

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
1N-65W-12 SAFI 1224 PAD  
SAFI 1224-07H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**16 May, 2019**

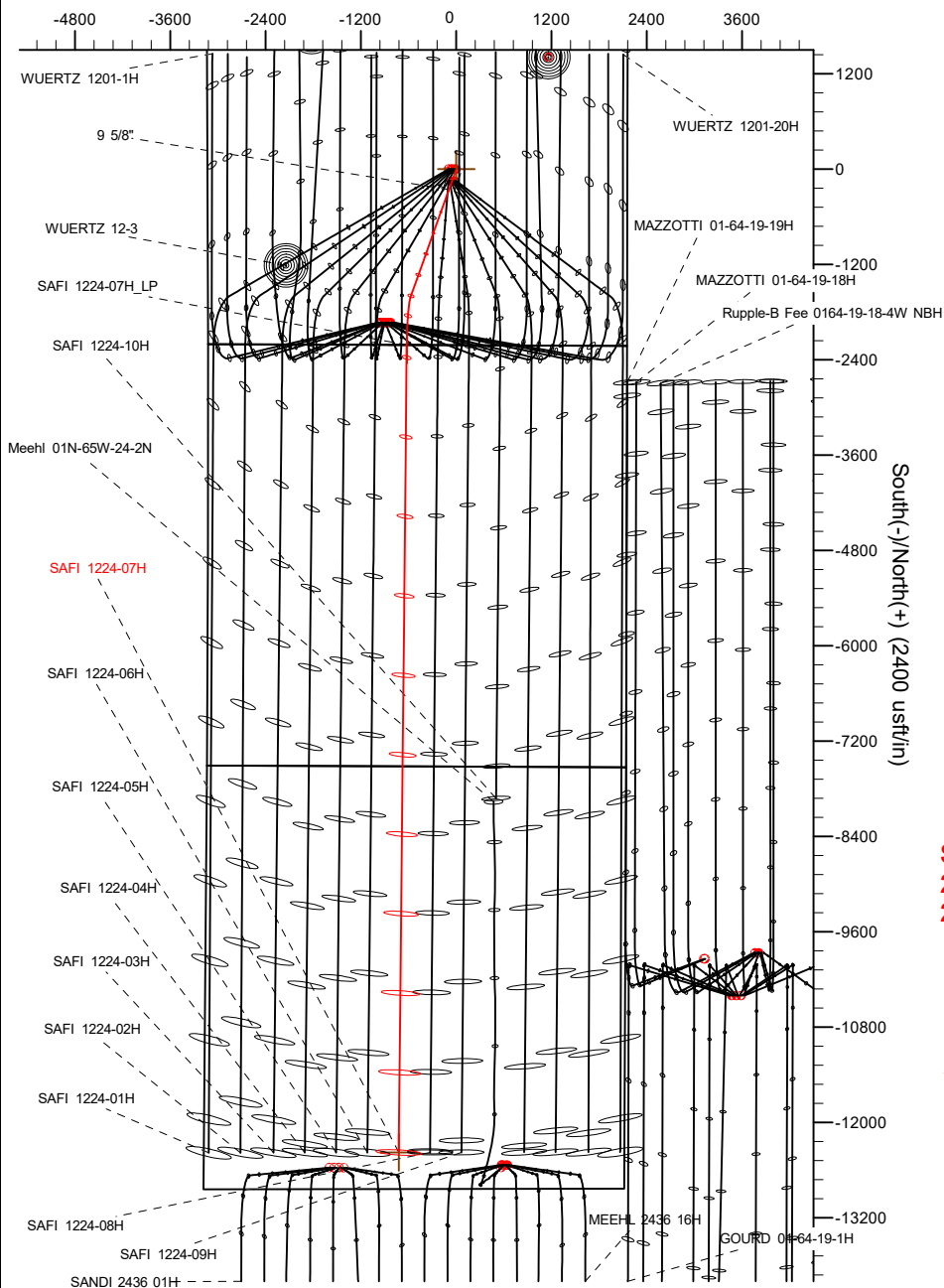
Project: WATTENBERG FIELD  
Site: 1N-65W-12 SAFI 1224 PAD  
Well: SAFI 1224-07H  
Wellbore: Wellbore #1  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1733.42	9 5/8"	9-5/8

West(-)/East(+) (2400 usft/in)

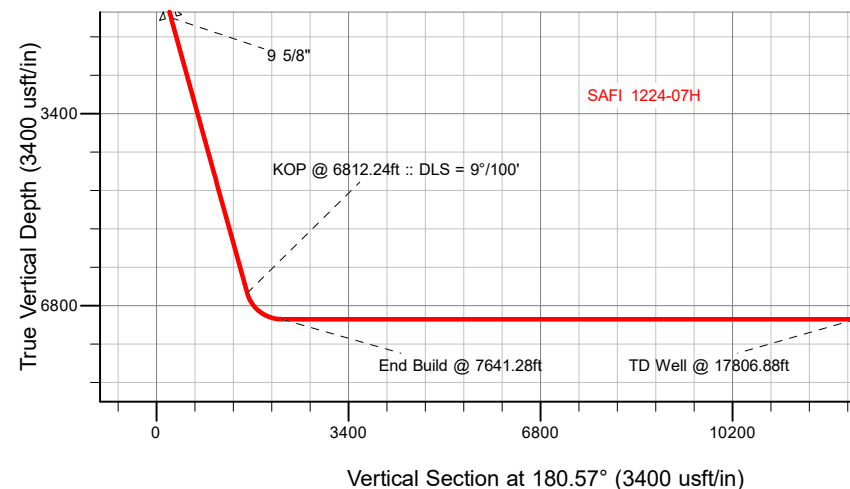


## SECTION DETAILS

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	
360.00	0.00	0.00	360.00	0.00	0.00	0.00	0.00	0.00	
1175.50	16.31	199.70	1164.53	-108.54	-38.86	2.00	199.70	108.92	
6812.24	16.31	199.70	6574.43	-1598.88	-572.48	0.00	0.00	1604.50	
7641.28	90.00	180.57	7040.00	-2212.21	-623.21	9.00	-19.87	2218.30	
17806.88	90.00	180.57	7040.00	-12377.31	-723.93	0.00	0.00	12383.90	SAFI 1224-07H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

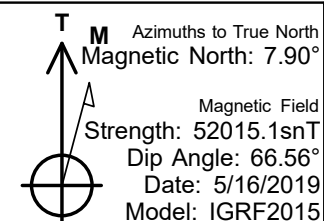
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
SAFI 1224-07H_SHL	0.00	0.00	0.00	40.064785	-104.610390
SAFI 1224-07H_BHL	7040.00	-12377.31	-723.93	40.030807	-104.612975



SHL  
2215' FSL  
2155' FEL

LP  
0' FNL  
2502' FWL

BHL  
460' FSL  
2456' FWL



## WELL DETAILS: SAFI 1224-07H

GL = 4970'

RKB = 24' @ 4994.00usft (RIG)

Plan: Design #1 (SAFI 1224-07H/Wellbore #1)

Date: 5/16/2019

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAFI 1224-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Site:</b>	1N-65W-12 SAFI 1224 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SAFI 1224-07H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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 SAFI 1224 PAD			
Site Position:		Northing:	1,267,795.88 usft	Latitude:	40.065068
From:	Lat/Long	Easting:	3,248,744.87 usft	Longitude:	-104.611250
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.57 °

Well		SAFI 1224-07H				
Well Position	+N/-S	-102.98 usft	Northing:	1,267,695.31 usft	Latitude:	40.064785
	+E/-W	240.62 usft	Easting:	3,248,986.51 usft	Longitude:	-104.610390
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,970.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	5/16/2019	7.90	66.56	52,015.05117188

<b>Design</b>	Design #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	180.57

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/16/2019		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	17,806.88	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
360.00	0.00	0.00	360.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,175.50	16.31	199.70	1,164.53	-108.54	-38.86	2.00	2.00	0.00	199.70	
6,812.24	16.31	199.70	6,574.43	-1,598.88	-572.48	0.00	0.00	0.00	0.00	
7,641.28	90.00	180.57	7,040.00	-2,212.21	-623.21	9.00	8.89	-2.31	-19.87	
17,806.88	90.00	180.57	7,040.00	-12,377.31	-723.93	0.00	0.00	0.00	0.00	SAFI 1224-07H_BHL

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAFI 1224-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Site:</b>	1N-65W-12 SAFI 1224 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SAFI 1224-07H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
360.00	0.00	0.00	360.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 360.00ft									
400.00	0.80	199.70	400.00	-0.26	-0.09	0.26	2.00	2.00	0.00
500.00	2.80	199.70	499.94	-3.22	-1.15	3.23	2.00	2.00	0.00
600.00	4.80	199.70	599.72	-9.46	-3.39	9.49	2.00	2.00	0.00
700.00	6.80	199.70	699.20	-18.97	-6.79	19.04	2.00	2.00	0.00
800.00	8.80	199.70	798.27	-31.75	-11.37	31.86	2.00	2.00	0.00
900.00	10.80	199.70	896.81	-47.77	-17.11	47.94	2.00	2.00	0.00
1,000.00	12.80	199.70	994.69	-67.03	-24.00	67.26	2.00	2.00	0.00
1,100.00	14.80	199.70	1,091.80	-89.48	-32.04	89.80	2.00	2.00	0.00
1,175.50	16.31	199.70	1,164.53	-108.54	-38.86	108.92	2.00	2.00	0.00
Hold Tangent @ 1175.50ft									
1,200.00	16.31	199.70	1,188.04	-115.02	-41.18	115.42	0.00	0.00	0.00
1,300.00	16.31	199.70	1,284.02	-141.46	-50.65	141.96	0.00	0.00	0.00
1,400.00	16.31	199.70	1,380.00	-167.90	-60.12	168.49	0.00	0.00	0.00
1,500.00	16.31	199.70	1,475.97	-194.34	-69.58	195.02	0.00	0.00	0.00
1,600.00	16.31	199.70	1,571.95	-220.78	-79.05	221.55	0.00	0.00	0.00
1,700.00	16.31	199.70	1,667.92	-247.22	-88.52	248.09	0.00	0.00	0.00
1,733.42	16.31	199.70	1,700.00	-256.05	-91.68	256.95	0.00	0.00	0.00
9 5/8"									
1,800.00	16.31	199.70	1,763.90	-273.66	-97.98	274.62	0.00	0.00	0.00
1,900.00	16.31	199.70	1,859.87	-300.10	-107.45	301.15	0.00	0.00	0.00
2,000.00	16.31	199.70	1,955.85	-326.54	-116.92	327.68	0.00	0.00	0.00
2,100.00	16.31	199.70	2,051.83	-352.98	-126.38	354.22	0.00	0.00	0.00
2,200.00	16.31	199.70	2,147.80	-379.42	-135.85	380.75	0.00	0.00	0.00
2,300.00	16.31	199.70	2,243.78	-405.86	-145.32	407.28	0.00	0.00	0.00
2,400.00	16.31	199.70	2,339.75	-432.30	-154.78	433.81	0.00	0.00	0.00
2,500.00	16.31	199.70	2,435.73	-458.74	-164.25	460.35	0.00	0.00	0.00
2,600.00	16.31	199.70	2,531.70	-485.18	-173.72	486.88	0.00	0.00	0.00
2,700.00	16.31	199.70	2,627.68	-511.62	-183.18	513.41	0.00	0.00	0.00
2,800.00	16.31	199.70	2,723.65	-538.06	-192.65	539.94	0.00	0.00	0.00
2,900.00	16.31	199.70	2,819.63	-564.49	-202.12	566.48	0.00	0.00	0.00
3,000.00	16.31	199.70	2,915.61	-590.93	-211.59	593.01	0.00	0.00	0.00
3,100.00	16.31	199.70	3,011.58	-617.37	-221.05	619.54	0.00	0.00	0.00
3,200.00	16.31	199.70	3,107.56	-643.81	-230.52	646.08	0.00	0.00	0.00
3,300.00	16.31	199.70	3,203.53	-670.25	-239.99	672.61	0.00	0.00	0.00
3,400.00	16.31	199.70	3,299.51	-696.69	-249.45	699.14	0.00	0.00	0.00
3,500.00	16.31	199.70	3,395.48	-723.13	-258.92	725.67	0.00	0.00	0.00
3,600.00	16.31	199.70	3,491.46	-749.57	-268.39	752.21	0.00	0.00	0.00
3,700.00	16.31	199.70	3,587.44	-776.01	-277.85	778.74	0.00	0.00	0.00
3,800.00	16.31	199.70	3,683.41	-802.45	-287.32	805.27	0.00	0.00	0.00
3,900.00	16.31	199.70	3,779.39	-828.89	-296.79	831.80	0.00	0.00	0.00
4,000.00	16.31	199.70	3,875.36	-855.33	-306.25	858.34	0.00	0.00	0.00
4,100.00	16.31	199.70	3,971.34	-881.77	-315.72	884.87	0.00	0.00	0.00
4,200.00	16.31	199.70	4,067.31	-908.21	-325.19	911.40	0.00	0.00	0.00
4,300.00	16.31	199.70	4,163.29	-934.65	-334.65	937.93	0.00	0.00	0.00
4,400.00	16.31	199.70	4,259.27	-961.09	-344.12	964.47	0.00	0.00	0.00
4,500.00	16.31	199.70	4,355.24	-987.53	-353.59	991.00	0.00	0.00	0.00
4,600.00	16.31	199.70	4,451.22	-1,013.97	-363.05	1,017.53	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAFI 1224-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Site:</b>	1N-65W-12 SAFI 1224 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SAFI 1224-07H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	16.31	199.70	4,547.19	-1,040.41	-372.52	1,044.06	0.00	0.00	0.00	
4,800.00	16.31	199.70	4,643.17	-1,066.85	-381.99	1,070.60	0.00	0.00	0.00	
4,900.00	16.31	199.70	4,739.14	-1,093.29	-391.45	1,097.13	0.00	0.00	0.00	
5,000.00	16.31	199.70	4,835.12	-1,119.73	-400.92	1,123.66	0.00	0.00	0.00	
5,100.00	16.31	199.70	4,931.09	-1,146.17	-410.39	1,150.19	0.00	0.00	0.00	
5,200.00	16.31	199.70	5,027.07	-1,172.61	-419.85	1,176.73	0.00	0.00	0.00	
5,300.00	16.31	199.70	5,123.05	-1,199.05	-429.32	1,203.26	0.00	0.00	0.00	
5,400.00	16.31	199.70	5,219.02	-1,225.49	-438.79	1,229.79	0.00	0.00	0.00	
5,500.00	16.31	199.70	5,315.00	-1,251.93	-448.25	1,256.32	0.00	0.00	0.00	
5,600.00	16.31	199.70	5,410.97	-1,278.37	-457.72	1,282.86	0.00	0.00	0.00	
5,700.00	16.31	199.70	5,506.95	-1,304.81	-467.19	1,309.39	0.00	0.00	0.00	
5,800.00	16.31	199.70	5,602.92	-1,331.25	-476.66	1,335.92	0.00	0.00	0.00	
5,900.00	16.31	199.70	5,698.90	-1,357.69	-486.12	1,362.46	0.00	0.00	0.00	
6,000.00	16.31	199.70	5,794.88	-1,384.13	-495.59	1,388.99	0.00	0.00	0.00	
6,100.00	16.31	199.70	5,890.85	-1,410.57	-505.06	1,415.52	0.00	0.00	0.00	
6,200.00	16.31	199.70	5,986.83	-1,437.01	-514.52	1,442.05	0.00	0.00	0.00	
6,300.00	16.31	199.70	6,082.80	-1,463.45	-523.99	1,468.59	0.00	0.00	0.00	
6,400.00	16.31	199.70	6,178.78	-1,489.88	-533.46	1,495.12	0.00	0.00	0.00	
6,500.00	16.31	199.70	6,274.75	-1,516.32	-542.92	1,521.65	0.00	0.00	0.00	
6,600.00	16.31	199.70	6,370.73	-1,542.76	-552.39	1,548.18	0.00	0.00	0.00	
6,700.00	16.31	199.70	6,466.70	-1,569.20	-561.86	1,574.72	0.00	0.00	0.00	
6,800.00	16.31	199.70	6,562.68	-1,595.64	-571.32	1,601.25	0.00	0.00	0.00	
6,812.24	16.31	199.70	6,574.43	-1,598.88	-572.48	1,604.50	0.00	0.00	0.00	
KOP @ 6812.24ft :: DLS = 9°/100'										
6,900.00	23.89	193.08	6,656.79	-1,627.83	-580.67	1,633.53	9.00	8.63	-7.55	
7,000.00	32.70	189.16	6,744.77	-1,674.32	-589.57	1,680.10	9.00	8.81	-3.92	
7,100.00	41.58	186.77	6,824.41	-1,734.06	-597.80	1,739.92	9.00	8.89	-2.39	
7,200.00	50.50	185.10	6,893.76	-1,805.58	-605.16	1,811.52	9.00	8.92	-1.67	
7,300.00	59.44	183.81	6,951.10	-1,887.14	-611.46	1,893.13	9.00	8.94	-1.29	
7,400.00	68.39	182.75	6,995.03	-1,976.72	-616.56	1,982.75	9.00	8.95	-1.07	
7,500.00	77.34	181.80	7,024.46	-2,072.11	-620.33	2,078.17	9.00	8.95	-0.94	
7,600.00	86.30	180.92	7,038.67	-2,170.96	-622.67	2,177.05	9.00	8.96	-0.88	
7,641.28	90.00	180.57	7,040.00	-2,212.21	-623.21	2,218.30	9.00	8.96	-0.86	
End Build @ 7641.28ft										
7,700.00	90.00	180.57	7,040.00	-2,270.92	-623.79	2,277.02	0.00	0.00	0.00	
7,800.00	90.00	180.57	7,040.00	-2,370.92	-624.78	2,377.02	0.00	0.00	0.00	
7,900.00	90.00	180.57	7,040.00	-2,470.91	-625.77	2,477.02	0.00	0.00	0.00	
8,000.00	90.00	180.57	7,040.00	-2,570.91	-626.76	2,577.02	0.00	0.00	0.00	
8,100.00	90.00	180.57	7,040.00	-2,670.90	-627.76	2,677.02	0.00	0.00	0.00	
8,200.00	90.00	180.57	7,040.00	-2,770.90	-628.75	2,777.02	0.00	0.00	0.00	
8,300.00	90.00	180.57	7,040.00	-2,870.89	-629.74	2,877.02	0.00	0.00	0.00	
8,400.00	90.00	180.57	7,040.00	-2,970.89	-630.73	2,977.02	0.00	0.00	0.00	
8,500.00	90.00	180.57	7,040.00	-3,070.89	-631.72	3,077.02	0.00	0.00	0.00	
8,600.00	90.00	180.57	7,040.00	-3,170.88	-632.71	3,177.02	0.00	0.00	0.00	
8,700.00	90.00	180.57	7,040.00	-3,270.88	-633.70	3,277.02	0.00	0.00	0.00	
8,800.00	90.00	180.57	7,040.00	-3,370.87	-634.69	3,377.02	0.00	0.00	0.00	
8,900.00	90.00	180.57	7,040.00	-3,470.87	-635.68	3,477.02	0.00	0.00	0.00	
9,000.00	90.00	180.57	7,040.00	-3,570.86	-636.67	3,577.02	0.00	0.00	0.00	
9,100.00	90.00	180.57	7,040.00	-3,670.86	-637.66	3,677.02	0.00	0.00	0.00	
9,200.00	90.00	180.57	7,040.00	-3,770.85	-638.65	3,777.02	0.00	0.00	0.00	
9,300.00	90.00	180.57	7,040.00	-3,870.85	-639.64	3,877.02	0.00	0.00	0.00	
9,400.00	90.00	180.57	7,040.00	-3,970.84	-640.64	3,977.02	0.00	0.00	0.00	
9,500.00	90.00	180.57	7,040.00	-4,070.84	-641.63	4,077.02	0.00	0.00	0.00	
9,600.00	90.00	180.57	7,040.00	-4,170.83	-642.62	4,177.02	0.00	0.00	0.00	

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAFI 1224-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Site:</b>	1N-65W-12 SAFI 1224 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SAFI 1224-07H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	90.00	180.57	7,040.00	-4,270.83	-643.61	4,277.02	0.00	0.00	0.00	
9,800.00	90.00	180.57	7,040.00	-4,370.82	-644.60	4,377.02	0.00	0.00	0.00	
9,900.00	90.00	180.57	7,040.00	-4,470.82	-645.59	4,477.02	0.00	0.00	0.00	
10,000.00	90.00	180.57	7,040.00	-4,570.81	-646.58	4,577.02	0.00	0.00	0.00	
10,100.00	90.00	180.57	7,040.00	-4,670.81	-647.57	4,677.02	0.00	0.00	0.00	
10,200.00	90.00	180.57	7,040.00	-4,770.80	-648.56	4,777.02	0.00	0.00	0.00	
10,300.00	90.00	180.57	7,040.00	-4,870.80	-649.55	4,877.02	0.00	0.00	0.00	
10,400.00	90.00	180.57	7,040.00	-4,970.79	-650.54	4,977.02	0.00	0.00	0.00	
10,500.00	90.00	180.57	7,040.00	-5,070.79	-651.53	5,077.02	0.00	0.00	0.00	
10,600.00	90.00	180.57	7,040.00	-5,170.78	-652.52	5,177.02	0.00	0.00	0.00	
10,700.00	90.00	180.57	7,040.00	-5,270.78	-653.52	5,277.02	0.00	0.00	0.00	
10,800.00	90.00	180.57	7,040.00	-5,370.77	-654.51	5,377.02	0.00	0.00	0.00	
10,900.00	90.00	180.57	7,040.00	-5,470.77	-655.50	5,477.02	0.00	0.00	0.00	
11,000.00	90.00	180.57	7,040.00	-5,570.76	-656.49	5,577.02	0.00	0.00	0.00	
11,100.00	90.00	180.57	7,040.00	-5,670.76	-657.48	5,677.02	0.00	0.00	0.00	
11,200.00	90.00	180.57	7,040.00	-5,770.75	-658.47	5,777.02	0.00	0.00	0.00	
11,300.00	90.00	180.57	7,040.00	-5,870.75	-659.46	5,877.02	0.00	0.00	0.00	
11,400.00	90.00	180.57	7,040.00	-5,970.74	-660.45	5,977.02	0.00	0.00	0.00	
11,500.00	90.00	180.57	7,040.00	-6,070.74	-661.44	6,077.02	0.00	0.00	0.00	
11,600.00	90.00	180.57	7,040.00	-6,170.73	-662.43	6,177.02	0.00	0.00	0.00	
11,700.00	90.00	180.57	7,040.00	-6,270.73	-663.42	6,277.02	0.00	0.00	0.00	
11,800.00	90.00	180.57	7,040.00	-6,370.72	-664.41	6,377.02	0.00	0.00	0.00	
11,900.00	90.00	180.57	7,040.00	-6,470.72	-665.40	6,477.02	0.00	0.00	0.00	
12,000.00	90.00	180.57	7,040.00	-6,570.71	-666.39	6,577.02	0.00	0.00	0.00	
12,100.00	90.00	180.57	7,040.00	-6,670.71	-667.39	6,677.02	0.00	0.00	0.00	
12,200.00	90.00	180.57	7,040.00	-6,770.70	-668.38	6,777.02	0.00	0.00	0.00	
12,300.00	90.00	180.57	7,040.00	-6,870.70	-669.37	6,877.02	0.00	0.00	0.00	
12,400.00	90.00	180.57	7,040.00	-6,970.69	-670.36	6,977.02	0.00	0.00	0.00	
12,500.00	90.00	180.57	7,040.00	-7,070.69	-671.35	7,077.02	0.00	0.00	0.00	
12,600.00	90.00	180.57	7,040.00	-7,170.68	-672.34	7,177.02	0.00	0.00	0.00	
12,700.00	90.00	180.57	7,040.00	-7,270.68	-673.33	7,277.02	0.00	0.00	0.00	
12,800.00	90.00	180.57	7,040.00	-7,370.67	-674.32	7,377.02	0.00	0.00	0.00	
12,900.00	90.00	180.57	7,040.00	-7,470.67	-675.31	7,477.02	0.00	0.00	0.00	
13,000.00	90.00	180.57	7,040.00	-7,570.66	-676.30	7,577.02	0.00	0.00	0.00	
13,100.00	90.00	180.57	7,040.00	-7,670.66	-677.29	7,677.02	0.00	0.00	0.00	
13,200.00	90.00	180.57	7,040.00	-7,770.65	-678.28	7,777.02	0.00	0.00	0.00	
13,300.00	90.00	180.57	7,040.00	-7,870.65	-679.27	7,877.02	0.00	0.00	0.00	
13,400.00	90.00	180.57	7,040.00	-7,970.64	-680.27	7,977.02	0.00	0.00	0.00	
13,500.00	90.00	180.57	7,040.00	-8,070.64	-681.26	8,077.02	0.00	0.00	0.00	
13,600.00	90.00	180.57	7,040.00	-8,170.63	-682.25	8,177.02	0.00	0.00	0.00	
13,700.00	90.00	180.57	7,040.00	-8,270.63	-683.24	8,277.02	0.00	0.00	0.00	
13,800.00	90.00	180.57	7,040.00	-8,370.63	-684.23	8,377.02	0.00	0.00	0.00	
13,900.00	90.00	180.57	7,040.00	-8,470.62	-685.22	8,477.02	0.00	0.00	0.00	
14,000.00	90.00	180.57	7,040.00	-8,570.62	-686.21	8,577.02	0.00	0.00	0.00	
14,100.00	90.00	180.57	7,040.00	-8,670.61	-687.20	8,677.02	0.00	0.00	0.00	
14,200.00	90.00	180.57	7,040.00	-8,770.61	-688.19	8,777.02	0.00	0.00	0.00	
14,300.00	90.00	180.57	7,040.00	-8,870.60	-689.18	8,877.02	0.00	0.00	0.00	
14,400.00	90.00	180.57	7,040.00	-8,970.60	-690.17	8,977.02	0.00	0.00	0.00	
14,500.00	90.00	180.57	7,040.00	-9,070.59	-691.16	9,077.02	0.00	0.00	0.00	
14,600.00	90.00	180.57	7,040.00	-9,170.59	-692.15	9,177.02	0.00	0.00	0.00	
14,700.00	90.00	180.57	7,040.00	-9,270.58	-693.14	9,277.02	0.00	0.00	0.00	
14,800.00	90.00	180.57	7,040.00	-9,370.58	-694.14	9,377.02	0.00	0.00	0.00	
14,900.00	90.00	180.57	7,040.00	-9,470.57	-695.13	9,477.02	0.00	0.00	0.00	

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAFI 1224-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 4994.00usft (RIG)
<b>Site:</b>	1N-65W-12 SAFI 1224 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SAFI 1224-07H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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)	
15,000.00	90.00	180.57	7,040.00	-9,570.57	-696.12	9,577.02	0.00	0.00	0.00	
15,100.00	90.00	180.57	7,040.00	-9,670.56	-697.11	9,677.02	0.00	0.00	0.00	
15,200.00	90.00	180.57	7,040.00	-9,770.56	-698.10	9,777.02	0.00	0.00	0.00	
15,300.00	90.00	180.57	7,040.00	-9,870.55	-699.09	9,877.02	0.00	0.00	0.00	
15,400.00	90.00	180.57	7,040.00	-9,970.55	-700.08	9,977.02	0.00	0.00	0.00	
15,500.00	90.00	180.57	7,040.00	-10,070.54	-701.07	10,077.02	0.00	0.00	0.00	
15,600.00	90.00	180.57	7,040.00	-10,170.54	-702.06	10,177.02	0.00	0.00	0.00	
15,700.00	90.00	180.57	7,040.00	-10,270.53	-703.05	10,277.02	0.00	0.00	0.00	
15,800.00	90.00	180.57	7,040.00	-10,370.53	-704.04	10,377.02	0.00	0.00	0.00	
15,900.00	90.00	180.57	7,040.00	-10,470.52	-705.03	10,477.02	0.00	0.00	0.00	
16,000.00	90.00	180.57	7,040.00	-10,570.52	-706.02	10,577.02	0.00	0.00	0.00	
16,100.00	90.00	180.57	7,040.00	-10,670.51	-707.02	10,677.02	0.00	0.00	0.00	
16,200.00	90.00	180.57	7,040.00	-10,770.51	-708.01	10,777.02	0.00	0.00	0.00	
16,300.00	90.00	180.57	7,040.00	-10,870.50	-709.00	10,877.02	0.00	0.00	0.00	
16,400.00	90.00	180.57	7,040.00	-10,970.50	-709.99	10,977.02	0.00	0.00	0.00	
16,500.00	90.00	180.57	7,040.00	-11,070.49	-710.98	11,077.02	0.00	0.00	0.00	
16,600.00	90.00	180.57	7,040.00	-11,170.49	-711.97	11,177.02	0.00	0.00	0.00	
16,700.00	90.00	180.57	7,040.00	-11,270.48	-712.96	11,277.02	0.00	0.00	0.00	
16,800.00	90.00	180.57	7,040.00	-11,370.48	-713.95	11,377.02	0.00	0.00	0.00	
16,900.00	90.00	180.57	7,040.00	-11,470.47	-714.94	11,477.02	0.00	0.00	0.00	
17,000.00	90.00	180.57	7,040.00	-11,570.47	-715.93	11,577.02	0.00	0.00	0.00	
17,100.00	90.00	180.57	7,040.00	-11,670.46	-716.92	11,677.02	0.00	0.00	0.00	
17,200.00	90.00	180.57	7,040.00	-11,770.46	-717.91	11,777.02	0.00	0.00	0.00	
17,300.00	90.00	180.57	7,040.00	-11,870.45	-718.90	11,877.02	0.00	0.00	0.00	
17,400.00	90.00	180.57	7,040.00	-11,970.45	-719.89	11,977.02	0.00	0.00	0.00	
17,500.00	90.00	180.57	7,040.00	-12,070.44	-720.89	12,077.02	0.00	0.00	0.00	
17,600.00	90.00	180.57	7,040.00	-12,170.44	-721.88	12,177.02	0.00	0.00	0.00	
17,700.00	90.00	180.57	7,040.00	-12,270.43	-722.87	12,277.02	0.00	0.00	0.00	
17,800.00	90.00	180.57	7,040.00	-12,370.43	-723.86	12,377.02	0.00	0.00	0.00	
17,806.88	90.00	180.57	7,040.00	-12,377.31	-723.93	12,383.90	0.00	0.00	0.00	
TD Well @ 17806.88ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,733.42	1,700.00	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)		
360.00	360.00	0.00	0.00	Begin Nudge @ 360.00ft	
1,175.50	1,164.53	-108.54	-38.86	Hold Tangent @ 1175.50ft	
6,812.24	6,574.43	-1,598.88	-572.48	KOP @ 6812.24ft :: DLS = 9°/100'	
7,641.28	7,040.00	-2,212.21	-623.21	End Build @ 7641.28ft	
17,806.88	7,040.00	-12,377.31	-723.93	TD Well @ 17806.88ft	