

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**ONION 1918-09H**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**10 March, 2022**

Project: WATTENBERG FIELD  
Site: 1N-64W-19 ONION 1918 PAD  
Well: ONION 1918-09H  
Wellbore: Plan A  
Design: Permit Rev-1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
2156.00	2252.09	9 5/8"	9-5/8

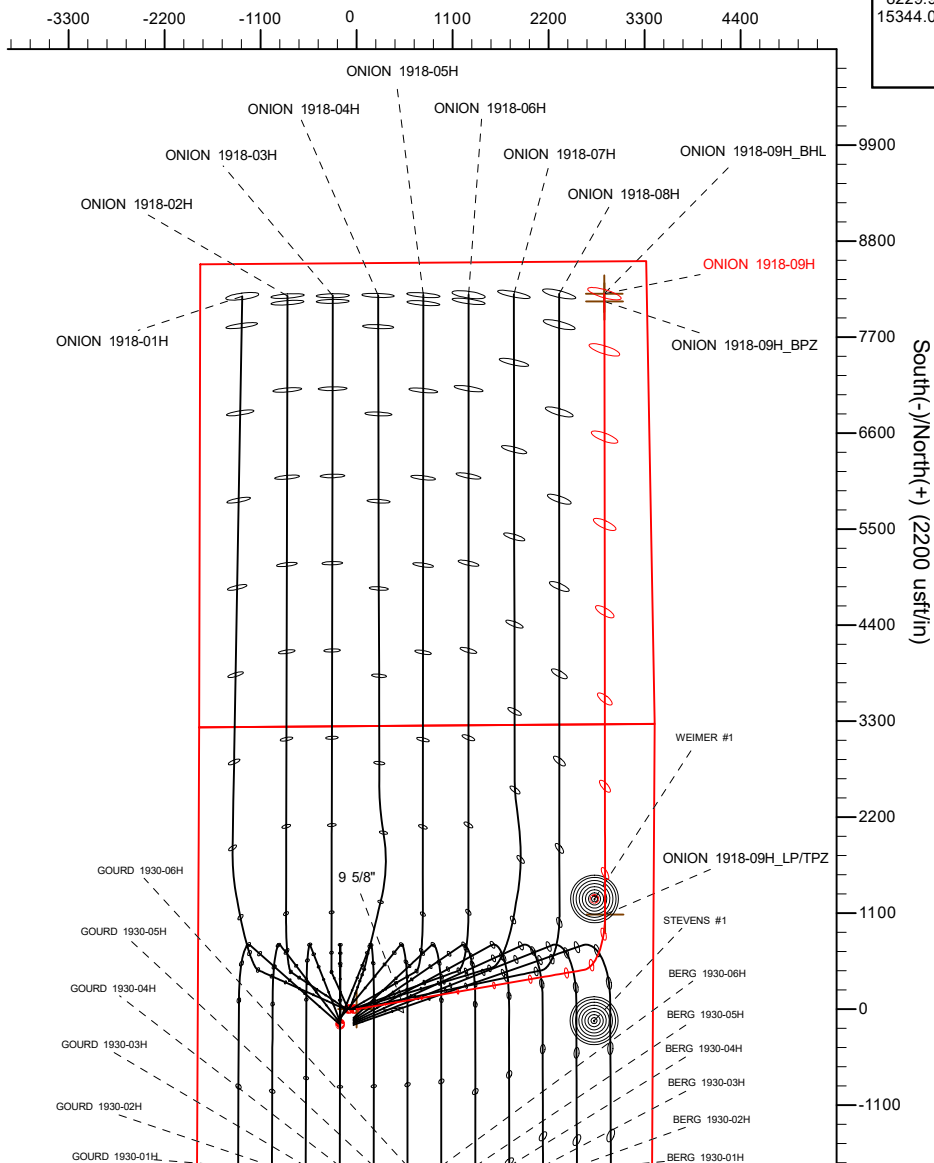
**SHL**  
2075' FSL  
1819' FWL

**TPZ**  
2180' FNL  
555' FEL

**BPZ**  
460' FNL  
488' FEL

**BHL**  
370' FNL  
486' FEL

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

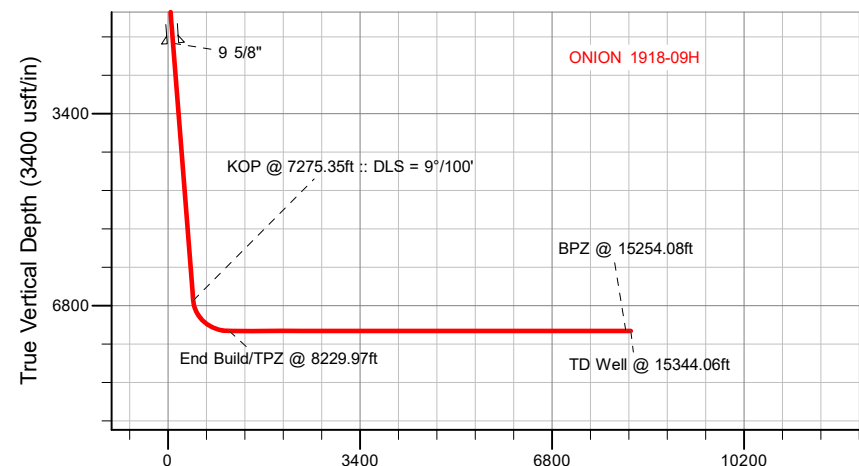


## SECTION DETAILS

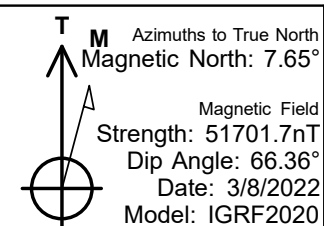
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
391.00	0.00	0.00	391.00	0.00	0.00	0.00	0.00	0.00	
1636.00	24.90	80.20	1597.18	45.33	262.41	2.00	80.20	45.05	
7275.35	24.90	80.20	6712.32	449.47	2602.13	0.00	0.00	446.74	
8229.97	90.00	359.94	7250.00	1084.74	2847.44	9.00	-81.15	1081.75	
15344.06	90.00	359.94	7250.00	8198.81	2839.75	0.00	0.00	8195.84	ONION 1918-09H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1918-09H_SHL	0.00	0.00	0.00	40.035251	-104.596311
ONION 1918-09H_LP/TPZ	7250.00	1084.74	2847.44	40.038228	-104.586142
ONION 1918-09H_BPZ	7250.00	8108.84	2839.85	40.057511	-104.586166
ONION 1918-09H_BHL	7250.00	8198.81	2839.75	40.057758	-104.586166



Vertical Section at 359.94° (3400 usft/in)



## WELL DETAILS: ONION 1918-09H

GL = 5011'

RKB = 24' @ 5035.00usft (RIG)

Plan: Permit Rev-1 (ONION 1918-09H/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 1918-09H
<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 1918-09H	<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		

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

Well		ONION 1918-09H				
Well Position	+N/-S	0.00 usft	Northing:	1,256,977.33 usft	Latitude:	40.035251
	+E/-W	0.00 usft	Easting:	3,253,036.39 usft	Longitude:	-104.596312
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	3/8/2022	7.65	66.36	51,701.72047370

<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	359.94	

<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	15,344.06	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 1918-09H
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 1918-09H	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	
391.00	0.00	0.00	391.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,636.00	24.90	80.20	1,597.18	45.33	262.41	2.00	2.00	0.00	80.20	
7,275.35	24.90	80.20	6,712.32	449.47	2,602.13	0.00	0.00	0.00	0.00	
8,229.97	90.00	359.94	7,250.00	1,084.74	2,847.44	9.00	6.82	-8.41	-81.15	
15,344.06	90.00	359.94	7,250.00	8,198.81	2,839.75	0.00	0.00	0.00	0.00	ONION 1918-09H_BH

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ONION 1918-09H
<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 1918-09H	<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
391.00	0.00	0.00	391.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 391.00ft									
400.00	0.18	80.20	400.00	0.00	0.01	0.00	2.00	2.00	0.00
500.00	2.18	80.20	499.97	0.35	2.04	0.35	2.00	2.00	0.00
600.00	4.18	80.20	599.81	1.30	7.51	1.29	2.00	2.00	0.00
700.00	6.18	80.20	699.40	2.83	16.41	2.82	2.00	2.00	0.00
800.00	8.18	80.20	798.61	4.96	28.72	4.93	2.00	2.00	0.00
900.00	10.18	80.20	897.33	7.68	44.44	7.63	2.00	2.00	0.00
1,000.00	12.18	80.20	995.42	10.98	63.55	10.91	2.00	2.00	0.00
1,100.00	14.18	80.20	1,092.78	14.86	86.01	14.77	2.00	2.00	0.00
1,200.00	16.18	80.20	1,189.29	19.31	111.82	19.20	2.00	2.00	0.00
1,300.00	18.18	80.20	1,284.82	24.34	140.92	24.19	2.00	2.00	0.00
1,400.00	20.18	80.20	1,379.27	29.93	173.29	29.75	2.00	2.00	0.00
1,500.00	22.18	80.20	1,472.51	36.08	208.89	35.86	2.00	2.00	0.00
1,600.00	24.18	80.20	1,564.43	42.78	247.68	42.52	2.00	2.00	0.00
1,636.00	24.90	80.20	1,597.18	45.33	262.41	45.05	2.00	2.00	0.00
Hold Tangent @ 1636.00ft									
1,700.00	24.90	80.20	1,655.23	49.91	288.97	49.61	0.00	0.00	0.00
1,800.00	24.90	80.20	1,745.93	57.08	330.46	56.73	0.00	0.00	0.00
1,900.00	24.90	80.20	1,836.64	64.25	371.94	63.86	0.00	0.00	0.00
2,000.00	24.90	80.20	1,927.34	71.41	413.43	70.98	0.00	0.00	0.00
2,100.00	24.90	80.20	2,018.05	78.58	454.92	78.10	0.00	0.00	0.00
2,200.00	24.90	80.20	2,108.75	85.75	496.41	85.23	0.00	0.00	0.00
2,252.09	24.90	80.20	2,156.00	89.48	518.02	88.94	0.00	0.00	0.00
9 5/8"									
2,300.00	24.90	80.20	2,199.46	92.91	537.90	92.35	0.00	0.00	0.00
2,400.00	24.90	80.20	2,290.16	100.08	579.39	99.47	0.00	0.00	0.00
2,500.00	24.90	80.20	2,380.86	107.24	620.88	106.59	0.00	0.00	0.00
2,600.00	24.90	80.20	2,471.57	114.41	662.37	113.72	0.00	0.00	0.00
2,700.00	24.90	80.20	2,562.27	121.58	703.86	120.84	0.00	0.00	0.00
2,800.00	24.90	80.20	2,652.98	128.74	745.35	127.96	0.00	0.00	0.00
2,900.00	24.90	80.20	2,743.68	135.91	786.84	135.09	0.00	0.00	0.00
3,000.00	24.90	80.20	2,834.39	143.08	828.33	142.21	0.00	0.00	0.00
3,100.00	24.90	80.20	2,925.09	150.24	869.82	149.33	0.00	0.00	0.00
3,200.00	24.90	80.20	3,015.80	157.41	911.30	156.46	0.00	0.00	0.00
3,300.00	24.90	80.20	3,106.50	164.58	952.79	163.58	0.00	0.00	0.00
3,400.00	24.90	80.20	3,197.20	171.74	994.28	170.70	0.00	0.00	0.00
3,500.00	24.90	80.20	3,287.91	178.91	1,035.77	177.82	0.00	0.00	0.00
3,600.00	24.90	80.20	3,378.61	186.08	1,077.26	184.95	0.00	0.00	0.00
3,700.00	24.90	80.20	3,469.32	193.24	1,118.75	192.07	0.00	0.00	0.00
3,800.00	24.90	80.20	3,560.02	200.41	1,160.24	199.19	0.00	0.00	0.00
3,900.00	24.90	80.20	3,650.73	207.57	1,201.73	206.32	0.00	0.00	0.00
4,000.00	24.90	80.20	3,741.43	214.74	1,243.22	213.44	0.00	0.00	0.00
4,100.00	24.90	80.20	3,832.14	221.91	1,284.71	220.56	0.00	0.00	0.00
4,200.00	24.90	80.20	3,922.84	229.07	1,326.20	227.69	0.00	0.00	0.00
4,300.00	24.90	80.20	4,013.54	236.24	1,367.69	234.81	0.00	0.00	0.00
4,400.00	24.90	80.20	4,104.25	243.41	1,409.17	241.93	0.00	0.00	0.00
4,500.00	24.90	80.20	4,194.95	250.57	1,450.66	249.05	0.00	0.00	0.00
4,600.00	24.90	80.20	4,285.66	257.74	1,492.15	256.18	0.00	0.00	0.00

## Planning Report

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<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 1918-09H	<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)	
4,700.00	24.90	80.20	4,376.36	264.91	1,533.64	263.30	0.00	0.00	0.00	
4,800.00	24.90	80.20	4,467.07	272.07	1,575.13	270.42	0.00	0.00	0.00	
4,900.00	24.90	80.20	4,557.77	279.24	1,616.62	277.55	0.00	0.00	0.00	
5,000.00	24.90	80.20	4,648.47	286.41	1,658.11	284.67	0.00	0.00	0.00	
5,100.00	24.90	80.20	4,739.18	293.57	1,699.60	291.79	0.00	0.00	0.00	
5,200.00	24.90	80.20	4,829.88	300.74	1,741.09	298.91	0.00	0.00	0.00	
5,300.00	24.90	80.20	4,920.59	307.90	1,782.58	306.04	0.00	0.00	0.00	
5,400.00	24.90	80.20	5,011.29	315.07	1,824.07	313.16	0.00	0.00	0.00	
5,500.00	24.90	80.20	5,102.00	322.24	1,865.56	320.28	0.00	0.00	0.00	
5,600.00	24.90	80.20	5,192.70	329.40	1,907.05	327.41	0.00	0.00	0.00	
5,700.00	24.90	80.20	5,283.41	336.57	1,948.53	334.53	0.00	0.00	0.00	
5,800.00	24.90	80.20	5,374.11	343.74	1,990.02	341.65	0.00	0.00	0.00	
5,900.00	24.90	80.20	5,464.81	350.90	2,031.51	348.78	0.00	0.00	0.00	
6,000.00	24.90	80.20	5,555.52	358.07	2,073.00	355.90	0.00	0.00	0.00	
6,100.00	24.90	80.20	5,646.22	365.24	2,114.49	363.02	0.00	0.00	0.00	
6,200.00	24.90	80.20	5,736.93	372.40	2,155.98	370.14	0.00	0.00	0.00	
6,300.00	24.90	80.20	5,827.63	379.57	2,197.47	377.27	0.00	0.00	0.00	
6,400.00	24.90	80.20	5,918.34	386.74	2,238.96	384.39	0.00	0.00	0.00	
6,500.00	24.90	80.20	6,009.04	393.90	2,280.45	391.51	0.00	0.00	0.00	
6,600.00	24.90	80.20	6,099.75	401.07	2,321.94	398.64	0.00	0.00	0.00	
6,700.00	24.90	80.20	6,190.45	408.23	2,363.43	405.76	0.00	0.00	0.00	
6,800.00	24.90	80.20	6,281.15	415.40	2,404.92	412.88	0.00	0.00	0.00	
6,900.00	24.90	80.20	6,371.86	422.57	2,446.41	420.01	0.00	0.00	0.00	
7,000.00	24.90	80.20	6,462.56	429.73	2,487.89	427.13	0.00	0.00	0.00	
7,100.00	24.90	80.20	6,553.27	436.90	2,529.38	434.25	0.00	0.00	0.00	
7,200.00	24.90	80.20	6,643.97	444.07	2,570.87	441.37	0.00	0.00	0.00	
7,275.35	24.90	80.20	6,712.32	449.47	2,602.13	446.74	0.00	0.00	0.00	
KOP @ 7275.35ft :: DLS = 9°/100'										
7,300.00	25.33	75.07	6,734.64	451.71	2,612.34	448.97	9.00	1.75	-20.81	
7,350.00	26.72	65.30	6,779.59	459.16	2,632.90	456.41	9.00	2.77	-19.54	
7,400.00	28.70	56.61	6,823.87	470.48	2,653.15	467.70	9.00	3.97	-17.39	
7,450.00	31.18	49.06	6,867.21	485.57	2,672.96	482.77	9.00	4.94	-15.09	
7,500.00	34.03	42.59	6,909.34	504.36	2,692.21	501.54	9.00	5.70	-12.94	
7,550.00	37.17	37.05	6,950.00	526.73	2,710.79	523.89	9.00	6.28	-11.08	
7,600.00	40.53	32.28	6,988.95	552.53	2,728.58	549.67	9.00	6.73	-9.54	
7,650.00	44.07	28.14	7,025.93	581.61	2,745.47	578.74	9.00	7.07	-8.28	
7,700.00	47.73	24.51	7,060.72	613.80	2,761.35	610.90	9.00	7.33	-7.27	
7,750.00	51.50	21.28	7,093.11	648.88	2,776.13	645.97	9.00	7.54	-6.46	
7,800.00	55.35	18.37	7,122.91	686.65	2,789.72	683.73	9.00	7.70	-5.81	
7,850.00	59.26	15.72	7,149.91	726.87	2,802.03	723.94	9.00	7.82	-5.29	
7,900.00	63.22	13.29	7,173.96	769.30	2,812.99	766.36	9.00	7.92	-4.88	
7,950.00	67.22	11.01	7,194.92	813.67	2,822.53	810.72	9.00	8.00	-4.55	
8,000.00	71.25	8.87	7,212.64	859.71	2,830.59	856.75	9.00	8.06	-4.29	
8,050.00	75.31	6.83	7,227.02	907.14	2,837.12	904.17	9.00	8.11	-4.08	
8,100.00	79.38	4.86	7,237.98	955.66	2,842.08	952.68	9.00	8.14	-3.94	
8,150.00	83.46	2.95	7,245.44	1,004.97	2,845.44	1,001.99	9.00	8.16	-3.83	
8,200.00	87.55	1.06	7,249.36	1,054.77	2,847.18	1,051.79	9.00	8.18	-3.77	
8,229.97	90.00	359.94	7,250.00	1,084.74	2,847.44	1,081.75	9.00	8.18	-3.75	
End Build/TPZ @ 8229.97ft										
8,300.00	90.00	359.94	7,250.00	1,154.76	2,847.36	1,151.78	0.00	0.00	0.00	
8,400.00	90.00	359.94	7,250.00	1,254.76	2,847.25	1,251.78	0.00	0.00	0.00	
8,500.00	90.00	359.94	7,250.00	1,354.76	2,847.15	1,351.78	0.00	0.00	0.00	
8,600.00	90.00	359.94	7,250.00	1,454.76	2,847.04	1,451.78	0.00	0.00	0.00	
8,700.00	90.00	359.94	7,250.00	1,554.76	2,846.93	1,551.78	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 1918-09H
<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 1918-09H	<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	359.94	7,250.00	1,654.76	2,846.82	1,651.78	0.00	0.00	0.00	
8,900.00	90.00	359.94	7,250.00	1,754.76	2,846.71	1,751.78	0.00	0.00	0.00	
9,000.00	90.00	359.94	7,250.00	1,854.76	2,846.61	1,851.78	0.00	0.00	0.00	
9,100.00	90.00	359.94	7,250.00	1,954.76	2,846.50	1,951.78	0.00	0.00	0.00	
9,200.00	90.00	359.94	7,250.00	2,054.76	2,846.39	2,051.78	0.00	0.00	0.00	
9,300.00	90.00	359.94	7,250.00	2,154.76	2,846.28	2,151.78	0.00	0.00	0.00	
9,400.00	90.00	359.94	7,250.00	2,254.76	2,846.17	2,251.78	0.00	0.00	0.00	
9,500.00	90.00	359.94	7,250.00	2,354.76	2,846.07	2,351.78	0.00	0.00	0.00	
9,600.00	90.00	359.94	7,250.00	2,454.76	2,845.96	2,451.78	0.00	0.00	0.00	
9,700.00	90.00	359.94	7,250.00	2,554.76	2,845.85	2,551.78	0.00	0.00	0.00	
9,800.00	90.00	359.94	7,250.00	2,654.76	2,845.74	2,651.78	0.00	0.00	0.00	
9,900.00	90.00	359.94	7,250.00	2,754.76	2,845.63	2,751.78	0.00	0.00	0.00	
10,000.00	90.00	359.94	7,250.00	2,854.76	2,845.52	2,851.78	0.00	0.00	0.00	
10,100.00	90.00	359.94	7,250.00	2,954.76	2,845.42	2,951.78	0.00	0.00	0.00	
10,200.00	90.00	359.94	7,250.00	3,054.76	2,845.31	3,051.78	0.00	0.00	0.00	
10,300.00	90.00	359.94	7,250.00	3,154.76	2,845.20	3,151.78	0.00	0.00	0.00	
10,400.00	90.00	359.94	7,250.00	3,254.76	2,845.09	3,251.78	0.00	0.00	0.00	
10,500.00	90.00	359.94	7,250.00	3,354.76	2,844.98	3,351.78	0.00	0.00	0.00	
10,600.00	90.00	359.94	7,250.00	3,454.76	2,844.88	3,451.78	0.00	0.00	0.00	
10,700.00	90.00	359.94	7,250.00	3,554.76	2,844.77	3,551.78	0.00	0.00	0.00	
10,800.00	90.00	359.94	7,250.00	3,654.76	2,844.66	3,651.78	0.00	0.00	0.00	
10,900.00	90.00	359.94	7,250.00	3,754.76	2,844.55	3,751.78	0.00	0.00	0.00	
11,000.00	90.00	359.94	7,250.00	3,854.76	2,844.44	3,851.78	0.00	0.00	0.00	
11,100.00	90.00	359.94	7,250.00	3,954.76	2,844.34	3,951.78	0.00	0.00	0.00	
11,200.00	90.00	359.94	7,250.00	4,054.76	2,844.23	4,051.78	0.00	0.00	0.00	
11,300.00	90.00	359.94	7,250.00	4,154.76	2,844.12	4,151.78	0.00	0.00	0.00	
11,400.00	90.00	359.94	7,250.00	4,254.76	2,844.01	4,251.78	0.00	0.00	0.00	
11,500.00	90.00	359.94	7,250.00	4,354.76	2,843.90	4,351.78	0.00	0.00	0.00	
11,600.00	90.00	359.94	7,250.00	4,454.76	2,843.80	4,451.78	0.00	0.00	0.00	
11,700.00	90.00	359.94	7,250.00	4,554.76	2,843.69	4,551.78	0.00	0.00	0.00	
11,800.00	90.00	359.94	7,250.00	4,654.76	2,843.58	4,651.78	0.00	0.00	0.00	
11,900.00	90.00	359.94	7,250.00	4,754.76	2,843.47	4,751.78	0.00	0.00	0.00	
12,000.00	90.00	359.94	7,250.00	4,854.76	2,843.36	4,851.78	0.00	0.00	0.00	
12,100.00	90.00	359.94	7,250.00	4,954.76	2,843.26	4,951.78	0.00	0.00	0.00	
12,200.00	90.00	359.94	7,250.00	5,054.76	2,843.15	5,051.78	0.00	0.00	0.00	
12,300.00	90.00	359.94	7,250.00	5,154.76	2,843.04	5,151.78	0.00	0.00	0.00	
12,400.00	90.00	359.94	7,250.00	5,254.76	2,842.93	5,251.78	0.00	0.00	0.00	
12,500.00	90.00	359.94	7,250.00	5,354.76	2,842.82	5,351.78	0.00	0.00	0.00	
12,600.00	90.00	359.94	7,250.00	5,454.76	2,842.72	5,451.78	0.00	0.00	0.00	
12,700.00	90.00	359.94	7,250.00	5,554.76	2,842.61	5,551.78	0.00	0.00	0.00	
12,800.00	90.00	359.94	7,250.00	5,654.76	2,842.50	5,651.78	0.00	0.00	0.00	
12,900.00	90.00	359.94	7,250.00	5,754.76	2,842.39	5,751.78	0.00	0.00	0.00	
13,000.00	90.00	359.94	7,250.00	5,854.76	2,842.28	5,851.78	0.00	0.00	0.00	
13,100.00	90.00	359.94	7,250.00	5,954.76	2,842.18	5,951.78	0.00	0.00	0.00	
13,200.00	90.00	359.94	7,250.00	6,054.76	2,842.07	6,051.78	0.00	0.00	0.00	
13,300.00	90.00	359.94	7,250.00	6,154.76	2,841.96	6,151.78	0.00	0.00	0.00	
13,400.00	90.00	359.94	7,250.00	6,254.76	2,841.85	6,251.78	0.00	0.00	0.00	
13,500.00	90.00	359.94	7,250.00	6,354.76	2,841.74	6,351.78	0.00	0.00	0.00	
13,600.00	90.00	359.94	7,250.00	6,454.76	2,841.64	6,451.78	0.00	0.00	0.00	
13,700.00	90.00	359.94	7,250.00	6,554.76	2,841.53	6,551.78	0.00	0.00	0.00	
13,800.00	90.00	359.94	7,250.00	6,654.76	2,841.42	6,651.78	0.00	0.00	0.00	
13,900.00	90.00	359.94	7,250.00	6,754.76	2,841.31	6,751.78	0.00	0.00	0.00	
14,000.00	90.00	359.94	7,250.00	6,854.76	2,841.20	6,851.78	0.00	0.00	0.00	
14,100.00	90.00	359.94	7,250.00	6,954.76	2,841.10	6,951.78	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 1918-09H
<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 1918-09H	<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	359.94	7,250.00	7,054.76	2,840.99	7,051.78	0.00	0.00	0.00	
14,300.00	90.00	359.94	7,250.00	7,154.76	2,840.88	7,151.78	0.00	0.00	0.00	
14,400.00	90.00	359.94	7,250.00	7,254.76	2,840.77	7,251.78	0.00	0.00	0.00	
14,500.00	90.00	359.94	7,250.00	7,354.76	2,840.66	7,351.78	0.00	0.00	0.00	
14,600.00	90.00	359.94	7,250.00	7,454.76	2,840.56	7,451.78	0.00	0.00	0.00	
14,700.00	90.00	359.94	7,250.00	7,554.76	2,840.45	7,551.78	0.00	0.00	0.00	
14,800.00	90.00	359.94	7,250.00	7,654.76	2,840.34	7,651.78	0.00	0.00	0.00	
14,900.00	90.00	359.94	7,250.00	7,754.76	2,840.23	7,751.78	0.00	0.00	0.00	
15,000.00	90.00	359.94	7,250.00	7,854.76	2,840.12	7,851.78	0.00	0.00	0.00	
15,100.00	90.00	359.94	7,250.00	7,954.76	2,840.01	7,951.78	0.00	0.00	0.00	
15,200.00	90.00	359.94	7,250.00	8,054.76	2,839.91	8,051.78	0.00	0.00	0.00	
15,254.08	90.00	359.94	7,250.00	8,108.84	2,839.85	8,105.86	0.00	0.00	0.00	
BPZ @ 15254.08ft										
15,300.00	90.00	359.94	7,250.00	8,154.76	2,839.80	8,151.78	0.00	0.00	0.00	
15,344.06	90.00	359.94	7,250.00	8,198.81	2,839.75	8,195.84	0.00	0.00	0.00	
TD Well @ 15344.06ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,252.09	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)		
391.00	391.00	0.00	0.00	Begin Nudge @ 391.00ft	
1,636.00	1,597.18	45.33	262.41	Hold Tangent @ 1636.00ft	
7,275.35	6,712.32	449.47	2,602.13	KOP @ 7275.35ft :: DLS = 9°/100'	
8,229.97	7,250.00	1,084.74	2,847.44	End Build/TPZ @ 8229.97ft	
15,254.08	7,250.00	8,108.84	2,839.85	BPZ @ 15254.08ft	
15,344.06	7,250.00	8,198.81	2,839.75	TD Well @ 15344.06ft	