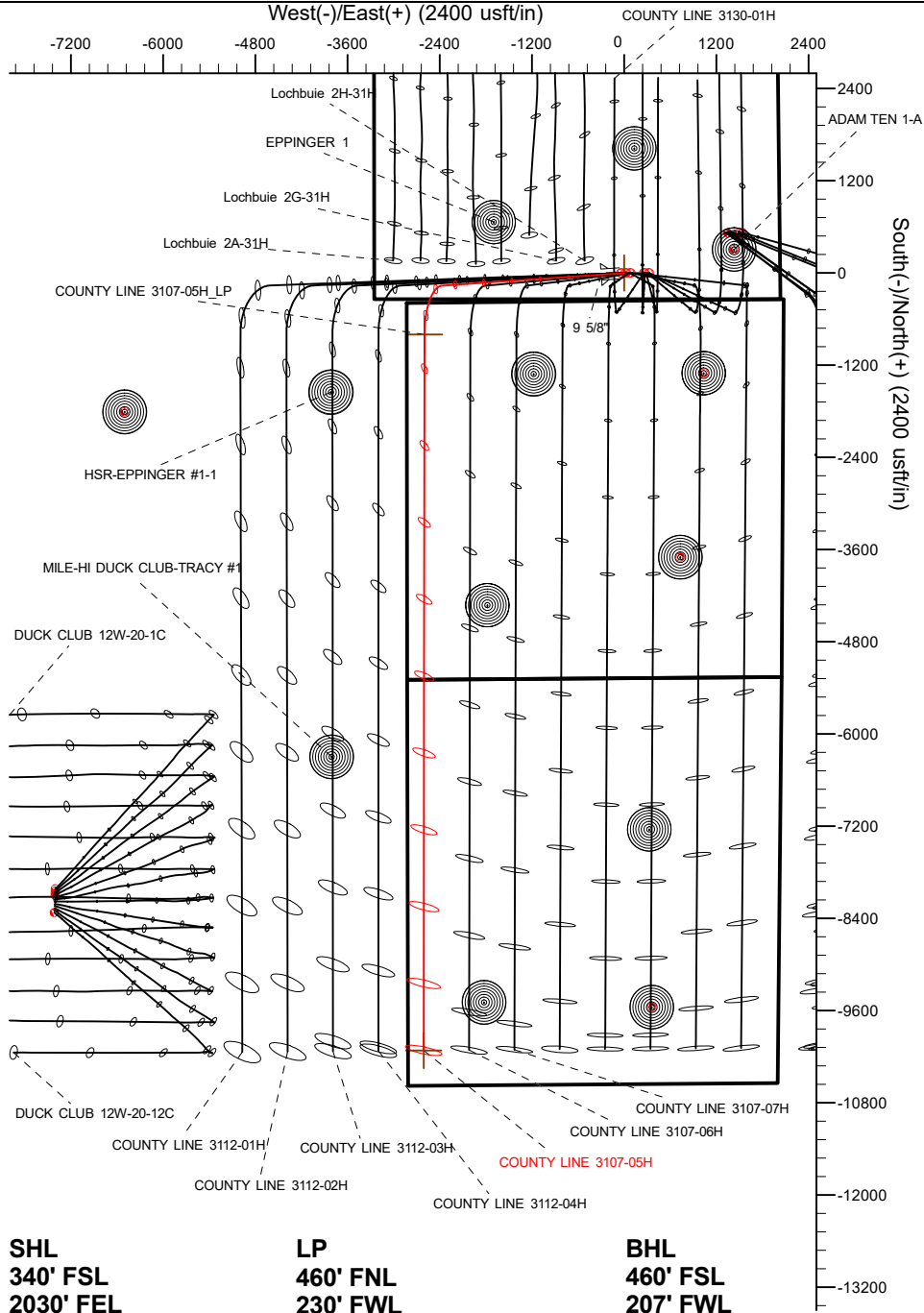
02 June, 2020

Project: WATTENBERG FIELD
Site: 1N-65W-31 COUNTY LINE 3107 PAD
Well: COUNTY LINE 3107-05H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1744.04	9 5/8"	9-5/8

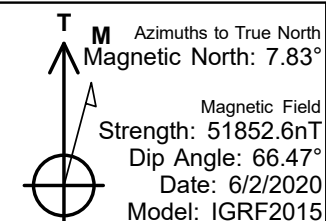
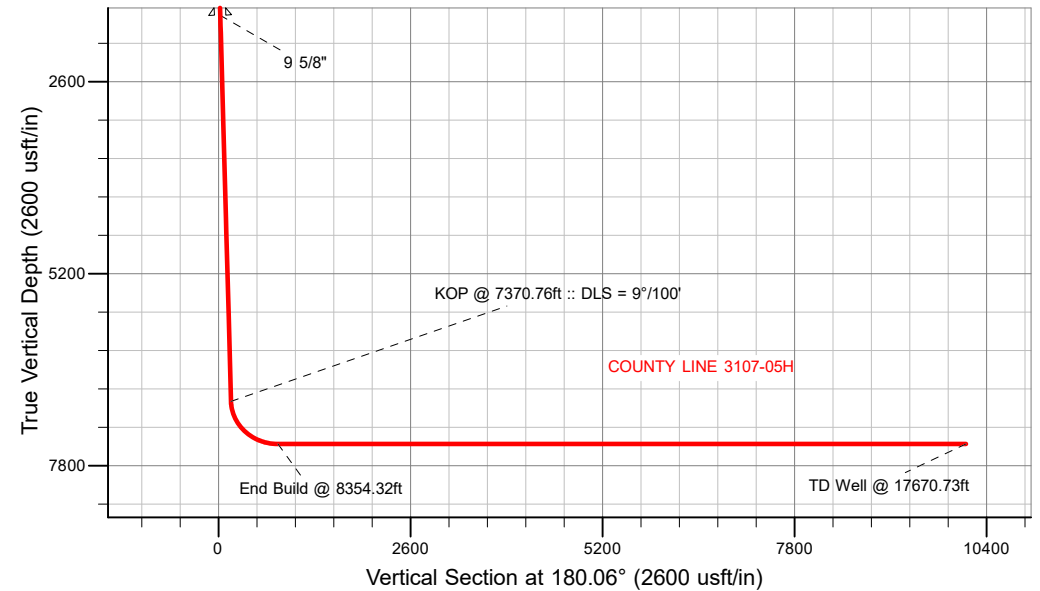


SECTION DETAILS

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	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1483.00	21.66	266.05	1457.39	-13.93	-201.80	2.00	266.05	14.15	
4	7370.76	21.66	266.05	6929.42	-163.63	-2369.80	0.00	0.00	166.12	
5	8354.32	90.00	180.06	7506.00	-799.80	-2598.91	9.00	-86.27	802.52	
6	17670.73	90.00	180.06	7506.00	-10116.20	-2608.96	0.00	0.00	10118.93	COUNTY LINE 3107-05H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3107-05H_SHL	0.00	0.00	0.00	40.001456	-104.704522
COUNTY LINE 3107-05H_BHL	7506.00	-10116.20	-2608.96	39.973685	-104.713831



WELL DETAILS: COUNTY LINE 3107-05H

GL = 5040'
RKB = 24' @ 5064.00usft (RIG)
Plan: Design #3 (COUNTY LINE 3107-05H/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 3107-05H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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 3107-05H			
Well Position	+N/-S	0.00 usft	Northing:	1,244,376.88 usft
	+E/-W	0.00 usft	Easting:	3,222,848.38 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.51 °	Ground Level:	5,040.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/2/2020	7.83	66.47	51,852.57960280

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	180.06	

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	17,670.73	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

HP
Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,483.00	21.66	266.05	1,457.39	-13.93	-201.80	2.00	2.00	0.00	266.05	
7,370.76	21.66	266.05	6,929.42	-163.63	-2,369.80	0.00	0.00	0.00	0.00	
8,354.32	90.00	180.06	7,506.00	-799.80	-2,598.91	9.00	6.95	-8.74	-86.27	
17,670.73	90.00	180.06	7,506.00	-10,116.20	-2,608.96	0.00	0.00	0.00	0.00	COUNTY LINE 3107-

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3107-05H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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
Begin Nudge @ 400.00ft									
500.00	2.00	266.05	499.98	-0.12	-1.74	0.12	2.00	2.00	0.00
600.00	4.00	266.05	599.84	-0.48	-6.96	0.49	2.00	2.00	0.00
700.00	6.00	266.05	699.45	-1.08	-15.66	1.10	2.00	2.00	0.00
800.00	8.00	266.05	798.70	-1.92	-27.81	1.95	2.00	2.00	0.00
900.00	10.00	266.05	897.47	-3.00	-43.42	3.04	2.00	2.00	0.00
1,000.00	12.00	266.05	995.62	-4.31	-62.45	4.38	2.00	2.00	0.00
1,100.00	14.00	266.05	1,093.06	-5.86	-84.89	5.95	2.00	2.00	0.00
1,200.00	16.00	266.05	1,189.64	-7.64	-110.71	7.76	2.00	2.00	0.00
1,300.00	18.00	266.05	1,285.27	-9.66	-139.88	9.81	2.00	2.00	0.00
1,400.00	20.00	266.05	1,379.82	-11.90	-172.36	12.08	2.00	2.00	0.00
1,483.00	21.66	266.05	1,457.39	-13.93	-201.80	14.15	2.00	2.00	0.00
Hold Tangent @ 1483.00ft									
1,500.00	21.66	266.05	1,473.19	-14.37	-208.06	14.58	0.00	0.00	0.00
1,600.00	21.66	266.05	1,566.13	-16.91	-244.88	17.17	0.00	0.00	0.00
1,700.00	21.66	266.05	1,659.07	-19.45	-281.70	19.75	0.00	0.00	0.00
1,744.04	21.66	266.05	1,700.00	-20.57	-297.92	20.88	0.00	0.00	0.00
9 5/8"									
1,800.00	21.66	266.05	1,752.00	-21.99	-318.53	22.33	0.00	0.00	0.00
1,900.00	21.66	266.05	1,844.94	-24.54	-355.35	24.91	0.00	0.00	0.00
2,000.00	21.66	266.05	1,937.88	-27.08	-392.17	27.49	0.00	0.00	0.00
2,100.00	21.66	266.05	2,030.82	-29.62	-428.99	30.07	0.00	0.00	0.00
2,200.00	21.66	266.05	2,123.76	-32.16	-465.82	32.65	0.00	0.00	0.00
2,300.00	21.66	266.05	2,216.70	-34.71	-502.64	35.23	0.00	0.00	0.00
2,400.00	21.66	266.05	2,309.64	-37.25	-539.46	37.81	0.00	0.00	0.00
2,500.00	21.66	266.05	2,402.58	-39.79	-576.28	40.40	0.00	0.00	0.00
2,600.00	21.66	266.05	2,495.52	-42.33	-613.10	42.98	0.00	0.00	0.00
2,700.00	21.66	266.05	2,588.46	-44.88	-649.93	45.56	0.00	0.00	0.00
2,800.00	21.66	266.05	2,681.40	-47.42	-686.75	48.14	0.00	0.00	0.00
2,900.00	21.66	266.05	2,774.33	-49.96	-723.57	50.72	0.00	0.00	0.00
3,000.00	21.66	266.05	2,867.27	-52.51	-760.39	53.30	0.00	0.00	0.00
3,100.00	21.66	266.05	2,960.21	-55.05	-797.21	55.88	0.00	0.00	0.00
3,200.00	21.66	266.05	3,053.15	-57.59	-834.04	58.46	0.00	0.00	0.00
3,300.00	21.66	266.05	3,146.09	-60.13	-870.86	61.04	0.00	0.00	0.00
3,400.00	21.66	266.05	3,239.03	-62.68	-907.68	63.63	0.00	0.00	0.00
3,500.00	21.66	266.05	3,331.97	-65.22	-944.50	66.21	0.00	0.00	0.00
3,600.00	21.66	266.05	3,424.91	-67.76	-981.33	68.79	0.00	0.00	0.00
3,700.00	21.66	266.05	3,517.85	-70.30	-1,018.15	71.37	0.00	0.00	0.00
3,800.00	21.66	266.05	3,610.79	-72.85	-1,054.97	73.95	0.00	0.00	0.00
3,900.00	21.66	266.05	3,703.72	-75.39	-1,091.79	76.53	0.00	0.00	0.00
4,000.00	21.66	266.05	3,796.66	-77.93	-1,128.61	79.11	0.00	0.00	0.00
4,100.00	21.66	266.05	3,889.60	-80.47	-1,165.44	81.69	0.00	0.00	0.00
4,200.00	21.66	266.05	3,982.54	-83.02	-1,202.26	84.27	0.00	0.00	0.00
4,300.00	21.66	266.05	4,075.48	-85.56	-1,239.08	86.86	0.00	0.00	0.00
4,400.00	21.66	266.05	4,168.42	-88.10	-1,275.90	89.44	0.00	0.00	0.00
4,500.00	21.66	266.05	4,261.36	-90.64	-1,312.72	92.02	0.00	0.00	0.00
4,600.00	21.66	266.05	4,354.30	-93.19	-1,349.55	94.60	0.00	0.00	0.00
4,700.00	21.66	266.05	4,447.24	-95.73	-1,386.37	97.18	0.00	0.00	0.00

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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	21.66	266.05	4,540.18	-98.27	-1,423.19	99.76	0.00	0.00	0.00	
4,900.00	21.66	266.05	4,633.12	-100.81	-1,460.01	102.34	0.00	0.00	0.00	
5,000.00	21.66	266.05	4,726.05	-103.36	-1,496.83	104.92	0.00	0.00	0.00	
5,100.00	21.66	266.05	4,818.99	-105.90	-1,533.66	107.50	0.00	0.00	0.00	
5,200.00	21.66	266.05	4,911.93	-108.44	-1,570.48	110.09	0.00	0.00	0.00	
5,300.00	21.66	266.05	5,004.87	-110.98	-1,607.30	112.67	0.00	0.00	0.00	
5,400.00	21.66	266.05	5,097.81	-113.53	-1,644.12	115.25	0.00	0.00	0.00	
5,500.00	21.66	266.05	5,190.75	-116.07	-1,680.95	117.83	0.00	0.00	0.00	
5,600.00	21.66	266.05	5,283.69	-118.61	-1,717.77	120.41	0.00	0.00	0.00	
5,700.00	21.66	266.05	5,376.63	-121.15	-1,754.59	122.99	0.00	0.00	0.00	
5,800.00	21.66	266.05	5,469.57	-123.70	-1,791.41	125.57	0.00	0.00	0.00	
5,900.00	21.66	266.05	5,562.51	-126.24	-1,828.23	128.15	0.00	0.00	0.00	
6,000.00	21.66	266.05	5,655.44	-128.78	-1,865.06	130.74	0.00	0.00	0.00	
6,100.00	21.66	266.05	5,748.38	-131.32	-1,901.88	133.32	0.00	0.00	0.00	
6,200.00	21.66	266.05	5,841.32	-133.87	-1,938.70	135.90	0.00	0.00	0.00	
6,300.00	21.66	266.05	5,934.26	-136.41	-1,975.52	138.48	0.00	0.00	0.00	
6,400.00	21.66	266.05	6,027.20	-138.95	-2,012.34	141.06	0.00	0.00	0.00	
6,500.00	21.66	266.05	6,120.14	-141.49	-2,049.17	143.64	0.00	0.00	0.00	
6,600.00	21.66	266.05	6,213.08	-144.04	-2,085.99	146.22	0.00	0.00	0.00	
6,700.00	21.66	266.05	6,306.02	-146.58	-2,122.81	148.80	0.00	0.00	0.00	
6,800.00	21.66	266.05	6,398.96	-149.12	-2,159.63	151.38	0.00	0.00	0.00	
6,900.00	21.66	266.05	6,491.90	-151.67	-2,196.46	153.97	0.00	0.00	0.00	
7,000.00	21.66	266.05	6,584.84	-154.21	-2,233.28	156.55	0.00	0.00	0.00	
7,100.00	21.66	266.05	6,677.77	-156.75	-2,270.10	159.13	0.00	0.00	0.00	
7,200.00	21.66	266.05	6,770.71	-159.29	-2,306.92	161.71	0.00	0.00	0.00	
7,300.00	21.66	266.05	6,863.65	-161.84	-2,343.74	164.29	0.00	0.00	0.00	
7,370.76	21.66	266.05	6,929.42	-163.63	-2,369.80	166.12	0.00	0.00	0.00	
KOP @ 7370.76ft :: DLS = 9°/100'										
7,400.00	21.98	259.02	6,956.57	-165.05	-2,380.56	167.54	9.00	1.10	-24.05	
7,500.00	25.11	237.75	7,048.39	-179.97	-2,416.95	182.50	9.00	3.13	-21.27	
7,600.00	30.53	222.26	7,136.91	-210.15	-2,452.05	212.72	9.00	5.42	-15.50	
7,700.00	37.25	211.46	7,219.95	-254.87	-2,485.00	257.47	9.00	6.72	-10.80	
7,800.00	44.68	203.68	7,295.46	-313.00	-2,514.97	315.64	9.00	7.43	-7.78	
7,900.00	52.51	197.75	7,361.57	-383.13	-2,541.24	385.79	9.00	7.83	-5.93	
8,000.00	60.58	192.97	7,416.67	-463.53	-2,563.16	466.21	9.00	8.07	-4.78	
8,100.00	68.80	188.90	7,459.40	-552.21	-2,580.18	554.91	9.00	8.22	-4.07	
8,200.00	77.11	185.27	7,488.69	-646.99	-2,591.89	649.70	9.00	8.30	-3.63	
8,300.00	85.46	181.87	7,503.85	-745.54	-2,598.00	748.26	9.00	8.35	-3.40	
8,354.32	90.00	180.06	7,506.00	-799.80	-2,598.91	802.52	9.00	8.37	-3.32	
End Build @ 8354.32ft										
8,400.00	90.00	180.06	7,506.00	-845.48	-2,598.96	848.20	0.00	0.00	0.00	
8,500.00	90.00	180.06	7,506.00	-945.48	-2,599.07	948.20	0.00	0.00	0.00	
8,600.00	90.00	180.06	7,506.00	-1,045.48	-2,599.17	1,048.20	0.00	0.00	0.00	
8,700.00	90.00	180.06	7,506.00	-1,145.48	-2,599.28	1,148.20	0.00	0.00	0.00	
8,800.00	90.00	180.06	7,506.00	-1,245.48	-2,599.39	1,248.20	0.00	0.00	0.00	
8,900.00	90.00	180.06	7,506.00	-1,345.48	-2,599.50	1,348.20	0.00	0.00	0.00	
9,000.00	90.00	180.06	7,506.00	-1,445.48	-2,599.60	1,448.20	0.00	0.00	0.00	
9,100.00	90.00	180.06	7,506.00	-1,545.48	-2,599.71	1,548.20	0.00	0.00	0.00	
9,200.00	90.00	180.06	7,506.00	-1,645.48	-2,599.82	1,648.20	0.00	0.00	0.00	
9,300.00	90.00	180.06	7,506.00	-1,745.48	-2,599.93	1,748.20	0.00	0.00	0.00	
9,400.00	90.00	180.06	7,506.00	-1,845.48	-2,600.04	1,848.20	0.00	0.00	0.00	
9,500.00	90.00	180.06	7,506.00	-1,945.48	-2,600.14	1,948.20	0.00	0.00	0.00	
9,600.00	90.00	180.06	7,506.00	-2,045.48	-2,600.25	2,048.20	0.00	0.00	0.00	
9,700.00	90.00	180.06	7,506.00	-2,145.48	-2,600.36	2,148.20	0.00	0.00	0.00	

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3107-05H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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	180.06	7,506.00	-2,245.48	-2,600.47	2,248.20	0.00	0.00	0.00
9,900.00	90.00	180.06	7,506.00	-2,345.48	-2,600.58	2,348.20	0.00	0.00	0.00
10,000.00	90.00	180.06	7,506.00	-2,445.48	-2,600.68	2,448.20	0.00	0.00	0.00
10,100.00	90.00	180.06	7,506.00	-2,545.48	-2,600.79	2,548.20	0.00	0.00	0.00
10,200.00	90.00	180.06	7,506.00	-2,645.48	-2,600.90	2,648.20	0.00	0.00	0.00
10,300.00	90.00	180.06	7,506.00	-2,745.48	-2,601.01	2,748.20	0.00	0.00	0.00
10,400.00	90.00	180.06	7,506.00	-2,845.48	-2,601.11	2,848.20	0.00	0.00	0.00
10,500.00	90.00	180.06	7,506.00	-2,945.48	-2,601.22	2,948.20	0.00	0.00	0.00
10,600.00	90.00	180.06	7,506.00	-3,045.48	-2,601.33	3,048.20	0.00	0.00	0.00
10,700.00	90.00	180.06	7,506.00	-3,145.48	-2,601.44	3,148.20	0.00	0.00	0.00
10,800.00	90.00	180.06	7,506.00	-3,245.47	-2,601.55	3,248.20	0.00	0.00	0.00
10,900.00	90.00	180.06	7,506.00	-3,345.47	-2,601.65	3,348.20	0.00	0.00	0.00
11,000.00	90.00	180.06	7,506.00	-3,445.47	-2,601.76	3,448.20	0.00	0.00	0.00
11,100.00	90.00	180.06	7,506.00	-3,545.47	-2,601.87	3,548.20	0.00	0.00	0.00
11,200.00	90.00	180.06	7,506.00	-3,645.47	-2,601.98	3,648.20	0.00	0.00	0.00
11,300.00	90.00	180.06	7,506.00	-3,745.47	-2,602.09	3,748.20	0.00	0.00	0.00
11,400.00	90.00	180.06	7,506.00	-3,845.47	-2,602.19	3,848.20	0.00	0.00	0.00
11,500.00	90.00	180.06	7,506.00	-3,945.47	-2,602.30	3,948.20	0.00	0.00	0.00
11,600.00	90.00	180.06	7,506.00	-4,045.47	-2,602.41	4,048.20	0.00	0.00	0.00
11,700.00	90.00	180.06	7,506.00	-4,145.47	-2,602.52	4,148.20	0.00	0.00	0.00
11,800.00	90.00	180.06	7,506.00	-4,245.47	-2,602.62	4,248.20	0.00	0.00	0.00
11,900.00	90.00	180.06	7,506.00	-4,345.47	-2,602.73	4,348.20	0.00	0.00	0.00
12,000.00	90.00	180.06	7,506.00	-4,445.47	-2,602.84	4,448.20	0.00	0.00	0.00
12,100.00	90.00	180.06	7,506.00	-4,545.47	-2,602.95	4,548.20	0.00	0.00	0.00
12,200.00	90.00	180.06	7,506.00	-4,645.47	-2,603.06	4,648.20	0.00	0.00	0.00
12,300.00	90.00	180.06	7,506.00	-4,745.47	-2,603.16	4,748.20	0.00	0.00	0.00
12,400.00	90.00	180.06	7,506.00	-4,845.47	-2,603.27	4,848.20	0.00	0.00	0.00
12,500.00	90.00	180.06	7,506.00	-4,945.47	-2,603.38	4,948.20	0.00	0.00	0.00
12,600.00	90.00	180.06	7,506.00	-5,045.47	-2,603.49	5,048.20	0.00	0.00	0.00
12,700.00	90.00	180.06	7,506.00	-5,145.47	-2,603.60	5,148.20	0.00	0.00	0.00
12,800.00	90.00	180.06	7,506.00	-5,245.47	-2,603.70	5,248.20	0.00	0.00	0.00
12,900.00	90.00	180.06	7,506.00	-5,345.47	-2,603.81	5,348.20	0.00	0.00	0.00
13,000.00	90.00	180.06	7,506.00	-5,445.47	-2,603.92	5,448.20	0.00	0.00	0.00
13,100.00	90.00	180.06	7,506.00	-5,545.47	-2,604.03	5,548.20	0.00	0.00	0.00
13,200.00	90.00	180.06	7,506.00	-5,645.47	-2,604.13	5,648.20	0.00	0.00	0.00
13,300.00	90.00	180.06	7,506.00	-5,745.47	-2,604.24	5,748.20	0.00	0.00	0.00
13,400.00	90.00	180.06	7,506.00	-5,845.47	-2,604.35	5,848.20	0.00	0.00	0.00
13,500.00	90.00	180.06	7,506.00	-5,945.47	-2,604.46	5,948.20	0.00	0.00	0.00
13,600.00	90.00	180.06	7,506.00	-6,045.47	-2,604.57	6,048.20	0.00	0.00	0.00
13,700.00	90.00	180.06	7,506.00	-6,145.47	-2,604.67	6,148.20	0.00	0.00	0.00
13,800.00	90.00	180.06	7,506.00	-6,245.47	-2,604.78	6,248.20	0.00	0.00	0.00
13,900.00	90.00	180.06	7,506.00	-6,345.47	-2,604.89	6,348.20	0.00	0.00	0.00
14,000.00	90.00	180.06	7,506.00	-6,445.47	-2,605.00	6,448.20	0.00	0.00	0.00
14,100.00	90.00	180.06	7,506.00	-6,545.47	-2,605.10	6,548.20	0.00	0.00	0.00
14,200.00	90.00	180.06	7,506.00	-6,645.47	-2,605.21	6,648.20	0.00	0.00	0.00
14,300.00	90.00	180.06	7,506.00	-6,745.47	-2,605.32	6,748.20	0.00	0.00	0.00
14,400.00	90.00	180.06	7,506.00	-6,845.47	-2,605.43	6,848.20	0.00	0.00	0.00
14,500.00	90.00	180.06	7,506.00	-6,945.47	-2,605.54	6,948.20	0.00	0.00	0.00
14,600.00	90.00	180.06	7,506.00	-7,045.47	-2,605.64	7,048.20	0.00	0.00	0.00
14,700.00	90.00	180.06	7,506.00	-7,145.47	-2,605.75	7,148.20	0.00	0.00	0.00
14,800.00	90.00	180.06	7,506.00	-7,245.47	-2,605.86	7,248.20	0.00	0.00	0.00
14,900.00	90.00	180.06	7,506.00	-7,345.47	-2,605.97	7,348.20	0.00	0.00	0.00
15,000.00	90.00	180.06	7,506.00	-7,445.47	-2,606.08	7,448.20	0.00	0.00	0.00
15,100.00	90.00	180.06	7,506.00	-7,545.47	-2,606.18	7,548.20	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3107-05H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5064.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5064.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3107 PAD	North Reference:	True
Well:	COUNTY LINE 3107-05H	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	180.06	7,506.00	-7,645.47	-2,606.29	7,648.20	0.00	0.00	0.00	
15,300.00	90.00	180.06	7,506.00	-7,745.47	-2,606.40	7,748.20	0.00	0.00	0.00	
15,400.00	90.00	180.06	7,506.00	-7,845.47	-2,606.51	7,848.20	0.00	0.00	0.00	
15,500.00	90.00	180.06	7,506.00	-7,945.47	-2,606.61	7,948.20	0.00	0.00	0.00	
15,600.00	90.00	180.06	7,506.00	-8,045.47	-2,606.72	8,048.20	0.00	0.00	0.00	
15,700.00	90.00	180.06	7,506.00	-8,145.47	-2,606.83	8,148.20	0.00	0.00	0.00	
15,800.00	90.00	180.06	7,506.00	-8,245.47	-2,606.94	8,248.20	0.00	0.00	0.00	
15,900.00	90.00	180.06	7,506.00	-8,345.47	-2,607.05	8,348.20	0.00	0.00	0.00	
16,000.00	90.00	180.06	7,506.00	-8,445.47	-2,607.15	8,448.20	0.00	0.00	0.00	
16,100.00	90.00	180.06	7,506.00	-8,545.47	-2,607.26	8,548.20	0.00	0.00	0.00	
16,200.00	90.00	180.06	7,506.00	-8,645.47	-2,607.37	8,648.20	0.00	0.00	0.00	
16,300.00	90.00	180.06	7,506.00	-8,745.47	-2,607.48	8,748.20	0.00	0.00	0.00	
16,400.00	90.00	180.06	7,506.00	-8,845.47	-2,607.59	8,848.20	0.00	0.00	0.00	
16,500.00	90.00	180.06	7,506.00	-8,945.47	-2,607.69	8,948.20	0.00	0.00	0.00	
16,600.00	90.00	180.06	7,506.00	-9,045.47	-2,607.80	9,048.20	0.00	0.00	0.00	
16,700.00	90.00	180.06	7,506.00	-9,145.47	-2,607.91	9,148.20	0.00	0.00	0.00	
16,800.00	90.00	180.06	7,506.00	-9,245.47	-2,608.02	9,248.20	0.00	0.00	0.00	
16,900.00	90.00	180.06	7,506.00	-9,345.47	-2,608.12	9,348.20	0.00	0.00	0.00	
17,000.00	90.00	180.06	7,506.00	-9,445.47	-2,608.23	9,448.20	0.00	0.00	0.00	
17,100.00	90.00	180.06	7,506.00	-9,545.47	-2,608.34	9,548.20	0.00	0.00	0.00	
17,200.00	90.00	180.06	7,506.00	-9,645.47	-2,608.45	9,648.20	0.00	0.00	0.00	
17,300.00	90.00	180.06	7,506.00	-9,745.47	-2,608.56	9,748.20	0.00	0.00	0.00	
17,400.00	90.00	180.06	7,506.00	-9,845.47	-2,608.66	9,848.20	0.00	0.00	0.00	
17,500.00	90.00	180.06	7,506.00	-9,945.47	-2,608.77	9,948.20	0.00	0.00	0.00	
17,600.00	90.00	180.06	7,506.00	-10,045.47	-2,608.88	10,048.20	0.00	0.00	0.00	
17,670.73	90.00	180.06	7,506.00	-10,116.20	-2,608.96	10,118.93	0.00	0.00	0.00	
TD Well @ 17670.73ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,744.04	1,700.00	9 5/8"	9-5/8	13-1/2	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
400.00	400.00	0.00	0.00	Begin Nudge @ 400.00ft	
1,483.00	1,457.39	-13.93	-201.80	Hold Tangent @ 1483.00ft	
7,370.76	6,929.42	-163.63	-2,369.80	KOP @ 7370.76ft :: DLS = 9°/100'	
8,354.32	7,506.00	-799.80	-2,598.91	End Build @ 8354.32ft	
17,670.73	7,506.00	-10,116.20	-2,608.96	TD Well @ 17670.73ft	