

VERDAD RESOURCES

**WATTENBERG FIELD
1N-64W-19 CHIVE & SHALLOT PAD
CHIVE 2536-10H**

Plan A

Plan: Design #1

Standard Planning Report

19 May, 2023

Project: WATTENBERG FIELD
Site: 1N-64W-19 CHIVE & SHALLOT PAD
Well: CHIVE 2536-10H
Wellbore: Plan A
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
2070.00	2237.27	9 5/8"	9-5/8

SHL
1875' FSL
1595' FWL

LP/TPZ
460' FNL
480' FWL

BPZ
460' FSL
480' FWL

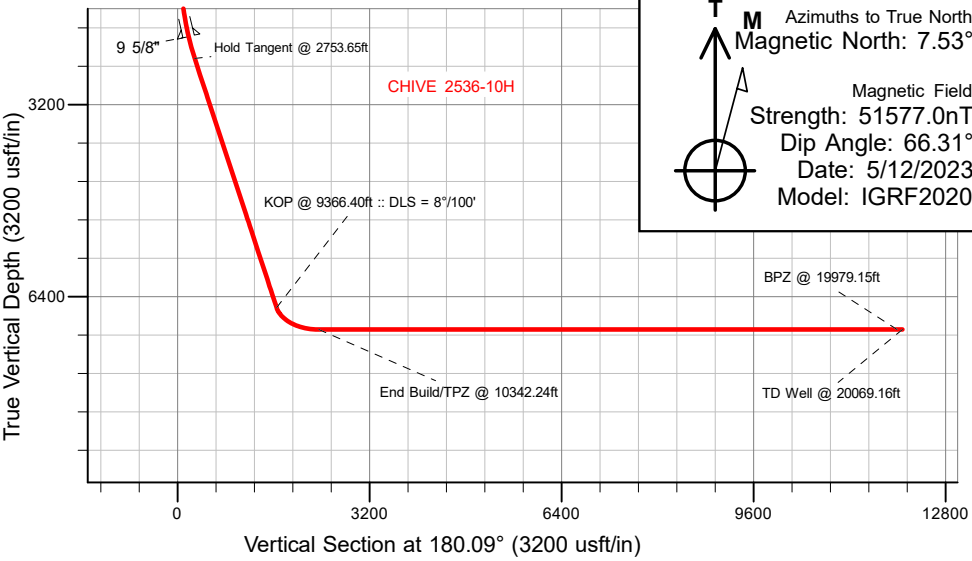
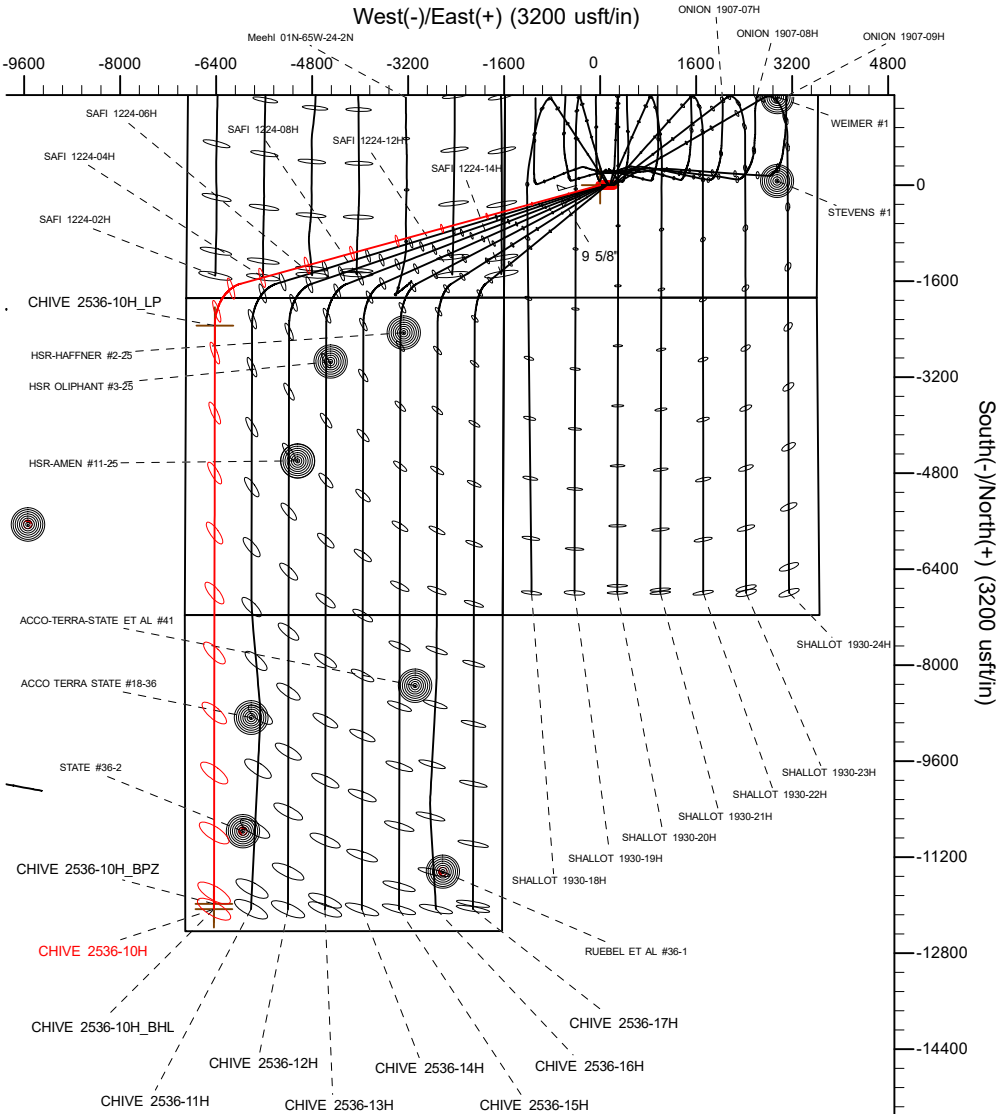
BHL
370' FSL
480' FWL

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.65	0.00	0.00	200.65	0.00	0.00	0.00	0.00	0.00	
2753.65	51.06	254.67	2428.90	-281.36	-1026.38	2.00	254.67	282.98	
9366.40	51.06	254.67	6585.05	-1641.17	-5986.80	0.00	0.00	1650.58	
10342.24	90.00	180.09	6950.00	-2341.24	-6423.25	8.00	-80.17	2351.33	
20069.16	90.00	180.09	6950.00	-12068.14	-6437.84	0.00	0.00	12078.24	CHIVE 2536-10H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
CHIVE 2536-10H_SHL	0.00	1256775.09	3252813.14	40.034702	-104.597116
CHIVE 2536-10H_LP	6950.00	1254368.18	3246414.18	40.028272	-104.620053
CHIVE 2536-10H_BPZ	6950.00	1244732.02	3246497.73	40.001818	-104.620096
CHIVE 2536-10H_BHL	6950.00	1244642.02	3246498.51	40.001571	-104.620096



WELL DETAILS: CHIVE 2536-10H

GL = 5011'

RKB = 20' @ 5031.00usft (RIG)

Plan: Design #1 (CHIVE 2536-10H/Plan A)

Date: 5/19/2023

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CHIVE 2536-10H
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:	CHIVE 2536-10H	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		CHIVE 2536-10H				
Well Position	+N/-S	0.00 usft	Northing:	1,256,775.08 usft	Latitude:	40.034702
	+E/-W	0.00 usft	Easting:	3,252,813.14 usft	Longitude:	-104.597116
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	51,577.01058523

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	180.09	

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	20,069.16	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

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Site:	1N-64W-19 CHIVE & SHALLOT PAD	North Reference:	True
Well:	CHIVE 2536-10H	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	
200.65	0.00	0.00	200.65	0.00	0.00	0.00	0.00	0.00	0.00	
2,753.65	51.06	254.67	2,428.90	-281.36	-1,026.38	2.00	2.00	0.00	254.67	
9,366.40	51.06	254.67	6,585.05	-1,641.17	-5,986.80	0.00	0.00	0.00	0.00	
10,342.24	90.00	180.09	6,950.00	-2,341.24	-6,423.25	8.00	3.99	-7.64	-80.17	
20,069.16	90.00	180.09	6,950.00	-12,068.14	-6,437.84	0.00	0.00	0.00	0.00	CHIVE 2536-10H_BH

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:	CHIVE 2536-10H	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
200.65	0.00	0.00	200.65	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 200.65ft									
300.00	1.99	254.67	299.98	-0.46	-1.66	0.46	2.00	2.00	0.00
400.00	3.99	254.67	399.84	-1.83	-6.69	1.84	2.00	2.00	0.00
500.00	5.99	254.67	499.46	-4.13	-15.07	4.15	2.00	2.00	0.00
600.00	7.99	254.67	598.71	-7.35	-26.80	7.39	2.00	2.00	0.00
700.00	9.99	254.67	697.48	-11.48	-41.87	11.54	2.00	2.00	0.00
800.00	11.99	254.67	795.64	-16.52	-60.24	16.61	2.00	2.00	0.00
900.00	13.99	254.67	893.07	-22.46	-81.92	22.58	2.00	2.00	0.00
1,000.00	15.99	254.67	989.67	-29.29	-106.86	29.46	2.00	2.00	0.00
1,100.00	17.99	254.67	1,085.30	-37.02	-135.03	37.23	2.00	2.00	0.00
1,200.00	19.99	254.67	1,179.85	-45.62	-166.41	45.88	2.00	2.00	0.00
1,300.00	21.99	254.67	1,273.22	-55.09	-200.95	55.40	2.00	2.00	0.00
1,400.00	23.99	254.67	1,365.27	-65.41	-238.61	65.78	2.00	2.00	0.00
1,500.00	25.99	254.67	1,455.91	-76.58	-279.34	77.02	2.00	2.00	0.00
1,600.00	27.99	254.67	1,545.01	-88.57	-323.10	89.08	2.00	2.00	0.00
1,700.00	29.99	254.67	1,632.48	-101.38	-369.84	101.97	2.00	2.00	0.00
1,800.00	31.99	254.67	1,718.21	-115.00	-419.49	115.65	2.00	2.00	0.00
1,900.00	33.99	254.67	1,802.08	-129.39	-471.99	130.13	2.00	2.00	0.00
2,000.00	35.99	254.67	1,884.00	-144.55	-527.29	145.38	2.00	2.00	0.00
2,100.00	37.99	254.67	1,963.88	-160.45	-585.31	161.37	2.00	2.00	0.00
2,200.00	39.99	254.67	2,041.60	-177.08	-645.98	178.10	2.00	2.00	0.00
2,237.27	40.73	254.67	2,070.00	-183.46	-669.26	184.52	2.00	2.00	0.00
9 5/8"									
2,300.00	41.99	254.67	2,117.08	-194.42	-709.23	195.54	2.00	2.00	0.00
2,400.00	43.99	254.67	2,190.23	-212.45	-774.99	213.67	2.00	2.00	0.00
2,500.00	45.99	254.67	2,260.96	-231.14	-843.16	232.46	2.00	2.00	0.00
2,600.00	47.99	254.67	2,329.17	-250.47	-913.68	251.90	2.00	2.00	0.00
2,700.00	49.99	254.67	2,394.79	-270.42	-986.45	271.97	2.00	2.00	0.00
2,753.65	51.06	254.67	2,428.90	-281.36	-1,026.38	282.98	2.00	2.00	0.00
Hold Tangent @ 2753.65ft									
2,800.00	51.06	254.67	2,458.03	-290.90	-1,061.15	292.56	0.00	0.00	0.00
2,900.00	51.06	254.67	2,520.88	-311.46	-1,136.17	313.24	0.00	0.00	0.00
3,000.00	51.06	254.67	2,583.73	-332.02	-1,211.18	333.92	0.00	0.00	0.00
3,100.00	51.06	254.67	2,646.58	-352.59	-1,286.19	354.61	0.00	0.00	0.00
3,200.00	51.06	254.67	2,709.43	-373.15	-1,361.20	375.29	0.00	0.00	0.00
3,300.00	51.06	254.67	2,772.28	-393.71	-1,436.22	395.97	0.00	0.00	0.00
3,400.00	51.06	254.67	2,835.13	-414.28	-1,511.23	416.65	0.00	0.00	0.00
3,500.00	51.06	254.67	2,897.98	-434.84	-1,586.24	437.33	0.00	0.00	0.00
3,600.00	51.06	254.67	2,960.83	-455.40	-1,661.26	458.01	0.00	0.00	0.00
3,700.00	51.06	254.67	3,023.68	-475.97	-1,736.27	478.69	0.00	0.00	0.00
3,800.00	51.06	254.67	3,086.53	-496.53	-1,811.28	499.37	0.00	0.00	0.00
3,900.00	51.06	254.67	3,149.38	-517.09	-1,886.30	520.06	0.00	0.00	0.00
4,000.00	51.06	254.67	3,212.23	-537.66	-1,961.31	540.74	0.00	0.00	0.00
4,100.00	51.06	254.67	3,275.09	-558.22	-2,036.32	561.42	0.00	0.00	0.00
4,200.00	51.06	254.67	3,337.94	-578.78	-2,111.33	582.10	0.00	0.00	0.00
4,300.00	51.06	254.67	3,400.79	-599.35	-2,186.35	602.78	0.00	0.00	0.00
4,400.00	51.06	254.67	3,463.64	-619.91	-2,261.36	623.46	0.00	0.00	0.00
4,500.00	51.06	254.67	3,526.49	-640.47	-2,336.37	644.14	0.00	0.00	0.00
4,600.00	51.06	254.67	3,589.34	-661.04	-2,411.39	664.82	0.00	0.00	0.00
4,700.00	51.06	254.67	3,652.19	-681.60	-2,486.40	685.51	0.00	0.00	0.00

Planning Report

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Well:	CHIVE 2536-10H	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	51.06	254.67	3,715.04	-702.16	-2,561.41	706.19	0.00	0.00	0.00
4,900.00	51.06	254.67	3,777.89	-722.73	-2,636.42	726.87	0.00	0.00	0.00
5,000.00	51.06	254.67	3,840.74	-743.29	-2,711.44	747.55	0.00	0.00	0.00
5,100.00	51.06	254.67	3,903.59	-763.86	-2,786.45	768.23	0.00	0.00	0.00
5,200.00	51.06	254.67	3,966.44	-784.42	-2,861.46	788.91	0.00	0.00	0.00
5,300.00	51.06	254.67	4,029.29	-804.98	-2,936.48	809.59	0.00	0.00	0.00
5,400.00	51.06	254.67	4,092.14	-825.55	-3,011.49	830.27	0.00	0.00	0.00
5,500.00	51.06	254.67	4,154.99	-846.11	-3,086.50	850.96	0.00	0.00	0.00
5,600.00	51.06	254.67	4,217.84	-866.67	-3,161.52	871.64	0.00	0.00	0.00
5,700.00	51.06	254.67	4,280.70	-887.24	-3,236.53	892.32	0.00	0.00	0.00
5,800.00	51.06	254.67	4,343.55	-907.80	-3,311.54	913.00	0.00	0.00	0.00
5,900.00	51.06	254.67	4,406.40	-928.36	-3,386.55	933.68	0.00	0.00	0.00
6,000.00	51.06	254.67	4,469.25	-948.93	-3,461.57	954.36	0.00	0.00	0.00
6,100.00	51.06	254.67	4,532.10	-969.49	-3,536.58	975.04	0.00	0.00	0.00
6,200.00	51.06	254.67	4,594.95	-990.05	-3,611.59	995.72	0.00	0.00	0.00
6,300.00	51.06	254.67	4,657.80	-1,010.62	-3,686.61	1,016.41	0.00	0.00	0.00
6,400.00	51.06	254.67	4,720.65	-1,031.18	-3,761.62	1,037.09	0.00	0.00	0.00
6,500.00	51.06	254.67	4,783.50	-1,051.74	-3,836.63	1,057.77	0.00	0.00	0.00
6,600.00	51.06	254.67	4,846.35	-1,072.31	-3,911.65	1,078.45	0.00	0.00	0.00
6,700.00	51.06	254.67	4,909.20	-1,092.87	-3,986.66	1,099.13	0.00	0.00	0.00
6,800.00	51.06	254.67	4,972.05	-1,113.43	-4,061.67	1,119.81	0.00	0.00	0.00
6,900.00	51.06	254.67	5,034.90	-1,134.00	-4,136.68	1,140.49	0.00	0.00	0.00
7,000.00	51.06	254.67	5,097.75	-1,154.56	-4,211.70	1,161.17	0.00	0.00	0.00
7,100.00	51.06	254.67	5,160.60	-1,175.12	-4,286.71	1,181.86	0.00	0.00	0.00
7,200.00	51.06	254.67	5,223.45	-1,195.69	-4,361.72	1,202.54	0.00	0.00	0.00
7,300.00	51.06	254.67	5,286.31	-1,216.25	-4,436.74	1,223.22	0.00	0.00	0.00
7,400.00	51.06	254.67	5,349.16	-1,236.81	-4,511.75	1,243.90	0.00	0.00	0.00
7,500.00	51.06	254.67	5,412.01	-1,257.38	-4,586.76	1,264.58	0.00	0.00	0.00
7,600.00	51.06	254.67	5,474.86	-1,277.94	-4,661.77	1,285.26	0.00	0.00	0.00
7,700.00	51.06	254.67	5,537.71	-1,298.50	-4,736.79	1,305.94	0.00	0.00	0.00
7,800.00	51.06	254.67	5,600.56	-1,319.07	-4,811.80	1,326.62	0.00	0.00	0.00
7,900.00	51.06	254.67	5,663.41	-1,339.63	-4,886.81	1,347.31	0.00	0.00	0.00
8,000.00	51.06	254.67	5,726.26	-1,360.20	-4,961.83	1,367.99	0.00	0.00	0.00
8,100.00	51.06	254.67	5,789.11	-1,380.76	-5,036.84	1,388.67	0.00	0.00	0.00
8,200.00	51.06	254.67	5,851.96	-1,401.32	-5,111.85	1,409.35	0.00	0.00	0.00
8,300.00	51.06	254.67	5,914.81	-1,421.89	-5,186.87	1,430.03	0.00	0.00	0.00
8,400.00	51.06	254.67	5,977.66	-1,442.45	-5,261.88	1,450.71	0.00	0.00	0.00
8,500.00	51.06	254.67	6,040.51	-1,463.01	-5,336.89	1,471.39	0.00	0.00	0.00
8,600.00	51.06	254.67	6,103.36	-1,483.58	-5,411.90	1,492.07	0.00	0.00	0.00
8,700.00	51.06	254.67	6,166.21	-1,504.14	-5,486.92	1,512.76	0.00	0.00	0.00
8,800.00	51.06	254.67	6,229.06	-1,524.70	-5,561.93	1,533.44	0.00	0.00	0.00
8,900.00	51.06	254.67	6,291.92	-1,545.27	-5,636.94	1,554.12	0.00	0.00	0.00
9,000.00	51.06	254.67	6,354.77	-1,565.83	-5,711.96	1,574.80	0.00	0.00	0.00
9,100.00	51.06	254.67	6,417.62	-1,586.39	-5,786.97	1,595.48	0.00	0.00	0.00
9,200.00	51.06	254.67	6,480.47	-1,606.96	-5,861.98	1,616.16	0.00	0.00	0.00
9,300.00	51.06	254.67	6,543.32	-1,627.52	-5,937.00	1,636.84	0.00	0.00	0.00
9,366.40	51.06	254.67	6,585.05	-1,641.17	-5,986.80	1,650.58	0.00	0.00	0.00
KOP @ 9366.40ft :: DLS = 8°/100'									
9,400.00	51.57	251.29	6,606.06	-1,648.85	-6,011.88	1,658.29	8.00	1.51	-10.06
9,450.00	52.50	246.35	6,636.83	-1,663.10	-6,048.61	1,672.59	8.00	1.86	-9.87
9,500.00	53.63	241.55	6,666.88	-1,680.65	-6,084.49	1,690.20	8.00	2.26	-9.60
9,550.00	54.95	236.90	6,696.08	-1,701.42	-6,119.35	1,711.03	8.00	2.64	-9.30
9,600.00	56.44	232.41	6,724.27	-1,725.32	-6,153.02	1,734.98	8.00	2.98	-8.99
9,650.00	58.09	228.07	6,751.31	-1,752.22	-6,185.32	1,761.93	8.00	3.29	-8.67

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CHIVE 2536-10H
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:	CHIVE 2536-10H	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)	
9,700.00	59.87	223.90	6,777.09	-1,781.99	-6,216.12	1,791.75	8.00	3.58	-8.35	
9,750.00	61.79	219.87	6,801.46	-1,814.49	-6,245.25	1,824.30	8.00	3.83	-8.04	
9,800.00	63.82	216.00	6,824.32	-1,849.56	-6,272.57	1,859.41	8.00	4.06	-7.75	
9,850.00	65.95	212.26	6,845.55	-1,887.03	-6,297.95	1,896.93	8.00	4.26	-7.48	
9,900.00	68.16	208.64	6,865.04	-1,926.72	-6,321.27	1,936.65	8.00	4.43	-7.23	
9,950.00	70.46	205.14	6,882.71	-1,968.44	-6,342.41	1,978.40	8.00	4.59	-7.01	
10,000.00	72.82	201.73	6,898.46	-2,011.97	-6,361.27	2,021.96	8.00	4.72	-6.81	
10,050.00	75.23	198.42	6,912.23	-2,057.11	-6,377.76	2,067.12	8.00	4.83	-6.64	
10,100.00	77.69	195.17	6,923.93	-2,103.64	-6,391.79	2,113.68	8.00	4.92	-6.49	
10,150.00	80.19	191.99	6,933.53	-2,151.33	-6,403.31	2,161.38	8.00	5.00	-6.37	
10,200.00	82.72	188.85	6,940.96	-2,199.95	-6,412.25	2,210.02	8.00	5.06	-6.27	
10,250.00	85.27	185.75	6,946.19	-2,249.26	-6,418.56	2,259.34	8.00	5.10	-6.20	
10,300.00	87.83	182.68	6,949.20	-2,299.02	-6,422.23	2,309.11	8.00	5.13	-6.15	
10,342.24	90.00	180.09	6,950.00	-2,341.24	-6,423.25	2,351.33	8.00	5.14	-6.13	
End Build/TPZ @ 10342.24ft										
10,400.00	90.00	180.09	6,950.00	-2,399.00	-6,423.33	2,409.08	0.00	0.00	0.00	
10,500.00	90.00	180.09	6,950.00	-2,499.00	-6,423.48	2,509.08	0.00	0.00	0.00	
10,600.00	90.00	180.09	6,950.00	-2,599.00	-6,423.63	2,609.08	0.00	0.00	0.00	
10,700.00	90.00	180.09	6,950.00	-2,699.00	-6,423.78	2,709.08	0.00	0.00	0.00	
10,800.00	90.00	180.09	6,950.00	-2,799.00	-6,423.93	2,809.08	0.00	0.00	0.00	
10,900.00	90.00	180.09	6,950.00	-2,899.00	-6,424.08	2,909.08	0.00	0.00	0.00	
11,000.00	90.00	180.09	6,950.00	-2,999.00	-6,424.23	3,009.08	0.00	0.00	0.00	
11,100.00	90.00	180.09	6,950.00	-3,099.00	-6,424.38	3,109.08	0.00	0.00	0.00	
11,200.00	90.00	180.09	6,950.00	-3,199.00	-6,424.53	3,209.08	0.00	0.00	0.00	
11,300.00	90.00	180.09	6,950.00	-3,299.00	-6,424.68	3,309.08	0.00	0.00	0.00	
11,400.00	90.00	180.09	6,950.00	-3,399.00	-6,424.83	3,409.08	0.00	0.00	0.00	
11,500.00	90.00	180.09	6,950.00	-3,499.00	-6,424.98	3,509.08	0.00	0.00	0.00	
11,600.00	90.00	180.09	6,950.00	-3,599.00	-6,425.13	3,609.08	0.00	0.00	0.00	
11,700.00	90.00	180.09	6,950.00	-3,699.00	-6,425.28	3,709.08	0.00	0.00	0.00	
11,800.00	90.00	180.09	6,950.00	-3,799.00	-6,425.43	3,809.08	0.00	0.00	0.00	
11,900.00	90.00	180.09	6,950.00	-3,899.00	-6,425.58	3,909.08	0.00	0.00	0.00	
12,000.00	90.00	180.09	6,950.00	-3,999.00	-6,425.73	4,009.08	0.00	0.00	0.00	
12,100.00	90.00	180.09	6,950.00	-4,099.00	-6,425.88	4,109.08	0.00	0.00	0.00	
12,200.00	90.00	180.09	6,950.00	-4,199.00	-6,426.03	4,209.08	0.00	0.00	0.00	
12,300.00	90.00	180.09	6,950.00	-4,299.00	-6,426.18	4,309.08	0.00	0.00	0.00	
12,400.00	90.00	180.09	6,950.00	-4,399.00	-6,426.33	4,409.08	0.00	0.00	0.00	
12,500.00	90.00	180.09	6,950.00	-4,499.00	-6,426.48	4,509.08	0.00	0.00	0.00	
12,600.00	90.00	180.09	6,950.00	-4,599.00	-6,426.63	4,609.08	0.00	0.00	0.00	
12,700.00	90.00	180.09	6,950.00	-4,699.00	-6,426.78	4,709.08	0.00	0.00	0.00	
12,800.00	90.00	180.09	6,950.00	-4,799.00	-6,426.93	4,809.08	0.00	0.00	0.00	
12,900.00	90.00	180.09	6,950.00	-4,899.00	-6,427.08	4,909.08	0.00	0.00	0.00	
13,000.00	90.00	180.09	6,950.00	-4,999.00	-6,427.23	5,009.08	0.00	0.00	0.00	
13,100.00	90.00	180.09	6,950.00	-5,098.99	-6,427.38	5,109.08	0.00	0.00	0.00	
13,200.00	90.00	180.09	6,950.00	-5,198.99	-6,427.53	5,209.08	0.00	0.00	0.00	
13,300.00	90.00	180.09	6,950.00	-5,298.99	-6,427.68	5,309.08	0.00	0.00	0.00	
13,400.00	90.00	180.09	6,950.00	-5,398.99	-6,427.83	5,409.08	0.00	0.00	0.00	
13,500.00	90.00	180.09	6,950.00	-5,498.99	-6,427.98	5,509.08	0.00	0.00	0.00	
13,600.00	90.00	180.09	6,950.00	-5,598.99	-6,428.13	5,609.08	0.00	0.00	0.00	
13,700.00	90.00	180.09	6,950.00	-5,698.99	-6,428.28	5,709.08	0.00	0.00	0.00	
13,800.00	90.00	180.09	6,950.00	-5,798.99	-6,428.43	5,809.08	0.00	0.00	0.00	
13,900.00	90.00	180.09	6,950.00	-5,898.99	-6,428.58	5,909.08	0.00	0.00	0.00	
14,000.00	90.00	180.09	6,950.00	-5,998.99	-6,428.73	6,009.08	0.00	0.00	0.00	
14,100.00	90.00	180.09	6,950.00	-6,098.99	-6,428.88	6,109.08	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CHIVE 2536-10H
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:	CHIVE 2536-10H	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)
14,200.00	90.00	180.09	6,950.00	-6,198.99	-6,429.03	6,209.08	0.00	0.00	0.00
14,300.00	90.00	180.09	6,950.00	-6,298.99	-6,429.19	6,309.08	0.00	0.00	0.00
14,400.00	90.00	180.09	6,950.00	-6,398.99	-6,429.34	6,409.08	0.00	0.00	0.00
14,500.00	90.00	180.09	6,950.00	-6,498.99	-6,429.49	6,509.08	0.00	0.00	0.00
14,600.00	90.00	180.09	6,950.00	-6,598.99	-6,429.64	6,609.08	0.00	0.00	0.00
14,700.00	90.00	180.09	6,950.00	-6,698.99	-6,429.79	6,709.08	0.00	0.00	0.00
14,800.00	90.00	180.09	6,950.00	-6,798.99	-6,429.94	6,809.08	0.00	0.00	0.00
14,900.00	90.00	180.09	6,950.00	-6,898.99	-6,430.09	6,909.08	0.00	0.00	0.00
15,000.00	90.00	180.09	6,950.00	-6,998.99	-6,430.24	7,009.08	0.00	0.00	0.00
15,100.00	90.00	180.09	6,950.00	-7,098.99	-6,430.39	7,109.08	0.00	0.00	0.00
15,200.00	90.00	180.09	6,950.00	-7,198.99	-6,430.54	7,209.08	0.00	0.00	0.00
15,300.00	90.00	180.09	6,950.00	-7,298.99	-6,430.69	7,309.08	0.00	0.00	0.00
15,400.00	90.00	180.09	6,950.00	-7,398.99	-6,430.84	7,409.08	0.00	0.00	0.00
15,500.00	90.00	180.09	6,950.00	-7,498.99	-6,430.99	7,509.08	0.00	0.00	0.00
15,600.00	90.00	180.09	6,950.00	-7,598.99	-6,431.14	7,609.08	0.00	0.00	0.00
15,700.00	90.00	180.09	6,950.00	-7,698.99	-6,431.29	7,709.08	0.00	0.00	0.00
15,800.00	90.00	180.09	6,950.00	-7,798.99	-6,431.44	7,809.08	0.00	0.00	0.00
15,900.00	90.00	180.09	6,950.00	-7,898.99	-6,431.59	7,909.08	0.00	0.00	0.00
16,000.00	90.00	180.09	6,950.00	-7,998.99	-6,431.74	8,009.08	0.00	0.00	0.00
16,100.00	90.00	180.09	6,950.00	-8,098.99	-6,431.89	8,109.08	0.00	0.00	0.00
16,200.00	90.00	180.09	6,950.00	-8,198.99	-6,432.04	8,209.08	0.00	0.00	0.00
16,300.00	90.00	180.09	6,950.00	-8,298.99	-6,432.19	8,309.08	0.00	0.00	0.00
16,400.00	90.00	180.09	6,950.00	-8,398.99	-6,432.34	8,409.08	0.00	0.00	0.00
16,500.00	90.00	180.09	6,950.00	-8,498.99	-6,432.49	8,509.08	0.00	0.00	0.00
16,600.00	90.00	180.09	6,950.00	-8,598.99	-6,432.64	8,609.08	0.00	0.00	0.00
16,700.00	90.00	180.09	6,950.00	-8,698.99	-6,432.79	8,709.08	0.00	0.00	0.00
16,800.00	90.00	180.09	6,950.00	-8,798.99	-6,432.94	8,809.08	0.00	0.00	0.00
16,900.00	90.00	180.09	6,950.00	-8,898.99	-6,433.09	8,909.08	0.00	0.00	0.00
17,000.00	90.00	180.09	6,950.00	-8,998.99	-6,433.24	9,009.08	0.00	0.00	0.00
17,100.00	90.00	180.09	6,950.00	-9,098.99	-6,433.39	9,109.08	0.00	0.00	0.00
17,200.00	90.00	180.09	6,950.00	-9,198.99	-6,433.54	9,209.08	0.00	0.00	0.00
17,300.00	90.00	180.09	6,950.00	-9,298.99	-6,433.69	9,309.08	0.00	0.00	0.00
17,400.00	90.00	180.09	6,950.00	-9,398.99	-6,433.84	9,409.08	0.00	0.00	0.00
17,500.00	90.00	180.09	6,950.00	-9,498.99	-6,433.99	9,509.08	0.00	0.00	0.00
17,600.00	90.00	180.09	6,950.00	-9,598.99	-6,434.14	9,609.08	0.00	0.00	0.00
17,700.00	90.00	180.09	6,950.00	-9,698.99	-6,434.29	9,709.08	0.00	0.00	0.00
17,800.00	90.00	180.09	6,950.00	-9,798.99	-6,434.44	9,809.08	0.00	0.00	0.00
17,900.00	90.00	180.09	6,950.00	-9,898.99	-6,434.59	9,909.08	0.00	0.00	0.00
18,000.00	90.00	180.09	6,950.00	-9,998.99	-6,434.74	10,009.08	0.00	0.00	0.00
18,100.00	90.00	180.09	6,950.00	-10,098.99	-6,434.89	10,109.08	0.00	0.00	0.00
18,200.00	90.00	180.09	6,950.00	-10,198.99	-6,435.04	10,209.08	0.00	0.00	0.00
18,300.00	90.00	180.09	6,950.00	-10,298.99	-6,435.19	10,309.08	0.00	0.00	0.00
18,400.00	90.00	180.09	6,950.00	-10,398.99	-6,435.34	10,409.08	0.00	0.00	0.00
18,500.00	90.00	180.09	6,950.00	-10,498.99	-6,435.49	10,509.08	0.00	0.00	0.00
18,600.00	90.00	180.09	6,950.00	-10,598.99	-6,435.64	10,609.08	0.00	0.00	0.00
18,700.00	90.00	180.09	6,950.00	-10,698.99	-6,435.79	10,709.08	0.00	0.00	0.00
18,800.00	90.00	180.09	6,950.00	-10,798.99	-6,435.94	10,809.08	0.00	0.00	0.00
18,900.00	90.00	180.09	6,950.00	-10,898.99	-6,436.09	10,909.08	0.00	0.00	0.00
19,000.00	90.00	180.09	6,950.00	-10,998.99	-6,436.24	11,009.08	0.00	0.00	0.00
19,100.00	90.00	180.09	6,950.00	-11,098.99	-6,436.39	11,109.08	0.00	0.00	0.00
19,200.00	90.00	180.09	6,950.00	-11,198.99	-6,436.54	11,209.08	0.00	0.00	0.00
19,300.00	90.00	180.09	6,950.00	-11,298.99	-6,436.69	11,309.08	0.00	0.00	0.00
19,400.00	90.00	180.09	6,950.00	-11,398.99	-6,436.84	11,409.08	0.00	0.00	0.00
19,500.00	90.00	180.09	6,950.00	-11,498.99	-6,436.99	11,509.08	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CHIVE 2536-10H
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:	CHIVE 2536-10H	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)
19,600.00	90.00	180.09	6,950.00	-11,598.99	-6,437.14	11,609.08	0.00	0.00	0.00
19,700.00	90.00	180.09	6,950.00	-11,698.99	-6,437.29	11,709.08	0.00	0.00	0.00
19,800.00	90.00	180.09	6,950.00	-11,798.99	-6,437.44	11,809.08	0.00	0.00	0.00
19,900.00	90.00	180.09	6,950.00	-11,898.99	-6,437.59	11,909.08	0.00	0.00	0.00
19,979.15	90.00	180.09	6,950.00	-11,978.14	-6,437.70	11,988.23	0.00	0.00	0.00
BPZ @ 19979.15ft									
20,000.00	90.00	180.09	6,950.00	-11,998.99	-6,437.74	12,009.08	0.00	0.00	0.00
20,069.16	90.00	180.09	6,950.00	-12,068.14	-6,437.84	12,078.24	0.00	0.00	0.00
TD Well @ 20069.16ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,237.27	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)	
200.65	200.65	0.00	0.00	Begin Nudge @ 200.65ft
2,753.65	2,428.90	-281.36	-1,026.38	Hold Tangent @ 2753.65ft
9,366.40	6,585.05	-1,641.17	-5,986.80	KOP @ 9366.40ft :: DLS = 8°/100'
10,342.24	6,950.00	-2,341.24	-6,423.25	End Build/TPZ @ 10342.24ft
19,979.15	6,950.00	-11,978.14	-6,437.70	BPZ @ 19979.15ft
20,069.16	6,950.00	-12,068.14	-6,437.84	TD Well @ 20069.16ft