

VERDAD RESOURCES

**WATTENBERG FIELD
1N-64W-19 CHIVE & SHALLOT PAD
SHALLOT 1930-21H**

Plan A

Plan: Design #1

Standard Planning Report

19 May, 2023

Project: WATTENBERG FIELD
Site: 1N-64W-19 CHIVE & SHALLOT PAD
Well: SHALLOT 1930-21H
Wellbore: Plan A
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
2070.00	2121.28	9 5/8"	9-5/8

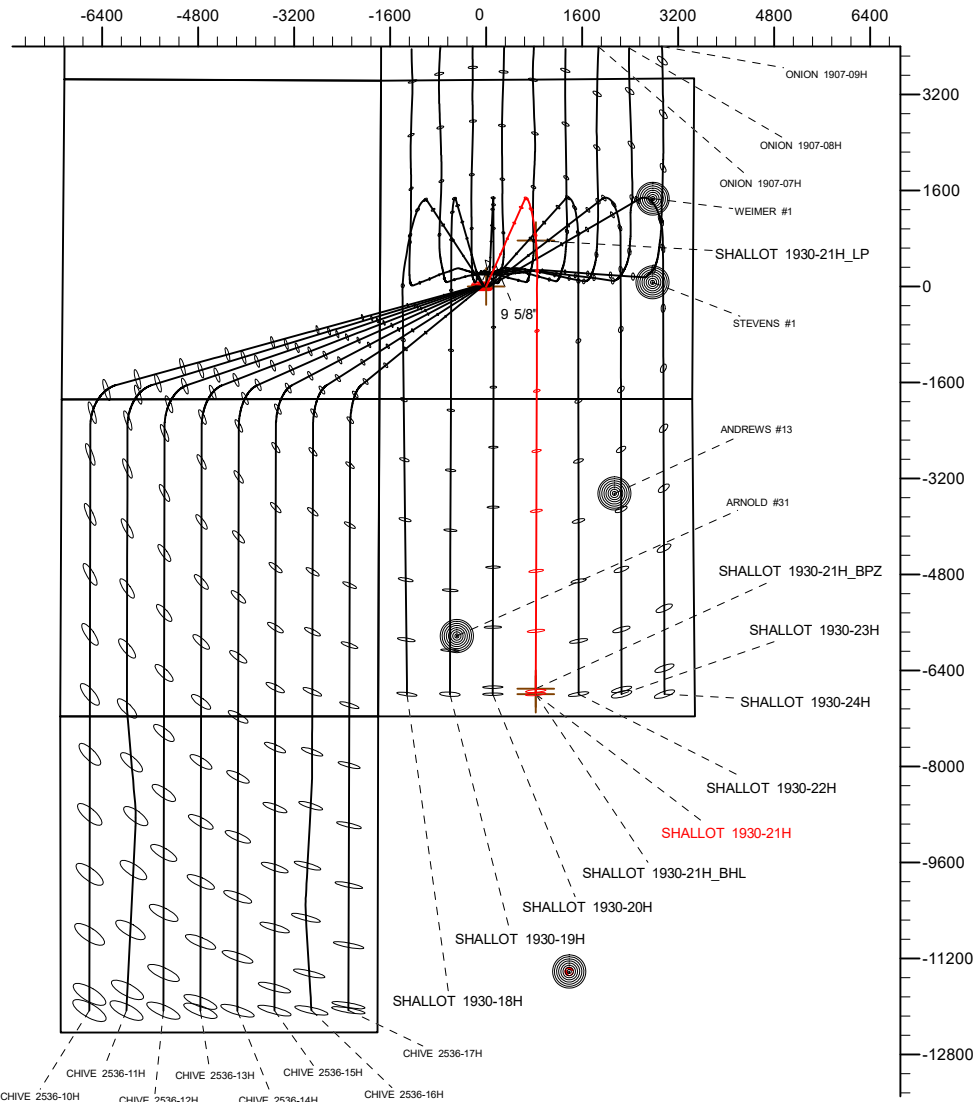
SHL
1875' FSL
1771' FWL

LP/TPZ
2640' FSL
2596' FWL

BPZ
460' FSL
2626' FWL

BHL
370' FSL
2626' FWL

West(-)/East(+) (3200 usft/in)

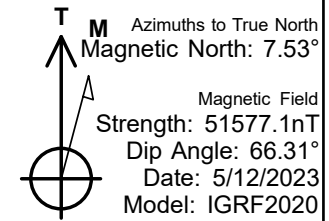
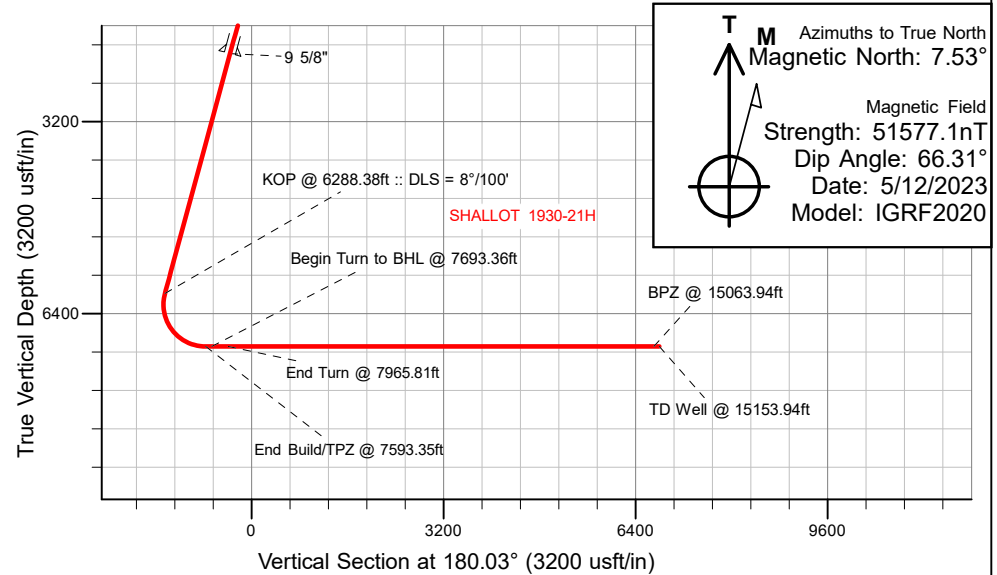


SECTION DETAILS

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	
330.25	0.00	0.00	330.25	0.00	0.00	0.00	0.00	0.00	
1156.75	16.53	23.83	1145.33	108.31	47.84	2.00	23.83	-108.33	
6288.38	16.53	23.83	6064.88	1443.87	637.73	0.00	0.00	-1444.21	
7593.35	90.00	174.75	6950.00	764.76	828.34	8.00	149.88	-765.19	
7693.36	90.00	174.75	6950.00	665.18	837.49	0.00	0.00	-665.61	
7965.81	90.00	180.20	6950.00	393.09	849.49	2.00	90.00	-393.54	
15153.94	90.00	180.20	6950.00	-6794.99	824.53	0.00	0.00	6794.56	SHALLOT 1930-21H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
SHALLOT 1930-21H_SHL	0.00	1256776.85	3252989.13	40.034702	-104.596487
SHALLOT 1930-21H_LP	6950.00	1257550.08	3253809.81	40.036802	-104.593528
SHALLOT 1930-21H_BPZ	6950.00	1250080.60	3253881.98	40.016296	-104.593543
SHALLOT 1930-21H_BHL	6950.00	1249990.61	3253882.85	40.016049	-104.593544



WELL DETAILS: SHALLOT 1930-21H

GL = 5011'

RKB = 20' @ 5031.00usft (RIG)

Plan: Design #1 (SHALLOT 1930-21H/Plan A)

Date: 5/19/2023

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SHALLOT 1930-21H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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 CHIVE & SHALLOT PAD			
Site Position:		Northing:	1,256,775.08 usft	Latitude:	40.034702
From:	Map	Easting:	3,252,813.14 usft	Longitude:	-104.597116
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	

Well		SHALLOT 1930-21H				
Well Position	+N/-S	0.00 usft	Northing:	1,256,776.85 usft	Latitude:	40.034702
	+E/-W	0.00 usft	Easting:	3,252,989.13 usft	Longitude:	-104.596488
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	5/12/2023	7.53	66.31	51,577.07501814

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	180.03	

Plan Survey Tool Program		Date	5/15/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,070.00	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	2,070.00	15,153.94	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

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Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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	
330.25	0.00	0.00	330.25	0.00	0.00	0.00	0.00	0.00	0.00	
1,156.75	16.53	23.83	1,145.33	108.31	47.84	2.00	2.00	0.00	23.83	
6,288.38	16.53	23.83	6,064.88	1,443.87	637.73	0.00	0.00	0.00	0.00	
7,593.35	90.00	174.75	6,950.00	764.76	828.34	8.00	5.63	11.57	149.88	
7,693.36	90.00	174.75	6,950.00	665.18	837.49	0.00	0.00	0.00	0.00	
7,965.81	90.00	180.20	6,950.00	393.09	849.49	2.00	0.00	2.00	90.00	
15,153.94	90.00	180.20	6,950.00	-6,794.99	824.53	0.00	0.00	0.00	0.00	SHALLOT 1930-21H_

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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
330.25	0.00	0.00	330.25	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 330.25ft									
400.00	1.39	23.83	399.99	0.78	0.34	-0.78	2.00	2.00	0.00
500.00	3.39	23.83	499.90	4.60	2.03	-4.60	2.00	2.00	0.00
600.00	5.39	23.83	599.60	11.61	5.13	-11.61	2.00	2.00	0.00
700.00	7.39	23.83	698.97	21.80	9.63	-21.80	2.00	2.00	0.00
800.00	9.39	23.83	797.90	35.15	15.53	-35.16	2.00	2.00	0.00
900.00	11.39	23.83	896.25	51.66	22.82	-51.67	2.00	2.00	0.00
1,000.00	13.39	23.83	993.92	71.29	31.49	-71.31	2.00	2.00	0.00
1,100.00	15.39	23.83	1,090.77	94.03	41.53	-94.05	2.00	2.00	0.00
1,156.75	16.53	23.83	1,145.33	108.31	47.84	-108.33	2.00	2.00	0.00
Hold Tangent @ 1156.75ft									
1,200.00	16.53	23.83	1,186.79	119.56	52.81	-119.59	0.00	0.00	0.00
1,300.00	16.53	23.83	1,282.66	145.59	64.30	-145.62	0.00	0.00	0.00
1,400.00	16.53	23.83	1,378.53	171.61	75.80	-171.65	0.00	0.00	0.00
1,500.00	16.53	23.83	1,474.40	197.64	87.29	-197.69	0.00	0.00	0.00
1,600.00	16.53	23.83	1,570.26	223.67	98.79	-223.72	0.00	0.00	0.00
1,700.00	16.53	23.83	1,666.13	249.69	110.28	-249.75	0.00	0.00	0.00
1,800.00	16.53	23.83	1,762.00	275.72	121.78	-275.78	0.00	0.00	0.00
1,900.00	16.53	23.83	1,857.86	301.74	133.27	-301.81	0.00	0.00	0.00
2,000.00	16.53	23.83	1,953.73	327.77	144.77	-327.85	0.00	0.00	0.00
2,100.00	16.53	23.83	2,049.60	353.80	156.26	-353.88	0.00	0.00	0.00
2,121.28	16.53	23.83	2,070.00	359.34	158.71	-359.42	0.00	0.00	0.00
9 5/8"									
2,200.00	16.53	23.83	2,145.47	379.82	167.76	-379.91	0.00	0.00	0.00
2,300.00	16.53	23.83	2,241.33	405.85	179.25	-405.94	0.00	0.00	0.00
2,400.00	16.53	23.83	2,337.20	431.88	190.75	-431.98	0.00	0.00	0.00
2,500.00	16.53	23.83	2,433.07	457.90	202.25	-458.01	0.00	0.00	0.00
2,600.00	16.53	23.83	2,528.93	483.93	213.74	-484.04	0.00	0.00	0.00
2,700.00	16.53	23.83	2,624.80	509.95	225.24	-510.07	0.00	0.00	0.00
2,800.00	16.53	23.83	2,720.67	535.98	236.73	-536.10	0.00	0.00	0.00
2,900.00	16.53	23.83	2,816.54	562.01	248.23	-562.14	0.00	0.00	0.00
3,000.00	16.53	23.83	2,912.40	588.03	259.72	-588.17	0.00	0.00	0.00
3,100.00	16.53	23.83	3,008.27	614.06	271.22	-614.20	0.00	0.00	0.00
3,200.00	16.53	23.83	3,104.14	640.09	282.71	-640.23	0.00	0.00	0.00
3,300.00	16.53	23.83	3,200.00	666.11	294.21	-666.27	0.00	0.00	0.00
3,400.00	16.53	23.83	3,295.87	692.14	305.70	-692.30	0.00	0.00	0.00
3,500.00	16.53	23.83	3,391.74	718.16	317.20	-718.33	0.00	0.00	0.00
3,600.00	16.53	23.83	3,487.60	744.19	328.69	-744.36	0.00	0.00	0.00
3,700.00	16.53	23.83	3,583.47	770.22	340.19	-770.39	0.00	0.00	0.00
3,800.00	16.53	23.83	3,679.34	796.24	351.68	-796.43	0.00	0.00	0.00
3,900.00	16.53	23.83	3,775.21	822.27	363.18	-822.46	0.00	0.00	0.00
4,000.00	16.53	23.83	3,871.07	848.29	374.67	-848.49	0.00	0.00	0.00
4,100.00	16.53	23.83	3,966.94	874.32	386.17	-874.52	0.00	0.00	0.00
4,200.00	16.53	23.83	4,062.81	900.35	397.66	-900.56	0.00	0.00	0.00
4,300.00	16.53	23.83	4,158.67	926.37	409.16	-926.59	0.00	0.00	0.00
4,400.00	16.53	23.83	4,254.54	952.40	420.65	-952.62	0.00	0.00	0.00
4,500.00	16.53	23.83	4,350.41	978.43	432.15	-978.65	0.00	0.00	0.00
4,600.00	16.53	23.83	4,446.28	1,004.45	443.64	-1,004.68	0.00	0.00	0.00

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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)	
4,700.00	16.53	23.83	4,542.14	1,030.48	455.14	-1,030.72	0.00	0.00	0.00	
4,800.00	16.53	23.83	4,638.01	1,056.50	466.63	-1,056.75	0.00	0.00	0.00	
4,900.00	16.53	23.83	4,733.88	1,082.53	478.13	-1,082.78	0.00	0.00	0.00	
5,000.00	16.53	23.83	4,829.74	1,108.56	489.63	-1,108.81	0.00	0.00	0.00	
5,100.00	16.53	23.83	4,925.61	1,134.58	501.12	-1,134.84	0.00	0.00	0.00	
5,200.00	16.53	23.83	5,021.48	1,160.61	512.62	-1,160.88	0.00	0.00	0.00	
5,300.00	16.53	23.83	5,117.35	1,186.63	524.11	-1,186.91	0.00	0.00	0.00	
5,400.00	16.53	23.83	5,213.21	1,212.66	535.61	-1,212.94	0.00	0.00	0.00	
5,500.00	16.53	23.83	5,309.08	1,238.69	547.10	-1,238.97	0.00	0.00	0.00	
5,600.00	16.53	23.83	5,404.95	1,264.71	558.60	-1,265.01	0.00	0.00	0.00	
5,700.00	16.53	23.83	5,500.81	1,290.74	570.09	-1,291.04	0.00	0.00	0.00	
5,800.00	16.53	23.83	5,596.68	1,316.77	581.59	-1,317.07	0.00	0.00	0.00	
5,900.00	16.53	23.83	5,692.55	1,342.79	593.08	-1,343.10	0.00	0.00	0.00	
6,000.00	16.53	23.83	5,788.42	1,368.82	604.58	-1,369.13	0.00	0.00	0.00	
6,100.00	16.53	23.83	5,884.28	1,394.84	616.07	-1,395.17	0.00	0.00	0.00	
6,200.00	16.53	23.83	5,980.15	1,420.87	627.57	-1,421.20	0.00	0.00	0.00	
6,288.38	16.53	23.83	6,064.88	1,443.87	637.73	-1,444.21	0.00	0.00	0.00	
KOP @ 6288.38ft :: DLS = 8°/100'										
6,300.00	15.73	25.55	6,076.04	1,446.81	639.07	-1,447.14	8.00	-6.86	14.81	
6,350.00	12.51	35.32	6,124.53	1,457.34	645.13	-1,457.68	8.00	-6.45	19.53	
6,400.00	9.85	50.91	6,173.59	1,464.46	651.58	-1,464.80	8.00	-5.31	31.18	
6,450.00	8.34	74.57	6,222.97	1,468.12	658.40	-1,468.47	8.00	-3.03	47.33	
6,500.00	8.59	101.96	6,272.45	1,468.32	665.55	-1,468.66	8.00	0.50	54.77	
6,550.00	10.48	123.48	6,321.77	1,465.03	672.99	-1,465.39	8.00	3.78	43.04	
6,600.00	13.32	137.23	6,370.70	1,458.29	680.70	-1,458.65	8.00	5.70	27.50	
6,650.00	16.65	145.90	6,419.00	1,448.13	688.63	-1,448.49	8.00	6.64	17.35	
6,700.00	20.21	151.68	6,466.43	1,434.59	696.75	-1,434.96	8.00	7.13	11.55	
6,750.00	23.91	155.76	6,512.77	1,417.74	705.01	-1,418.11	8.00	7.39	8.16	
6,800.00	27.68	158.79	6,557.78	1,397.67	713.37	-1,398.04	8.00	7.55	6.06	
6,850.00	31.51	161.14	6,601.25	1,374.46	721.80	-1,374.84	8.00	7.66	4.70	
6,900.00	35.38	163.03	6,642.96	1,348.25	730.25	-1,348.63	8.00	7.73	3.77	
6,950.00	39.26	164.59	6,682.72	1,319.14	738.69	-1,319.52	8.00	7.77	3.12	
7,000.00	43.17	165.90	6,720.33	1,287.28	747.06	-1,287.67	8.00	7.81	2.64	
7,050.00	47.09	167.04	6,755.60	1,252.84	755.33	-1,253.23	8.00	7.84	2.28	
7,100.00	51.01	168.05	6,788.36	1,215.97	763.47	-1,216.37	8.00	7.86	2.00	
7,150.00	54.95	168.94	6,818.46	1,176.86	771.42	-1,177.26	8.00	7.87	1.79	
7,200.00	58.89	169.76	6,845.74	1,135.69	779.16	-1,136.10	8.00	7.88	1.63	
7,250.00	62.84	170.51	6,870.08	1,092.67	786.63	-1,093.08	8.00	7.89	1.50	
7,300.00	66.79	171.20	6,891.36	1,048.01	793.82	-1,048.42	8.00	7.90	1.40	
7,350.00	70.74	171.86	6,909.47	1,001.92	800.68	-1,002.34	8.00	7.91	1.32	
7,400.00	74.69	172.49	6,924.32	954.63	807.18	-955.06	8.00	7.91	1.25	
7,450.00	78.65	173.09	6,935.84	906.37	813.28	-906.80	8.00	7.91	1.21	
7,500.00	82.61	173.68	6,943.98	857.38	818.96	-857.81	8.00	7.92	1.17	
7,550.00	86.57	174.25	6,948.70	807.89	824.19	-808.32	8.00	7.92	1.15	
7,593.35	90.00	174.75	6,950.00	764.76	828.34	-765.19	8.00	7.92	1.14	
End Build/TPZ @ 7593.35ft										
7,600.00	90.00	174.75	6,950.00	758.14	828.95	-758.57	0.00	0.00	0.00	
7,693.36	90.00	174.75	6,950.00	665.18	837.49	-665.61	0.00	0.00	0.00	
Begin Turn to BHL @ 7693.36ft										
7,700.00	90.00	174.88	6,950.00	658.56	838.09	-659.00	2.00	0.00	2.00	
7,800.00	90.00	176.88	6,950.00	558.82	845.27	-559.27	2.00	0.00	2.00	
7,900.00	90.00	178.88	6,950.00	458.90	848.97	-459.34	2.00	0.00	2.00	
7,965.81	90.00	180.20	6,950.00	393.09	849.49	-393.54	2.00	0.00	2.00	
End Turn @ 7965.81ft										

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SHALLOT 1930-21H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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)
8,000.00	90.00	180.20	6,950.00	358.90	849.37	-359.34	0.00	0.00	0.00
8,100.00	90.00	180.20	6,950.00	258.90	849.03	-259.35	0.00	0.00	0.00
8,200.00	90.00	180.20	6,950.00	158.90	848.68	-159.35	0.00	0.00	0.00
8,300.00	90.00	180.20	6,950.00	58.90	848.33	-59.35	0.00	0.00	0.00
8,400.00	90.00	180.20	6,950.00	-41.10	847.98	40.65	0.00	0.00	0.00
8,500.00	90.00	180.20	6,950.00	-141.10	847.64	140.65	0.00	0.00	0.00
8,600.00	90.00	180.20	6,950.00	-241.10	847.29	240.65	0.00	0.00	0.00
8,700.00	90.00	180.20	6,950.00	-341.10	846.94	340.65	0.00	0.00	0.00
8,800.00	90.00	180.20	6,950.00	-441.10	846.60	440.65	0.00	0.00	0.00
8,900.00	90.00	180.20	6,950.00	-541.09	846.25	540.65	0.00	0.00	0.00
9,000.00	90.00	180.20	6,950.00	-641.09	845.90	640.65	0.00	0.00	0.00
9,100.00	90.00	180.20	6,950.00	-741.09	845.55	740.65	0.00	0.00	0.00
9,200.00	90.00	180.20	6,950.00	-841.09	845.21	840.65	0.00	0.00	0.00
9,300.00	90.00	180.20	6,950.00	-941.09	844.86	940.65	0.00	0.00	0.00
9,400.00	90.00	180.20	6,950.00	-1,041.09	844.51	1,040.65	0.00	0.00	0.00
9,500.00	90.00	180.20	6,950.00	-1,141.09	844.16	1,140.65	0.00	0.00	0.00
9,600.00	90.00	180.20	6,950.00	-1,241.09	843.82	1,240.65	0.00	0.00	0.00
9,700.00	90.00	180.20	6,950.00	-1,341.09	843.47	1,340.65	0.00	0.00	0.00
9,800.00	90.00	180.20	6,950.00	-1,441.09	843.12	1,440.65	0.00	0.00	0.00
9,900.00	90.00	180.20	6,950.00	-1,541.09	842.78	1,540.65	0.00	0.00	0.00
10,000.00	90.00	180.20	6,950.00	-1,641.09	842.43	1,640.65	0.00	0.00	0.00
10,100.00	90.00	180.20	6,950.00	-1,741.09	842.08	1,740.65	0.00	0.00	0.00
10,200.00	90.00	180.20	6,950.00	-1,841.09	841.73	1,840.65	0.00	0.00	0.00
10,300.00	90.00	180.20	6,950.00	-1,941.09	841.39	1,940.65	0.00	0.00	0.00
10,400.00	90.00	180.20	6,950.00	-2,041.09	841.04	2,040.64	0.00	0.00	0.00
10,500.00	90.00	180.20	6,950.00	-2,141.08	840.69	2,140.64	0.00	0.00	0.00
10,600.00	90.00	180.20	6,950.00	-2,241.08	840.34	2,240.64	0.00	0.00	0.00
10,700.00	90.00	180.20	6,950.00	-2,341.08	840.00	2,340.64	0.00	0.00	0.00
10,800.00	90.00	180.20	6,950.00	-2,441.08	839.65	2,440.64	0.00	0.00	0.00
10,900.00	90.00	180.20	6,950.00	-2,541.08	839.30	2,540.64	0.00	0.00	0.00
11,000.00	90.00	180.20	6,950.00	-2,641.08	838.96	2,640.64	0.00	0.00	0.00
11,100.00	90.00	180.20	6,950.00	-2,741.08	838.61	2,740.64	0.00	0.00	0.00
11,200.00	90.00	180.20	6,950.00	-2,841.08	838.26	2,840.64	0.00	0.00	0.00
11,300.00	90.00	180.20	6,950.00	-2,941.08	837.91	2,940.64	0.00	0.00	0.00
11,400.00	90.00	180.20	6,950.00	-3,041.08	837.57	3,040.64	0.00	0.00	0.00
11,500.00	90.00	180.20	6,950.00	-3,141.08	837.22	3,140.64	0.00	0.00	0.00
11,600.00	90.00	180.20	6,950.00	-3,241.08	836.87	3,240.64	0.00	0.00	0.00
11,700.00	90.00	180.20	6,950.00	-3,341.08	836.52	3,340.64	0.00	0.00	0.00
11,800.00	90.00	180.20	6,950.00	-3,441.08	836.18	3,440.64	0.00	0.00	0.00
11,900.00	90.00	180.20	6,950.00	-3,541.08	835.83	3,540.64	0.00	0.00	0.00
12,000.00	90.00	180.20	6,950.00	-3,641.08	835.48	3,640.64	0.00	0.00	0.00
12,100.00	90.00	180.20	6,950.00	-3,741.08	835.14	3,740.64	0.00	0.00	0.00
12,200.00	90.00	180.20	6,950.00	-3,841.07	834.79	3,840.64	0.00	0.00	0.00
12,300.00	90.00	180.20	6,950.00	-3,941.07	834.44	3,940.64	0.00	0.00	0.00
12,400.00	90.00	180.20	6,950.00	-4,041.07	834.09	4,040.64	0.00	0.00	0.00
12,500.00	90.00	180.20	6,950.00	-4,141.07	833.75	4,140.64	0.00	0.00	0.00
12,600.00	90.00	180.20	6,950.00	-4,241.07	833.40	4,240.64	0.00	0.00	0.00
12,700.00	90.00	180.20	6,950.00	-4,341.07	833.05	4,340.63	0.00	0.00	0.00
12,800.00	90.00	180.20	6,950.00	-4,441.07	832.70	4,440.63	0.00	0.00	0.00
12,900.00	90.00	180.20	6,950.00	-4,541.07	832.36	4,540.63	0.00	0.00	0.00
13,000.00	90.00	180.20	6,950.00	-4,641.07	832.01	4,640.63	0.00	0.00	0.00
13,100.00	90.00	180.20	6,950.00	-4,741.07	831.66	4,740.63	0.00	0.00	0.00
13,200.00	90.00	180.20	6,950.00	-4,841.07	831.32	4,840.63	0.00	0.00	0.00
13,300.00	90.00	180.20	6,950.00	-4,941.07	830.97	4,940.63	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SHALLOT 1930-21H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	SHALLOT 1930-21H	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)	
13,400.00	90.00	180.20	6,950.00	-5,041.07	830.62	5,040.63	0.00	0.00	0.00	
13,500.00	90.00	180.20	6,950.00	-5,141.07	830.27	5,140.63	0.00	0.00	0.00	
13,600.00	90.00	180.20	6,950.00	-5,241.07	829.93	5,240.63	0.00	0.00	0.00	
13,700.00	90.00	180.20	6,950.00	-5,341.07	829.58	5,340.63	0.00	0.00	0.00	
13,800.00	90.00	180.20	6,950.00	-5,441.07	829.23	5,440.63	0.00	0.00	0.00	
13,900.00	90.00	180.20	6,950.00	-5,541.06	828.88	5,540.63	0.00	0.00	0.00	
14,000.00	90.00	180.20	6,950.00	-5,641.06	828.54	5,640.63	0.00	0.00	0.00	
14,100.00	90.00	180.20	6,950.00	-5,741.06	828.19	5,740.63	0.00	0.00	0.00	
14,200.00	90.00	180.20	6,950.00	-5,841.06	827.84	5,840.63	0.00	0.00	0.00	
14,300.00	90.00	180.20	6,950.00	-5,941.06	827.50	5,940.63	0.00	0.00	0.00	
14,400.00	90.00	180.20	6,950.00	-6,041.06	827.15	6,040.63	0.00	0.00	0.00	
14,500.00	90.00	180.20	6,950.00	-6,141.06	826.80	6,140.63	0.00	0.00	0.00	
14,600.00	90.00	180.20	6,950.00	-6,241.06	826.45	6,240.63	0.00	0.00	0.00	
14,700.00	90.00	180.20	6,950.00	-6,341.06	826.11	6,340.63	0.00	0.00	0.00	
14,800.00	90.00	180.20	6,950.00	-6,441.06	825.76	6,440.63	0.00	0.00	0.00	
14,900.00	90.00	180.20	6,950.00	-6,541.06	825.41	6,540.63	0.00	0.00	0.00	
15,000.00	90.00	180.20	6,950.00	-6,641.06	825.06	6,640.63	0.00	0.00	0.00	
15,063.94	90.00	180.20	6,950.00	-6,705.00	824.84	6,704.56	0.00	0.00	0.00	
BPZ @ 15063.94ft										
15,100.00	90.00	180.20	6,950.00	-6,741.06	824.72	6,740.62	0.00	0.00	0.00	
15,153.94	90.00	180.20	6,950.00	-6,794.99	824.53	6,794.56	0.00	0.00	0.00	
TD Well @ 15153.94ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,121.28	2,070.00	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)		
330.25	330.25	0.00	0.00	Begin Nudge @ 330.25ft	
1,156.75	1,145.33	108.31	47.84	Hold Tangent @ 1156.75ft	
6,288.38	6,064.88	1,443.87	637.73	KOP @ 6288.38ft :: DLS = 8°/100'	
7,593.35	6,950.00	764.76	828.34	End Build/TPZ @ 7593.35ft	
7,693.36	6,950.00	665.18	837.49	Begin Turn to BHL @ 7693.36ft	
7,965.81	6,950.00	393.09	849.49	End Turn @ 7965.81ft	
15,063.94	6,950.00	-6,705.00	824.84	BPZ @ 15063.94ft	
15,153.94	6,950.00	-6,794.99	824.53	TD Well @ 15153.94ft	