

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1907 PAD

ONION 1907-08H

Plan A

Plan: Design #1

Standard Planning Report

16 March, 2022

Project: WATTENBERG FIELD
Site: 1N-64W-19 ONION 1907 PAD
Well: ONION 1907-08H
Wellbore: Plan A
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

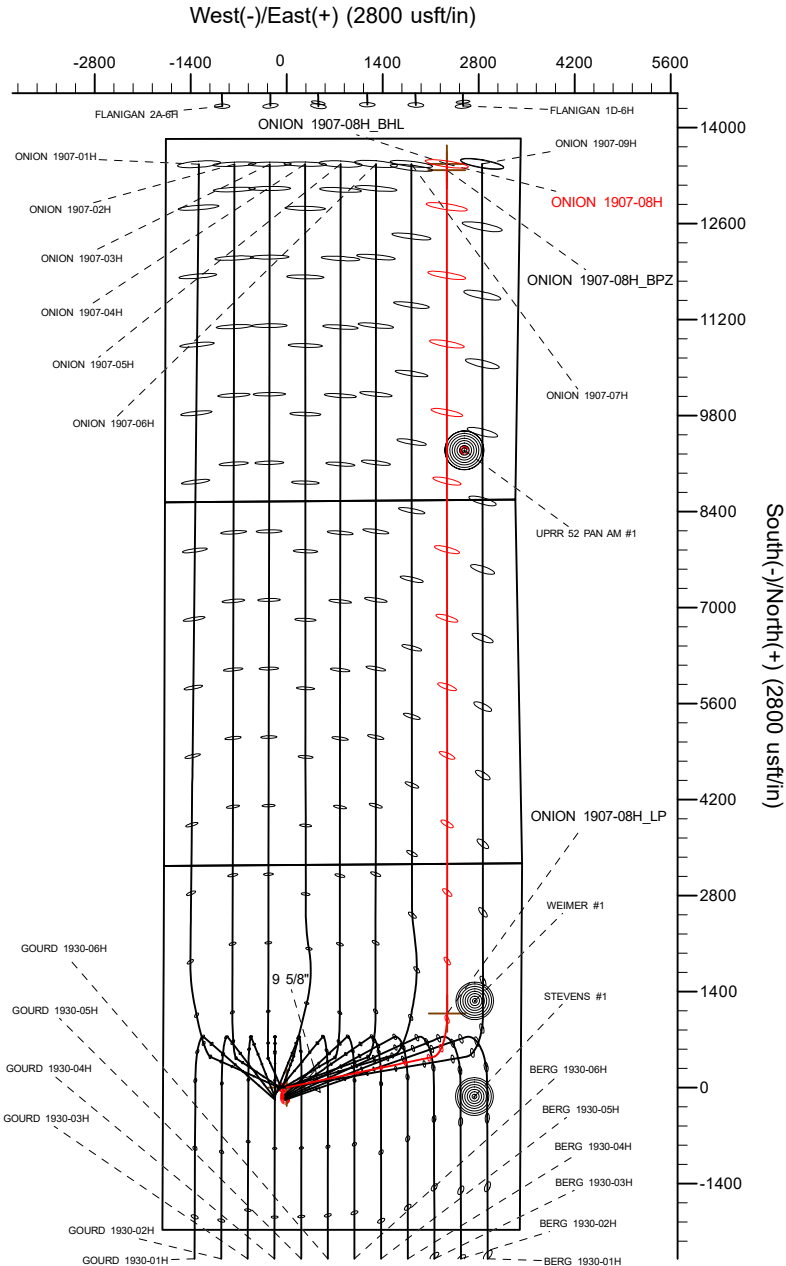
TVD	MD	Name	Size
2156.00	2229.75	9 5/8"	9-5/8

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	
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	2341.19	9.00	-78.98	1079.81	
20425.17	90.00	359.97	7250.00	13468.75	2334.01	0.00	0.00	13467.52	ONION 1907-08H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
ONION 1907-08H_SHL	0.00	0.00	0.00	40.035251	-104.596368
ONION 1907-08H_LP	7250.00	1081.03	2341.19	40.038218	-104.588007
ONION 1907-08H_BPZ	7250.00	13378.73	2334.04	40.071978	-104.588028
ONION 1907-08H_BHL	7250.00	13468.75	2334.01	40.072225	-104.588028

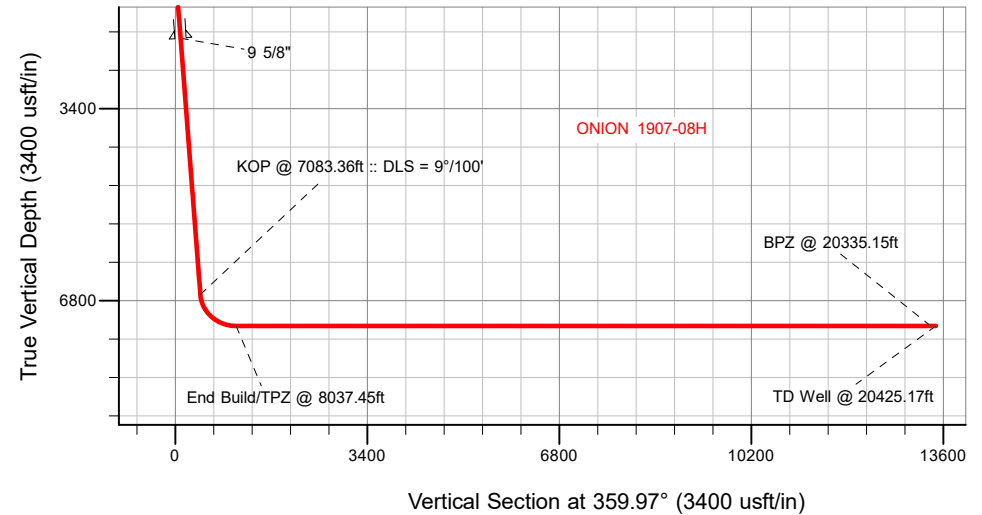



BHL
370' FNL
1072' FEL

BPZ
460' FNL
1071' FEL

TPZ
2180' FNL
1077' FEL

SHL
2075' FSL
1803' FWL



 <p>Azimuths to True North Magnetic North: 7.65° Magnetic Field Strength: 51700.6nT Dip Angle: 66.36° Date: 3/12/2022 Model: IGRF2020</p>	WELL DETAILS: ONION 1907-08H	
	GL = 5011'	
	RKB = 24' @ 5035.00usft (RIG)	
	Plan: Design #1 (ONION 1907-08H/Plan A)	
	Date: 3/16/2022	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-08H
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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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 1907-08H			
Well Position	+N/-S	0.00 usft	Northing:	1,256,977.17 usft
	+E/-W	0.00 usft	Easting:	3,253,020.41 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	51,700.55999825

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	359.97	

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	20,425.17	Design #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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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	
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	2,341.19	9.00	7.26	-8.20	-78.98	
20,425.17	90.00	359.97	7,250.00	13,468.75	2,334.01	0.00	0.00	0.00	0.00	ONION 1907-08H_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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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
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

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-08H
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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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)
4,800.00	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	15.87	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	2,336.14	943.42	9.00	8.41	-3.31
7,950.00	82.62	2.71	7,244.38	993.86	2,339.16	992.63	9.00	8.42	-3.21
8,000.00	86.84	1.14	7,248.97	1,043.61	2,340.83	1,042.38	9.00	8.44	-3.15
8,037.45	90.00	359.97	7,250.00	1,081.03	2,341.19	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	2,340.98	1,442.36	0.00	0.00	0.00
8,500.00	90.00	359.97	7,250.00	1,543.58	2,340.92	1,542.36	0.00	0.00	0.00
8,600.00	90.00	359.97	7,250.00	1,643.58	2,340.86	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 1907-08H
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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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)
8,900.00	90.00	359.97	7,250.00	1,943.58	2,340.69	1,942.36	0.00	0.00	0.00
9,000.00	90.00	359.97	7,250.00	2,043.58	2,340.63	2,042.36	0.00	0.00	0.00
9,100.00	90.00	359.97	7,250.00	2,143.58	2,340.57	2,142.36	0.00	0.00	0.00
9,200.00	90.00	359.97	7,250.00	2,243.58	2,340.51	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	2,340.40	2,442.36	0.00	0.00	0.00
9,500.00	90.00	359.97	7,250.00	2,543.58	2,340.34	2,542.36	0.00	0.00	0.00
9,600.00	90.00	359.97	7,250.00	2,643.58	2,340.28	2,642.36	0.00	0.00	0.00
9,700.00	90.00	359.97	7,250.00	2,743.58	2,340.22	2,742.36	0.00	0.00	0.00
9,800.00	90.00	359.97	7,250.00	2,843.58	2,340.16	2,842.36	0.00	0.00	0.00
9,900.00	90.00	359.97	7,250.00	2,943.58	2,340.11	2,942.36	0.00	0.00	0.00
10,000.00	90.00	359.97	7,250.00	3,043.58	2,340.05	3,042.36	0.00	0.00	0.00
10,100.00	90.00	359.97	7,250.00	3,143.58	2,339.99	3,142.36	0.00	0.00	0.00
10,200.00	90.00	359.97	7,250.00	3,243.58	2,339.93	3,242.36	0.00	0.00	0.00
10,300.00	90.00	359.97	7,250.00	3,343.58	2,339.88	3,342.36	0.00	0.00	0.00
10,400.00	90.00	359.97	7,250.00	3,443.58	2,339.82	3,442.36	0.00	0.00	0.00
10,500.00	90.00	359.97	7,250.00	3,543.58	2,339.76	3,542.36	0.00	0.00	0.00
10,600.00	90.00	359.97	7,250.00	3,643.58	2,339.70	3,642.36	0.00	0.00	0.00
10,700.00	90.00	359.97	7,250.00	3,743.58	2,339.64	3,742.36	0.00	0.00	0.00
10,800.00	90.00	359.97	7,250.00	3,843.58	2,339.59	3,842.36	0.00	0.00	0.00
10,900.00	90.00	359.97	7,250.00	3,943.58	2,339.53	3,942.36	0.00	0.00	0.00
11,000.00	90.00	359.97	7,250.00	4,043.58	2,339.47	4,042.36	0.00	0.00	0.00
11,100.00	90.00	359.97	7,250.00	4,143.58	2,339.41	4,142.36	0.00	0.00	0.00
11,200.00	90.00	359.97	7,250.00	4,243.58	2,339.35	4,242.36	0.00	0.00	0.00
11,300.00	90.00	359.97	7,250.00	4,343.58	2,339.30	4,342.36	0.00	0.00	0.00
11,400.00	90.00	359.97	7,250.00	4,443.58	2,339.24	4,442.36	0.00	0.00	0.00
11,500.00	90.00	359.97	7,250.00	4,543.58	2,339.18	4,542.36	0.00	0.00	0.00
11,600.00	90.00	359.97	7,250.00	4,643.58	2,339.12	4,642.36	0.00	0.00	0.00
11,700.00	90.00	359.97	7,250.00	4,743.58	2,339.06	4,742.36	0.00	0.00	0.00
11,800.00	90.00	359.97	7,250.00	4,843.58	2,339.01	4,842.36	0.00	0.00	0.00
11,900.00	90.00	359.97	7,250.00	4,943.58	2,338.95	4,942.36	0.00	0.00	0.00
12,000.00	90.00	359.97	7,250.00	5,043.58	2,338.89	5,042.36	0.00	0.00	0.00
12,100.00	90.00	359.97	7,250.00	5,143.58	2,338.83	5,142.36	0.00	0.00	0.00
12,200.00	90.00	359.97	7,250.00	5,243.58	2,338.77	5,242.36	0.00	0.00	0.00
12,300.00	90.00	359.97	7,250.00	5,343.58	2,338.72	5,342.36	0.00	0.00	0.00
12,400.00	90.00	359.97	7,250.00	5,443.58	2,338.66	5,442.36	0.00	0.00	0.00
12,500.00	90.00	359.97	7,250.00	5,543.58	2,338.60	5,542.36	0.00	0.00	0.00
12,600.00	90.00	359.97	7,250.00	5,643.58	2,338.54	5,642.36	0.00	0.00	0.00
12,700.00	90.00	359.97	7,250.00	5,743.58	2,338.48	5,742.36	0.00	0.00	0.00
12,800.00	90.00	359.97	7,250.00	5,843.58	2,338.43	5,842.36	0.00	0.00	0.00
12,900.00	90.00	359.97	7,250.00	5,943.58	2,338.37	5,942.36	0.00	0.00	0.00
13,000.00	90.00	359.97	7,250.00	6,043.58	2,338.31	6,042.36	0.00	0.00	0.00
13,100.00	90.00	359.97	7,250.00	6,143.58	2,338.25	6,142.36	0.00	0.00	0.00
13,200.00	90.00	359.97	7,250.00	6,243.58	2,338.19	6,242.36	0.00	0.00	0.00
13,300.00	90.00	359.97	7,250.00	6,343.58	2,338.14	6,342.36	0.00	0.00	0.00
13,400.00	90.00	359.97	7,250.00	6,443.58	2,338.08	6,442.36	0.00	0.00	0.00
13,500.00	90.00	359.97	7,250.00	6,543.58	2,338.02	6,542.36	0.00	0.00	0.00
13,600.00	90.00	359.97	7,250.00	6,643.58	2,337.96	6,642.36	0.00	0.00	0.00
13,700.00	90.00	359.97	7,250.00	6,743.58	2,337.90	6,742.36	0.00	0.00	0.00
13,800.00	90.00	359.97	7,250.00	6,843.58	2,337.85	6,842.36	0.00	0.00	0.00
13,900.00	90.00	359.97	7,250.00	6,943.58	2,337.79	6,942.36	0.00	0.00	0.00
14,000.00	90.00	359.97	7,250.00	7,043.58	2,337.73	7,042.36	0.00	0.00	0.00
14,100.00	90.00	359.97	7,250.00	7,143.58	2,337.67	7,142.36	0.00	0.00	0.00
14,200.00	90.00	359.97	7,250.00	7,243.58	2,337.61	7,242.36	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-08H
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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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)
14,300.00	90.00	359.97	7,250.00	7,343.58	2,337.56	7,342.36	0.00	0.00	0.00
14,400.00	90.00	359.97	7,250.00	7,443.58	2,337.50	7,442.36	0.00	0.00	0.00
14,500.00	90.00	359.97	7,250.00	7,543.58	2,337.44	7,542.36	0.00	0.00	0.00
14,600.00	90.00	359.97	7,250.00	7,643.58	2,337.38	7,642.36	0.00	0.00	0.00
14,700.00	90.00	359.97	7,250.00	7,743.58	2,337.32	7,742.36	0.00	0.00	0.00
14,800.00	90.00	359.97	7,250.00	7,843.58	2,337.27	7,842.36	0.00	0.00	0.00
14,900.00	90.00	359.97	7,250.00	7,943.58	2,337.21	7,942.36	0.00	0.00	0.00
15,000.00	90.00	359.97	7,250.00	8,043.58	2,337.15	8,042.36	0.00	0.00	0.00
15,100.00	90.00	359.97	7,250.00	8,143.58	2,337.09	8,142.36	0.00	0.00	0.00
15,200.00	90.00	359.97	7,250.00	8,243.58	2,337.04	8,242.36	0.00	0.00	0.00
15,300.00	90.00	359.97	7,250.00	8,343.58	2,336.98	8,342.36	0.00	0.00	0.00
15,400.00	90.00	359.97	7,250.00	8,443.58	2,336.92	8,442.36	0.00	0.00	0.00
15,500.00	90.00	359.97	7,250.00	8,543.58	2,336.86	8,542.36	0.00	0.00	0.00
15,600.00	90.00	359.97	7,250.00	8,643.58	2,336.80	8,642.36	0.00	0.00	0.00
15,700.00	90.00	359.97	7,250.00	8,743.58	2,336.75	8,742.36	0.00	0.00	0.00
15,800.00	90.00	359.97	7,250.00	8,843.58	2,336.69	8,842.36	0.00	0.00	0.00
15,900.00	90.00	359.97	7,250.00	8,943.58	2,336.63	8,942.36	0.00	0.00	0.00
16,000.00	90.00	359.97	7,250.00	9,043.58	2,336.57	9,042.36	0.00	0.00	0.00
16,100.00	90.00	359.97	7,250.00	9,143.58	2,336.51	9,142.36	0.00	0.00	0.00
16,200.00	90.00	359.97	7,250.00	9,243.58	2,336.46	9,242.36	0.00	0.00	0.00
16,300.00	90.00	359.97	7,250.00	9,343.58	2,336.40	9,342.36	0.00	0.00	0.00
16,400.00	90.00	359.97	7,250.00	9,443.58	2,336.34	9,442.36	0.00	0.00	0.00
16,500.00	90.00	359.97	7,250.00	9,543.58	2,336.28	9,542.36	0.00	0.00	0.00
16,600.00	90.00	359.97	7,250.00	9,643.58	2,336.22	9,642.36	0.00	0.00	0.00
16,700.00	90.00	359.97	7,250.00	9,743.58	2,336.17	9,742.36	0.00	0.00	0.00
16,800.00	90.00	359.97	7,250.00	9,843.58	2,336.11	9,842.36	0.00	0.00	0.00
16,900.00	90.00	359.97	7,250.00	9,943.58	2,336.05	9,942.36	0.00	0.00	0.00
17,000.00	90.00	359.97	7,250.00	10,043.58	2,335.99	10,042.36	0.00	0.00	0.00
17,100.00	90.00	359.97	7,250.00	10,143.58	2,335.93	10,142.36	0.00	0.00	0.00
17,200.00	90.00	359.97	7,250.00	10,243.58	2,335.88	10,242.36	0.00	0.00	0.00
17,300.00	90.00	359.97	7,250.00	10,343.58	2,335.82	10,342.36	0.00	0.00	0.00
17,400.00	90.00	359.97	7,250.00	10,443.58	2,335.76	10,442.36	0.00	0.00	0.00
17,500.00	90.00	359.97	7,250.00	10,543.58	2,335.70	10,542.36	0.00	0.00	0.00
17,600.00	90.00	359.97	7,250.00	10,643.58	2,335.64	10,642.36	0.00	0.00	0.00
17,700.00	90.00	359.97	7,250.00	10,743.58	2,335.59	10,742.36	0.00	0.00	0.00
17,800.00	90.00	359.97	7,250.00	10,843.58	2,335.53	10,842.36	0.00	0.00	0.00
17,900.00	90.00	359.97	7,250.00	10,943.58	2,335.47	10,942.36	0.00	0.00	0.00
18,000.00	90.00	359.97	7,250.00	11,043.58	2,335.41	11,042.36	0.00	0.00	0.00
18,100.00	90.00	359.97	7,250.00	11,143.58	2,335.35	11,142.36	0.00	0.00	0.00
18,200.00	90.00	359.97	7,250.00	11,243.58	2,335.30	11,242.36	0.00	0.00	0.00
18,300.00	90.00	359.97	7,250.00	11,343.58	2,335.24	11,342.36	0.00	0.00	0.00
18,400.00	90.00	359.97	7,250.00	11,443.58	2,335.18	11,442.36	0.00	0.00	0.00
18,500.00	90.00	359.97	7,250.00	11,543.58	2,335.12	11,542.36	0.00	0.00	0.00
18,600.00	90.00	359.97	7,250.00	11,643.58	2,335.06	11,642.36	0.00	0.00	0.00
18,700.00	90.00	359.97	7,250.00	11,743.58	2,335.01	11,742.36	0.00	0.00	0.00
18,800.00	90.00	359.97	7,250.00	11,843.58	2,334.95	11,842.36	0.00	0.00	0.00
18,900.00	90.00	359.97	7,250.00	11,943.58	2,334.89	11,942.36	0.00	0.00	0.00
19,000.00	90.00	359.97	7,250.00	12,043.58	2,334.83	12,042.36	0.00	0.00	0.00
19,100.00	90.00	359.97	7,250.00	12,143.58	2,334.77	12,142.36	0.00	0.00	0.00
19,200.00	90.00	359.97	7,250.00	12,243.58	2,334.72	12,242.36	0.00	0.00	0.00
19,300.00	90.00	359.97	7,250.00	12,343.58	2,334.66	12,342.36	0.00	0.00	0.00
19,400.00	90.00	359.97	7,250.00	12,443.58	2,334.60	12,442.36	0.00	0.00	0.00
19,500.00	90.00	359.97	7,250.00	12,543.58	2,334.54	12,542.36	0.00	0.00	0.00
19,600.00	90.00	359.97	7,250.00	12,643.58	2,334.48	12,642.36	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well ONION 1907-08H
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 1907 PAD	North Reference:	True
Well:	ONION 1907-08H	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)	
19,700.00	90.00	359.97	7,250.00	12,743.58	2,334.43	12,742.36	0.00	0.00	0.00	
19,800.00	90.00	359.97	7,250.00	12,843.58	2,334.37	12,842.36	0.00	0.00	0.00	
19,900.00	90.00	359.97	7,250.00	12,943.58	2,334.31	12,942.36	0.00	0.00	0.00	
20,000.00	90.00	359.97	7,250.00	13,043.58	2,334.25	13,042.36	0.00	0.00	0.00	
20,100.00	90.00	359.97	7,250.00	13,143.58	2,334.19	13,142.36	0.00	0.00	0.00	
20,200.00	90.00	359.97	7,250.00	13,243.58	2,334.14	13,242.36	0.00	0.00	0.00	
20,300.00	90.00	359.97	7,250.00	13,343.58	2,334.08	13,342.36	0.00	0.00	0.00	
20,335.15	90.00	359.97	7,250.00	13,378.73	2,334.06	13,377.51	0.00	0.00	0.00	
BPZ @ 20335.15ft										
20,400.00	90.00	359.97	7,250.00	13,443.58	2,334.02	13,442.36	0.00	0.00	0.00	
20,425.17	90.00	359.97	7,250.00	13,468.75	2,334.01	13,467.52	0.00	0.00	0.00	
TD Well @ 20425.17ft										

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	2,341.19	End Build/TPZ @ 8037.45ft	
20,335.15	7,250.00	13,378.73	2,334.06	BPZ @ 20335.15ft	
20,425.17	7,250.00	13,468.75	2,334.01	TD Well @ 20425.17ft	