

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-65W-12 RAMEN 1423 PAD**

**RAMEN 1423-06H**

**Plan B**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**17 August, 2023**

Project: WATTENBERG FIELD  
Site: 1N-65W-12 RAMEN 1423 PAD  
Well: RAMEN 1423-06H  
Wellbore: Plan B  
Design: Permit Rev-1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
2020.00	2140.04	9 5/8"	9-5/8

SHL  
2215' FSL  
2299' FEL

LP/TPZ  
460' FNL  
1718' FEL

BPZ  
460' FSL  
1721' FEL

BHL  
370' FSL  
1721' FEL

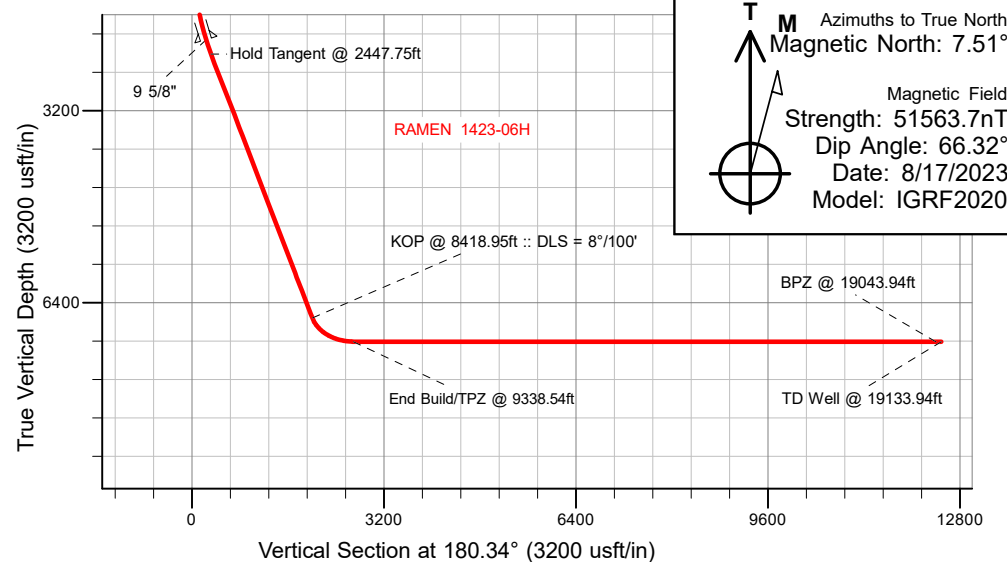
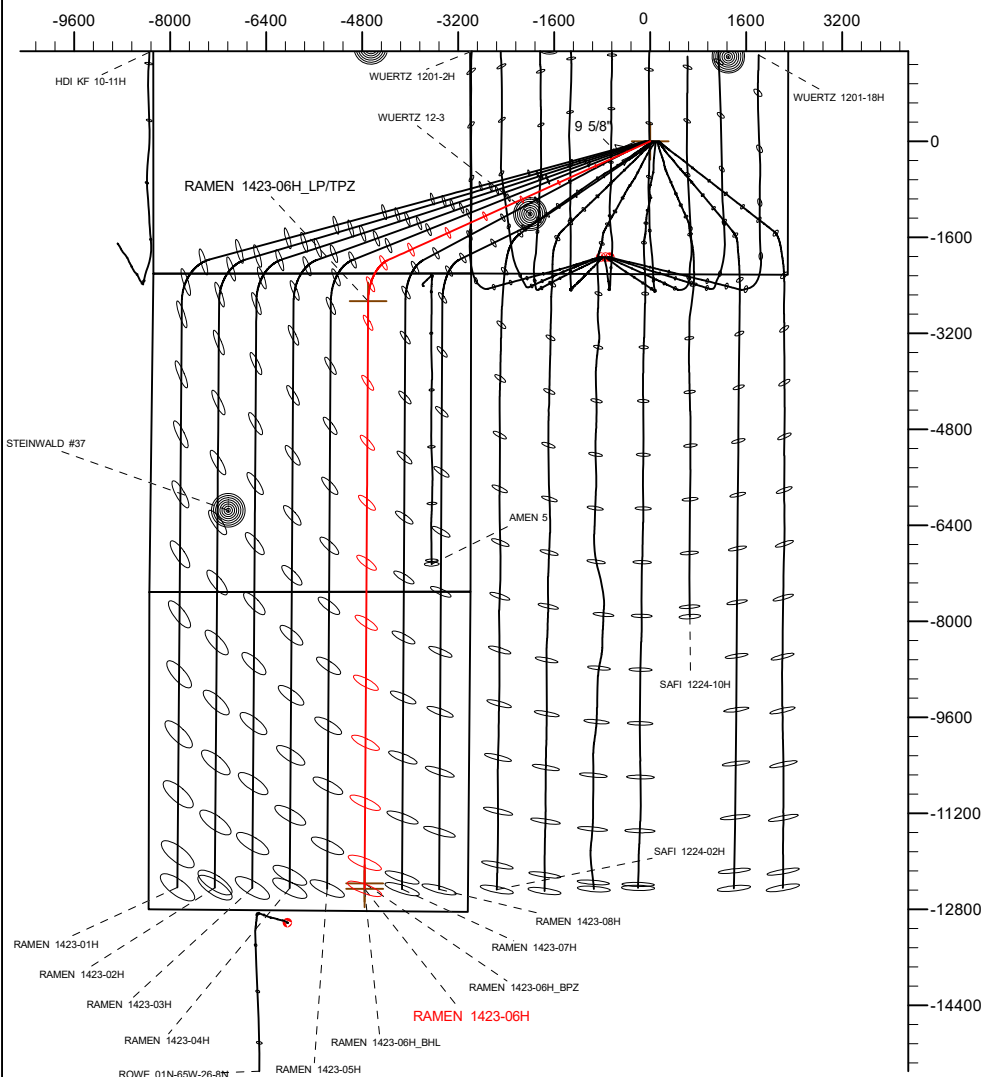
## SECTION DETAILS

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	
319.75	0.00	0.00	319.75	0.00	0.00	0.00	0.00	0.00	
2447.75	42.56	245.62	2257.38	-311.52	-687.38	2.00	245.62	315.59	
8418.95	42.56	245.62	6655.59	-1978.64	-4365.93	0.00	0.00	2004.51	
9338.54	90.00	180.34	7050.00	-2663.59	-4699.02	8.00	-71.27	2691.43	
19133.94	90.00	180.34	7050.00	-12458.81	-4757.78	0.00	0.00	12486.83	RAMEN 1423-06H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
RAMEN 1423-06H_SHL	0.00	1267694.47	3248842.43	40.064787	-104.610905
RAMEN 1423-06H_LP/TPZ	7050.00	1264984.11	3244170.30	40.057474	-104.627692
RAMEN 1423-06H_BPZ	7050.00	1255278.58	3244209.44	40.030831	-104.627893
RAMEN 1423-06H_BHL	7050.00	1255188.58	3244209.80	40.030584	-104.627895

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



## WELL DETAILS: RAMEN 1423-06H

GL = 4971'

RKB = 24' @ 4995.00usft (RIG)

Plan: Permit Rev-1 (RAMEN 1423-06H/Plan B)

Date: 8/17/2023

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RAMEN 1423-06H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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-65W-12 RAMEN 1423 PAD				
Site Position:		Northing:	1,267,694.08	usft	Latitude:	40.064787
From:	Map	Easting:	3,248,778.43	usft	Longitude:	-104.611134
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well		RAMEN 1423-06H				
Well Position	+N/-S	0.00 usft	Northing:	1,267,694.47 usft	Latitude:	40.064787
	+E/-W	0.00 usft	Easting:	3,248,842.43 usft	Longitude:	-104.610905
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,971.00 usft
Grid Convergence:		0.57 °				

<b>Wellbore</b>	Plan B				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF202013	8/17/2023	7.51	66.32	51,563.66417747

<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	180.34	

<b>Plan Survey Tool Program</b>		<b>Date</b>	8/17/2023		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	2,020.00	Permit Rev-1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination
2	2,020.00	19,133.94	Permit Rev-1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well RAMEN 1423-06H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 4995.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4995.00usft (RIG)
Site:	1N-65W-12 RAMEN 1423 PAD	North Reference:	True
Well:	RAMEN 1423-06H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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	
319.75	0.00	0.00	319.75	0.00	0.00	0.00	0.00	0.00	0.00	
2,447.75	42.56	245.62	2,257.38	-311.52	-687.38	2.00	2.00	0.00	245.62	
8,418.95	42.56	245.62	6,655.59	-1,978.64	-4,365.93	0.00	0.00	0.00	0.00	
9,338.54	90.00	180.34	7,050.00	-2,663.59	-4,699.02	8.00	5.16	-7.10	-71.27	
19,133.94	90.00	180.34	7,050.00	-12,458.81	-4,757.79	0.00	0.00	0.00	0.00	RAMEN 1423-06H_B

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RAMEN 1423-06H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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
319.75	0.00	0.00	319.75	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 319.75ft									
400.00	1.60	245.62	399.99	-0.46	-1.02	0.47	2.00	2.00	0.00
500.00	3.60	245.62	499.88	-2.34	-5.16	2.37	2.00	2.00	0.00
600.00	5.60	245.62	599.55	-5.65	-12.48	5.73	2.00	2.00	0.00
700.00	7.60	245.62	698.88	-10.40	-22.95	10.54	2.00	2.00	0.00
800.00	9.60	245.62	797.75	-16.58	-36.58	16.79	2.00	2.00	0.00
900.00	11.60	245.62	896.04	-24.17	-53.34	24.49	2.00	2.00	0.00
1,000.00	13.60	245.62	993.63	-33.18	-73.22	33.62	2.00	2.00	0.00
1,100.00	15.60	245.62	1,090.39	-43.59	-96.18	44.16	2.00	2.00	0.00
1,200.00	17.60	245.62	1,186.21	-55.39	-122.21	56.11	2.00	2.00	0.00
1,300.00	19.60	245.62	1,280.98	-68.55	-151.27	69.45	2.00	2.00	0.00
1,400.00	21.60	245.62	1,374.58	-83.08	-183.32	84.17	2.00	2.00	0.00
1,500.00	23.60	245.62	1,466.89	-98.95	-218.33	100.24	2.00	2.00	0.00
1,600.00	25.60	245.62	1,557.81	-116.13	-256.25	117.65	2.00	2.00	0.00
1,700.00	27.60	245.62	1,647.22	-134.62	-297.04	136.38	2.00	2.00	0.00
1,800.00	29.60	245.62	1,735.01	-154.38	-340.64	156.40	2.00	2.00	0.00
1,900.00	31.60	245.62	1,821.07	-175.39	-387.01	177.69	2.00	2.00	0.00
2,000.00	33.60	245.62	1,905.31	-197.64	-436.09	200.22	2.00	2.00	0.00
2,100.00	35.60	245.62	1,987.61	-221.08	-487.81	223.97	2.00	2.00	0.00
2,140.04	36.41	245.62	2,020.00	-230.79	-509.25	233.81	2.00	2.00	0.00
9 5/8"									
2,200.00	37.60	245.62	2,067.89	-245.69	-542.12	248.90	2.00	2.00	0.00
2,300.00	39.60	245.62	2,146.03	-271.44	-598.95	274.99	2.00	2.00	0.00
2,400.00	41.60	245.62	2,221.95	-298.31	-658.23	302.21	2.00	2.00	0.00
2,447.75	42.56	245.62	2,257.38	-311.52	-687.38	315.59	2.00	2.00	0.00
Hold Tangent @ 2447.75ft									
2,500.00	42.56	245.62	2,295.87	-326.11	-719.57	330.37	0.00	0.00	0.00
2,600.00	42.56	245.62	2,369.53	-354.03	-781.17	358.66	0.00	0.00	0.00
2,700.00	42.56	245.62	2,443.18	-381.95	-842.78	386.94	0.00	0.00	0.00
2,800.00	42.56	245.62	2,516.84	-409.86	-904.38	415.22	0.00	0.00	0.00
2,900.00	42.56	245.62	2,590.50	-437.78	-965.99	443.51	0.00	0.00	0.00
3,000.00	42.56	245.62	2,664.15	-465.70	-1,027.59	471.79	0.00	0.00	0.00
3,100.00	42.56	245.62	2,737.81	-493.62	-1,089.20	500.08	0.00	0.00	0.00
3,200.00	42.56	245.62	2,811.47	-521.54	-1,150.80	528.36	0.00	0.00	0.00
3,300.00	42.56	245.62	2,885.13	-549.46	-1,212.41	556.65	0.00	0.00	0.00
3,400.00	42.56	245.62	2,958.78	-577.38	-1,274.01	584.93	0.00	0.00	0.00
3,500.00	42.56	245.62	3,032.44	-605.30	-1,335.61	613.21	0.00	0.00	0.00
3,600.00	42.56	245.62	3,106.10	-633.22	-1,397.22	641.50	0.00	0.00	0.00
3,700.00	42.56	245.62	3,179.75	-661.14	-1,458.82	669.78	0.00	0.00	0.00
3,800.00	42.56	245.62	3,253.41	-689.06	-1,520.43	698.07	0.00	0.00	0.00
3,900.00	42.56	245.62	3,327.07	-716.98	-1,582.03	726.35	0.00	0.00	0.00
4,000.00	42.56	245.62	3,400.72	-744.90	-1,643.64	754.64	0.00	0.00	0.00
4,100.00	42.56	245.62	3,474.38	-772.82	-1,705.24	782.92	0.00	0.00	0.00
4,200.00	42.56	245.62	3,548.04	-800.73	-1,766.85	811.21	0.00	0.00	0.00
4,300.00	42.56	245.62	3,621.70	-828.65	-1,828.45	839.49	0.00	0.00	0.00
4,400.00	42.56	245.62	3,695.35	-856.57	-1,890.06	867.77	0.00	0.00	0.00
4,500.00	42.56	245.62	3,769.01	-884.49	-1,951.66	896.06	0.00	0.00	0.00
4,600.00	42.56	245.62	3,842.67	-912.41	-2,013.27	924.34	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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	42.56	245.62	3,916.32	-940.33	-2,074.87	952.63	0.00	0.00	0.00
4,800.00	42.56	245.62	3,989.98	-968.25	-2,136.48	980.91	0.00	0.00	0.00
4,900.00	42.56	245.62	4,063.64	-996.17	-2,198.08	1,009.20	0.00	0.00	0.00
5,000.00	42.56	245.62	4,137.29	-1,024.09	-2,259.69	1,037.48	0.00	0.00	0.00
5,100.00	42.56	245.62	4,210.95	-1,052.01	-2,321.29	1,065.76	0.00	0.00	0.00
5,200.00	42.56	245.62	4,284.61	-1,079.93	-2,382.90	1,094.05	0.00	0.00	0.00
5,300.00	42.56	245.62	4,358.26	-1,107.85	-2,444.50	1,122.33	0.00	0.00	0.00
5,400.00	42.56	245.62	4,431.92	-1,135.77	-2,506.11	1,150.62	0.00	0.00	0.00
5,500.00	42.56	245.62	4,505.58	-1,163.69	-2,567.71	1,178.90	0.00	0.00	0.00
5,600.00	42.56	245.62	4,579.24	-1,191.61	-2,629.32	1,207.19	0.00	0.00	0.00
5,700.00	42.56	245.62	4,652.89	-1,219.52	-2,690.92	1,235.47	0.00	0.00	0.00
5,800.00	42.56	245.62	4,726.55	-1,247.44	-2,752.53	1,263.76	0.00	0.00	0.00
5,900.00	42.56	245.62	4,800.21	-1,275.36	-2,814.13	1,292.04	0.00	0.00	0.00
6,000.00	42.56	245.62	4,873.86	-1,303.28	-2,875.74	1,320.32	0.00	0.00	0.00
6,100.00	42.56	245.62	4,947.52	-1,331.20	-2,937.34	1,348.61	0.00	0.00	0.00
6,200.00	42.56	245.62	5,021.18	-1,359.12	-2,998.95	1,376.89	0.00	0.00	0.00
6,300.00	42.56	245.62	5,094.83	-1,387.04	-3,060.55	1,405.18	0.00	0.00	0.00
6,400.00	42.56	245.62	5,168.49	-1,414.96	-3,122.16	1,433.46	0.00	0.00	0.00
6,500.00	42.56	245.62	5,242.15	-1,442.88	-3,183.76	1,461.75	0.00	0.00	0.00
6,600.00	42.56	245.62	5,315.80	-1,470.80	-3,245.37	1,490.03	0.00	0.00	0.00
6,700.00	42.56	245.62	5,389.46	-1,498.72	-3,306.97	1,518.32	0.00	0.00	0.00
6,800.00	42.56	245.62	5,463.12	-1,526.64	-3,368.58	1,546.60	0.00	0.00	0.00
6,900.00	42.56	245.62	5,536.78	-1,554.56	-3,430.18	1,574.88	0.00	0.00	0.00
7,000.00	42.56	245.62	5,610.43	-1,582.48	-3,491.79	1,603.17	0.00	0.00	0.00
7,100.00	42.56	245.62	5,684.09	-1,610.39	-3,553.39	1,631.45	0.00	0.00	0.00
7,200.00	42.56	245.62	5,757.75	-1,638.31	-3,615.00	1,659.74	0.00	0.00	0.00
7,300.00	42.56	245.62	5,831.40	-1,666.23	-3,676.60	1,688.02	0.00	0.00	0.00
7,400.00	42.56	245.62	5,905.06	-1,694.15	-3,738.21	1,716.31	0.00	0.00	0.00
7,500.00	42.56	245.62	5,978.72	-1,722.07	-3,799.81	1,744.59	0.00	0.00	0.00
7,600.00	42.56	245.62	6,052.37	-1,749.99	-3,861.42	1,772.87	0.00	0.00	0.00
7,700.00	42.56	245.62	6,126.03	-1,777.91	-3,923.02	1,801.16	0.00	0.00	0.00
7,800.00	42.56	245.62	6,199.69	-1,805.83	-3,984.63	1,829.44	0.00	0.00	0.00
7,900.00	42.56	245.62	6,273.35	-1,833.75	-4,046.23	1,857.73	0.00	0.00	0.00
8,000.00	42.56	245.62	6,347.00	-1,861.67	-4,107.84	1,886.01	0.00	0.00	0.00
8,100.00	42.56	245.62	6,420.66	-1,889.59	-4,169.44	1,914.30	0.00	0.00	0.00
8,200.00	42.56	245.62	6,494.32	-1,917.51	-4,231.05	1,942.58	0.00	0.00	0.00
8,300.00	42.56	245.62	6,567.97	-1,945.43	-4,292.65	1,970.87	0.00	0.00	0.00
8,400.00	42.56	245.62	6,641.63	-1,973.35	-4,354.26	1,999.15	0.00	0.00	0.00
8,418.95	42.56	245.62	6,655.59	-1,978.64	-4,365.93	2,004.51	0.00	0.00	0.00
KOP @ 8418.95ft :: DLS = 8°/100'									
8,450.00	43.41	242.20	6,678.30	-1,987.95	-4,384.93	2,013.93	8.00	2.74	-11.03
8,500.00	44.98	236.92	6,714.16	-2,005.62	-4,414.95	2,031.78	8.00	3.15	-10.55
8,550.00	46.78	231.94	6,748.98	-2,026.50	-4,444.12	2,052.84	8.00	3.60	-9.95
8,600.00	48.79	227.27	6,782.58	-2,050.50	-4,472.29	2,077.01	8.00	4.01	-9.35
8,650.00	50.97	222.88	6,814.81	-2,077.51	-4,499.33	2,104.17	8.00	4.37	-8.77
8,700.00	53.31	218.77	6,845.50	-2,107.38	-4,525.11	2,134.20	8.00	4.67	-8.23
8,750.00	55.78	214.91	6,874.51	-2,139.98	-4,549.50	2,166.94	8.00	4.94	-7.73
8,800.00	58.36	211.27	6,901.70	-2,175.14	-4,572.39	2,202.23	8.00	5.17	-7.28
8,850.00	61.04	207.83	6,926.92	-2,212.69	-4,593.66	2,239.91	8.00	5.36	-6.88
8,900.00	63.81	204.57	6,950.07	-2,252.45	-4,613.20	2,279.79	8.00	5.53	-6.52
8,950.00	66.64	201.46	6,971.03	-2,294.23	-4,630.93	2,321.67	8.00	5.67	-6.22
9,000.00	69.54	198.48	6,989.69	-2,337.82	-4,646.76	2,365.36	8.00	5.79	-5.96
9,050.00	72.48	195.61	7,005.96	-2,383.02	-4,660.60	2,410.63	8.00	5.88	-5.73
9,100.00	75.46	192.84	7,019.77	-2,429.59	-4,672.40	2,457.27	8.00	5.96	-5.55

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RAMEN 1423-06H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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)
9,150.00	78.47	190.14	7,031.05	-2,477.32	-4,682.09	2,505.06	8.00	6.03	-5.40
9,200.00	81.51	187.50	7,039.74	-2,525.97	-4,689.64	2,553.75	8.00	6.08	-5.29
9,250.00	84.57	184.89	7,045.80	-2,575.30	-4,694.99	2,603.11	8.00	6.11	-5.20
9,300.00	87.63	182.32	7,049.20	-2,625.07	-4,698.12	2,652.91	8.00	6.13	-5.15
9,338.54	90.00	180.34	7,050.00	-2,663.59	-4,699.02	2,691.43	8.00	6.14	-5.13
End Build/TPZ @ 9338.54ft									
9,400.00	90.00	180.34	7,050.00	-2,725.05	-4,699.39	2,752.89	0.00	0.00	0.00
9,500.00	90.00	180.34	7,050.00	-2,825.05	-4,699.99	2,852.89	0.00	0.00	0.00
9,600.00	90.00	180.34	7,050.00	-2,925.04	-4,700.59	2,952.89	0.00	0.00	0.00
9,700.00	90.00	180.34	7,050.00	-3,025.04	-4,701.19	3,052.89	0.00	0.00	0.00
9,800.00	90.00	180.34	7,050.00	-3,125.04	-4,701.79	3,152.89	0.00	0.00	0.00
9,900.00	90.00	180.34	7,050.00	-3,225.04	-4,702.39	3,252.89	0.00	0.00	0.00
10,000.00	90.00	180.34	7,050.00	-3,325.04	-4,702.99	3,352.89	0.00	0.00	0.00
10,100.00	90.00	180.34	7,050.00	-3,425.04	-4,703.59	3,452.89	0.00	0.00	0.00
10,200.00	90.00	180.34	7,050.00	-3,525.03	-4,704.19	3,552.89	0.00	0.00	0.00
10,300.00	90.00	180.34	7,050.00	-3,625.03	-4,704.79	3,652.89	0.00	0.00	0.00
10,400.00	90.00	180.34	7,050.00	-3,725.03	-4,705.39	3,752.89	0.00	0.00	0.00
10,500.00	90.00	180.34	7,050.00	-3,825.03	-4,705.99	3,852.89	0.00	0.00	0.00
10,600.00	90.00	180.34	7,050.00	-3,925.03	-4,706.59	3,952.89	0.00	0.00	0.00
10,700.00	90.00	180.34	7,050.00	-4,025.02	-4,707.19	4,052.89	0.00	0.00	0.00
10,800.00	90.00	180.34	7,050.00	-4,125.02	-4,707.79	4,152.89	0.00	0.00	0.00
10,900.00	90.00	180.34	7,050.00	-4,225.02	-4,708.39	4,252.89	0.00	0.00	0.00
11,000.00	90.00	180.34	7,050.00	-4,325.02	-4,708.99	4,352.89	0.00	0.00	0.00
11,100.00	90.00	180.34	7,050.00	-4,425.02	-4,709.59	4,452.89	0.00	0.00	0.00
11,200.00	90.00	180.34	7,050.00	-4,525.02	-4,710.19	4,552.89	0.00	0.00	0.00
11,300.00	90.00	180.34	7,050.00	-4,625.01	-4,710.79	4,652.89	0.00	0.00	0.00
11,400.00	90.00	180.34	7,050.00	-4,725.01	-4,711.39	4,752.89	0.00	0.00	0.00
11,500.00	90.00	180.34	7,050.00	-4,825.01	-4,711.99	4,852.89	0.00	0.00	0.00
11,600.00	90.00	180.34	7,050.00	-4,925.01	-4,712.59	4,952.89	0.00	0.00	0.00
11,700.00	90.00	180.34	7,050.00	-5,025.01	-4,713.19	5,052.89	0.00	0.00	0.00
11,800.00	90.00	180.34	7,050.00	-5,125.00	-4,713.79	5,152.89	0.00	0.00	0.00
11,900.00	90.00	180.34	7,050.00	-5,225.00	-4,714.39	5,252.89	0.00	0.00	0.00
12,000.00	90.00	180.34	7,050.00	-5,325.00	-4,714.98	5,352.89	0.00	0.00	0.00
12,100.00	90.00	180.34	7,050.00	-5,425.00	-4,715.58	5,452.89	0.00	0.00	0.00
12,200.00	90.00	180.34	7,050.00	-5,525.00	-4,716.18	5,552.89	0.00	0.00	0.00
12,300.00	90.00	180.34	7,050.00	-5,625.00	-4,716.78	5,652.89	0.00	0.00	0.00
12,400.00	90.00	180.34	7,050.00	-5,724.99	-4,717.38	5,752.89	0.00	0.00	0.00
12,500.00	90.00	180.34	7,050.00	-5,824.99	-4,717.98	5,852.89	0.00	0.00	0.00
12,600.00	90.00	180.34	7,050.00	-5,924.99	-4,718.58	5,952.89	0.00	0.00	0.00
12,700.00	90.00	180.34	7,050.00	-6,024.99	-4,719.18	6,052.89	0.00	0.00	0.00
12,800.00	90.00	180.34	7,050.00	-6,124.99	-4,719.78	6,152.89	0.00	0.00	0.00
12,900.00	90.00	180.34	7,050.00	-6,224.99	-4,720.38	6,252.89	0.00	0.00	0.00
13,000.00	90.00	180.34	7,050.00	-6,324.98	-4,720.98	6,352.89	0.00	0.00	0.00
13,100.00	90.00	180.34	7,050.00	-6,424.98	-4,721.58	6,452.89	0.00	0.00	0.00
13,200.00	90.00	180.34	7,050.00	-6,524.98	-4,722.18	6,552.89	0.00	0.00	0.00
13,300.00	90.00	180.34	7,050.00	-6,624.98	-4,722.78	6,652.89	0.00	0.00	0.00
13,400.00	90.00	180.34	7,050.00	-6,724.98	-4,723.38	6,752.89	0.00	0.00	0.00
13,500.00	90.00	180.34	7,050.00	-6,824.97	-4,723.98	6,852.89	0.00	0.00	0.00
13,600.00	90.00	180.34	7,050.00	-6,924.97	-4,724.58	6,952.89	0.00	0.00	0.00
13,700.00	90.00	180.34	7,050.00	-7,024.97	-4,725.18	7,052.89	0.00	0.00	0.00
13,800.00	90.00	180.34	7,050.00	-7,124.97	-4,725.78	7,152.89	0.00	0.00	0.00
13,900.00	90.00	180.34	7,050.00	-7,224.97	-4,726.38	7,252.89	0.00	0.00	0.00
14,000.00	90.00	180.34	7,050.00	-7,324.97	-4,726.98	7,352.89	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RAMEN 1423-06H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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)
14,100.00	90.00	180.34	7,050.00	-7,424.96	-4,727.58	7,452.89	0.00	0.00	0.00
14,200.00	90.00	180.34	7,050.00	-7,524.96	-4,728.18	7,552.89	0.00	0.00	0.00
14,300.00	90.00	180.34	7,050.00	-7,624.96	-4,728.78	7,652.89	0.00	0.00	0.00
14,400.00	90.00	180.34	7,050.00	-7,724.96	-4,729.38	7,752.89	0.00	0.00	0.00
14,500.00	90.00	180.34	7,050.00	-7,824.96	-4,729.98	7,852.89	0.00	0.00	0.00
14,600.00	90.00	180.34	7,050.00	-7,924.95	-4,730.58	7,952.89	0.00	0.00	0.00
14,700.00	90.00	180.34	7,050.00	-8,024.95	-4,731.18	8,052.89	0.00	0.00	0.00
14,800.00	90.00	180.34	7,050.00	-8,124.95	-4,731.78	8,152.89	0.00	0.00	0.00
14,900.00	90.00	180.34	7,050.00	-8,224.95	-4,732.38	8,252.89	0.00	0.00	0.00
15,000.00	90.00	180.34	7,050.00	-8,324.95	-4,732.98	8,352.89	0.00	0.00	0.00
15,100.00	90.00	180.34	7,050.00	-8,424.95	-4,733.58	8,452.89	0.00	0.00	0.00
15,200.00	90.00	180.34	7,050.00	-8,524.94	-4,734.18	8,552.89	0.00	0.00	0.00
15,300.00	90.00	180.34	7,050.00	-8,624.94	-4,734.78	8,652.89	0.00	0.00	0.00
15,400.00	90.00	180.34	7,050.00	-8,724.94	-4,735.38	8,752.89	0.00	0.00	0.00
15,500.00	90.00	180.34	7,050.00	-8,824.94	-4,735.98	8,852.89	0.00	0.00	0.00
15,600.00	90.00	180.34	7,050.00	-8,924.94	-4,736.58	8,952.89	0.00	0.00	0.00
15,700.00	90.00	180.34	7,050.00	-9,024.93	-4,737.18	9,052.89	0.00	0.00	0.00
15,800.00	90.00	180.34	7,050.00	-9,124.93	-4,737.78	9,152.89	0.00	0.00	0.00
15,900.00	90.00	180.34	7,050.00	-9,224.93	-4,738.38	9,252.89	0.00	0.00	0.00
16,000.00	90.00	180.34	7,050.00	-9,324.93	-4,738.98	9,352.89	0.00	0.00	0.00
16,100.00	90.00	180.34	7,050.00	-9,424.93	-4,739.58	9,452.89	0.00	0.00	0.00
16,200.00	90.00	180.34	7,050.00	-9,524.93	-4,740.18	9,552.89	0.00	0.00	0.00
16,300.00	90.00	180.34	7,050.00	-9,624.92	-4,740.78	9,652.89	0.00	0.00	0.00
16,400.00	90.00	180.34	7,050.00	-9,724.92	-4,741.38	9,752.89	0.00	0.00	0.00
16,500.00	90.00	180.34	7,050.00	-9,824.92	-4,741.98	9,852.89	0.00	0.00	0.00
16,600.00	90.00	180.34	7,050.00	-9,924.92	-4,742.58	9,952.89	0.00	0.00	0.00
16,700.00	90.00	180.34	7,050.00	-10,024.92	-4,743.18	10,052.89	0.00	0.00	0.00
16,800.00	90.00	180.34	7,050.00	-10,124.92	-4,743.78	10,152.89	0.00	0.00	0.00
16,900.00	90.00	180.34	7,050.00	-10,224.91	-4,744.38	10,252.89	0.00	0.00	0.00
17,000.00	90.00	180.34	7,050.00	-10,324.91	-4,744.98	10,352.89	0.00	0.00	0.00
17,100.00	90.00	180.34	7,050.00	-10,424.91	-4,745.58	10,452.89	0.00	0.00	0.00
17,200.00	90.00	180.34	7,050.00	-10,524.91	-4,746.18	10,552.89	0.00	0.00	0.00
17,300.00	90.00	180.34	7,050.00	-10,624.91	-4,746.78	10,652.89	0.00	0.00	0.00
17,400.00	90.00	180.34	7,050.00	-10,724.90	-4,747.38	10,752.89	0.00	0.00	0.00
17,500.00	90.00	180.34	7,050.00	-10,824.90	-4,747.98	10,852.89	0.00	0.00	0.00
17,600.00	90.00	180.34	7,050.00	-10,924.90	-4,748.58	10,952.89	0.00	0.00	0.00
17,700.00	90.00	180.34	7,050.00	-11,024.90	-4,749.18	11,052.89	0.00	0.00	0.00
17,800.00	90.00	180.34	7,050.00	-11,124.90	-4,749.78	11,152.89	0.00	0.00	0.00
17,900.00	90.00	180.34	7,050.00	-11,224.90	-4,750.38	11,252.89	0.00	0.00	0.00
18,000.00	90.00	180.34	7,050.00	-11,324.89	-4,750.98	11,352.89	0.00	0.00	0.00
18,100.00	90.00	180.34	7,050.00	-11,424.89	-4,751.58	11,452.89	0.00	0.00	0.00
18,200.00	90.00	180.34	7,050.00	-11,524.89	-4,752.18	11,552.89	0.00	0.00	0.00
18,300.00	90.00	180.34	7,050.00	-11,624.89	-4,752.78	11,652.89	0.00	0.00	0.00
18,400.00	90.00	180.34	7,050.00	-11,724.89	-4,753.38	11,752.89	0.00	0.00	0.00
18,500.00	90.00	180.34	7,050.00	-11,824.88	-4,753.98	11,852.89	0.00	0.00	0.00
18,600.00	90.00	180.34	7,050.00	-11,924.88	-4,754.58	11,952.89	0.00	0.00	0.00
18,700.00	90.00	180.34	7,050.00	-12,024.88	-4,755.18	12,052.89	0.00	0.00	0.00
18,800.00	90.00	180.34	7,050.00	-12,124.88	-4,755.78	12,152.89	0.00	0.00	0.00
18,900.00	90.00	180.34	7,050.00	-12,224.88	-4,756.38	12,252.89	0.00	0.00	0.00
19,000.00	90.00	180.34	7,050.00	-12,324.88	-4,756.98	12,352.89	0.00	0.00	0.00
19,043.94	90.00	180.34	7,050.00	-12,368.81	-4,757.25	12,396.83	0.00	0.00	0.00
BPZ @ 19043.94ft									
19,100.00	90.00	180.34	7,050.00	-12,424.87	-4,757.58	12,452.89	0.00	0.00	0.00
19,133.94	90.00	180.34	7,050.00	-12,458.81	-4,757.79	12,486.83	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RAMEN 1423-06H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4995.00usft (RIG)
<b>Site:</b>	1N-65W-12 RAMEN 1423 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RAMEN 1423-06H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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)
TD Well @ 19133.94ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
2,140.04	2,020.00	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)	
319.75	319.75	0.00	0.00	Begin Nudge @ 319.75ft
2,447.75	2,257.38	-311.52	-687.38	Hold Tangent @ 2447.75ft
8,418.95	6,655.59	-1,978.64	-4,365.93	KOP @ 8418.95ft :: DLS = 8°/100'
9,338.54	7,050.00	-2,663.59	-4,699.02	End Build/TPZ @ 9338.54ft
19,043.94	7,050.00	-12,368.81	-4,757.25	BPZ @ 19043.94ft
19,133.94	7,050.00	-12,458.81	-4,757.79	TD Well @ 19133.94ft