

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**8N-61W-29 GAFFNEY 2920 PAD**

**GAFFNEY 2920-07H**

**Plan B**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**07 June, 2024**

Project: WATTENBERG FIELD  
Site: 8N-61W-29 GAFFNEY 2920 PAD  
Well: GAFFNEY 2920-07H  
Wellbore: Plan B  
Design: Permit Rev-1

# VERDAD RESOURCES

## CASING DETAILS

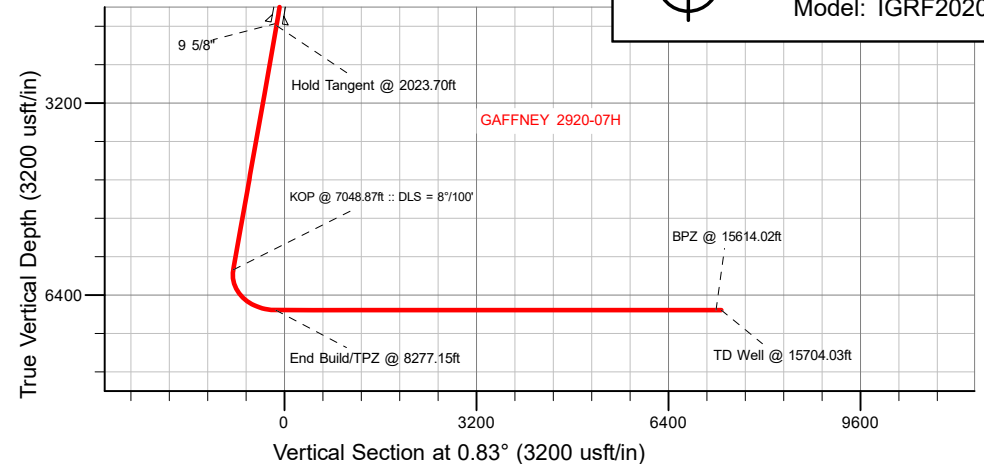
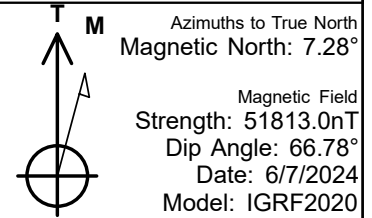
TVD	MD	Name	Size
1871.00	1977.41	9 5/8"	9-5/8

## 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	
229.70	0.00	0.00	229.70	0.00	0.00	0.00	0.00	0.00	
2023.70	35.88	105.02	1908.72	-140.88	525.03	2.00	105.02	-133.26	
7048.87	35.88	105.02	5980.35	-904.15	3369.61	0.00	0.00	-855.24	
8277.15	90.00	0.83	6651.00	-202.24	3850.09	8.00	-101.58	-146.44	
15704.03	90.00	0.83	6651.00	7223.87	3957.17	0.00	0.00	7280.43	GAFFNEY 2920-07H_BHL

## DESIGN TARGET DETAILS

Name	TVD	Northing	Easting	Latitude	Longitude
GAFFNEY 2920-07H_SHL	0.00	1476296.95	3350297.64	40.633988	-104.237847
GAFFNEY 2920-07H_LP	6651.00	1476149.52	3354150.28	40.633432	-104.223975
GAFFNEY 2920-07H_BPZ	6651.00	1483486.40	3354151.57	40.653569	-104.223590
GAFFNEY 2920-07H_BHL	6651.00	1483576.41	3354151.59	40.653816	-104.223585



## WELL DETAILS: GAFFNEY 2920-07H

GL = 4991'

RKB = 21' @ 5012.00usft (RIG)

Plan: Permit Rev-1 (GAFFNEY 2920-07H/Plan B)

Date: 6/7/2024

SHL  
2097' FNL  
559' FWL

LP/TPZ  
2340' FNL  
920' FEL

BPZ  
300' FNL  
917' FEL

BHL  
210' FNL  
917' FEL

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GAFFNEY 2920-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 21' @ 5012.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 21' @ 5012.00usft (RIG)
Site:	8N-61W-29 GAFFNEY 2920 PAD	North Reference:	True
Well:	GAFFNEY 2920-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-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		8N-61W-29 GAFFNEY 2920 PAD				
Site Position:		Northing:	1,476,229.35	usft	Latitude:	40.633806
From:	Map	Easting:	3,350,201.64	usft	Longitude:	-104.238196
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well	GAFFNEY 2920-07H					
Well Position	+N/-S	0.00 usft	Northing:	1,476,296.95 usft	Latitude:	40.633988
	+E/-W	0.00 usft	Easting:	3,350,297.64 usft	Longitude:	-104.237847
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,991.00 usft
Grid Convergence:		0.82 °				

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	6/7/2024	7.28	66.78	51,812.96839342

Design	Permit Rev-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	0.83

Plan Survey Tool Program		Date	6/6/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,871.00	Permit Rev-1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,871.00	15,704.03	Permit Rev-1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 21' @ 5012.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 21' @ 5012.00usft (RIG)
Site:	8N-61W-29 GAFFNEY 2920 PAD	North Reference:	True
Well:	GAFFNEY 2920-07H	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	
229.70	0.00	0.00	229.70	0.00	0.00	0.00	0.00	0.00	0.00	
2,023.70	35.88	105.02	1,908.72	-140.88	525.03	2.00	2.00	0.00	105.02	
7,048.87	35.88	105.02	5,980.35	-904.15	3,369.61	0.00	0.00	0.00	0.00	
8,277.15	90.00	0.83	6,651.00	-202.24	3,850.09	8.00	4.41	-8.48	-101.58	
15,704.03	90.00	0.83	6,651.00	7,223.87	3,957.17	0.00	0.00	0.00	0.00	GAFFNEY 2920-07H_

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GAFFNEY 2920-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Site:</b>	8N-61W-29 GAFFNEY 2920 PAD	<b>North Reference:</b>	True
<b>Well:</b>	GAFFNEY 2920-07H	<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
229.70	0.00	0.00	229.70	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 229.70ft									
300.00	1.41	105.02	299.99	-0.22	0.83	-0.21	2.00	2.00	0.00
400.00	3.41	105.02	399.90	-1.31	4.89	-1.24	2.00	2.00	0.00
500.00	5.41	105.02	499.60	-3.30	12.31	-3.12	2.00	2.00	0.00
600.00	7.41	105.02	598.97	-6.19	23.08	-5.86	2.00	2.00	0.00
700.00	9.41	105.02	697.89	-9.98	37.20	-9.44	2.00	2.00	0.00
800.00	11.41	105.02	796.24	-14.66	54.65	-13.87	2.00	2.00	0.00
900.00	13.41	105.02	893.90	-20.23	75.39	-19.14	2.00	2.00	0.00
1,000.00	15.41	105.02	990.75	-26.68	99.42	-25.23	2.00	2.00	0.00
1,100.00	17.41	105.02	1,086.68	-34.00	126.70	-32.16	2.00	2.00	0.00
1,200.00	19.41	105.02	1,181.55	-42.18	157.19	-39.90	2.00	2.00	0.00
1,300.00	21.41	105.02	1,275.27	-51.21	190.87	-48.44	2.00	2.00	0.00
1,400.00	23.41	105.02	1,367.72	-61.09	227.68	-57.79	2.00	2.00	0.00
1,500.00	25.41	105.02	1,458.78	-71.80	267.59	-67.92	2.00	2.00	0.00
1,600.00	27.41	105.02	1,548.34	-83.32	310.54	-78.82	2.00	2.00	0.00
1,700.00	29.41	105.02	1,636.30	-95.65	356.48	-90.48	2.00	2.00	0.00
1,800.00	31.41	105.02	1,722.54	-108.77	405.36	-102.89	2.00	2.00	0.00
1,900.00	33.41	105.02	1,806.96	-122.66	457.12	-116.02	2.00	2.00	0.00
1,977.41	34.95	105.02	1,871.00	-133.93	499.12	-126.68	2.00	2.00	0.00
9 5/8"									
2,000.00	35.41	105.02	1,889.46	-137.30	511.69	-129.87	2.00	2.00	0.00
2,023.70	35.88	105.02	1,908.72	-140.88	525.03	-133.26	2.00	2.00	0.00
Hold Tangent @ 2023.70ft									
2,100.00	35.88	105.02	1,970.54	-152.47	568.22	-144.22	0.00	0.00	0.00
2,200.00	35.88	105.02	2,051.57	-167.66	624.83	-158.59	0.00	0.00	0.00
2,300.00	35.88	105.02	2,132.59	-182.85	681.44	-172.96	0.00	0.00	0.00
2,400.00	35.88	105.02	2,213.62	-198.03	738.04	-187.32	0.00	0.00	0.00
2,500.00	35.88	105.02	2,294.64	-213.22	794.65	-201.69	0.00	0.00	0.00
2,600.00	35.88	105.02	2,375.67	-228.41	851.26	-216.06	0.00	0.00	0.00
2,700.00	35.88	105.02	2,456.69	-243.60	907.86	-230.42	0.00	0.00	0.00
2,800.00	35.88	105.02	2,537.72	-258.79	964.47	-244.79	0.00	0.00	0.00
2,900.00	35.88	105.02	2,618.74	-273.98	1,021.08	-259.16	0.00	0.00	0.00
3,000.00	35.88	105.02	2,699.77	-289.17	1,077.68	-273.53	0.00	0.00	0.00
3,100.00	35.88	105.02	2,780.79	-304.36	1,134.29	-287.89	0.00	0.00	0.00
3,200.00	35.88	105.02	2,861.82	-319.55	1,190.90	-302.26	0.00	0.00	0.00
3,300.00	35.88	105.02	2,942.84	-334.73	1,247.50	-316.63	0.00	0.00	0.00
3,400.00	35.88	105.02	3,023.86	-349.92	1,304.11	-331.00	0.00	0.00	0.00
3,500.00	35.88	105.02	3,104.89	-365.11	1,360.72	-345.36	0.00	0.00	0.00
3,600.00	35.88	105.02	3,185.91	-380.30	1,417.32	-359.73	0.00	0.00	0.00
3,700.00	35.88	105.02	3,266.94	-395.49	1,473.93	-374.10	0.00	0.00	0.00
3,800.00	35.88	105.02	3,347.96	-410.68	1,530.54	-388.46	0.00	0.00	0.00
3,900.00	35.88	105.02	3,428.99	-425.87	1,587.14	-402.83	0.00	0.00	0.00
4,000.00	35.88	105.02	3,510.01	-441.06	1,643.75	-417.20	0.00	0.00	0.00
4,100.00	35.88	105.02	3,591.04	-456.25	1,700.36	-431.57	0.00	0.00	0.00
4,200.00	35.88	105.02	3,672.06	-471.43	1,756.96	-445.93	0.00	0.00	0.00
4,300.00	35.88	105.02	3,753.09	-486.62	1,813.57	-460.30	0.00	0.00	0.00
4,400.00	35.88	105.02	3,834.11	-501.81	1,870.18	-474.67	0.00	0.00	0.00
4,500.00	35.88	105.02	3,915.14	-517.00	1,926.78	-489.04	0.00	0.00	0.00
4,600.00	35.88	105.02	3,996.16	-532.19	1,983.39	-503.40	0.00	0.00	0.00

# Planning Report

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<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Site:</b>	8N-61W-29 GAFFNEY 2920 PAD	<b>North Reference:</b>	True
<b>Well:</b>	GAFFNEY 2920-07H	<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	35.88	105.02	4,077.19	-547.38	2,040.00	-517.77	0.00	0.00	0.00
4,800.00	35.88	105.02	4,158.21	-562.57	2,096.60	-532.14	0.00	0.00	0.00
4,900.00	35.88	105.02	4,239.23	-577.76	2,153.21	-546.50	0.00	0.00	0.00
5,000.00	35.88	105.02	4,320.26	-592.94	2,209.81	-560.87	0.00	0.00	0.00
5,100.00	35.88	105.02	4,401.28	-608.13	2,266.42	-575.24	0.00	0.00	0.00
5,200.00	35.88	105.02	4,482.31	-623.32	2,323.03	-589.61	0.00	0.00	0.00
5,300.00	35.88	105.02	4,563.33	-638.51	2,379.63	-603.97	0.00	0.00	0.00
5,400.00	35.88	105.02	4,644.36	-653.70	2,436.24	-618.34	0.00	0.00	0.00
5,500.00	35.88	105.02	4,725.38	-668.89	2,492.85	-632.71	0.00	0.00	0.00
5,600.00	35.88	105.02	4,806.41	-684.08	2,549.45	-647.08	0.00	0.00	0.00
5,700.00	35.88	105.02	4,887.43	-699.27	2,606.06	-661.44	0.00	0.00	0.00
5,800.00	35.88	105.02	4,968.46	-714.46	2,662.67	-675.81	0.00	0.00	0.00
5,900.00	35.88	105.02	5,049.48	-729.64	2,719.27	-690.18	0.00	0.00	0.00
6,000.00	35.88	105.02	5,130.51	-744.83	2,775.88	-704.54	0.00	0.00	0.00
6,100.00	35.88	105.02	5,211.53	-760.02	2,832.49	-718.91	0.00	0.00	0.00
6,200.00	35.88	105.02	5,292.55	-775.21	2,889.09	-733.28	0.00	0.00	0.00
6,300.00	35.88	105.02	5,373.58	-790.40	2,945.70	-747.65	0.00	0.00	0.00
6,400.00	35.88	105.02	5,454.60	-805.59	3,002.31	-762.01	0.00	0.00	0.00
6,500.00	35.88	105.02	5,535.63	-820.78	3,058.91	-776.38	0.00	0.00	0.00
6,600.00	35.88	105.02	5,616.65	-835.97	3,115.52	-790.75	0.00	0.00	0.00
6,700.00	35.88	105.02	5,697.68	-851.16	3,172.13	-805.12	0.00	0.00	0.00
6,800.00	35.88	105.02	5,778.70	-866.34	3,228.73	-819.48	0.00	0.00	0.00
6,900.00	35.88	105.02	5,859.73	-881.53	3,285.34	-833.85	0.00	0.00	0.00
7,000.00	35.88	105.02	5,940.75	-896.72	3,341.95	-848.22	0.00	0.00	0.00
7,048.87	35.88	105.02	5,980.35	-904.15	3,369.61	-855.24	0.00	0.00	0.00
KOP @ 7048.87ft :: DLS = 8°/100'									
7,050.00	35.86	104.87	5,981.26	-904.32	3,370.25	-855.40	8.00	-1.60	-13.38
7,100.00	35.26	98.07	6,021.96	-910.10	3,398.71	-860.77	8.00	-1.21	-13.60
7,150.00	35.04	91.13	6,062.86	-912.41	3,427.36	-862.67	8.00	-0.43	-13.88
7,200.00	35.22	84.18	6,103.76	-911.23	3,456.06	-861.07	8.00	0.36	-13.89
7,250.00	35.79	77.36	6,144.48	-906.57	3,484.69	-855.99	8.00	1.14	-13.64
7,300.00	36.74	70.79	6,184.81	-898.44	3,513.09	-847.46	8.00	1.89	-13.15
7,350.00	38.03	64.55	6,224.55	-886.90	3,541.13	-835.51	8.00	2.58	-12.48
7,400.00	39.63	58.70	6,263.52	-871.99	3,568.67	-820.20	8.00	3.20	-11.70
7,450.00	41.50	53.26	6,301.51	-853.79	3,595.58	-801.61	8.00	3.74	-10.88
7,500.00	43.61	48.23	6,338.35	-832.38	3,621.73	-779.83	8.00	4.22	-10.05
7,550.00	45.92	43.60	6,373.86	-807.88	3,646.98	-754.97	8.00	4.63	-9.27
7,600.00	48.41	39.32	6,407.86	-780.40	3,671.22	-727.13	8.00	4.97	-8.55
7,650.00	51.04	35.37	6,440.19	-750.07	3,694.33	-696.47	8.00	5.26	-7.90
7,700.00	53.80	31.71	6,470.68	-717.04	3,716.20	-663.14	8.00	5.51	-7.32
7,750.00	56.66	28.31	6,499.20	-681.48	3,736.71	-627.28	8.00	5.72	-6.81
7,800.00	59.60	25.12	6,525.61	-643.55	3,755.78	-589.08	8.00	5.89	-6.37
7,850.00	62.62	22.12	6,549.76	-603.45	3,773.30	-548.73	8.00	6.04	-5.99
7,900.00	65.70	19.28	6,571.56	-561.36	3,789.19	-506.41	8.00	6.16	-5.67
7,950.00	68.83	16.58	6,590.88	-517.49	3,803.38	-462.34	8.00	6.26	-5.40
8,000.00	72.00	14.00	6,607.64	-472.06	3,815.78	-416.73	8.00	6.34	-5.18
8,050.00	75.21	11.50	6,621.75	-425.28	3,826.36	-369.81	8.00	6.41	-4.99
8,100.00	78.44	9.08	6,633.15	-377.39	3,835.04	-321.80	8.00	6.46	-4.85
8,150.00	81.69	6.71	6,641.78	-328.62	3,841.80	-272.93	8.00	6.50	-4.74
8,200.00	84.95	4.38	6,647.60	-279.20	3,846.59	-223.45	8.00	6.53	-4.66
8,250.00	88.22	2.07	6,650.58	-229.38	3,849.40	-173.59	8.00	6.54	-4.61
8,277.15	90.00	0.83	6,651.00	-202.24	3,850.09	-146.44	8.00	6.55	-4.59
End Build/TPZ @ 8277.15ft									
8,300.00	90.00	0.83	6,651.00	-179.39	3,850.42	-123.60	0.00	0.00	0.00

## Planning Report

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<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Site:</b>	8N-61W-29 GAFFNEY 2920 PAD	<b>North Reference:</b>	True
<b>Well:</b>	GAFFNEY 2920-07H	<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)	
8,400.00	90.00	0.83	6,651.00	-79.40	3,851.86	-23.60	0.00	0.00	0.00	
8,500.00	90.00	0.83	6,651.00	20.59	3,853.30	76.40	0.00	0.00	0.00	
8,600.00	90.00	0.83	6,651.00	120.58	3,854.74	176.40	0.00	0.00	0.00	
8,700.00	90.00	0.83	6,651.00	220.57	3,856.18	276.40	0.00	0.00	0.00	
8,800.00	90.00	0.83	6,651.00	320.56	3,857.62	376.40	0.00	0.00	0.00	
8,900.00	90.00	0.83	6,651.00	420.55	3,859.07	476.40	0.00	0.00	0.00	
9,000.00	90.00	0.83	6,651.00	520.53	3,860.51	576.40	0.00	0.00	0.00	
9,100.00	90.00	0.83	6,651.00	620.52	3,861.95	676.40	0.00	0.00	0.00	
9,200.00	90.00	0.83	6,651.00	720.51	3,863.39	776.40	0.00	0.00	0.00	
9,300.00	90.00	0.83	6,651.00	820.50	3,864.83	876.40	0.00	0.00	0.00	
9,400.00	90.00	0.83	6,651.00	920.49	3,866.28	976.40	0.00	0.00	0.00	
9,500.00	90.00	0.83	6,651.00	1,020.48	3,867.72	1,076.40	0.00	0.00	0.00	
9,600.00	90.00	0.83	6,651.00	1,120.47	3,869.16	1,176.40	0.00	0.00	0.00	
9,700.00	90.00	0.83	6,651.00	1,220.46	3,870.60	1,276.40	0.00	0.00	0.00	
9,800.00	90.00	0.83	6,651.00	1,320.45	3,872.04	1,376.40	0.00	0.00	0.00	
9,900.00	90.00	0.83	6,651.00	1,420.44	3,873.48	1,476.40	0.00	0.00	0.00	
10,000.00	90.00	0.83	6,651.00	1,520.43	3,874.93	1,576.40	0.00	0.00	0.00	
10,100.00	90.00	0.83	6,651.00	1,620.42	3,876.37	1,676.40	0.00	0.00	0.00	
10,200.00	90.00	0.83	6,651.00	1,720.41	3,877.81	1,776.40	0.00	0.00	0.00	
10,300.00	90.00	0.83	6,651.00	1,820.40	3,879.25	1,876.40	0.00	0.00	0.00	
10,400.00	90.00	0.83	6,651.00	1,920.39	3,880.69	1,976.40	0.00	0.00	0.00	
10,500.00	90.00	0.83	6,651.00	2,020.38	3,882.14	2,076.40	0.00	0.00	0.00	
10,600.00	90.00	0.83	6,651.00	2,120.37	3,883.58	2,176.40	0.00	0.00	0.00	
10,700.00	90.00	0.83	6,651.00	2,220.36	3,885.02	2,276.40	0.00	0.00	0.00	
10,800.00	90.00	0.83	6,651.00	2,320.35	3,886.46	2,376.40	0.00	0.00	0.00	
10,900.00	90.00	0.83	6,651.00	2,420.34	3,887.90	2,476.40	0.00	0.00	0.00	
11,000.00	90.00	0.83	6,651.00	2,520.33	3,889.34	2,576.40	0.00	0.00	0.00	
11,100.00	90.00	0.83	6,651.00	2,620.32	3,890.79	2,676.40	0.00	0.00	0.00	
11,200.00	90.00	0.83	6,651.00	2,720.31	3,892.23	2,776.40	0.00	0.00	0.00	
11,300.00	90.00	0.83	6,651.00	2,820.30	3,893.67	2,876.40	0.00	0.00	0.00	
11,400.00	90.00	0.83	6,651.00	2,920.29	3,895.11	2,976.40	0.00	0.00	0.00	
11,500.00	90.00	0.83	6,651.00	3,020.27	3,896.55	3,076.40	0.00	0.00	0.00	
11,600.00	90.00	0.83	6,651.00	3,120.26	3,898.00	3,176.40	0.00	0.00	0.00	
11,700.00	90.00	0.83	6,651.00	3,220.25	3,899.44	3,276.40	0.00	0.00	0.00	
11,800.00	90.00	0.83	6,651.00	3,320.24	3,900.88	3,376.40	0.00	0.00	0.00	
11,900.00	90.00	0.83	6,651.00	3,420.23	3,902.32	3,476.40	0.00	0.00	0.00	
12,000.00	90.00	0.83	6,651.00	3,520.22	3,903.76	3,576.40	0.00	0.00	0.00	
12,100.00	90.00	0.83	6,651.00	3,620.21	3,905.20	3,676.40	0.00	0.00	0.00	
12,200.00	90.00	0.83	6,651.00	3,720.20	3,906.65	3,776.40	0.00	0.00	0.00	
12,300.00	90.00	0.83	6,651.00	3,820.19	3,908.09	3,876.40	0.00	0.00	0.00	
12,400.00	90.00	0.83	6,651.00	3,920.18	3,909.53	3,976.40	0.00	0.00	0.00	
12,500.00	90.00	0.83	6,651.00	4,020.17	3,910.97	4,076.40	0.00	0.00	0.00	
12,600.00	90.00	0.83	6,651.00	4,120.16	3,912.41	4,176.40	0.00	0.00	0.00	
12,700.00	90.00	0.83	6,651.00	4,220.15	3,913.86	4,276.40	0.00	0.00	0.00	
12,800.00	90.00	0.83	6,651.00	4,320.14	3,915.30	4,376.40	0.00	0.00	0.00	
12,900.00	90.00	0.83	6,651.00	4,420.13	3,916.74	4,476.40	0.00	0.00	0.00	
13,000.00	90.00	0.83	6,651.00	4,520.12	3,918.18	4,576.40	0.00	0.00	0.00	
13,100.00	90.00	0.83	6,651.00	4,620.11	3,919.62	4,676.40	0.00	0.00	0.00	
13,200.00	90.00	0.83	6,651.00	4,720.10	3,921.06	4,776.40	0.00	0.00	0.00	
13,300.00	90.00	0.83	6,651.00	4,820.09	3,922.51	4,876.40	0.00	0.00	0.00	
13,400.00	90.00	0.83	6,651.00	4,920.08	3,923.95	4,976.40	0.00	0.00	0.00	
13,500.00	90.00	0.83	6,651.00	5,020.07	3,925.39	5,076.40	0.00	0.00	0.00	
13,600.00	90.00	0.83	6,651.00	5,120.06	3,926.83	5,176.40	0.00	0.00	0.00	
13,700.00	90.00	0.83	6,651.00	5,220.05	3,928.27	5,276.40	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GAFFNEY 2920-07H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 21' @ 5012.00usft (RIG)
<b>Site:</b>	8N-61W-29 GAFFNEY 2920 PAD	<b>North Reference:</b>	True
<b>Well:</b>	GAFFNEY 2920-07H	<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)
13,800.00	90.00	0.83	6,651.00	5,320.04	3,929.72	5,376.40	0.00	0.00	0.00
13,900.00	90.00	0.83	6,651.00	5,420.03	3,931.16	5,476.40	0.00	0.00	0.00
14,000.00	90.00	0.83	6,651.00	5,520.02	3,932.60	5,576.40	0.00	0.00	0.00
14,100.00	90.00	0.83	6,651.00	5,620.00	3,934.04	5,676.40	0.00	0.00	0.00
14,200.00	90.00	0.83	6,651.00	5,719.99	3,935.48	5,776.40	0.00	0.00	0.00
14,300.00	90.00	0.83	6,651.00	5,819.98	3,936.92	5,876.40	0.00	0.00	0.00
14,400.00	90.00	0.83	6,651.00	5,919.97	3,938.37	5,976.40	0.00	0.00	0.00
14,500.00	90.00	0.83	6,651.00	6,019.96	3,939.81	6,076.40	0.00	0.00	0.00
14,600.00	90.00	0.83	6,651.00	6,119.95	3,941.25	6,176.40	0.00	0.00	0.00
14,700.00	90.00	0.83	6,651.00	6,219.94	3,942.69	6,276.40	0.00	0.00	0.00
14,800.00	90.00	0.83	6,651.00	6,319.93	3,944.13	6,376.40	0.00	0.00	0.00
14,900.00	90.00	0.83	6,651.00	6,419.92	3,945.58	6,476.40	0.00	0.00	0.00
15,000.00	90.00	0.83	6,651.00	6,519.91	3,947.02	6,576.40	0.00	0.00	0.00
15,100.00	90.00	0.83	6,651.00	6,619.90	3,948.46	6,676.40	0.00	0.00	0.00
15,200.00	90.00	0.83	6,651.00	6,719.89	3,949.90	6,776.40	0.00	0.00	0.00
15,300.00	90.00	0.83	6,651.00	6,819.88	3,951.34	6,876.40	0.00	0.00	0.00
15,400.00	90.00	0.83	6,651.00	6,919.87	3,952.78	6,976.40	0.00	0.00	0.00
15,500.00	90.00	0.83	6,651.00	7,019.86	3,954.23	7,076.40	0.00	0.00	0.00
15,600.00	90.00	0.83	6,651.00	7,119.85	3,955.67	7,176.40	0.00	0.00	0.00
15,614.02	90.00	0.83	6,651.00	7,133.87	3,955.87	7,190.42	0.00	0.00	0.00
<b>BPZ @ 15614.02ft</b>									
15,704.03	90.00	0.83	6,651.00	7,223.87	3,957.17	7,280.43	0.00	0.00	0.00
<b>TD Well @ 15704.03ft</b>									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,977.41	1,871.00	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)	
229.70	229.70	0.00	0.00	Begin Nudge @ 229.70ft
2,023.70	1,908.72	-140.88	525.03	Hold Tangent @ 2023.70ft
7,048.87	5,980.35	-904.15	3,369.61	KOP @ 7048.87ft :: DLS = 8°/100'
8,277.15	6,651.00	-202.24	3,850.09	End Build/TPZ @ 8277.15ft
15,614.02	6,651.00	7,133.87	3,955.87	BPZ @ 15614.02ft
15,704.03	6,651.00	7,223.87	3,957.17	TD Well @ 15704.03ft