

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-17 TIMBRO 1717 PAD

TIMBRO 1717-14H

Wellbore #1

Plan: Design #3

Standard Planning Report

11 May, 2021

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-14H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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		9N-59W-17 TIMBRO 1717 PAD				
Site Position:		Northing:	1,522,135.25	usft	Latitude:	40.756951
From:	Lat/Long	Easting:	3,416,606.55	usft	Longitude:	-103.996171
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well		TIMBRO 1717-14H				
Well Position	+N/-S	0.00 usft	Northing:	1,522,137.24 usft	Latitude:	40.756952
	+E/-W	0.00 usft	Easting:	3,416,717.87 usft	Longitude:	-103.995770
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,011.00 usft
Grid Convergence:		0.97 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	5/11/2021	7.48	67.05	52,225.28783197

Design	Design #3				
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	179.93	

Plan Survey Tool Program	Date	5/11/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,700.00	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,700.00	11,500.29	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

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Wellbore:	Wellbore #1		
Design:	Design #3		

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	
203.00	0.00	0.00	203.00	0.00	0.00	0.00	0.00	0.00	0.00	
647.50	8.89	36.76	645.72	27.57	20.60	2.00	2.00	0.00	36.76	
5,599.02	8.89	36.76	5,537.76	640.61	478.54	0.00	0.00	0.00	0.00	
6,677.97	90.00	179.93	6,250.00	8.96	546.08	9.00	7.52	13.27	142.84	
11,500.29	90.00	179.93	6,250.00	-4,813.35	551.90	0.00	0.00	0.00	0.00	TIMBRO 1717-14H_E

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Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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
203.00	0.00	0.00	203.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 203.00ft									
300.00	1.94	36.76	299.98	1.32	0.98	-1.31	2.00	2.00	0.00
400.00	3.94	36.76	399.84	5.42	4.05	-5.42	2.00	2.00	0.00
500.00	5.94	36.76	499.47	12.32	9.21	-12.31	2.00	2.00	0.00
600.00	7.94	36.76	598.73	22.00	16.44	-21.98	2.00	2.00	0.00
647.50	8.89	36.76	645.72	27.57	20.60	-27.55	2.00	2.00	0.00
Hold Tangent @ 647.50ft									
700.00	8.89	36.76	697.59	34.07	25.45	-34.04	0.00	0.00	0.00
800.00	8.89	36.76	796.39	46.45	34.70	-46.41	0.00	0.00	0.00
900.00	8.89	36.76	895.19	58.83	43.95	-58.78	0.00	0.00	0.00
1,000.00	8.89	36.76	993.98	71.21	53.20	-71.15	0.00	0.00	0.00
1,100.00	8.89	36.76	1,092.78	83.59	62.45	-83.52	0.00	0.00	0.00
1,200.00	8.89	36.76	1,191.58	95.98	71.69	-95.89	0.00	0.00	0.00
1,300.00	8.89	36.76	1,290.38	108.36	80.94	-108.26	0.00	0.00	0.00
1,400.00	8.89	36.76	1,389.18	120.74	90.19	-120.63	0.00	0.00	0.00
1,500.00	8.89	36.76	1,487.98	133.12	99.44	-133.00	0.00	0.00	0.00
1,600.00	8.89	36.76	1,586.78	145.50	108.69	-145.37	0.00	0.00	0.00
1,700.00	8.89	36.76	1,685.57	157.88	117.94	-157.74	0.00	0.00	0.00
1,714.60	8.89	36.76	1,700.00	159.69	119.29	-159.54	0.00	0.00	0.00
9 5/8"									
1,800.00	8.89	36.76	1,784.37	170.26	127.19	-170.10	0.00	0.00	0.00
1,900.00	8.89	36.76	1,883.17	182.64	136.43	-182.47	0.00	0.00	0.00
2,000.00	8.89	36.76	1,981.97	195.02	145.68	-194.84	0.00	0.00	0.00
2,100.00	8.89	36.76	2,080.77	207.40	154.93	-207.21	0.00	0.00	0.00
2,200.00	8.89	36.76	2,179.57	219.78	164.18	-219.58	0.00	0.00	0.00
2,300.00	8.89	36.76	2,278.37	232.16	173.43	-231.95	0.00	0.00	0.00
2,400.00	8.89	36.76	2,377.17	244.55	182.68	-244.32	0.00	0.00	0.00
2,500.00	8.89	36.76	2,475.96	256.93	191.93	-256.69	0.00	0.00	0.00
2,600.00	8.89	36.76	2,574.76	269.31	201.17	-269.06	0.00	0.00	0.00
2,700.00	8.89	36.76	2,673.56	281.69	210.42	-281.43	0.00	0.00	0.00
2,800.00	8.89	36.76	2,772.36	294.07	219.67	-293.80	0.00	0.00	0.00
2,900.00	8.89	36.76	2,871.16	306.45	228.92	-306.17	0.00	0.00	0.00
3,000.00	8.89	36.76	2,969.96	318.83	238.17	-318.54	0.00	0.00	0.00
3,100.00	8.89	36.76	3,068.76	331.21	247.42	-330.91	0.00	0.00	0.00
3,200.00	8.89	36.76	3,167.56	343.59	256.67	-343.28	0.00	0.00	0.00
3,300.00	8.89	36.76	3,266.35	355.97	265.91	-355.65	0.00	0.00	0.00
3,400.00	8.89	36.76	3,365.15	368.35	275.16	-368.02	0.00	0.00	0.00
3,500.00	8.89	36.76	3,463.95	380.73	284.41	-380.39	0.00	0.00	0.00
3,600.00	8.89	36.76	3,562.75	393.11	293.66	-392.76	0.00	0.00	0.00
3,700.00	8.89	36.76	3,661.55	405.50	302.91	-405.13	0.00	0.00	0.00
3,800.00	8.89	36.76	3,760.35	417.88	312.16	-417.49	0.00	0.00	0.00
3,900.00	8.89	36.76	3,859.15	430.26	321.41	-429.86	0.00	0.00	0.00
4,000.00	8.89	36.76	3,957.94	442.64	330.65	-442.23	0.00	0.00	0.00
4,100.00	8.89	36.76	4,056.74	455.02	339.90	-454.60	0.00	0.00	0.00
4,200.00	8.89	36.76	4,155.54	467.40	349.15	-466.97	0.00	0.00	0.00
4,300.00	8.89	36.76	4,254.34	479.78	358.40	-479.34	0.00	0.00	0.00
4,400.00	8.89	36.76	4,353.14	492.16	367.65	-491.71	0.00	0.00	0.00
4,500.00	8.89	36.76	4,451.94	504.54	376.90	-504.08	0.00	0.00	0.00
4,600.00	8.89	36.76	4,550.74	516.92	386.15	-516.45	0.00	0.00	0.00

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Well:	TIMBRO 1717-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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	8.89	36.76	4,649.54	529.30	395.39	-528.82	0.00	0.00	0.00
4,800.00	8.89	36.76	4,748.33	541.68	404.64	-541.19	0.00	0.00	0.00
4,900.00	8.89	36.76	4,847.13	554.07	413.89	-553.56	0.00	0.00	0.00
5,000.00	8.89	36.76	4,945.93	566.45	423.14	-565.93	0.00	0.00	0.00
5,100.00	8.89	36.76	5,044.73	578.83	432.39	-578.30	0.00	0.00	0.00
5,200.00	8.89	36.76	5,143.53	591.21	441.64	-590.67	0.00	0.00	0.00
5,300.00	8.89	36.76	5,242.33	603.59	450.88	-603.04	0.00	0.00	0.00
5,400.00	8.89	36.76	5,341.13	615.97	460.13	-615.41	0.00	0.00	0.00
5,500.00	8.89	36.76	5,439.92	628.35	469.38	-627.78	0.00	0.00	0.00
5,599.02	8.89	36.76	5,537.76	640.61	478.54	-640.02	0.00	0.00	0.00
KOP @ 5599.02ft :: DLS = 9°/100'									
5,600.00	8.82	37.11	5,538.72	640.73	478.63	-640.14	9.00	-7.16	35.46
5,700.00	5.71	110.28	5,638.09	645.13	487.94	-644.53	9.00	-3.11	73.17
5,800.00	12.20	154.24	5,736.91	633.86	497.22	-633.25	9.00	6.49	43.96
5,900.00	20.66	165.53	5,832.77	607.20	506.24	-606.59	9.00	8.45	11.29
6,000.00	29.43	170.36	5,923.28	565.82	514.78	-565.19	9.00	8.77	4.83
6,100.00	38.30	173.11	6,006.24	510.71	522.62	-510.07	9.00	8.87	2.75
6,200.00	47.22	174.95	6,079.59	443.25	529.58	-442.61	9.00	8.91	1.84
6,300.00	56.15	176.33	6,141.53	365.10	535.48	-364.45	9.00	8.94	1.37
6,400.00	65.10	177.44	6,190.53	278.17	540.18	-277.51	9.00	8.95	1.11
6,500.00	74.05	178.40	6,225.39	184.62	543.56	-183.95	9.00	8.96	0.96
6,600.00	83.01	179.27	6,245.25	86.73	545.54	-86.07	9.00	8.96	0.88
6,677.97	90.00	179.93	6,250.00	8.96	546.08	-8.29	9.00	8.96	0.84
TPZ @ 6677.97ft									
6,700.00	90.00	179.93	6,250.00	-13.07	546.11	13.74	0.00	0.00	0.00
6,800.00	90.00	179.93	6,250.00	-113.07	546.23	113.74	0.00	0.00	0.00
6,900.00	90.00	179.93	6,250.00	-213.07	546.35	213.74	0.00	0.00	0.00
7,000.00	90.00	179.93	6,250.00	-313.07	546.47	313.74	0.00	0.00	0.00
7,100.00	90.00	179.93	6,250.00	-413.07	546.59	413.74	0.00	0.00	0.00
7,200.00	90.00	179.93	6,250.00	-513.07	546.71	513.74	0.00	0.00	0.00
7,300.00	90.00	179.93	6,250.00	-613.07	546.83	613.74	0.00	0.00	0.00
7,400.00	90.00	179.93	6,250.00	-713.07	546.95	713.74	0.00	0.00	0.00
7,500.00	90.00	179.93	6,250.00	-813.07	547.07	813.74	0.00	0.00	0.00
7,600.00	90.00	179.93	6,250.00	-913.07	547.19	913.74	0.00	0.00	0.00
7,700.00	90.00	179.93	6,250.00	-1,013.07	547.31	1,013.74	0.00	0.00	0.00
7,800.00	90.00	179.93	6,250.00	-1,113.07	547.43	1,113.74	0.00	0.00	0.00
7,900.00	90.00	179.93	6,250.00	-1,213.07	547.56	1,213.74	0.00	0.00	0.00
8,000.00	90.00	179.93	6,250.00	-1,313.07	547.68	1,313.74	0.00	0.00	0.00
8,100.00	90.00	179.93	6,250.00	-1,413.07	547.80	1,413.74	0.00	0.00	0.00
8,200.00	90.00	179.93	6,250.00	-1,513.07	547.92	1,513.74	0.00	0.00	0.00
8,300.00	90.00	179.93	6,250.00	-1,613.07	548.04	1,613.74	0.00	0.00	0.00
8,400.00	90.00	179.93	6,250.00	-1,713.07	548.16	1,713.74	0.00	0.00	0.00
8,500.00	90.00	179.93	6,250.00	-1,813.07	548.28	1,813.74	0.00	0.00	0.00
8,600.00	90.00	179.93	6,250.00	-1,913.07	548.40	1,913.74	0.00	0.00	0.00
8,700.00	90.00	179.93	6,250.00	-2,013.07	548.52	2,013.74	0.00	0.00	0.00
8,800.00	90.00	179.93	6,250.00	-2,113.07	548.64	2,113.74	0.00	0.00	0.00
8,900.00	90.00	179.93	6,250.00	-2,213.07	548.76	2,213.74	0.00	0.00	0.00
9,000.00	90.00	179.93	6,250.00	-2,313.07	548.88	2,313.74	0.00	0.00	0.00
9,100.00	90.00	179.93	6,250.00	-2,413.07	549.00	2,413.74	0.00	0.00	0.00
9,200.00	90.00	179.93	6,250.00	-2,513.07	549.12	2,513.74	0.00	0.00	0.00
9,300.00	90.00	179.93	6,250.00	-2,613.07	549.24	2,613.74	0.00	0.00	0.00
9,400.00	90.00	179.93	6,250.00	-2,713.07	549.36	2,713.74	0.00	0.00	0.00
9,500.00	90.00	179.93	6,250.00	-2,813.07	549.48	2,813.74	0.00	0.00	0.00
9,600.00	90.00	179.93	6,250.00	-2,913.07	549.61	2,913.74	0.00	0.00	0.00

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Well:	TIMBRO 1717-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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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	179.93	6,250.00	-3,013.07	549.73	3,013.74	0.00	0.00	0.00	
9,800.00	90.00	179.93	6,250.00	-3,113.07	549.85	3,113.74	0.00	0.00	0.00	
9,900.00	90.00	179.93	6,250.00	-3,213.07	549.97	3,213.74	0.00	0.00	0.00	
10,000.00	90.00	179.93	6,250.00	-3,313.07	550.09	3,313.74	0.00	0.00	0.00	
10,100.00	90.00	179.93	6,250.00	-3,413.07	550.21	3,413.74	0.00	0.00	0.00	
10,200.00	90.00	179.93	6,250.00	-3,513.07	550.33	3,513.74	0.00	0.00	0.00	
10,300.00	90.00	179.93	6,250.00	-3,613.07	550.45	3,613.74	0.00	0.00	0.00	
10,400.00	90.00	179.93	6,250.00	-3,713.07	550.57	3,713.74	0.00	0.00	0.00	
10,500.00	90.00	179.93	6,250.00	-3,813.07	550.69	3,813.74	0.00	0.00	0.00	
10,600.00	90.00	179.93	6,250.00	-3,913.07	550.81	3,913.74	0.00	0.00	0.00	
10,700.00	90.00	179.93	6,250.00	-4,013.07	550.93	4,013.74	0.00	0.00	0.00	
10,800.00	90.00	179.93	6,250.00	-4,113.07	551.05	4,113.74	0.00	0.00	0.00	
10,900.00	90.00	179.93	6,250.00	-4,213.07	551.17	4,213.74	0.00	0.00	0.00	
11,000.00	90.00	179.93	6,250.00	-4,313.07	551.29	4,313.74	0.00	0.00	0.00	
11,100.00	90.00	179.93	6,250.00	-4,413.07	551.41	4,413.74	0.00	0.00	0.00	
11,200.00	90.00	179.93	6,250.00	-4,513.07	551.53	4,513.74	0.00	0.00	0.00	
11,300.00	90.00	179.93	6,250.00	-4,613.07	551.65	4,613.74	0.00	0.00	0.00	
11,380.31	90.00	179.93	6,250.00	-4,693.38	551.75	4,694.05	0.00	0.00	0.00	
BPZ @ 11380.31ft										
11,400.00	90.00	179.93	6,250.00	-4,713.07	551.78	4,713.74	0.00	0.00	0.00	
11,500.00	90.00	179.93	6,250.00	-4,813.07	551.90	4,813.74	0.00	0.00	0.00	
11,500.29	90.00	179.93	6,250.00	-4,813.35	551.90	4,814.02	0.00	0.00	0.00	
TD Well @ 11500.29ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,714.60	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)	
203.00	203.00	0.00	0.00	Begin Nudge @ 203.00ft
647.50	645.72	27.57	20.60	Hold Tangent @ 647.50ft
5,599.02	5,537.76	640.61	478.54	KOP @ 5599.02ft :: DLS = 9°/100'
6,677.97	6,250.00	8.96	546.08	TPZ @ 6677.97ft
11,380.31	6,250.00	-4,693.38	551.75	BPZ @ 11380.31ft
11,500.29	6,250.00	-4,813.35	551.90	TD Well @ 11500.29ft