

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-64W-19 ONION 1907 PAD**

**ONION 1907-04H**

**Plan A**

**Plan: Design #1**

## **Standard Planning Report**

**16 March, 2022**

Project: WATTENBERG FIELD  
Site: 1N-64W-19 ONION 1907 PAD  
Well: ONION 1907-04H  
Wellbore: Plan A  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
2156.00	2161.13	9 5/8"	9-5/8

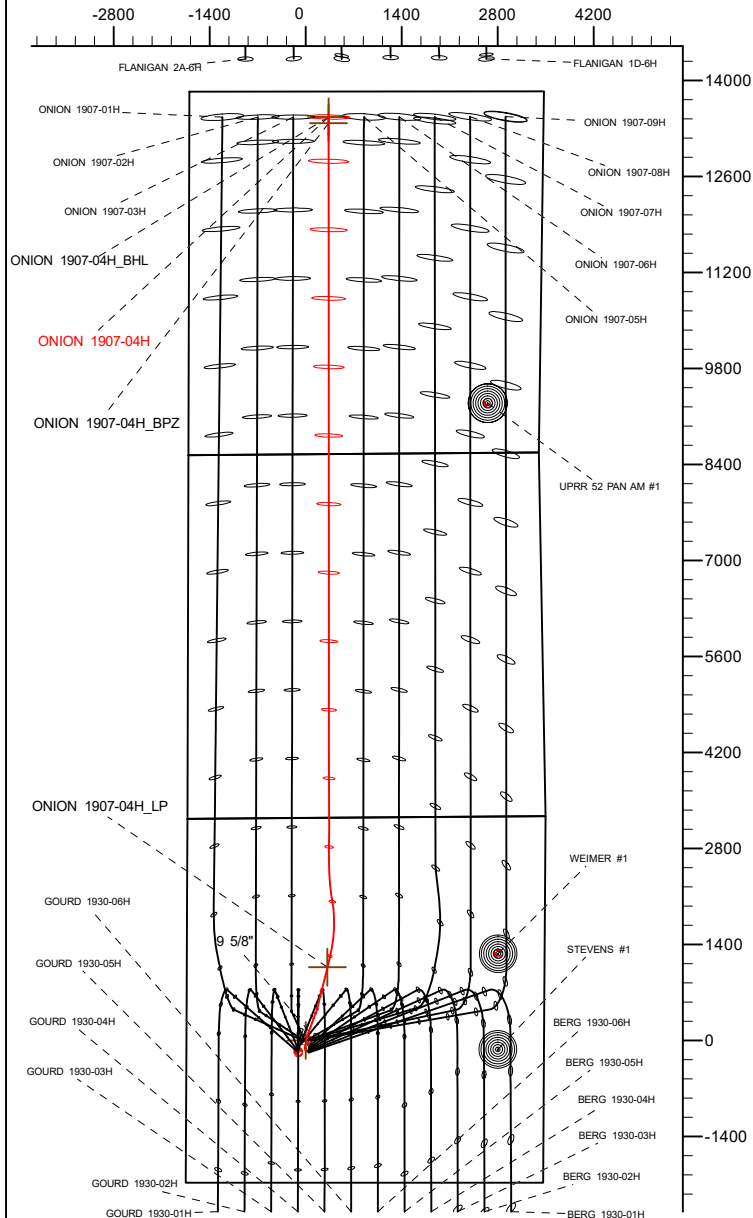
## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
204.00	0.00	0.00	204.00	0.00	0.00	0.00	0.00	0.00	
419.50	4.31	20.00	419.30	7.61	2.77	2.00	20.00	7.62	
6678.84	4.31	20.00	6660.94	449.65	163.66	0.00	0.00	449.88	
7631.26	90.00	13.45	7250.00	1065.90	316.25	9.00	-6.57	1066.34	
7831.26	90.00	13.45	7250.00	1260.41	362.77	0.00	0.00	1260.92	
8579.59	90.00	351.00	7250.00	2003.41	391.63	3.00	-90.00	2003.95	
8679.60	90.00	351.00	7250.00	2102.18	375.99	0.00	0.00	2102.71	
9127.75	90.00	359.96	7250.00	2548.49	340.72	2.00	90.00	2548.96	
20044.88	90.00	359.96	7250.00	13465.62	333.67	0.00	0.00	13466.07	ONION 1907-04H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1907-04H_SHL	0.00	0.00	0.00	40.035251	-104.596597
ONION 1907-04H_LP	7250.00	1065.90	316.25	40.038177	-104.595468
ONION 1907-04H_BPZ	7250.00	13375.64	333.53	40.071970	-104.595405
ONION 1907-04H_BHL	7250.00	13465.62	333.67	40.072217	-104.595405

West(-)/East(+) (2800 usft/in)

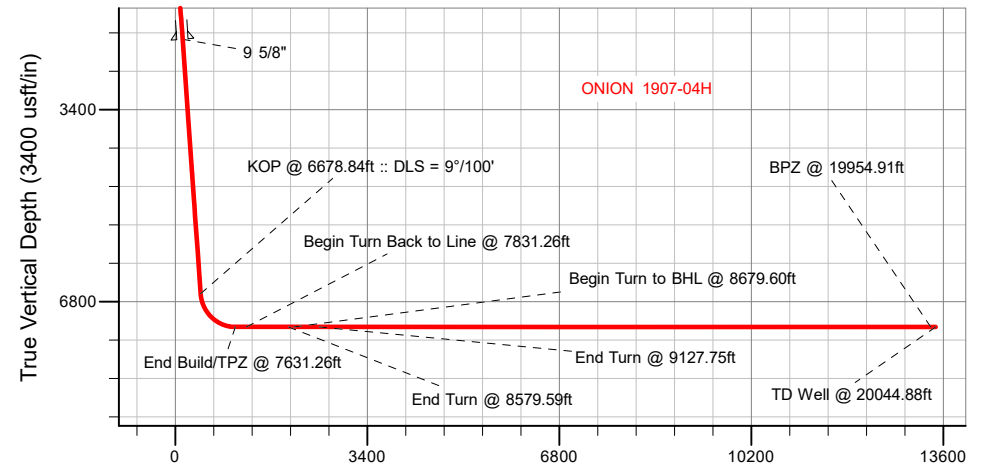


**BHL**  
**370' FNL**  
**2032' FWL**

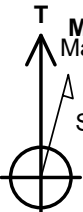
**BPZ**  
**460' FNL**  
**2032' FWL**

**TPZ**  
**2180' FNL**  
**2051' FWL**

**SHL**  
**2075' FSL**  
**1739' FWL**



Vertical Section at 0.08° (3400 usft/in)

 <p>Azimuths to True North Magnetic North: 7.65°  Magnetic Field Strength: 51700.5nT Dip Angle: 66.36° Date: 3/12/2022 Model: IGRF2020</p>	WELL DETAILS: ONION 1907-04H	
	GL = 5011'	
	RKB = 24' @ 5035.00usft (RIG)	
	Plan: Design #1 (ONION 1907-04H/Plan A)	
	Date: 3/16/2022	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #1		

<b>Project</b>	WATTENBERG FIELD		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 1907-04H				
Well Position	+N/-S	0.00 usft	Northing:	1,256,976.52 usft	Latitude:	40.035251
	+E/-W	0.00 usft	Easting:	3,252,956.40 usft	Longitude:	-104.596597
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,011.00 usft
Grid Convergence:		0.58 °				

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF202013	3/12/2022	7.65	66.36	51,700.53640980

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	0.08	

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/16/2022			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	2,156.00	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,156.00	20,044.88	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	
204.00	0.00	0.00	204.00	0.00	0.00	0.00	0.00	0.00	0.00	
419.50	4.31	20.00	419.30	7.61	2.77	2.00	2.00	0.00	20.00	
6,678.84	4.31	20.00	6,660.94	449.65	163.66	0.00	0.00	0.00	0.00	
7,631.26	90.00	13.45	7,250.00	1,065.90	316.25	9.00	9.00	-0.69	-6.57	
7,831.26	90.00	13.45	7,250.00	1,260.41	362.77	0.00	0.00	0.00	0.00	
8,579.59	90.00	351.00	7,250.00	2,003.41	391.63	3.00	0.00	-3.00	-90.00	
8,679.60	90.00	351.00	7,250.00	2,102.18	375.99	0.00	0.00	0.00	0.00	
9,127.75	90.00	359.96	7,250.00	2,548.49	340.72	2.00	0.00	2.00	90.00	
20,044.88	90.00	359.96	7,250.00	13,465.62	333.67	0.00	0.00	0.00	0.00	ONION 1907-04H_B+

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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
204.00	0.00	0.00	204.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 204.00ft									
300.00	1.92	20.00	299.98	1.51	0.55	1.51	2.00	2.00	0.00
400.00	3.92	20.00	399.85	6.30	2.29	6.30	2.00	2.00	0.00
419.50	4.31	20.00	419.30	7.61	2.77	7.62	2.00	2.00	0.00
Hold Tangent @ 419.50ft									
500.00	4.31	20.00	499.57	13.30	4.84	13.30	0.00	0.00	0.00
600.00	4.31	20.00	599.29	20.36	7.41	20.37	0.00	0.00	0.00
700.00	4.31	20.00	699.00	27.42	9.98	27.44	0.00	0.00	0.00
800.00	4.31	20.00	798.72	34.48	12.55	34.50	0.00	0.00	0.00
900.00	4.31	20.00	898.44	41.55	15.12	41.57	0.00	0.00	0.00
1,000.00	4.31	20.00	998.16	48.61	17.69	48.63	0.00	0.00	0.00
1,100.00	4.31	20.00	1,097.87	55.67	20.26	55.70	0.00	0.00	0.00
1,200.00	4.31	20.00	1,197.59	62.73	22.83	62.76	0.00	0.00	0.00
1,300.00	4.31	20.00	1,297.31	69.79	25.40	69.83	0.00	0.00	0.00
1,400.00	4.31	20.00	1,397.02	76.86	27.97	76.90	0.00	0.00	0.00
1,500.00	4.31	20.00	1,496.74	83.92	30.54	83.96	0.00	0.00	0.00
1,600.00	4.31	20.00	1,596.46	90.98	33.11	91.03	0.00	0.00	0.00
1,700.00	4.31	20.00	1,696.18	98.04	35.68	98.09	0.00	0.00	0.00
1,800.00	4.31	20.00	1,795.89	105.10	38.25	105.16	0.00	0.00	0.00
1,900.00	4.31	20.00	1,895.61	112.17	40.83	112.22	0.00	0.00	0.00
2,000.00	4.31	20.00	1,995.33	119.23	43.40	119.29	0.00	0.00	0.00
2,100.00	4.31	20.00	2,095.04	126.29	45.97	126.35	0.00	0.00	0.00
2,161.13	4.31	20.00	2,156.00	130.61	47.54	130.67	0.00	0.00	0.00
9 5/8"									
2,200.00	4.31	20.00	2,194.76	133.35	48.54	133.42	0.00	0.00	0.00
2,300.00	4.31	20.00	2,294.48	140.41	51.11	140.49	0.00	0.00	0.00
2,400.00	4.31	20.00	2,394.20	147.48	53.68	147.55	0.00	0.00	0.00
2,500.00	4.31	20.00	2,493.91	154.54	56.25	154.62	0.00	0.00	0.00
2,600.00	4.31	20.00	2,593.63	161.60	58.82	161.68	0.00	0.00	0.00
2,700.00	4.31	20.00	2,693.35	168.66	61.39	168.75	0.00	0.00	0.00
2,800.00	4.31	20.00	2,793.06	175.73	63.96	175.81	0.00	0.00	0.00
2,900.00	4.31	20.00	2,892.78	182.79	66.53	182.88	0.00	0.00	0.00
3,000.00	4.31	20.00	2,992.50	189.85	69.10	189.95	0.00	0.00	0.00
3,100.00	4.31	20.00	3,092.22	196.91	71.67	197.01	0.00	0.00	0.00
3,200.00	4.31	20.00	3,191.93	203.97	74.24	204.08	0.00	0.00	0.00
3,300.00	4.31	20.00	3,291.65	211.04	76.81	211.14	0.00	0.00	0.00
3,400.00	4.31	20.00	3,391.37	218.10	79.38	218.21	0.00	0.00	0.00
3,500.00	4.31	20.00	3,491.09	225.16	81.95	225.27	0.00	0.00	0.00
3,600.00	4.31	20.00	3,590.80	232.22	84.52	232.34	0.00	0.00	0.00
3,700.00	4.31	20.00	3,690.52	239.28	87.09	239.40	0.00	0.00	0.00
3,800.00	4.31	20.00	3,790.24	246.35	89.66	246.47	0.00	0.00	0.00
3,900.00	4.31	20.00	3,889.95	253.41	92.23	253.54	0.00	0.00	0.00
4,000.00	4.31	20.00	3,989.67	260.47	94.80	260.60	0.00	0.00	0.00
4,100.00	4.31	20.00	4,089.39	267.53	97.37	267.67	0.00	0.00	0.00
4,200.00	4.31	20.00	4,189.11	274.59	99.94	274.73	0.00	0.00	0.00
4,300.00	4.31	20.00	4,288.82	281.66	102.51	281.80	0.00	0.00	0.00
4,400.00	4.31	20.00	4,388.54	288.72	105.08	288.86	0.00	0.00	0.00
4,500.00	4.31	20.00	4,488.26	295.78	107.66	295.93	0.00	0.00	0.00
4,600.00	4.31	20.00	4,587.97	302.84	110.23	303.00	0.00	0.00	0.00
4,700.00	4.31	20.00	4,687.69	309.90	112.80	310.06	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
4,800.00	4.31	20.00	4,787.41	316.97	115.37	317.13	0.00	0.00	0.00
4,900.00	4.31	20.00	4,887.13	324.03	117.94	324.19	0.00	0.00	0.00
5,000.00	4.31	20.00	4,986.84	331.09	120.51	331.26	0.00	0.00	0.00
5,100.00	4.31	20.00	5,086.56	338.15	123.08	338.32	0.00	0.00	0.00
5,200.00	4.31	20.00	5,186.28	345.21	125.65	345.39	0.00	0.00	0.00
5,300.00	4.31	20.00	5,286.00	352.28	128.22	352.45	0.00	0.00	0.00
5,400.00	4.31	20.00	5,385.71	359.34	130.79	359.52	0.00	0.00	0.00
5,500.00	4.31	20.00	5,485.43	366.40	133.36	366.59	0.00	0.00	0.00
5,600.00	4.31	20.00	5,585.15	373.46	135.93	373.65	0.00	0.00	0.00
5,700.00	4.31	20.00	5,684.86	380.52	138.50	380.72	0.00	0.00	0.00
5,800.00	4.31	20.00	5,784.58	387.59	141.07	387.78	0.00	0.00	0.00
5,900.00	4.31	20.00	5,884.30	394.65	143.64	394.85	0.00	0.00	0.00
6,000.00	4.31	20.00	5,984.02	401.71	146.21	401.91	0.00	0.00	0.00
6,100.00	4.31	20.00	6,083.73	408.77	148.78	408.98	0.00	0.00	0.00
6,200.00	4.31	20.00	6,183.45	415.83	151.35	416.05	0.00	0.00	0.00
6,300.00	4.31	20.00	6,283.17	422.90	153.92	423.11	0.00	0.00	0.00
6,400.00	4.31	20.00	6,382.88	429.96	156.49	430.18	0.00	0.00	0.00
6,500.00	4.31	20.00	6,482.60	437.02	159.06	437.24	0.00	0.00	0.00
6,600.00	4.31	20.00	6,582.32	444.08	161.63	444.31	0.00	0.00	0.00
6,678.84	4.31	20.00	6,660.94	449.65	163.66	449.88	0.00	0.00	0.00
KOP @ 6678.84ft :: DLS = 9°/100'									
6,700.00	6.21	17.98	6,682.01	451.49	164.28	451.71	9.00	8.96	-9.52
6,750.00	10.70	16.06	6,731.45	458.52	166.40	458.75	9.00	8.98	-3.85
6,800.00	15.19	15.26	6,780.17	469.31	169.41	469.54	9.00	8.99	-1.59
6,850.00	19.69	14.83	6,827.86	483.78	173.30	484.02	9.00	9.00	-0.88
6,900.00	24.19	14.55	6,874.22	501.85	178.03	502.09	9.00	9.00	-0.56
6,950.00	28.69	14.35	6,918.98	523.40	183.58	523.66	9.00	9.00	-0.39
7,000.00	33.19	14.20	6,961.85	548.31	189.91	548.57	9.00	9.00	-0.29
7,050.00	37.69	14.09	7,002.58	576.41	197.00	576.69	9.00	9.00	-0.23
7,100.00	42.19	13.99	7,040.91	607.55	204.78	607.83	9.00	9.00	-0.19
7,150.00	46.69	13.91	7,076.60	641.51	213.22	641.81	9.00	9.00	-0.16
7,200.00	51.19	13.85	7,109.43	678.10	222.26	678.41	9.00	9.00	-0.14
7,250.00	55.69	13.79	7,139.21	717.09	231.85	717.41	9.00	9.00	-0.12
7,300.00	60.19	13.73	7,165.75	758.24	241.92	758.57	9.00	9.00	-0.11
7,350.00	64.69	13.68	7,188.88	801.29	252.42	801.64	9.00	9.00	-0.10
7,400.00	69.19	13.64	7,208.46	845.98	263.28	846.35	9.00	9.00	-0.09
7,450.00	73.69	13.59	7,224.37	892.03	274.44	892.42	9.00	9.00	-0.09
7,500.00	78.19	13.55	7,236.52	939.17	285.82	939.57	9.00	9.00	-0.08
7,550.00	82.69	13.51	7,244.82	987.09	297.35	987.51	9.00	9.00	-0.08
7,600.00	87.19	13.47	7,249.23	1,035.51	308.97	1,035.94	9.00	9.00	-0.08
7,631.26	90.00	13.45	7,250.00	1,065.90	316.25	1,066.34	9.00	9.00	-0.08
End Build/TPZ @ 7631.26ft									
7,700.00	90.00	13.45	7,250.00	1,132.75	332.23	1,133.22	0.00	0.00	0.00
7,800.00	90.00	13.45	7,250.00	1,230.01	355.49	1,230.51	0.00	0.00	0.00
7,831.26	90.00	13.45	7,250.00	1,260.41	362.77	1,260.92	0.00	0.00	0.00
Begin Turn Back to Line @ 7831.26ft									
7,900.00	90.00	11.39	7,250.00	1,327.54	377.55	1,328.07	3.00	0.00	-3.00
8,000.00	90.00	8.39	7,250.00	1,426.05	394.72	1,426.60	3.00	0.00	-3.00
8,100.00	90.00	5.39	7,250.00	1,525.31	406.71	1,525.88	3.00	0.00	-3.00
8,200.00	90.00	2.39	7,250.00	1,625.07	413.49	1,625.65	3.00	0.00	-3.00
8,300.00	90.00	359.39	7,250.00	1,725.05	415.04	1,725.63	3.00	0.00	-3.00
8,400.00	90.00	356.39	7,250.00	1,824.97	411.35	1,825.54	3.00	0.00	-3.00
8,500.00	90.00	353.39	7,250.00	1,924.56	402.44	1,925.12	3.00	0.00	-3.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
8,579.59	90.00	351.00	7,250.00	2,003.41	391.63	2,003.95	3.00	0.00	-3.00
<b>End Turn @ 8579.59ft</b>									
8,600.00	90.00	351.00	7,250.00	2,023.56	388.44	2,024.11	0.00	0.00	0.00
8,679.60	90.00	351.00	7,250.00	2,102.18	375.99	2,102.71	0.00	0.00	0.00
<b>Begin Turn to BHL @ 8679.60ft</b>									
8,700.00	90.00	351.41	7,250.00	2,122.34	372.87	2,122.86	2.00	0.00	2.00
8,800.00	90.00	353.41	7,250.00	2,221.46	359.66	2,221.96	2.00	0.00	2.00
8,900.00	90.00	355.41	7,250.00	2,320.98	349.91	2,321.47	2.00	0.00	2.00
9,000.00	90.00	357.41	7,250.00	2,420.78	343.65	2,421.26	2.00	0.00	2.00
9,100.00	90.00	359.41	7,250.00	2,520.74	340.87	2,521.21	2.00	0.00	2.00
9,127.75	90.00	359.96	7,250.00	2,548.49	340.72	2,548.96	2.00	0.00	2.00
<b>End Turn @ 9127.75ft</b>									
9,200.00	90.00	359.96	7,250.00	2,620.74	340.67	2,621.21	0.00	0.00	0.00
9,300.00	90.00	359.96	7,250.00	2,720.74	340.61	2,721.21	0.00	0.00	0.00
9,400.00	90.00	359.96	7,250.00	2,820.74	340.54	2,821.21	0.00	0.00	0.00
9,500.00	90.00	359.96	7,250.00	2,920.74	340.48	2,921.21	0.00	0.00	0.00
9,600.00	90.00	359.96	7,250.00	3,020.74	340.41	3,021.21	0.00	0.00	0.00
9,700.00	90.00	359.96	7,250.00	3,120.74	340.35	3,121.21	0.00	0.00	0.00
9,800.00	90.00	359.96	7,250.00	3,220.74	340.29	3,221.21	0.00	0.00	0.00
9,900.00	90.00	359.96	7,250.00	3,320.74	340.22	3,321.21	0.00	0.00	0.00
10,000.00	90.00	359.96	7,250.00	3,420.74	340.16	3,421.21	0.00	0.00	0.00
10,100.00	90.00	359.96	7,250.00	3,520.74	340.09	3,521.21	0.00	0.00	0.00
10,200.00	90.00	359.96	7,250.00	3,620.74	340.03	3,621.21	0.00	0.00	0.00
10,300.00	90.00	359.96	7,250.00	3,720.74	339.96	3,721.21	0.00	0.00	0.00
10,400.00	90.00	359.96	7,250.00	3,820.74	339.90	3,821.21	0.00	0.00	0.00
10,500.00	90.00	359.96	7,250.00	3,920.74	339.83	3,921.21	0.00	0.00	0.00
10,600.00	90.00	359.96	7,250.00	4,020.74	339.77	4,021.21	0.00	0.00	0.00
10,700.00	90.00	359.96	7,250.00	4,120.74	339.70	4,121.21	0.00	0.00	0.00
10,800.00	90.00	359.96	7,250.00	4,220.74	339.64	4,221.21	0.00	0.00	0.00
10,900.00	90.00	359.96	7,250.00	4,320.74	339.58	4,321.21	0.00	0.00	0.00
11,000.00	90.00	359.96	7,250.00	4,420.74	339.51	4,421.21	0.00	0.00	0.00
11,100.00	90.00	359.96	7,250.00	4,520.74	339.45	4,521.21	0.00	0.00	0.00
11,200.00	90.00	359.96	7,250.00	4,620.74	339.38	4,621.21	0.00	0.00	0.00
11,300.00	90.00	359.96	7,250.00	4,720.74	339.32	4,721.21	0.00	0.00	0.00
11,400.00	90.00	359.96	7,250.00	4,820.74	339.25	4,821.21	0.00	0.00	0.00
11,500.00	90.00	359.96	7,250.00	4,920.74	339.19	4,921.20	0.00	0.00	0.00
11,600.00	90.00	359.96	7,250.00	5,020.74	339.12	5,021.20	0.00	0.00	0.00
11,700.00	90.00	359.96	7,250.00	5,120.74	339.06	5,121.20	0.00	0.00	0.00
11,800.00	90.00	359.96	7,250.00	5,220.74	338.99	5,221.20	0.00	0.00	0.00
11,900.00	90.00	359.96	7,250.00	5,320.74	338.93	5,321.20	0.00	0.00	0.00
12,000.00	90.00	359.96	7,250.00	5,420.74	338.87	5,421.20	0.00	0.00	0.00
12,100.00	90.00	359.96	7,250.00	5,520.74	338.80	5,521.20	0.00	0.00	0.00
12,200.00	90.00	359.96	7,250.00	5,620.74	338.74	5,621.20	0.00	0.00	0.00
12,300.00	90.00	359.96	7,250.00	5,720.74	338.67	5,721.20	0.00	0.00	0.00
12,400.00	90.00	359.96	7,250.00	5,820.74	338.61	5,821.20	0.00	0.00	0.00
12,500.00	90.00	359.96	7,250.00	5,920.74	338.54	5,921.20	0.00	0.00	0.00
12,600.00	90.00	359.96	7,250.00	6,020.74	338.48	6,021.20	0.00	0.00	0.00
12,700.00	90.00	359.96	7,250.00	6,120.74	338.41	6,121.20	0.00	0.00	0.00
12,800.00	90.00	359.96	7,250.00	6,220.74	338.35	6,221.20	0.00	0.00	0.00
12,900.00	90.00	359.96	7,250.00	6,320.74	338.28	6,321.20	0.00	0.00	0.00
13,000.00	90.00	359.96	7,250.00	6,420.74	338.22	6,421.20	0.00	0.00	0.00
13,100.00	90.00	359.96	7,250.00	6,520.74	338.16	6,521.20	0.00	0.00	0.00
13,200.00	90.00	359.96	7,250.00	6,620.74	338.09	6,621.20	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
13,300.00	90.00	359.96	7,250.00	6,720.74	338.03	6,721.20	0.00	0.00	0.00
13,400.00	90.00	359.96	7,250.00	6,820.74	337.96	6,821.20	0.00	0.00	0.00
13,500.00	90.00	359.96	7,250.00	6,920.74	337.90	6,921.20	0.00	0.00	0.00
13,600.00	90.00	359.96	7,250.00	7,020.74	337.83	7,021.20	0.00	0.00	0.00
13,700.00	90.00	359.96	7,250.00	7,120.74	337.77	7,121.20	0.00	0.00	0.00
13,800.00	90.00	359.96	7,250.00	7,220.74	337.70	7,221.20	0.00	0.00	0.00
13,900.00	90.00	359.96	7,250.00	7,320.74	337.64	7,321.20	0.00	0.00	0.00
14,000.00	90.00	359.96	7,250.00	7,420.74	337.57	7,421.20	0.00	0.00	0.00
14,100.00	90.00	359.96	7,250.00	7,520.74	337.51	7,521.20	0.00	0.00	0.00
14,200.00	90.00	359.96	7,250.00	7,620.74	337.45	7,621.20	0.00	0.00	0.00
14,300.00	90.00	359.96	7,250.00	7,720.74	337.38	7,721.20	0.00	0.00	0.00
14,400.00	90.00	359.96	7,250.00	7,820.74	337.32	7,821.20	0.00	0.00	0.00
14,500.00	90.00	359.96	7,250.00	7,920.74	337.25	7,921.20	0.00	0.00	0.00
14,600.00	90.00	359.96	7,250.00	8,020.74	337.19	8,021.20	0.00	0.00	0.00
14,700.00	90.00	359.96	7,250.00	8,120.74	337.12	8,121.20	0.00	0.00	0.00
14,800.00	90.00	359.96	7,250.00	8,220.74	337.06	8,221.20	0.00	0.00	0.00
14,900.00	90.00	359.96	7,250.00	8,320.74	336.99	8,321.20	0.00	0.00	0.00
15,000.00	90.00	359.96	7,250.00	8,420.74	336.93	8,421.20	0.00	0.00	0.00
15,100.00	90.00	359.96	7,250.00	8,520.74	336.86	8,521.20	0.00	0.00	0.00
15,200.00	90.00	359.96	7,250.00	8,620.74	336.80	8,621.20	0.00	0.00	0.00
15,300.00	90.00	359.96	7,250.00	8,720.74	336.74	8,721.20	0.00	0.00	0.00
15,400.00	90.00	359.96	7,250.00	8,820.74	336.67	8,821.20	0.00	0.00	0.00
15,500.00	90.00	359.96	7,250.00	8,920.74	336.61	8,921.20	0.00	0.00	0.00
15,600.00	90.00	359.96	7,250.00	9,020.74	336.54	9,021.20	0.00	0.00	0.00
15,700.00	90.00	359.96	7,250.00	9,120.74	336.48	9,121.20	0.00	0.00	0.00
15,800.00	90.00	359.96	7,250.00	9,220.74	336.41	9,221.20	0.00	0.00	0.00
15,900.00	90.00	359.96	7,250.00	9,320.74	336.35	9,321.20	0.00	0.00	0.00
16,000.00	90.00	359.96	7,250.00	9,420.74	336.28	9,421.20	0.00	0.00	0.00
16,100.00	90.00	359.96	7,250.00	9,520.74	336.22	9,521.20	0.00	0.00	0.00
16,200.00	90.00	359.96	7,250.00	9,620.74	336.15	9,621.20	0.00	0.00	0.00
16,300.00	90.00	359.96	7,250.00	9,720.74	336.09	9,721.19	0.00	0.00	0.00
16,400.00	90.00	359.96	7,250.00	9,820.74	336.03	9,821.19	0.00	0.00	0.00
16,500.00	90.00	359.96	7,250.00	9,920.74	335.96	9,921.19	0.00	0.00	0.00
16,600.00	90.00	359.96	7,250.00	10,020.74	335.90	10,021.19	0.00	0.00	0.00
16,700.00	90.00	359.96	7,250.00	10,120.74	335.83	10,121.19	0.00	0.00	0.00
16,800.00	90.00	359.96	7,250.00	10,220.74	335.77	10,221.19	0.00	0.00	0.00
16,900.00	90.00	359.96	7,250.00	10,320.74	335.70	10,321.19	0.00	0.00	0.00
17,000.00	90.00	359.96	7,250.00	10,420.74	335.64	10,421.19	0.00	0.00	0.00
17,100.00	90.00	359.96	7,250.00	10,520.74	335.57	10,521.19	0.00	0.00	0.00
17,200.00	90.00	359.96	7,250.00	10,620.74	335.51	10,621.19	0.00	0.00	0.00
17,300.00	90.00	359.96	7,250.00	10,720.73	335.44	10,721.19	0.00	0.00	0.00
17,400.00	90.00	359.96	7,250.00	10,820.73	335.38	10,821.19	0.00	0.00	0.00
17,500.00	90.00	359.96	7,250.00	10,920.73	335.32	10,921.19	0.00	0.00	0.00
17,600.00	90.00	359.96	7,250.00	11,020.73	335.25	11,021.19	0.00	0.00	0.00
17,700.00	90.00	359.96	7,250.00	11,120.73	335.19	11,121.19	0.00	0.00	0.00
17,800.00	90.00	359.96	7,250.00	11,220.73	335.12	11,221.19	0.00	0.00	0.00
17,900.00	90.00	359.96	7,250.00	11,320.73	335.06	11,321.19	0.00	0.00	0.00
18,000.00	90.00	359.96	7,250.00	11,420.73	334.99	11,421.19	0.00	0.00	0.00
18,100.00	90.00	359.96	7,250.00	11,520.73	334.93	11,521.19	0.00	0.00	0.00
18,200.00	90.00	359.96	7,250.00	11,620.73	334.86	11,621.19	0.00	0.00	0.00
18,300.00	90.00	359.96	7,250.00	11,720.73	334.80	11,721.19	0.00	0.00	0.00
18,400.00	90.00	359.96	7,250.00	11,820.73	334.73	11,821.19	0.00	0.00	0.00
18,500.00	90.00	359.96	7,250.00	11,920.73	334.67	11,921.19	0.00	0.00	0.00
18,600.00	90.00	359.96	7,250.00	12,020.73	334.61	12,021.19	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1907-04H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site:</b>	1N-64W-19 ONION 1907 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1907-04H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
18,700.00	90.00	359.96	7,250.00	12,120.73	334.54	12,121.19	0.00	0.00	0.00
18,800.00	90.00	359.96	7,250.00	12,220.73	334.48	12,221.19	0.00	0.00	0.00
18,900.00	90.00	359.96	7,250.00	12,320.73	334.41	12,321.19	0.00	0.00	0.00
19,000.00	90.00	359.96	7,250.00	12,420.73	334.35	12,421.19	0.00	0.00	0.00
19,100.00	90.00	359.96	7,250.00	12,520.73	334.28	12,521.19	0.00	0.00	0.00
19,200.00	90.00	359.96	7,250.00	12,620.73	334.22	12,621.19	0.00	0.00	0.00
19,300.00	90.00	359.96	7,250.00	12,720.73	334.15	12,721.19	0.00	0.00	0.00
19,400.00	90.00	359.96	7,250.00	12,820.73	334.09	12,821.19	0.00	0.00	0.00
19,500.00	90.00	359.96	7,250.00	12,920.73	334.03	12,921.19	0.00	0.00	0.00
19,600.00	90.00	359.96	7,250.00	13,020.73	333.96	13,021.19	0.00	0.00	0.00
19,700.00	90.00	359.96	7,250.00	13,120.73	333.90	13,121.19	0.00	0.00	0.00
19,800.00	90.00	359.96	7,250.00	13,220.73	333.83	13,221.19	0.00	0.00	0.00
19,900.00	90.00	359.96	7,250.00	13,320.73	333.77	13,321.19	0.00	0.00	0.00
19,954.91	90.00	359.96	7,250.00	13,375.64	333.73	13,376.10	0.00	0.00	0.00
<b>BPZ @ 19954.91ft</b>									
20,000.00	90.00	359.96	7,250.00	13,420.73	333.70	13,421.19	0.00	0.00	0.00
20,044.88	90.00	359.96	7,250.00	13,465.62	333.67	13,466.07	0.00	0.00	0.00
<b>TD Well @ 20044.88ft</b>									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,161.13	2,156.00	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)	
204.00	204.00	0.00	0.00	Begin Nudge @ 204.00ft
419.50	419.30	7.61	2.77	Hold Tangent @ 419.50ft
6,678.84	6,660.94	449.65	163.66	KOP @ 6678.84ft :: DLS = 9°/100'
7,631.26	7,250.00	1,065.90	316.25	End Build/TPZ @ 7631.26ft
7,831.26	7,250.00	1,260.41	362.77	Begin Turn Back to Line @ 7831.26ft
8,579.59	7,250.00	2,003.41	391.63	End Turn @ 8579.59ft
8,679.60	7,250.00	2,102.18	375.99	Begin Turn to BHL @ 8679.60ft
9,127.75	7,250.00	2,548.49	340.72	End Turn @ 9127.75ft
19,954.91	7,250.00	13,375.64	333.73	BPZ @ 19954.91ft
20,044.88	7,250.00	13,465.62	333.67	TD Well @ 20044.88ft