

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1918 PAD

ONION 1918-08H

Plan A

Plan: Permit Rev-1

Standard Planning Report

10 March, 2022

Project: WATTENBERG FIELD
Site: 1N-64W-19 ONION 1918 PAD
Well: ONION 1918-08H
Wellbore: Plan A
Design: Permit Rev-1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
2156.00	2229.75	9 5/8"	9-5/8

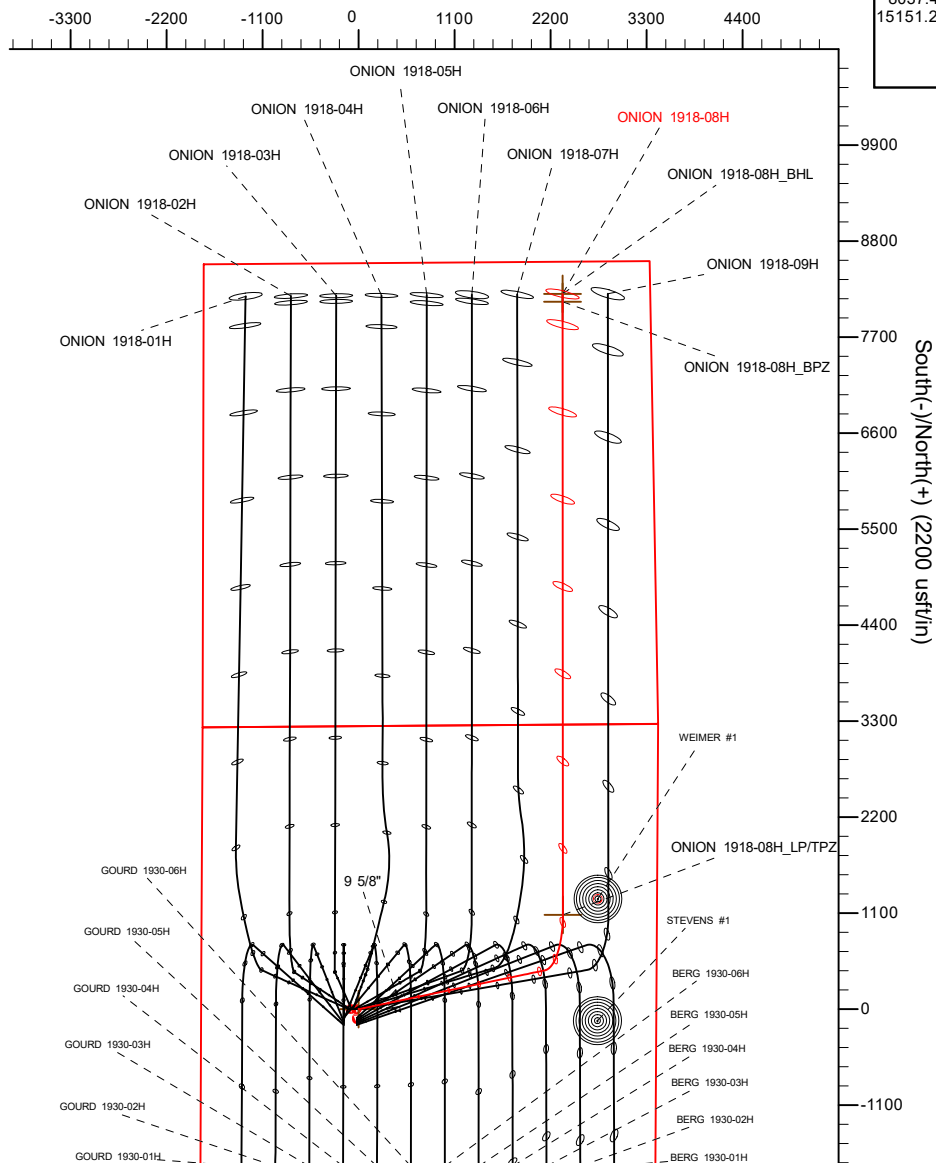
SHL
2075' FSL
1803' FWL

TPZ
2180' FNL
1077' FEL

BPZ
460' FNL
1007' FEL

BHL
370' FNL
1005' FEL

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

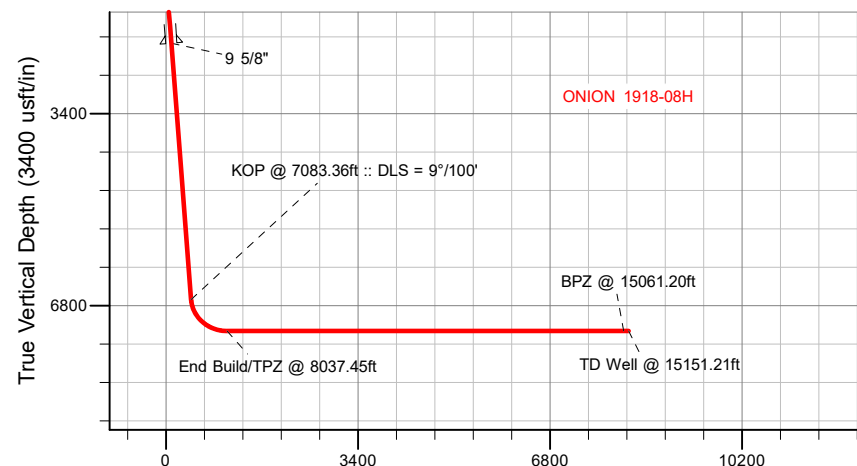


SECTION DETAILS

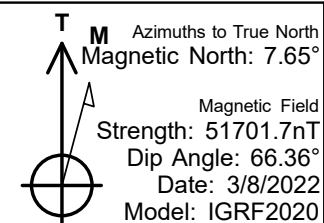
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
399.65	0.00	0.00	399.65	0.00	0.00	0.00	0.00	0.00	
1435.15	20.71	78.21	1412.75	37.82	181.21	2.00	78.21	37.73	
7083.36	20.71	78.21	6695.98	445.95	2136.49	0.00	0.00	444.83	
8037.45	90.00	359.97	7250.00	1081.03	2341.18	9.00	-78.98	1079.81	
15151.21	90.00	359.97	7250.00	8194.79	2337.02	0.00	0.00	8193.57	ONION 1918-08H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1918-08H_SHL	0.00	0.00	0.00	40.035251	-104.596368
ONION 1918-08H_LP/TPZ	7250.00	1081.03	2341.18	40.038218	-104.588007
ONION 1918-08H_BPZ	7250.00	8104.78	2337.09	40.057500	-104.588019
ONION 1918-08H_BHL	7250.00	8194.79	2337.02	40.057747	-104.588019



Vertical Section at 359.97° (3400 usft/in)



WELL DETAILS: ONION 1918-08H

GL = 5011'
RKB = 24' @ 5035.00usft (RIG)
Plan: Permit Rev-1 (ONION 1918-08H/Plan A)
Date: 3/10/2022

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1918-08H
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 1918-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-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 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 1918-08H				
Well Position	+N/-S	0.00 usft	Northing:	1,256,977.17 usft	Latitude:	40.035251
	+E/-W	0.00 usft	Easting:	3,253,020.41 usft	Longitude:	-104.596369
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,011.00 usft
Grid Convergence:		0.58 °				

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	3/8/2022	7.65	66.36	51,701.71458148

Design	Permit Rev-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	359.97	

Plan Survey Tool Program		Date	3/10/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,156.00	Permit Rev-1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,156.00	15,151.21	Permit Rev-1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 ONION 1918 PAD	North Reference:	True
Well:	ONION 1918-08H	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	
399.65	0.00	0.00	399.65	0.00	0.00	0.00	0.00	0.00	0.00	
1,435.15	20.71	78.21	1,412.75	37.82	181.21	2.00	2.00	0.00	78.21	
7,083.36	20.71	78.21	6,695.98	445.95	2,136.49	0.00	0.00	0.00	0.00	
8,037.45	90.00	359.97	7,250.00	1,081.03	2,341.18	9.00	7.26	-8.20	-78.98	
15,151.21	90.00	359.97	7,250.00	8,194.79	2,337.02	0.00	0.00	0.00	0.00	ONION 1918-08H_BH

Planning Report

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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 1918-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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
399.65	0.00	0.00	399.65	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 399.65ft									
500.00	2.01	78.21	499.98	0.36	1.72	0.36	2.00	2.00	0.00
600.00	4.01	78.21	599.84	1.43	6.86	1.43	2.00	2.00	0.00
700.00	6.01	78.21	699.45	3.21	15.40	3.21	2.00	2.00	0.00
800.00	8.01	78.21	798.70	5.71	27.34	5.69	2.00	2.00	0.00
900.00	10.01	78.21	897.46	8.91	42.66	8.88	2.00	2.00	0.00
1,000.00	12.01	78.21	995.62	12.81	61.35	12.77	2.00	2.00	0.00
1,100.00	14.01	78.21	1,093.04	17.40	83.38	17.36	2.00	2.00	0.00
1,200.00	16.01	78.21	1,189.63	22.70	108.73	22.64	2.00	2.00	0.00
1,300.00	18.01	78.21	1,285.25	28.67	137.36	28.60	2.00	2.00	0.00
1,400.00	20.01	78.21	1,379.79	35.33	169.24	35.24	2.00	2.00	0.00
1,435.15	20.71	78.21	1,412.75	37.82	181.21	37.73	2.00	2.00	0.00
Hold Tangent @ 1435.15ft									
1,500.00	20.71	78.21	1,473.41	42.51	203.66	42.40	0.00	0.00	0.00
1,600.00	20.71	78.21	1,566.95	49.74	238.28	49.61	0.00	0.00	0.00
1,700.00	20.71	78.21	1,660.48	56.96	272.90	56.82	0.00	0.00	0.00
1,800.00	20.71	78.21	1,754.02	64.19	307.51	64.03	0.00	0.00	0.00
1,900.00	20.71	78.21	1,847.56	71.41	342.13	71.23	0.00	0.00	0.00
2,000.00	20.71	78.21	1,941.10	78.64	376.75	78.44	0.00	0.00	0.00
2,100.00	20.71	78.21	2,034.64	85.86	411.37	85.65	0.00	0.00	0.00
2,200.00	20.71	78.21	2,128.18	93.09	445.98	92.86	0.00	0.00	0.00
2,229.75	20.71	78.21	2,156.00	95.24	456.28	95.00	0.00	0.00	0.00
9 5/8"									
2,300.00	20.71	78.21	2,221.71	100.32	480.60	100.06	0.00	0.00	0.00
2,400.00	20.71	78.21	2,315.25	107.54	515.22	107.27	0.00	0.00	0.00
2,500.00	20.71	78.21	2,408.79	114.77	549.84	114.48	0.00	0.00	0.00
2,600.00	20.71	78.21	2,502.33	121.99	584.46	121.69	0.00	0.00	0.00
2,700.00	20.71	78.21	2,595.87	129.22	619.07	128.89	0.00	0.00	0.00
2,800.00	20.71	78.21	2,689.41	136.44	653.69	136.10	0.00	0.00	0.00
2,900.00	20.71	78.21	2,782.94	143.67	688.31	143.31	0.00	0.00	0.00
3,000.00	20.71	78.21	2,876.48	150.90	722.93	150.52	0.00	0.00	0.00
3,100.00	20.71	78.21	2,970.02	158.12	757.54	157.72	0.00	0.00	0.00
3,200.00	20.71	78.21	3,063.56	165.35	792.16	164.93	0.00	0.00	0.00
3,300.00	20.71	78.21	3,157.10	172.57	826.78	172.14	0.00	0.00	0.00
3,400.00	20.71	78.21	3,250.63	179.80	861.40	179.35	0.00	0.00	0.00
3,500.00	20.71	78.21	3,344.17	187.02	896.02	186.55	0.00	0.00	0.00
3,600.00	20.71	78.21	3,437.71	194.25	930.63	193.76	0.00	0.00	0.00
3,700.00	20.71	78.21	3,531.25	201.48	965.25	200.97	0.00	0.00	0.00
3,800.00	20.71	78.21	3,624.79	208.70	999.87	208.18	0.00	0.00	0.00
3,900.00	20.71	78.21	3,718.33	215.93	1,034.49	215.39	0.00	0.00	0.00
4,000.00	20.71	78.21	3,811.86	223.15	1,069.10	222.59	0.00	0.00	0.00
4,100.00	20.71	78.21	3,905.40	230.38	1,103.72	229.80	0.00	0.00	0.00
4,200.00	20.71	78.21	3,998.94	237.60	1,138.34	237.01	0.00	0.00	0.00
4,300.00	20.71	78.21	4,092.48	244.83	1,172.96	244.22	0.00	0.00	0.00
4,400.00	20.71	78.21	4,186.02	252.06	1,207.57	251.42	0.00	0.00	0.00
4,500.00	20.71	78.21	4,279.56	259.28	1,242.19	258.63	0.00	0.00	0.00
4,600.00	20.71	78.21	4,373.09	266.51	1,276.81	265.84	0.00	0.00	0.00
4,700.00	20.71	78.21	4,466.63	273.73	1,311.43	273.05	0.00	0.00	0.00

Planning Report

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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 1918-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	20.71	78.21	4,560.17	280.96	1,346.05	280.25	0.00	0.00	0.00
4,900.00	20.71	78.21	4,653.71	288.18	1,380.66	287.46	0.00	0.00	0.00
5,000.00	20.71	78.21	4,747.25	295.41	1,415.28	294.67	0.00	0.00	0.00
5,100.00	20.71	78.21	4,840.78	302.64	1,449.90	301.88	0.00	0.00	0.00
5,200.00	20.71	78.21	4,934.32	309.86	1,484.52	309.08	0.00	0.00	0.00
5,300.00	20.71	78.21	5,027.86	317.09	1,519.13	316.29	0.00	0.00	0.00
5,400.00	20.71	78.21	5,121.40	324.31	1,553.75	323.50	0.00	0.00	0.00
5,500.00	20.71	78.21	5,214.94	331.54	1,588.37	330.71	0.00	0.00	0.00
5,600.00	20.71	78.21	5,308.48	338.76	1,622.99	337.91	0.00	0.00	0.00
5,700.00	20.71	78.21	5,402.01	345.99	1,657.61	345.12	0.00	0.00	0.00
5,800.00	20.71	78.21	5,495.55	353.22	1,692.22	352.33	0.00	0.00	0.00
5,900.00	20.71	78.21	5,589.09	360.44	1,726.84	359.54	0.00	0.00	0.00
6,000.00	20.71	78.21	5,682.63	367.67	1,761.46	366.74	0.00	0.00	0.00
6,100.00	20.71	78.21	5,776.17	374.89	1,796.08	373.95	0.00	0.00	0.00
6,200.00	20.71	78.21	5,869.71	382.12	1,830.69	381.16	0.00	0.00	0.00
6,300.00	20.71	78.21	5,963.24	389.34	1,865.31	388.37	0.00	0.00	0.00
6,400.00	20.71	78.21	6,056.78	396.57	1,899.93	395.58	0.00	0.00	0.00
6,500.00	20.71	78.21	6,150.32	403.80	1,934.55	402.78	0.00	0.00	0.00
6,600.00	20.71	78.21	6,243.86	411.02	1,969.17	409.99	0.00	0.00	0.00
6,700.00	20.71	78.21	6,337.40	418.25	2,003.78	417.20	0.00	0.00	0.00
6,800.00	20.71	78.21	6,430.93	425.47	2,038.40	424.41	0.00	0.00	0.00
6,900.00	20.71	78.21	6,524.47	432.70	2,073.02	431.61	0.00	0.00	0.00
7,000.00	20.71	78.21	6,618.01	439.92	2,107.64	438.82	0.00	0.00	0.00
7,083.36	20.71	78.21	6,695.98	445.95	2,136.49	444.83	0.00	0.00	0.00
KOP @ 7083.36ft :: DLS = 9°/100'									
7,100.00	21.05	74.11	6,711.53	447.37	2,142.25	446.24	9.00	2.02	-24.62
7,150.00	22.60	62.73	6,757.97	454.23	2,159.43	453.10	9.00	3.11	-22.76
7,200.00	24.85	53.02	6,803.76	464.96	2,176.37	463.82	9.00	4.50	-19.42
7,250.00	27.62	44.99	6,848.62	479.48	2,192.97	478.33	9.00	5.54	-16.07
7,300.00	30.77	38.40	6,892.27	497.71	2,209.12	496.56	9.00	6.31	-13.19
7,350.00	34.20	32.96	6,934.45	519.54	2,224.71	518.37	9.00	6.86	-10.87
7,400.00	37.83	28.43	6,974.89	544.83	2,239.67	543.66	9.00	7.26	-9.06
7,450.00	41.61	24.60	7,013.35	573.42	2,253.89	572.24	9.00	7.55	-7.67
7,500.00	45.49	21.30	7,049.58	605.14	2,267.28	603.96	9.00	7.77	-6.59
7,550.00	49.46	18.42	7,083.37	639.80	2,279.77	638.61	9.00	7.94	-5.76
7,600.00	53.50	15.86	7,114.51	677.18	2,291.27	675.98	9.00	8.06	-5.11
7,650.00	57.58	13.56	7,142.80	717.04	2,301.72	715.83	9.00	8.16	-4.60
7,700.00	61.70	11.46	7,168.07	759.15	2,311.05	757.94	9.00	8.24	-4.20
7,750.00	65.85	9.52	7,190.17	803.24	2,319.20	802.02	9.00	8.30	-3.89
7,800.00	70.02	7.70	7,208.95	849.04	2,326.13	847.82	9.00	8.34	-3.64
7,850.00	74.21	5.98	7,224.31	896.27	2,331.78	895.05	9.00	8.38	-3.45
7,900.00	78.41	4.32	7,236.14	944.65	2,336.13	943.42	9.00	8.41	-3.31
7,950.00	82.62	2.71	7,244.38	993.86	2,339.15	992.63	9.00	8.42	-3.21
8,000.00	86.84	1.14	7,248.97	1,043.61	2,340.82	1,042.38	9.00	8.44	-3.15
8,037.45	90.00	359.97	7,250.00	1,081.03	2,341.18	1,079.81	9.00	8.44	-3.13
End Build/TPZ @ 8037.45ft									
8,100.00	90.00	359.97	7,250.00	1,143.58	2,341.15	1,142.36	0.00	0.00	0.00
8,200.00	90.00	359.97	7,250.00	1,243.58	2,341.09	1,242.36	0.00	0.00	0.00
8,300.00	90.00	359.97	7,250.00	1,343.58	2,341.03	1,342.36	0.00	0.00	0.00
8,400.00	90.00	359.97	7,250.00	1,443.58	2,340.97	1,442.36	0.00	0.00	0.00
8,500.00	90.00	359.97	7,250.00	1,543.58	2,340.91	1,542.36	0.00	0.00	0.00
8,600.00	90.00	359.97	7,250.00	1,643.58	2,340.85	1,642.36	0.00	0.00	0.00
8,700.00	90.00	359.97	7,250.00	1,743.58	2,340.80	1,742.36	0.00	0.00	0.00
8,800.00	90.00	359.97	7,250.00	1,843.58	2,340.74	1,842.36	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1918-08H
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 1918-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
8,900.00	90.00	359.97	7,250.00	1,943.58	2,340.68	1,942.36	0.00	0.00	0.00
9,000.00	90.00	359.97	7,250.00	2,043.58	2,340.62	2,042.36	0.00	0.00	0.00
9,100.00	90.00	359.97	7,250.00	2,143.58	2,340.56	2,142.36	0.00	0.00	0.00
9,200.00	90.00	359.97	7,250.00	2,243.58	2,340.50	2,242.36	0.00	0.00	0.00
9,300.00	90.00	359.97	7,250.00	2,343.58	2,340.45	2,342.36	0.00	0.00	0.00
9,400.00	90.00	359.97	7,250.00	2,443.58	2,340.39	2,442.36	0.00	0.00	0.00
9,500.00	90.00	359.97	7,250.00	2,543.58	2,340.33	2,542.36	0.00	0.00	0.00
9,600.00	90.00	359.97	7,250.00	2,643.58	2,340.27	2,642.36	0.00	0.00	0.00
9,700.00	90.00	359.97	7,250.00	2,743.58	2,340.21	2,742.36	0.00	0.00	0.00
9,800.00	90.00	359.97	7,250.00	2,843.58	2,340.15	2,842.36	0.00	0.00	0.00
9,900.00	90.00	359.97	7,250.00	2,943.58	2,340.09	2,942.36	0.00	0.00	0.00
10,000.00	90.00	359.97	7,250.00	3,043.58	2,340.04	3,042.36	0.00	0.00	0.00
10,100.00	90.00	359.97	7,250.00	3,143.58	2,339.98	3,142.36	0.00	0.00	0.00
10,200.00	90.00	359.97	7,250.00	3,243.58	2,339.92	3,242.36	0.00	0.00	0.00
10,300.00	90.00	359.97	7,250.00	3,343.58	2,339.86	3,342.36	0.00	0.00	0.00
10,400.00	90.00	359.97	7,250.00	3,443.58	2,339.80	3,442.36	0.00	0.00	0.00
10,500.00	90.00	359.97	7,250.00	3,543.58	2,339.74	3,542.36	0.00	0.00	0.00
10,600.00	90.00	359.97	7,250.00	3,643.58	2,339.68	3,642.36	0.00	0.00	0.00
10,700.00	90.00	359.97	7,250.00	3,743.58	2,339.63	3,742.36	0.00	0.00	0.00
10,800.00	90.00	359.97	7,250.00	3,843.58	2,339.57	3,842.36	0.00	0.00	0.00
10,900.00	90.00	359.97	7,250.00	3,943.58	2,339.51	3,942.36	0.00	0.00	0.00
11,000.00	90.00	359.97	7,250.00	4,043.58	2,339.45	4,042.36	0.00	0.00	0.00
11,100.00	90.00	359.97	7,250.00	4,143.58	2,339.39	4,142.36	0.00	0.00	0.00
11,200.00	90.00	359.97	7,250.00	4,243.58	2,339.33	4,242.36	0.00	0.00	0.00
11,300.00	90.00	359.97	7,250.00	4,343.58	2,339.27	4,342.36	0.00	0.00	0.00
11,400.00	90.00	359.97	7,250.00	4,443.58	2,339.22	4,442.36	0.00	0.00	0.00
11,500.00	90.00	359.97	7,250.00	4,543.58	2,339.16	4,542.36	0.00	0.00	0.00
11,600.00	90.00	359.97	7,250.00	4,643.58	2,339.10	4,642.36	0.00	0.00	0.00
11,700.00	90.00	359.97	7,250.00	4,743.58	2,339.04	4,742.36	0.00	0.00	0.00
11,800.00	90.00	359.97	7,250.00	4,843.58	2,338.98	4,842.36	0.00	0.00	0.00
11,900.00	90.00	359.97	7,250.00	4,943.58	2,338.92	4,942.36	0.00	0.00	0.00
12,000.00	90.00	359.97	7,250.00	5,043.58	2,338.87	5,042.36	0.00	0.00	0.00
12,100.00	90.00	359.97	7,250.00	5,143.58	2,338.81	5,142.36	0.00	0.00	0.00
12,200.00	90.00	359.97	7,250.00	5,243.58	2,338.75	5,242.36	0.00	0.00	0.00
12,300.00	90.00	359.97	7,250.00	5,343.58	2,338.69	5,342.36	0.00	0.00	0.00
12,400.00	90.00	359.97	7,250.00	5,443.58	2,338.63	5,442.36	0.00	0.00	0.00
12,500.00	90.00	359.97	7,250.00	5,543.58	2,338.57	5,542.36	0.00	0.00	0.00
12,600.00	90.00	359.97	7,250.00	5,643.58	2,338.51	5,642.36	0.00	0.00	0.00
12,700.00	90.00	359.97	7,250.00	5,743.58	2,338.46	5,742.36	0.00	0.00	0.00
12,800.00	90.00	359.97	7,250.00	5,843.58	2,338.40	5,842.36	0.00	0.00	0.00
12,900.00	90.00	359.97	7,250.00	5,943.58	2,338.34	5,942.36	0.00	0.00	0.00
13,000.00	90.00	359.97	7,250.00	6,043.58	2,338.28	6,042.36	0.00	0.00	0.00
13,100.00	90.00	359.97	7,250.00	6,143.58	2,338.22	6,142.36	0.00	0.00	0.00
13,200.00	90.00	359.97	7,250.00	6,243.58	2,338.16	6,242.36	0.00	0.00	0.00
13,300.00	90.00	359.97	7,250.00	6,343.58	2,338.10	6,342.36	0.00	0.00	0.00
13,400.00	90.00	359.97	7,250.00	6,443.58	2,338.05	6,442.36	0.00	0.00	0.00
13,500.00	90.00	359.97	7,250.00	6,543.58	2,337.99	6,542.36	0.00	0.00	0.00
13,600.00	90.00	359.97	7,250.00	6,643.58	2,337.93	6,642.36	0.00	0.00	0.00
13,700.00	90.00	359.97	7,250.00	6,743.58	2,337.87	6,742.36	0.00	0.00	0.00
13,800.00	90.00	359.97	7,250.00	6,843.58	2,337.81	6,842.36	0.00	0.00	0.00
13,900.00	90.00	359.97	7,250.00	6,943.58	2,337.75	6,942.36	0.00	0.00	0.00
14,000.00	90.00	359.97	7,250.00	7,043.58	2,337.70	7,042.36	0.00	0.00	0.00
14,100.00	90.00	359.97	7,250.00	7,143.58	2,337.64	7,142.36	0.00	0.00	0.00
14,200.00	90.00	359.97	7,250.00	7,243.58	2,337.58	7,242.36	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1918-08H
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 1918-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
14,300.00	90.00	359.97	7,250.00	7,343.58	2,337.52	7,342.36	0.00	0.00	0.00
14,400.00	90.00	359.97	7,250.00	7,443.58	2,337.46	7,442.36	0.00	0.00	0.00
14,500.00	90.00	359.97	7,250.00	7,543.58	2,337.40	7,542.36	0.00	0.00	0.00
14,600.00	90.00	359.97	7,250.00	7,643.58	2,337.34	7,642.36	0.00	0.00	0.00
14,700.00	90.00	359.97	7,250.00	7,743.58	2,337.29	7,742.36	0.00	0.00	0.00
14,800.00	90.00	359.97	7,250.00	7,843.58	2,337.23	7,842.36	0.00	0.00	0.00
14,900.00	90.00	359.97	7,250.00	7,943.58	2,337.17	7,942.36	0.00	0.00	0.00
15,000.00	90.00	359.97	7,250.00	8,043.58	2,337.11	8,042.36	0.00	0.00	0.00
15,061.20	90.00	359.97	7,250.00	8,104.78	2,337.07	8,103.56	0.00	0.00	0.00
BPZ @ 15061.20ft									
15,100.00	90.00	359.97	7,250.00	8,143.58	2,337.05	8,142.36	0.00	0.00	0.00
15,151.21	90.00	359.97	7,250.00	8,194.79	2,337.02	8,193.57	0.00	0.00	0.00
TD Well @ 15151.21ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,229.75	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)	
399.65	399.65	0.00	0.00	Begin Nudge @ 399.65ft
1,435.15	1,412.75	37.82	181.21	Hold Tangent @ 1435.15ft
7,083.36	6,695.98	445.95	2,136.49	KOP @ 7083.36ft :: DLS = 9°/100'
8,037.45	7,250.00	1,081.03	2,341.18	End Build/TPZ @ 8037.45ft
15,061.20	7,250.00	8,104.78	2,337.07	BPZ @ 15061.20ft
15,151.21	7,250.00	8,194.79	2,337.02	TD Well @ 15151.21ft