

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-64W-19 ONION 1918 PAD**

**ONION 1918-05H**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**10 March, 2022**

Project: WATTENBERG FIELD  
Site: 1N-64W-19 ONION 1918 PAD  
Well: ONION 1918-05H  
Wellbore: Plan A  
Design: Permit Rev-1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
2156.00	2170.51	9 5/8"	9-5/8

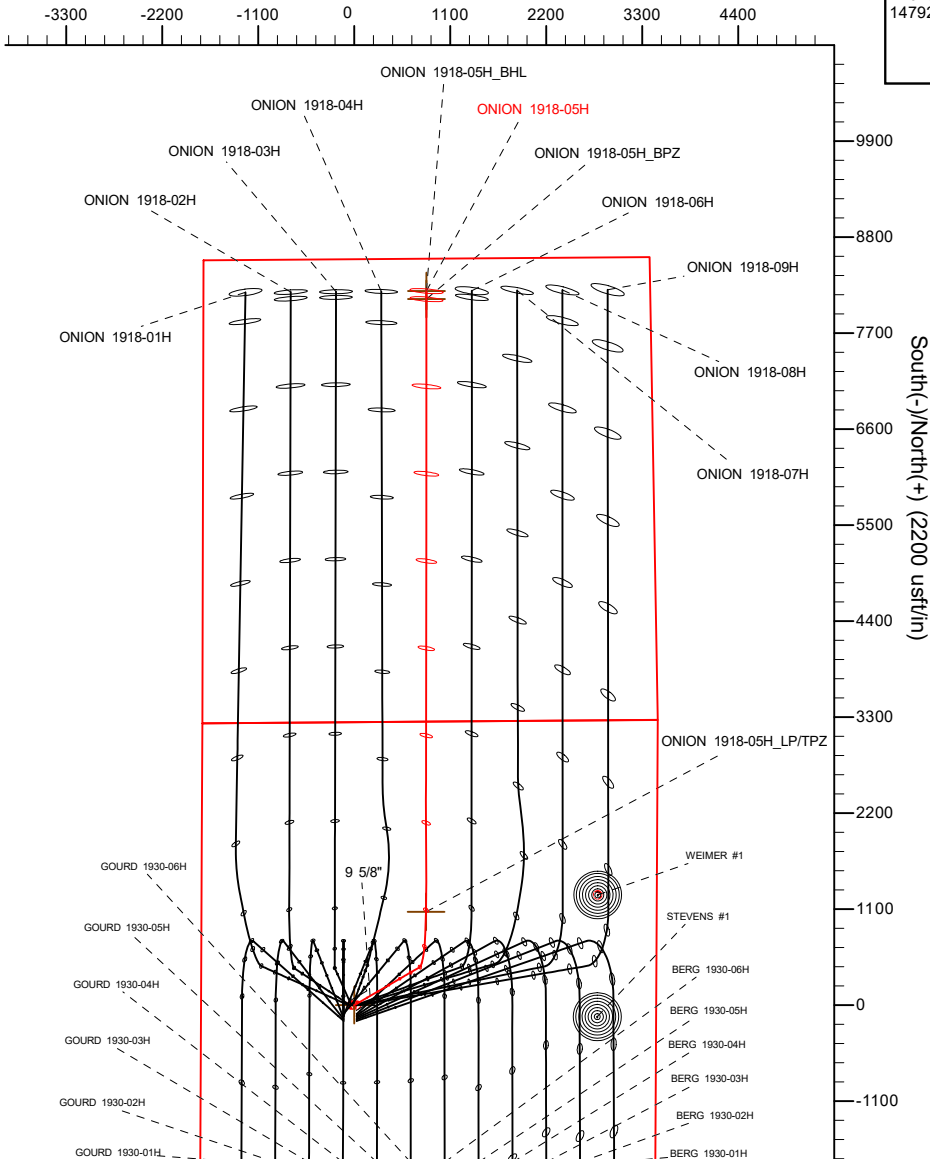
**SHL**  
2075' FSL  
1755' FWL

**TPZ**  
2180' FNL  
2573' FWL

**BPZ**  
460' FNL  
2557' FWL

**BHL**  
370' FNL  
2557' FWL

West(-)/East(+) (2200 usft/in)

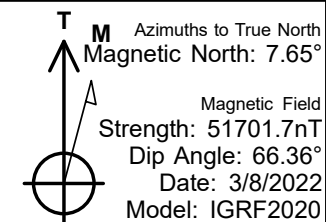
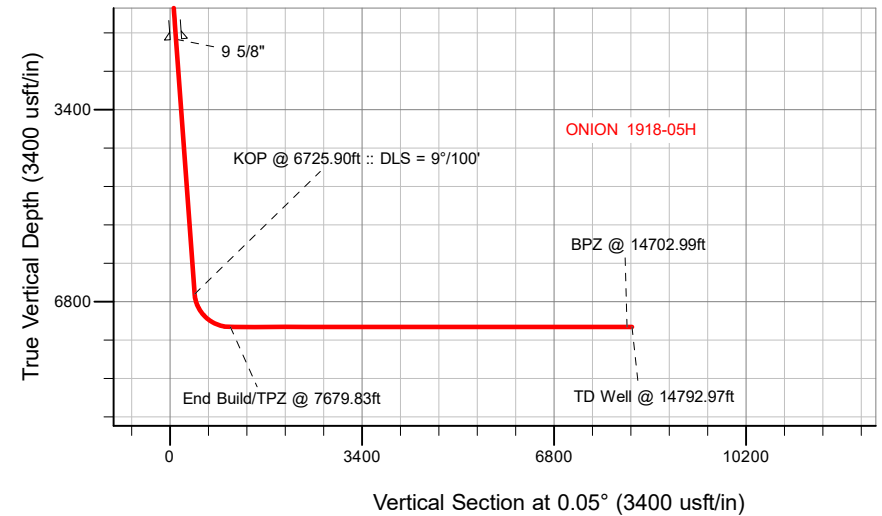


## SECTION DETAILS

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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
913.50	8.27	59.87	912.07	14.95	25.77	2.00	59.87	14.98	
6725.90	8.27	59.87	6664.02	434.62	748.85	0.00	0.00	435.27	
7679.83	90.00	0.05	7250.00	1069.51	823.01	9.00	-60.08	1070.23	
14792.97	90.00	0.05	7250.00	8182.65	828.97	0.00	0.00	8183.37	ONION 1918-05H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1918-05H_SHL	0.00	0.00	0.00	40.035251	-104.596540
ONION 1918-05H_LP/TPZ	7250.00	1069.51	823.01	40.038187	-104.593602
ONION 1918-05H_BPZ	7250.00	8092.67	828.89	40.057467	-104.593579
ONION 1918-05H_BHL	7250.00	8182.65	828.97	40.057714	-104.593578



## WELL DETAILS: ONION 1918-05H

GL = 5011'

RKB = 24' @ 5035.00usft (RIG)

Plan: Permit Rev-1 (ONION 1918-05H/Plan A)

Date: 3/10/2022

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1918-05H
<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 1918 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1918-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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		

<b>Site</b>	1N-64W-19 ONION 1918 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,256,565.51 usft	<b>Latitude:</b> 40.034126
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,252,854.15 usft	<b>Longitude:</b> -104.596977
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	

<b>Well</b>	ONION 1918-05H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,256,976.67 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,252,972.39 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		0.58 °	<b>Ground Level:</b>	5,011.00 usft

<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	3/8/2022	7.65	66.36	51,701.69686581

<b>Design</b>	Permit Rev-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	0.05

<b>Plan Survey Tool Program</b>		<b>Date</b>	3/10/2022		
<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	Permit Rev-1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,156.00	14,792.97	Permit Rev-1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1918-05H
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 1918 PAD	North Reference:	True
Well:	ONION 1918-05H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
913.50	8.27	59.87	912.07	14.95	25.77	2.00	2.00	0.00	59.87	
6,725.90	8.27	59.87	6,664.02	434.62	748.85	0.00	0.00	0.00	0.00	
7,679.83	90.00	0.05	7,250.01	1,069.51	823.01	9.00	8.57	-6.27	-60.08	
14,792.97	90.00	0.05	7,250.00	8,182.65	828.97	0.00	0.00	0.00	0.00	ONION 1918-05H_BH

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1918-05H
<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 1918 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1918-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 500.00ft									
600.00	2.00	59.87	599.98	0.88	1.51	0.88	2.00	2.00	0.00
700.00	4.00	59.87	699.84	3.50	6.04	3.51	2.00	2.00	0.00
800.00	6.00	59.87	799.45	7.88	13.57	7.89	2.00	2.00	0.00
900.00	8.00	59.87	898.70	13.99	24.11	14.02	2.00	2.00	0.00
913.50	8.27	59.87	912.07	14.95	25.77	14.98	2.00	2.00	0.00
Hold Tangent @ 913.50ft									
1,000.00	8.27	59.87	997.67	21.20	36.53	21.23	0.00	0.00	0.00
1,100.00	8.27	59.87	1,096.63	28.42	48.97	28.46	0.00	0.00	0.00
1,200.00	8.27	59.87	1,195.59	35.64	61.41	35.69	0.00	0.00	0.00
1,300.00	8.27	59.87	1,294.55	42.86	73.85	42.92	0.00	0.00	0.00
1,400.00	8.27	59.87	1,393.51	50.08	86.29	50.15	0.00	0.00	0.00
1,500.00	8.27	59.87	1,492.47	57.30	98.73	57.39	0.00	0.00	0.00
1,600.00	8.27	59.87	1,591.43	64.52	111.17	64.62	0.00	0.00	0.00
1,700.00	8.27	59.87	1,690.39	71.74	123.61	71.85	0.00	0.00	0.00
1,800.00	8.27	59.87	1,789.35	78.96	136.05	79.08	0.00	0.00	0.00
1,900.00	8.27	59.87	1,888.31	86.18	148.49	86.31	0.00	0.00	0.00
2,000.00	8.27	59.87	1,987.27	93.40	160.93	93.54	0.00	0.00	0.00
2,100.00	8.27	59.87	2,086.23	100.62	173.37	100.77	0.00	0.00	0.00
2,170.51	8.27	59.87	2,156.00	105.71	182.14	105.87	0.00	0.00	0.00
9 5/8"									
2,200.00	8.27	59.87	2,185.19	107.84	185.81	108.00	0.00	0.00	0.00
2,300.00	8.27	59.87	2,284.15	115.06	198.25	115.23	0.00	0.00	0.00
2,400.00	8.27	59.87	2,383.11	122.28	210.69	122.46	0.00	0.00	0.00
2,500.00	8.27	59.87	2,482.07	129.50	223.13	129.70	0.00	0.00	0.00
2,600.00	8.27	59.87	2,581.03	136.72	235.57	136.93	0.00	0.00	0.00
2,700.00	8.27	59.87	2,679.99	143.94	248.01	144.16	0.00	0.00	0.00
2,800.00	8.27	59.87	2,778.95	151.16	260.45	151.39	0.00	0.00	0.00
2,900.00	8.27	59.87	2,877.91	158.38	272.89	158.62	0.00	0.00	0.00
3,000.00	8.27	59.87	2,976.87	165.60	285.33	165.85	0.00	0.00	0.00
3,100.00	8.27	59.87	3,075.83	172.82	297.77	173.08	0.00	0.00	0.00
3,200.00	8.27	59.87	3,174.79	180.04	310.21	180.31	0.00	0.00	0.00
3,300.00	8.27	59.87	3,273.75	187.26	322.66	187.54	0.00	0.00	0.00
3,400.00	8.27	59.87	3,372.71	194.48	335.10	194.77	0.00	0.00	0.00
3,500.00	8.27	59.87	3,471.67	201.70	347.54	202.01	0.00	0.00	0.00
3,600.00	8.27	59.87	3,570.63	208.92	359.98	209.24	0.00	0.00	0.00
3,700.00	8.27	59.87	3,669.59	216.14	372.42	216.47	0.00	0.00	0.00
3,800.00	8.27	59.87	3,768.55	223.36	384.86	223.70	0.00	0.00	0.00
3,900.00	8.27	59.87	3,867.51	230.58	397.30	230.93	0.00	0.00	0.00
4,000.00	8.27	59.87	3,966.47	237.80	409.74	238.16	0.00	0.00	0.00
4,100.00	8.27	59.87	4,065.43	245.02	422.18	245.39	0.00	0.00	0.00
4,200.00	8.27	59.87	4,164.39	252.24	434.62	252.62	0.00	0.00	0.00
4,300.00	8.27	59.87	4,263.35	259.46	447.06	259.85	0.00	0.00	0.00
4,400.00	8.27	59.87	4,362.31	266.68	459.50	267.08	0.00	0.00	0.00
4,500.00	8.27	59.87	4,461.27	273.90	471.94	274.32	0.00	0.00	0.00
4,600.00	8.27	59.87	4,560.23	281.12	484.38	281.55	0.00	0.00	0.00
4,700.00	8.27	59.87	4,659.19	288.34	496.82	288.78	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 1918-05H
<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 1918 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1918-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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	8.27	59.87	4,758.15	295.56	509.26	296.01	0.00	0.00	0.00
4,900.00	8.27	59.87	4,857.11	302.78	521.70	303.24	0.00	0.00	0.00
5,000.00	8.27	59.87	4,956.07	310.00	534.14	310.47	0.00	0.00	0.00
5,100.00	8.27	59.87	5,055.03	317.23	546.58	317.70	0.00	0.00	0.00
5,200.00	8.27	59.87	5,153.99	324.45	559.02	324.93	0.00	0.00	0.00
5,300.00	8.27	59.87	5,252.95	331.67	571.46	332.16	0.00	0.00	0.00
5,400.00	8.27	59.87	5,351.91	338.89	583.90	339.40	0.00	0.00	0.00
5,500.00	8.27	59.87	5,450.87	346.11	596.34	346.63	0.00	0.00	0.00
5,600.00	8.27	59.87	5,549.83	353.33	608.78	353.86	0.00	0.00	0.00
5,700.00	8.27	59.87	5,648.79	360.55	621.22	361.09	0.00	0.00	0.00
5,800.00	8.27	59.87	5,747.75	367.77	633.67	368.32	0.00	0.00	0.00
5,900.00	8.27	59.87	5,846.71	374.99	646.11	375.55	0.00	0.00	0.00
6,000.00	8.27	59.87	5,945.67	382.21	658.55	382.78	0.00	0.00	0.00
6,100.00	8.27	59.87	6,044.63	389.43	670.99	390.01	0.00	0.00	0.00
6,200.00	8.27	59.87	6,143.59	396.65	683.43	397.24	0.00	0.00	0.00
6,300.00	8.27	59.87	6,242.55	403.87	695.87	404.47	0.00	0.00	0.00
6,400.00	8.27	59.87	6,341.51	411.09	708.31	411.71	0.00	0.00	0.00
6,500.00	8.27	59.87	6,440.47	418.31	720.75	418.94	0.00	0.00	0.00
6,600.00	8.27	59.87	6,539.43	425.53	733.19	426.17	0.00	0.00	0.00
6,700.00	8.27	59.87	6,638.39	432.75	745.63	433.40	0.00	0.00	0.00
6,725.90	8.27	59.87	6,664.02	434.62	748.85	435.27	0.00	0.00	0.00
<b>KOP @ 6725.90ft :: DLS = 9°/100'</b>									
6,750.00	9.54	48.45	6,687.84	436.81	751.84	437.47	9.00	5.26	-47.38
6,800.00	12.95	33.18	6,736.88	444.25	758.01	444.91	9.00	6.82	-30.55
6,850.00	16.87	24.52	6,785.19	455.55	764.09	456.21	9.00	7.85	-17.30
6,900.00	21.02	19.13	6,832.48	470.63	770.05	471.30	9.00	8.30	-10.78
6,950.00	25.29	15.47	6,878.44	489.40	775.84	490.08	9.00	8.53	-7.32
7,000.00	29.62	12.82	6,922.80	511.75	781.43	512.43	9.00	8.66	-5.31
7,050.00	33.99	10.79	6,965.29	537.54	786.79	538.23	9.00	8.74	-4.06
7,100.00	38.39	9.17	7,005.63	566.61	791.88	567.30	9.00	8.80	-3.23
7,150.00	42.80	7.85	7,043.59	598.78	796.68	599.48	9.00	8.83	-2.66
7,200.00	47.23	6.72	7,078.92	633.86	801.15	634.55	9.00	8.86	-2.25
7,250.00	51.67	5.75	7,111.42	671.62	805.26	672.32	9.00	8.88	-1.95
7,300.00	56.12	4.89	7,140.88	711.83	809.00	712.53	9.00	8.89	-1.72
7,350.00	60.57	4.11	7,167.11	754.25	812.33	754.96	9.00	8.90	-1.55
7,400.00	65.03	3.40	7,189.96	798.61	815.24	799.32	9.00	8.91	-1.42
7,450.00	69.48	2.74	7,209.29	844.64	817.71	845.36	9.00	8.92	-1.32
7,500.00	73.95	2.12	7,224.97	892.07	819.72	892.78	9.00	8.92	-1.25
7,550.00	78.41	1.52	7,236.92	940.58	821.26	941.30	9.00	8.93	-1.19
7,600.00	82.87	0.95	7,245.05	989.89	822.32	990.61	9.00	8.93	-1.15
7,650.00	87.34	0.38	7,249.31	1,039.69	822.90	1,040.41	9.00	8.93	-1.13
7,679.83	90.00	0.05	7,250.01	1,069.51	823.01	1,070.23	9.00	8.93	-1.12
<b>End Build/TPZ @ 7679.83ft</b>									
7,700.00	90.00	0.05	7,250.01	1,089.68	823.03	1,090.40	0.00	0.00	0.00
7,800.00	90.00	0.05	7,250.00	1,189.68	823.11	1,190.40	0.00	0.00	0.00
7,900.00	90.00	0.05	7,250.00	1,289.68	823.20	1,290.40	0.00	0.00	0.00
8,000.00	90.00	0.05	7,250.00	1,389.68	823.28	1,390.40	0.00	0.00	0.00
8,100.00	90.00	0.05	7,250.00	1,489.68	823.36	1,490.40	0.00	0.00	0.00
8,200.00	90.00	0.05	7,250.00	1,589.68	823.45	1,590.40	0.00	0.00	0.00
8,300.00	90.00	0.05	7,250.00	1,689.68	823.53	1,690.40	0.00	0.00	0.00
8,400.00	90.00	0.05	7,250.00	1,789.68	823.61	1,790.40	0.00	0.00	0.00
8,500.00	90.00	0.05	7,250.00	1,889.68	823.70	1,890.40	0.00	0.00	0.00
8,600.00	90.00	0.05	7,250.00	1,989.68	823.78	1,990.40	0.00	0.00	0.00
8,700.00	90.00	0.05	7,250.00	2,089.68	823.87	2,090.40	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 1918-05H
<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 1918 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1918-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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)	
8,800.00	90.00	0.05	7,250.00	2,189.68	823.95	2,190.40	0.00	0.00	0.00	
8,900.00	90.00	0.05	7,250.00	2,289.68	824.03	2,290.40	0.00	0.00	0.00	
9,000.00	90.00	0.05	7,250.00	2,389.68	824.12	2,390.40	0.00	0.00	0.00	
9,100.00	90.00	0.05	7,250.00	2,489.68	824.20	2,490.40	0.00	0.00	0.00	
9,200.00	90.00	0.05	7,250.00	2,589.68	824.29	2,590.40	0.00	0.00	0.00	
9,300.00	90.00	0.05	7,250.00	2,689.68	824.37	2,690.40	0.00	0.00	0.00	
9,400.00	90.00	0.05	7,250.00	2,789.68	824.45	2,790.40	0.00	0.00	0.00	
9,500.00	90.00	0.05	7,250.00	2,889.68	824.54	2,890.40	0.00	0.00	0.00	
9,600.00	90.00	0.05	7,250.00	2,989.68	824.62	2,990.40	0.00	0.00	0.00	
9,700.00	90.00	0.05	7,250.00	3,089.68	824.70	3,090.40	0.00	0.00	0.00	
9,800.00	90.00	0.05	7,250.00	3,189.68	824.79	3,190.40	0.00	0.00	0.00	
9,900.00	90.00	0.05	7,250.00	3,289.68	824.87	3,290.40	0.00	0.00	0.00	
10,000.00	90.00	0.05	7,250.00	3,389.68	824.96	3,390.40	0.00	0.00	0.00	
10,100.00	90.00	0.05	7,250.00	3,489.68	825.04	3,490.40	0.00	0.00	0.00	
10,200.00	90.00	0.05	7,250.00	3,589.68	825.12	3,590.40	0.00	0.00	0.00	
10,300.00	90.00	0.05	7,250.00	3,689.68	825.21	3,690.40	0.00	0.00	0.00	
10,400.00	90.00	0.05	7,250.00	3,789.68	825.29	3,790.40	0.00	0.00	0.00	
10,500.00	90.00	0.05	7,250.00	3,889.68	825.37	3,890.40	0.00	0.00	0.00	
10,600.00	90.00	0.05	7,250.00	3,989.68	825.46	3,990.40	0.00	0.00	0.00	
10,700.00	90.00	0.05	7,250.00	4,089.68	825.54	4,090.40	0.00	0.00	0.00	
10,800.00	90.00	0.05	7,250.00	4,189.68	825.63	4,190.40	0.00	0.00	0.00	
10,900.00	90.00	0.05	7,250.00	4,289.68	825.71	4,290.40	0.00	0.00	0.00	
11,000.00	90.00	0.05	7,250.00	4,389.68	825.79	4,390.40	0.00	0.00	0.00	
11,100.00	90.00	0.05	7,250.00	4,489.68	825.88	4,490.40	0.00	0.00	0.00	
11,200.00	90.00	0.05	7,250.00	4,589.68	825.96	4,590.40	0.00	0.00	0.00	
11,300.00	90.00	0.05	7,250.00	4,689.68	826.05	4,690.40	0.00	0.00	0.00	
11,400.00	90.00	0.05	7,250.00	4,789.68	826.13	4,790.40	0.00	0.00	0.00	
11,500.00	90.00	0.05	7,250.00	4,889.68	826.21	4,890.40	0.00	0.00	0.00	
11,600.00	90.00	0.05	7,250.00	4,989.68	826.30	4,990.40	0.00	0.00	0.00	
11,700.00	90.00	0.05	7,250.00	5,089.68	826.38	5,090.40	0.00	0.00	0.00	
11,800.00	90.00	0.05	7,250.00	5,189.68	826.46	5,190.40	0.00	0.00	0.00	
11,900.00	90.00	0.05	7,250.00	5,289.68	826.55	5,290.40	0.00	0.00	0.00	
12,000.00	90.00	0.05	7,250.00	5,389.68	826.63	5,390.40	0.00	0.00	0.00	
12,100.00	90.00	0.05	7,250.00	5,489.68	826.72	5,490.40	0.00	0.00	0.00	
12,200.00	90.00	0.05	7,250.00	5,589.68	826.80	5,590.40	0.00	0.00	0.00	
12,300.00	90.00	0.05	7,250.00	5,689.68	826.88	5,690.40	0.00	0.00	0.00	
12,400.00	90.00	0.05	7,250.00	5,789.68	826.97	5,790.40	0.00	0.00	0.00	
12,500.00	90.00	0.05	7,250.00	5,889.68	827.05	5,890.40	0.00	0.00	0.00	
12,600.00	90.00	0.05	7,250.00	5,989.68	827.13	5,990.40	0.00	0.00	0.00	
12,700.00	90.00	0.05	7,250.00	6,089.68	827.22	6,090.40	0.00	0.00	0.00	
12,800.00	90.00	0.05	7,250.00	6,189.68	827.30	6,190.40	0.00	0.00	0.00	
12,900.00	90.00	0.05	7,250.00	6,289.68	827.39	6,290.40	0.00	0.00	0.00	
13,000.00	90.00	0.05	7,250.00	6,389.68	827.47	6,390.40	0.00	0.00	0.00	
13,100.00	90.00	0.05	7,250.00	6,489.68	827.55	6,490.40	0.00	0.00	0.00	
13,200.00	90.00	0.05	7,250.00	6,589.68	827.64	6,590.40	0.00	0.00	0.00	
13,300.00	90.00	0.05	7,250.00	6,689.68	827.72	6,690.40	0.00	0.00	0.00	
13,400.00	90.00	0.05	7,250.00	6,789.68	827.81	6,790.40	0.00	0.00	0.00	
13,500.00	90.00	0.05	7,250.00	6,889.68	827.89	6,890.40	0.00	0.00	0.00	
13,600.00	90.00	0.05	7,250.00	6,989.68	827.97	6,990.40	0.00	0.00	0.00	
13,700.00	90.00	0.05	7,250.00	7,089.68	828.06	7,090.40	0.00	0.00	0.00	
13,800.00	90.00	0.05	7,250.00	7,189.68	828.14	7,190.40	0.00	0.00	0.00	
13,900.00	90.00	0.05	7,250.00	7,289.68	828.22	7,290.40	0.00	0.00	0.00	
14,000.00	90.00	0.05	7,250.00	7,389.68	828.31	7,390.40	0.00	0.00	0.00	
14,100.00	90.00	0.05	7,250.00	7,489.68	828.39	7,490.40	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 1918-05H
<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 1918 PAD	<b>North Reference:</b>	True
<b>Well:</b>	ONION 1918-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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)	
14,200.00	90.00	0.05	7,250.00	7,589.68	828.48	7,590.40	0.00	0.00	0.00	
14,300.00	90.00	0.05	7,250.00	7,689.68	828.56	7,690.40	0.00	0.00	0.00	
14,400.00	90.00	0.05	7,250.00	7,789.68	828.64	7,790.40	0.00	0.00	0.00	
14,500.00	90.00	0.05	7,250.00	7,889.68	828.73	7,890.40	0.00	0.00	0.00	
14,600.00	90.00	0.05	7,250.00	7,989.68	828.81	7,990.40	0.00	0.00	0.00	
14,700.00	90.00	0.05	7,250.00	8,089.68	828.89	8,090.40	0.00	0.00	0.00	
14,702.99	90.00	0.05	7,250.00	8,092.67	828.90	8,093.39	0.00	0.00	0.00	
BPZ @ 14702.99ft										
14,792.97	90.00	0.05	7,250.00	8,182.65	828.97	8,183.37	0.00	0.00	0.00	
TD Well @ 14792.97ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,170.51	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)		
500.00	500.00	0.00	0.00	Begin Nudge @ 500.00ft	
913.50	912.07	14.95	25.77	Hold Tangent @ 913.50ft	
6,725.90	6,664.02	434.62	748.85	KOP @ 6725.90ft :: DLS = 9°/100'	
7,679.83	7,250.01	1,069.51	823.01	End Build/TPZ @ 7679.83ft	
14,702.99	7,250.00	8,092.67	828.90	BPZ @ 14702.99ft	
14,792.97	7,250.00	8,182.65	828.97	TD Well @ 14792.97ft	