

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1907 PAD

ONION 1907-07H

Plan A

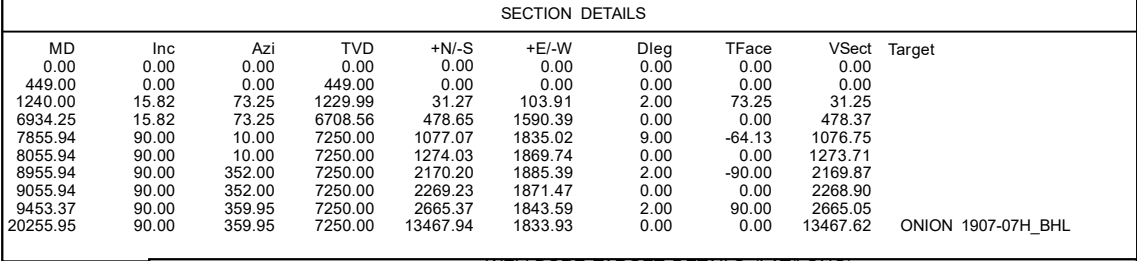
Plan: Design #1

Standard Planning Report

16 March, 2022

VERDAD RESOURCES

CASING DETAILS			
TVD	MD	Name	Size
2156.00	2202.47	9 5/8"	9-5/8



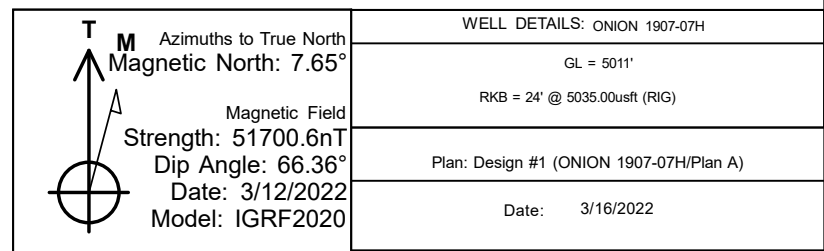
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1907-07H_SHL	0.00	0.00	0.00	40.035251	-104.596426
ONION 1907-07H_LP	7250.00	1077.07	1835.02	40.038208	-104.589872
ONION 1907-07H_BPZ	7250.00	13377.96	1833.94	40.071976	-104.589873
ONION 1907-07H_BHL	7250.00	13467.94	1833.93	40.072223	-104.589873



BPZ
460' FNL
1587' FEL

TPZ
2180' FNL
1599' FEL

SHL
2075' FSL
1787' FWL



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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-64W-19 ONION 1907 PAD			
Site Position:		Northing:	1,256,976.07 usft	Latitude: 40.035252
From:	Lat/Long	Easting:	3,252,908.41 usft	Longitude: -104.596769
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	ONION 1907-07H			
Well Position	+N/-S	0.00 usft	Northing:	1,256,977.01 usft
	+E/-W	0.00 usft	Easting:	3,253,004.39 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.58 °	Ground Level:	5,011.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	3/12/2022	7.65	66.36	51,700.55409601

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	359.99	

Plan Survey Tool Program	Date	3/16/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,156.00	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,156.00	20,255.95	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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	
449.00	0.00	0.00	449.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,240.00	15.82	73.25	1,229.99	31.27	103.91	2.00	2.00	0.00	73.25	
6,934.25	15.82	73.25	6,708.56	478.65	1,590.39	0.00	0.00	0.00	0.00	
7,855.94	90.00	10.00	7,250.00	1,077.07	1,835.02	9.00	8.05	-6.86	-64.13	
8,055.94	90.00	10.00	7,250.00	1,274.03	1,869.74	0.00	0.00	0.00	0.00	
8,955.94	90.00	352.00	7,250.00	2,170.20	1,885.39	2.00	0.00	-2.00	-90.00	
9,055.94	90.00	352.00	7,250.00	2,269.23	1,871.47	0.00	0.00	0.00	0.00	
9,453.37	90.00	359.95	7,250.00	2,665.37	1,843.59	2.00	0.00	2.00	90.00	
20,255.95	90.00	359.95	7,250.00	13,467.94	1,833.93	0.00	0.00	0.00	0.00	ONION 1907-07H_B+

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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
200.00	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
449.00	0.00	0.00	449.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 449.00ft									
500.00	1.02	73.25	500.00	0.13	0.43	0.13	2.00	2.00	0.00
600.00	3.02	73.25	599.93	1.15	3.81	1.15	2.00	2.00	0.00
700.00	5.02	73.25	699.68	3.17	10.52	3.17	2.00	2.00	0.00
800.00	7.02	73.25	799.12	6.19	20.56	6.19	2.00	2.00	0.00
900.00	9.02	73.25	898.14	10.21	33.92	10.20	2.00	2.00	0.00
1,000.00	11.02	73.25	996.61	15.22	50.58	15.22	2.00	2.00	0.00
1,100.00	13.02	73.25	1,094.41	21.23	70.52	21.21	2.00	2.00	0.00
1,200.00	15.02	73.25	1,191.43	28.21	93.72	28.19	2.00	2.00	0.00
1,240.00	15.82	73.25	1,229.99	31.27	103.91	31.25	2.00	2.00	0.00
Hold Tangent @ 1240.00ft									
1,300.00	15.82	73.25	1,287.72	35.99	119.57	35.97	0.00	0.00	0.00
1,400.00	15.82	73.25	1,383.93	43.84	145.67	43.82	0.00	0.00	0.00
1,500.00	15.82	73.25	1,480.14	51.70	171.78	51.67	0.00	0.00	0.00
1,600.00	15.82	73.25	1,576.35	59.56	197.88	59.52	0.00	0.00	0.00
1,700.00	15.82	73.25	1,672.56	67.41	223.99	67.37	0.00	0.00	0.00
1,800.00	15.82	73.25	1,768.78	75.27	250.09	75.23	0.00	0.00	0.00
1,900.00	15.82	73.25	1,864.99	83.13	276.20	83.08	0.00	0.00	0.00
2,000.00	15.82	73.25	1,961.20	90.98	302.30	90.93	0.00	0.00	0.00
2,100.00	15.82	73.25	2,057.41	98.84	328.41	98.78	0.00	0.00	0.00
2,200.00	15.82	73.25	2,153.63	106.70	354.51	106.63	0.00	0.00	0.00
2,202.47	15.82	73.25	2,156.00	106.89	355.16	106.83	0.00	0.00	0.00
9 5/8"									
2,300.00	15.82	73.25	2,249.84	114.55	380.62	114.49	0.00	0.00	0.00
2,400.00	15.82	73.25	2,346.05	122.41	406.72	122.34	0.00	0.00	0.00
2,500.00	15.82	73.25	2,442.26	130.27	432.83	130.19	0.00	0.00	0.00
2,600.00	15.82	73.25	2,538.47	138.12	458.93	138.04	0.00	0.00	0.00
2,700.00	15.82	73.25	2,634.69	145.98	485.04	145.90	0.00	0.00	0.00
2,800.00	15.82	73.25	2,730.90	153.84	511.14	153.75	0.00	0.00	0.00
2,900.00	15.82	73.25	2,827.11	161.69	537.25	161.60	0.00	0.00	0.00
3,000.00	15.82	73.25	2,923.32	169.55	563.35	169.45	0.00	0.00	0.00
3,100.00	15.82	73.25	3,019.54	177.41	589.46	177.30	0.00	0.00	0.00
3,200.00	15.82	73.25	3,115.75	185.26	615.56	185.16	0.00	0.00	0.00
3,300.00	15.82	73.25	3,211.96	193.12	641.67	193.01	0.00	0.00	0.00
3,400.00	15.82	73.25	3,308.17	200.98	667.77	200.86	0.00	0.00	0.00
3,500.00	15.82	73.25	3,404.39	208.83	693.88	208.71	0.00	0.00	0.00
3,600.00	15.82	73.25	3,500.60	216.69	719.98	216.56	0.00	0.00	0.00
3,700.00	15.82	73.25	3,596.81	224.55	746.09	224.42	0.00	0.00	0.00
3,800.00	15.82	73.25	3,693.02	232.40	772.19	232.27	0.00	0.00	0.00
3,900.00	15.82	73.25	3,789.23	240.26	798.30	240.12	0.00	0.00	0.00
4,000.00	15.82	73.25	3,885.45	248.12	824.40	247.97	0.00	0.00	0.00
4,100.00	15.82	73.25	3,981.66	255.97	850.51	255.83	0.00	0.00	0.00
4,200.00	15.82	73.25	4,077.87	263.83	876.61	263.68	0.00	0.00	0.00
4,300.00	15.82	73.25	4,174.08	271.69	902.72	271.53	0.00	0.00	0.00
4,400.00	15.82	73.25	4,270.30	279.54	928.82	279.38	0.00	0.00	0.00
4,500.00	15.82	73.25	4,366.51	287.40	954.93	287.23	0.00	0.00	0.00
4,600.00	15.82	73.25	4,462.72	295.26	981.03	295.09	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
4,700.00	15.82	73.25	4,558.93	303.11	1,007.14	302.94	0.00	0.00	0.00	
4,800.00	15.82	73.25	4,655.15	310.97	1,033.24	310.79	0.00	0.00	0.00	
4,900.00	15.82	73.25	4,751.36	318.83	1,059.35	318.64	0.00	0.00	0.00	
5,000.00	15.82	73.25	4,847.57	326.68	1,085.45	326.49	0.00	0.00	0.00	
5,100.00	15.82	73.25	4,943.78	334.54	1,111.56	334.35	0.00	0.00	0.00	
5,200.00	15.82	73.25	5,039.99	342.40	1,137.66	342.20	0.00	0.00	0.00	
5,300.00	15.82	73.25	5,136.21	350.25	1,163.77	350.05	0.00	0.00	0.00	
5,400.00	15.82	73.25	5,232.42	358.11	1,189.87	357.90	0.00	0.00	0.00	
5,500.00	15.82	73.25	5,328.63	365.97	1,215.98	365.76	0.00	0.00	0.00	
5,600.00	15.82	73.25	5,424.84	373.82	1,242.08	373.61	0.00	0.00	0.00	
5,700.00	15.82	73.25	5,521.06	381.68	1,268.19	381.46	0.00	0.00	0.00	
5,800.00	15.82	73.25	5,617.27	389.54	1,294.29	389.31	0.00	0.00	0.00	
5,900.00	15.82	73.25	5,713.48	397.39	1,320.40	397.16	0.00	0.00	0.00	
6,000.00	15.82	73.25	5,809.69	405.25	1,346.50	405.02	0.00	0.00	0.00	
6,100.00	15.82	73.25	5,905.91	413.11	1,372.61	412.87	0.00	0.00	0.00	
6,200.00	15.82	73.25	6,002.12	420.96	1,398.71	420.72	0.00	0.00	0.00	
6,300.00	15.82	73.25	6,098.33	428.82	1,424.82	428.57	0.00	0.00	0.00	
6,400.00	15.82	73.25	6,194.54	436.68	1,450.92	436.42	0.00	0.00	0.00	
6,500.00	15.82	73.25	6,290.75	444.53	1,477.03	444.28	0.00	0.00	0.00	
6,600.00	15.82	73.25	6,386.97	452.39	1,503.13	452.13	0.00	0.00	0.00	
6,700.00	15.82	73.25	6,483.18	460.25	1,529.24	459.98	0.00	0.00	0.00	
6,800.00	15.82	73.25	6,579.39	468.10	1,555.34	467.83	0.00	0.00	0.00	
6,900.00	15.82	73.25	6,675.60	475.96	1,581.45	475.69	0.00	0.00	0.00	
6,934.25	15.82	73.25	6,708.56	478.65	1,590.39	478.37	0.00	0.00	0.00	
KOP @ 6934.25ft :: DLS = 9°/100'										
6,950.00	16.49	68.75	6,723.68	480.08	1,594.53	479.80	9.00	4.23	-28.56	
7,000.00	19.14	56.81	6,771.30	487.14	1,608.00	486.86	9.00	5.30	-23.88	
7,050.00	22.37	47.94	6,818.06	498.01	1,621.93	497.72	9.00	6.46	-17.75	
7,100.00	25.96	41.31	6,863.68	512.61	1,636.23	512.32	9.00	7.19	-13.27	
7,150.00	29.79	36.23	6,907.88	530.86	1,650.80	530.57	9.00	7.65	-10.15	
7,200.00	33.77	32.23	6,950.38	552.64	1,665.56	552.35	9.00	7.96	-7.99	
7,250.00	37.85	29.00	6,990.92	577.83	1,680.42	577.54	9.00	8.17	-6.47	
7,300.00	42.01	26.31	7,029.25	606.26	1,695.28	605.96	9.00	8.32	-5.37	
7,350.00	46.22	24.03	7,065.14	637.76	1,710.06	637.46	9.00	8.42	-4.56	
7,400.00	50.47	22.05	7,098.37	672.14	1,724.66	671.84	9.00	8.50	-3.96	
7,450.00	54.75	20.30	7,128.72	709.18	1,738.99	708.87	9.00	8.56	-3.50	
7,500.00	59.05	18.73	7,156.02	748.65	1,752.96	748.35	9.00	8.61	-3.15	
7,550.00	63.37	17.29	7,180.09	790.32	1,766.49	790.01	9.00	8.64	-2.88	
7,600.00	67.71	15.95	7,200.79	833.92	1,779.50	833.61	9.00	8.67	-2.67	
7,650.00	72.05	14.70	7,217.99	879.19	1,791.90	878.88	9.00	8.69	-2.51	
7,700.00	76.40	13.51	7,231.57	925.85	1,803.62	925.53	9.00	8.70	-2.39	
7,750.00	80.76	12.36	7,241.47	973.60	1,814.58	973.28	9.00	8.71	-2.30	
7,800.00	85.12	11.24	7,247.62	1,022.16	1,824.72	1,021.84	9.00	8.72	-2.24	
7,850.00	89.48	10.13	7,249.97	1,071.23	1,833.98	1,070.91	9.00	8.72	-2.21	
7,855.94	90.00	10.00	7,250.00	1,077.07	1,835.02	1,076.75	9.00	8.73	-2.21	
End Build/TPZ @ 7855.94ft										
7,900.00	90.00	10.00	7,250.00	1,120.47	1,842.67	1,120.15	0.00	0.00	0.00	
8,000.00	90.00	10.00	7,250.00	1,218.95	1,860.03	1,218.62	0.00	0.00	0.00	
8,055.94	90.00	10.00	7,250.00	1,274.03	1,869.74	1,273.71	0.00	0.00	0.00	
Begin Turn Back to Line @ 8055.94ft										
8,100.00	90.00	9.12	7,250.00	1,317.49	1,877.06	1,317.16	2.00	0.00	-2.00	
8,200.00	90.00	7.12	7,250.00	1,416.48	1,891.18	1,416.15	2.00	0.00	-2.00	
8,300.00	90.00	5.12	7,250.00	1,515.90	1,901.84	1,515.57	2.00	0.00	-2.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)
8,400.00	90.00	3.12	7,250.00	1,615.64	1,909.02	1,615.31	2.00	0.00	-2.00
8,500.00	90.00	1.12	7,250.00	1,715.57	1,912.72	1,715.23	2.00	0.00	-2.00
8,600.00	90.00	359.12	7,250.00	1,815.56	1,912.93	1,815.23	2.00	0.00	-2.00
8,700.00	90.00	357.12	7,250.00	1,915.50	1,909.65	1,915.17	2.00	0.00	-2.00
8,800.00	90.00	355.12	7,250.00	2,015.27	1,902.88	2,014.94	2.00	0.00	-2.00
8,900.00	90.00	353.12	7,250.00	2,114.74	1,892.63	2,114.41	2.00	0.00	-2.00
8,955.94	90.00	352.00	7,250.00	2,170.20	1,885.39	2,169.87	2.00	0.00	-2.00
End Turn @ 8955.94ft									
9,000.00	90.00	352.00	7,250.00	2,213.84	1,879.26	2,213.51	0.00	0.00	0.00
9,055.94	90.00	352.00	7,250.00	2,269.23	1,871.47	2,268.90	0.00	0.00	0.00
Begin Turn to BHL @ 9055.94ft									
9,100.00	90.00	352.88	7,250.00	2,312.91	1,865.67	2,312.58	2.00	0.00	2.00
9,200.00	90.00	354.88	7,250.00	2,412.33	1,855.02	2,412.01	2.00	0.00	2.00
9,300.00	90.00	356.88	7,250.00	2,512.07	1,847.83	2,511.75	2.00	0.00	2.00
9,400.00	90.00	358.88	7,250.00	2,612.00	1,844.14	2,611.67	2.00	0.00	2.00
9,453.37	90.00	359.95	7,250.00	2,665.37	1,843.59	2,665.05	2.00	0.00	2.00
End Turn @ 9453.37ft									
9,500.00	90.00	359.95	7,250.00	2,711.99	1,843.55	2,711.67	0.00	0.00	0.00
9,600.00	90.00	359.95	7,250.00	2,811.99	1,843.46	2,811.67	0.00	0.00	0.00
9,700.00	90.00	359.95	7,250.00	2,911.99	1,843.37	2,911.67	0.00	0.00	0.00
9,800.00	90.00	359.95	7,250.00	3,011.99	1,843.28	3,011.67	0.00	0.00	0.00
9,900.00	90.00	359.95	7,250.00	3,111.99	1,843.19	3,111.67	0.00	0.00	0.00
10,000.00	90.00	359.95	7,250.00	3,211.99	1,843.10	3,211.67	0.00	0.00	0.00
10,100.00	90.00	359.95	7,250.00	3,311.99	1,843.01	3,311.67	0.00	0.00	0.00
10,200.00	90.00	359.95	7,250.00	3,411.99	1,842.92	3,411.67	0.00	0.00	0.00
10,300.00	90.00	359.95	7,250.00	3,511.99	1,842.83	3,511.67	0.00	0.00	0.00
10,400.00	90.00	359.95	7,250.00	3,611.99	1,842.74	3,611.67	0.00	0.00	0.00
10,500.00	90.00	359.95	7,250.00	3,711.99	1,842.66	3,711.67	0.00	0.00	0.00
10,600.00	90.00	359.95	7,250.00	3,811.99	1,842.57	3,811.67	0.00	0.00	0.00
10,700.00	90.00	359.95	7,250.00	3,911.99	1,842.48	3,911.67	0.00	0.00	0.00
10,800.00	90.00	359.95	7,250.00	4,011.99	1,842.39	4,011.67	0.00	0.00	0.00
10,900.00	90.00	359.95	7,250.00	4,111.99	1,842.30	4,111.67	0.00	0.00	0.00
11,000.00	90.00	359.95	7,250.00	4,211.99	1,842.21	4,211.67	0.00	0.00	0.00
11,100.00	90.00	359.95	7,250.00	4,311.99	1,842.12	4,311.67	0.00	0.00	0.00
11,200.00	90.00	359.95	7,250.00	4,411.99	1,842.03	4,411.67	0.00	0.00	0.00
11,300.00	90.00	359.95	7,250.00	4,511.99	1,841.94	4,511.67	0.00	0.00	0.00
11,400.00	90.00	359.95	7,250.00	4,611.99	1,841.85	4,611.67	0.00	0.00	0.00
11,500.00	90.00	359.95	7,250.00	4,711.99	1,841.76	4,711.67	0.00	0.00	0.00
11,600.00	90.00	359.95	7,250.00	4,811.99	1,841.67	4,811.67	0.00	0.00	0.00
11,700.00	90.00	359.95	7,250.00	4,911.99	1,841.58	4,911.67	0.00	0.00	0.00
11,800.00	90.00	359.95	7,250.00	5,011.99	1,841.49	5,011.67	0.00	0.00	0.00
11,900.00	90.00	359.95	7,250.00	5,111.99	1,841.40	5,111.67	0.00	0.00	0.00
12,000.00	90.00	359.95	7,250.00	5,211.99	1,841.31	5,211.67	0.00	0.00	0.00
12,100.00	90.00	359.95	7,250.00	5,311.99	1,841.22	5,311.67	0.00	0.00	0.00
12,200.00	90.00	359.95	7,250.00	5,411.99	1,841.14	5,411.67	0.00	0.00	0.00
12,300.00	90.00	359.95	7,250.00	5,511.99	1,841.05	5,511.67	0.00	0.00	0.00
12,400.00	90.00	359.95	7,250.00	5,611.99	1,840.96	5,611.67	0.00	0.00	0.00
12,500.00	90.00	359.95	7,250.00	5,711.99	1,840.87	5,711.67	0.00	0.00	0.00
12,600.00	90.00	359.95	7,250.00	5,811.99	1,840.78	5,811.67	0.00	0.00	0.00
12,700.00	90.00	359.95	7,250.00	5,911.99	1,840.69	5,911.67	0.00	0.00	0.00
12,800.00	90.00	359.95	7,250.00	6,011.99	1,840.60	6,011.67	0.00	0.00	0.00
12,900.00	90.00	359.95	7,250.00	6,111.99	1,840.51	6,111.67	0.00	0.00	0.00
13,000.00	90.00	359.95	7,250.00	6,211.99	1,840.42	6,211.67	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)
13,100.00	90.00	359.95	7,250.00	6,311.99	1,840.33	6,311.67	0.00	0.00	0.00
13,200.00	90.00	359.95	7,250.00	6,411.99	1,840.24	6,411.67	0.00	0.00	0.00
13,300.00	90.00	359.95	7,250.00	6,511.99	1,840.15	6,511.67	0.00	0.00	0.00
13,400.00	90.00	359.95	7,250.00	6,611.99	1,840.06	6,611.67	0.00	0.00	0.00
13,500.00	90.00	359.95	7,250.00	6,711.99	1,839.97	6,711.67	0.00	0.00	0.00
13,600.00	90.00	359.95	7,250.00	6,811.99	1,839.88	6,811.67	0.00	0.00	0.00
13,700.00	90.00	359.95	7,250.00	6,911.99	1,839.79	6,911.67	0.00	0.00	0.00
13,800.00	90.00	359.95	7,250.00	7,011.99	1,839.70	7,011.67	0.00	0.00	0.00
13,900.00	90.00	359.95	7,250.00	7,111.99	1,839.61	7,111.67	0.00	0.00	0.00
14,000.00	90.00	359.95	7,250.00	7,211.99	1,839.53	7,211.67	0.00	0.00	0.00
14,100.00	90.00	359.95	7,250.00	7,311.99	1,839.44	7,311.67	0.00	0.00	0.00
14,200.00	90.00	359.95	7,250.00	7,411.99	1,839.35	7,411.67	0.00	0.00	0.00
14,300.00	90.00	359.95	7,250.00	7,511.99	1,839.26	7,511.67	0.00	0.00	0.00
14,400.00	90.00	359.95	7,250.00	7,611.99	1,839.17	7,611.67	0.00	0.00	0.00
14,500.00	90.00	359.95	7,250.00	7,711.99	1,839.08	7,711.67	0.00	0.00	0.00
14,600.00	90.00	359.95	7,250.00	7,811.99	1,838.99	7,811.67	0.00	0.00	0.00
14,700.00	90.00	359.95	7,250.00	7,911.99	1,838.90	7,911.67	0.00	0.00	0.00
14,800.00	90.00	359.95	7,250.00	8,011.99	1,838.81	8,011.67	0.00	0.00	0.00
14,900.00	90.00	359.95	7,250.00	8,111.99	1,838.72	8,111.67	0.00	0.00	0.00
15,000.00	90.00	359.95	7,250.00	8,211.99	1,838.63	8,211.67	0.00	0.00	0.00
15,100.00	90.00	359.95	7,250.00	8,311.99	1,838.54	8,311.67	0.00	0.00	0.00
15,200.00	90.00	359.95	7,250.00	8,411.99	1,838.45	8,411.67	0.00	0.00	0.00
15,300.00	90.00	359.95	7,250.00	8,511.99	1,838.36	8,511.67	0.00	0.00	0.00
15,400.00	90.00	359.95	7,250.00	8,611.99	1,838.27	8,611.67	0.00	0.00	0.00
15,500.00	90.00	359.95	7,250.00	8,711.99	1,838.18	8,711.67	0.00	0.00	0.00
15,600.00	90.00	359.95	7,250.00	8,811.99	1,838.09	8,811.67	0.00	0.00	0.00
15,700.00	90.00	359.95	7,250.00	8,911.99	1,838.00	8,911.67	0.00	0.00	0.00
15,800.00	90.00	359.95	7,250.00	9,011.99	1,837.92	9,011.67	0.00	0.00	0.00
15,900.00	90.00	359.95	7,250.00	9,111.99	1,837.83	9,111.67	0.00	0.00	0.00
16,000.00	90.00	359.95	7,250.00	9,211.99	1,837.74	9,211.67	0.00	0.00	0.00
16,100.00	90.00	359.95	7,250.00	9,311.99	1,837.65	9,311.67	0.00	0.00	0.00
16,200.00	90.00	359.95	7,250.00	9,411.99	1,837.56	9,411.67	0.00	0.00	0.00
16,300.00	90.00	359.95	7,250.00	9,511.99	1,837.47	9,511.67	0.00	0.00	0.00
16,400.00	90.00	359.95	7,250.00	9,611.99	1,837.38	9,611.67	0.00	0.00	0.00
16,500.00	90.00	359.95	7,250.00	9,711.99	1,837.29	9,711.67	0.00	0.00	0.00
16,600.00	90.00	359.95	7,250.00	9,811.99	1,837.20	9,811.67	0.00	0.00	0.00
16,700.00	90.00	359.95	7,250.00	9,911.99	1,837.11	9,911.67	0.00	0.00	0.00
16,800.00	90.00	359.95	7,250.00	10,011.99	1,837.02	10,011.67	0.00	0.00	0.00
16,900.00	90.00	359.95	7,250.00	10,111.99	1,836.93	10,111.67	0.00	0.00	0.00
17,000.00	90.00	359.95	7,250.00	10,211.99	1,836.84	10,211.67	0.00	0.00	0.00
17,100.00	90.00	359.95	7,250.00	10,311.99	1,836.75	10,311.67	0.00	0.00	0.00
17,200.00	90.00	359.95	7,250.00	10,411.99	1,836.66	10,411.67	0.00	0.00	0.00
17,300.00	90.00	359.95	7,250.00	10,511.99	1,836.57	10,511.67	0.00	0.00	0.00
17,400.00	90.00	359.95	7,250.00	10,611.99	1,836.48	10,611.67	0.00	0.00	0.00
17,500.00	90.00	359.95	7,250.00	10,711.99	1,836.40	10,711.67	0.00	0.00	0.00
17,600.00	90.00	359.95	7,250.00	10,811.99	1,836.31	10,811.67	0.00	0.00	0.00
17,700.00	90.00	359.95	7,250.00	10,911.99	1,836.22	10,911.67	0.00	0.00	0.00
17,800.00	90.00	359.95	7,250.00	11,011.99	1,836.13	11,011.67	0.00	0.00	0.00
17,900.00	90.00	359.95	7,250.00	11,111.99	1,836.04	11,111.67	0.00	0.00	0.00
18,000.00	90.00	359.95	7,250.00	11,211.99	1,835.95	11,211.67	0.00	0.00	0.00
18,100.00	90.00	359.95	7,250.00	11,311.99	1,835.86	11,311.67	0.00	0.00	0.00
18,200.00	90.00	359.95	7,250.00	11,411.99	1,835.77	11,411.67	0.00	0.00	0.00
18,300.00	90.00	359.95	7,250.00	11,511.99	1,835.68	11,511.67	0.00	0.00	0.00
18,400.00	90.00	359.95	7,250.00	11,611.99	1,835.59	11,611.67	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1907 PAD	North Reference:	True
Well:	ONION 1907-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
18,500.00	90.00	359.95	7,250.00	11,711.99	1,835.50	11,711.67	0.00	0.00	0.00	
18,600.00	90.00	359.95	7,250.00	11,811.99	1,835.41	11,811.67	0.00	0.00	0.00	
18,700.00	90.00	359.95	7,250.00	11,911.99	1,835.32	11,911.67	0.00	0.00	0.00	
18,800.00	90.00	359.95	7,250.00	12,011.99	1,835.23	12,011.67	0.00	0.00	0.00	
18,900.00	90.00	359.95	7,250.00	12,111.99	1,835.14	12,111.67	0.00	0.00	0.00	
19,000.00	90.00	359.95	7,250.00	12,211.99	1,835.05	12,211.67	0.00	0.00	0.00	
19,100.00	90.00	359.95	7,250.00	12,311.99	1,834.96	12,311.67	0.00	0.00	0.00	
19,200.00	90.00	359.95	7,250.00	12,411.99	1,834.87	12,411.67	0.00	0.00	0.00	
19,300.00	90.00	359.95	7,250.00	12,511.99	1,834.79	12,511.67	0.00	0.00	0.00	
19,400.00	90.00	359.95	7,250.00	12,611.99	1,834.70	12,611.67	0.00	0.00	0.00	
19,500.00	90.00	359.95	7,250.00	12,711.99	1,834.61	12,711.67	0.00	0.00	0.00	
19,600.00	90.00	359.95	7,250.00	12,811.99	1,834.52	12,811.67	0.00	0.00	0.00	
19,700.00	90.00	359.95	7,250.00	12,911.99	1,834.43	12,911.67	0.00	0.00	0.00	
19,800.00	90.00	359.95	7,250.00	13,011.99	1,834.34	13,011.67	0.00	0.00	0.00	
19,900.00	90.00	359.95	7,250.00	13,111.99	1,834.25	13,111.67	0.00	0.00	0.00	
20,000.00	90.00	359.95	7,250.00	13,211.99	1,834.16	13,211.67	0.00	0.00	0.00	
20,100.00	90.00	359.95	7,250.00	13,311.99	1,834.07	13,311.67	0.00	0.00	0.00	
20,165.97	90.00	359.95	7,250.00	13,377.96	1,834.01	13,377.64	0.00	0.00	0.00	
BPZ @ 20165.97ft										
20,200.00	90.00	359.95	7,250.00	13,411.99	1,833.98	13,411.67	0.00	0.00	0.00	
20,255.95	90.00	359.95	7,250.00	13,467.94	1,833.93	13,467.62	0.00	0.00	0.00	
TD Well @ 20255.95ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,202.47	2,156.00	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	
449.00	449.00	0.00	0.00	Begin Nudge @ 449.00ft	
1,240.00	1,229.99	31.27	103.91	Hold Tangent @ 1240.00ft	
6,934.25	6,708.56	478.65	1,590.39	KOP @ 6934.25ft :: DLS = 9°/100'	
7,855.94	7,250.00	1,077.07	1,835.02	End Build/TPZ @ 7855.94ft	
8,055.94	7,250.00	1,274.03	1,869.74	Begin Turn Back to Line @ 8055.94ft	
8,955.94	7,250.00	2,170.20	1,885.39	End Turn @ 8955.94ft	
9,055.94	7,250.00	2,269.23	1,871.47	Begin Turn to BHL @ 9055.94ft	
9,453.37	7,250.00	2,665.37	1,843.59	End Turn @ 9453.37ft	
20,165.97	7,250.00	13,377.96	1,834.01	BPZ @ 20165.97ft	
20,255.95	7,250.00	13,467.94	1,833.93	TD Well @ 20255.95ft	