

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-17 TIMBRO 1717 PAD

TIMBRO 1717-12H

Wellbore #1

Plan: Design #3

Standard Planning Report

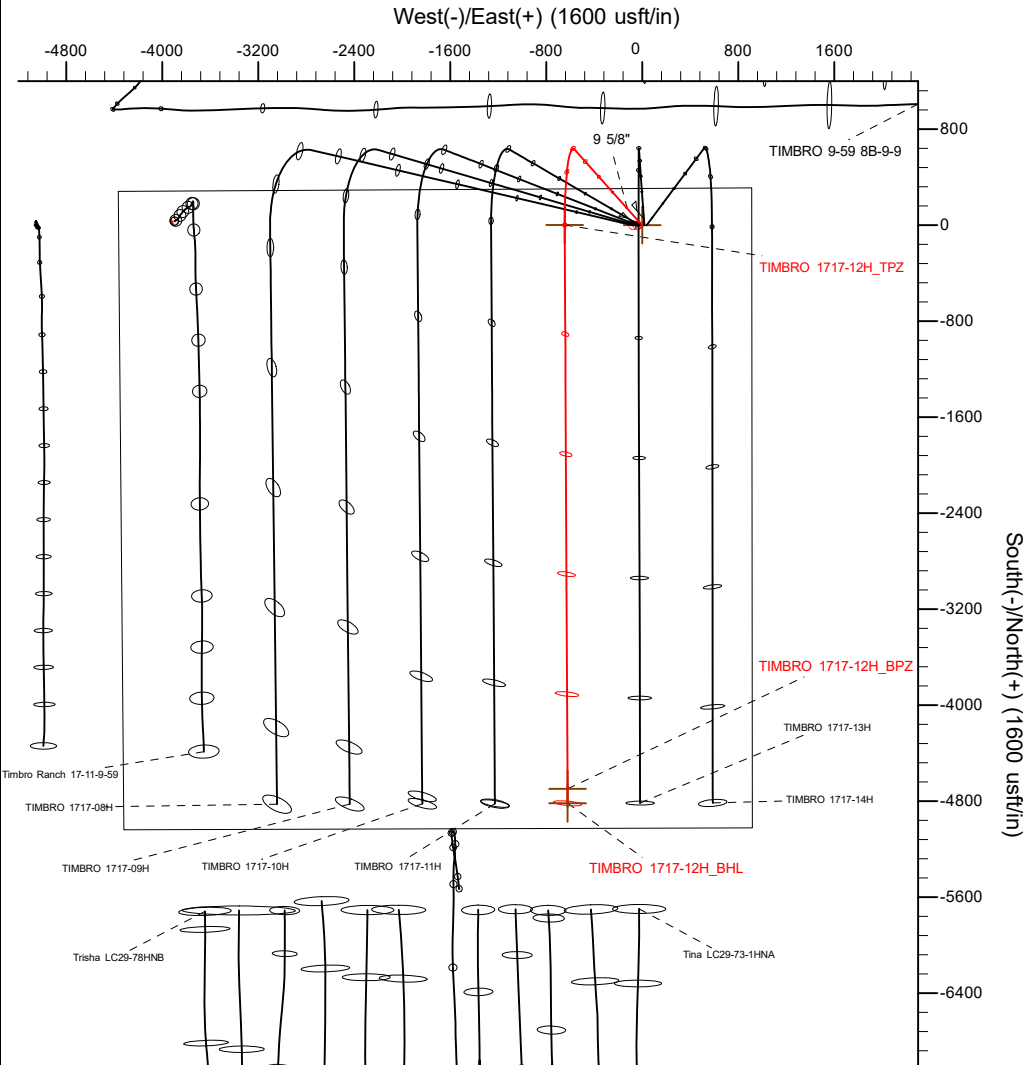
11 May, 2021

Project: WATTENBERG FIELD
 Site: 9N-59W-17 TIMBRO 1717 PAD
 Well: TIMBRO 1717-12H
 Wellbore: Wellbore #1
 Design: Design #3

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1714.58	9 5/8"	9-5/8



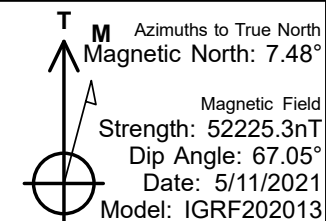
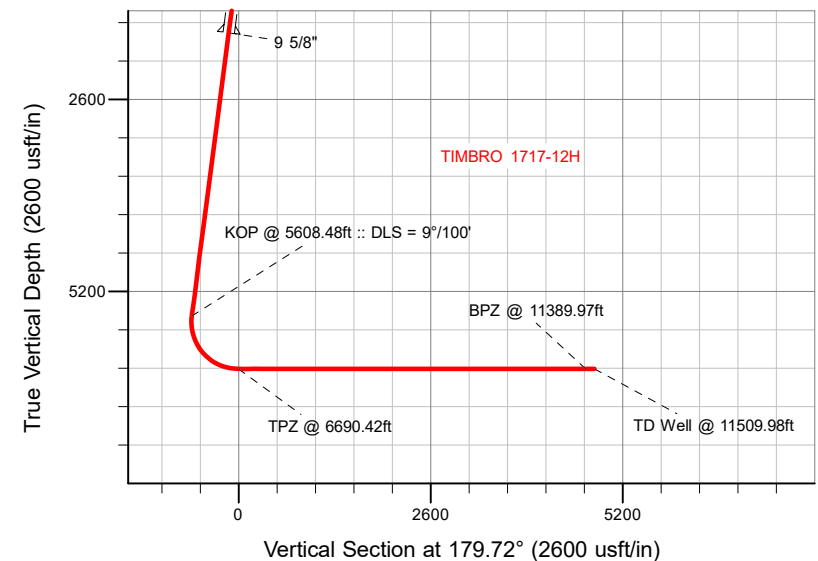
SHL	TPZ	BPZ	BHL
306 FNL	300' FNL	330' FSL	210' FSL
913' FEL	1558' FEL	1541' FEL	1540' FEL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	398.70	0.00	0.00	398.70	0.00	0.00	0.00	0.00	0.00	
3	891.70	9.86	318.27	889.27	31.58	-28.17	2.00	318.27	-31.72	
4	5608.48	9.86	318.27	5536.38	634.36	-565.79	0.00	0.00	-637.12	
5	6690.42	90.00	179.72	6250.00	2.62	-644.83	9.00	-138.13	-5.77	
6	11509.98	90.00	179.72	6250.00	-4816.89	-621.36	0.00	0.00	4813.79	TIMBRO 1717-12H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 1717-12H_SHL	0.00	0.00	0.00	0.00	40.756951	-103.995903
TIMBRO 1717-12H_TPZ	6690.42	6250.00	2.62	-644.83	40.756958	-103.998231
TIMBRO 1717-12H_BPZ	11389.97	6250.00	-4696.88	-621.97	40.744059	-103.998147
TIMBRO 1717-12H_BHL	11509.98	6250.00	-4816.89	-621.36	40.743730	-103.998145



WELL DETAILS: TIMBRO 1717-12H

GL = 5010'

RKB = 20' @ 5030.00usft (RIG)

Plan: Design #3 (TIMBRO 1717-12H/Wellbore #1)

Date: 5/11/2021

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5030.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5030.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-12H	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 1717-12H				
Well Position	+N/-S	0.00 usft	Northing:	1,522,136.43 usft	Latitude:	40.756951
	+E/-W	0.00 usft	Easting:	3,416,680.90 usft	Longitude:	-103.995903
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,010.00 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	52,225.28252406

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	179.72	

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	11,509.98	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5030.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5030.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-12H	Survey Calculation Method:	Minimum Curvature
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	
398.70	0.00	0.00	398.70	0.00	0.00	0.00	0.00	0.00	0.00	
891.70	9.86	318.27	889.27	31.58	-28.17	2.00	2.00	0.00	318.27	
5,608.48	9.86	318.27	5,536.38	634.36	-565.79	0.00	0.00	0.00	0.00	
6,690.42	90.00	179.72	6,250.00	2.62	-644.83	9.00	7.41	-12.81	-138.13	
11,509.98	90.00	179.72	6,250.00	-4,816.89	-621.36	0.00	0.00	0.00	0.00	TIMBRO 1717-12H_E

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5030.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5030.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-12H	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
398.70	0.00	0.00	398.70	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 398.70ft									
400.00	0.03	318.27	400.00	0.00	0.00	0.00	2.00	2.00	0.00
500.00	2.03	318.27	499.98	1.34	-1.19	-1.34	2.00	2.00	0.00
600.00	4.03	318.27	599.83	5.28	-4.71	-5.30	2.00	2.00	0.00
700.00	6.03	318.27	699.44	11.81	-10.54	-11.86	2.00	2.00	0.00
800.00	8.03	318.27	798.69	20.94	-18.68	-21.03	2.00	2.00	0.00
891.70	9.86	318.27	889.27	31.58	-28.17	-31.72	2.00	2.00	0.00
Hold Tangent @ 891.70ft									
900.00	9.86	318.27	897.45	32.64	-29.11	-32.78	0.00	0.00	0.00
1,000.00	9.86	318.27	995.97	45.42	-40.51	-45.62	0.00	0.00	0.00
1,100.00	9.86	318.27	1,094.49	58.20	-51.91	-58.45	0.00	0.00	0.00
1,200.00	9.86	318.27	1,193.02	70.98	-63.31	-71.29	0.00	0.00	0.00
1,300.00	9.86	318.27	1,291.54	83.76	-74.70	-84.12	0.00	0.00	0.00
1,400.00	9.86	318.27	1,390.06	96.54	-86.10	-96.96	0.00	0.00	0.00
1,500.00	9.86	318.27	1,488.59	109.32	-97.50	-109.79	0.00	0.00	0.00
1,600.00	9.86	318.27	1,587.11	122.10	-108.90	-122.63	0.00	0.00	0.00
1,700.00	9.86	318.27	1,685.63	134.88	-120.30	-135.46	0.00	0.00	0.00
1,714.58	9.86	318.27	1,700.00	136.74	-121.96	-137.34	0.00	0.00	0.00
9 5/8"									
1,800.00	9.86	318.27	1,784.15	147.66	-131.70	-148.30	0.00	0.00	0.00
1,900.00	9.86	318.27	1,882.68	160.44	-143.09	-161.13	0.00	0.00	0.00
2,000.00	9.86	318.27	1,981.20	173.22	-154.49	-173.97	0.00	0.00	0.00
2,100.00	9.86	318.27	2,079.72	186.00	-165.89	-186.80	0.00	0.00	0.00
2,200.00	9.86	318.27	2,178.25	198.77	-177.29	-199.64	0.00	0.00	0.00
2,300.00	9.86	318.27	2,276.77	211.55	-188.69	-212.47	0.00	0.00	0.00
2,400.00	9.86	318.27	2,375.29	224.33	-200.08	-225.31	0.00	0.00	0.00
2,500.00	9.86	318.27	2,473.81	237.11	-211.48	-238.14	0.00	0.00	0.00
2,600.00	9.86	318.27	2,572.34	249.89	-222.88	-250.98	0.00	0.00	0.00
2,700.00	9.86	318.27	2,670.86	262.67	-234.28	-263.81	0.00	0.00	0.00
2,800.00	9.86	318.27	2,769.38	275.45	-245.68	-276.65	0.00	0.00	0.00
2,900.00	9.86	318.27	2,867.91	288.23	-257.08	-289.48	0.00	0.00	0.00
3,000.00	9.86	318.27	2,966.43	301.01	-268.47	-302.32	0.00	0.00	0.00
3,100.00	9.86	318.27	3,064.95	313.79	-279.87	-315.15	0.00	0.00	0.00
3,200.00	9.86	318.27	3,163.47	326.57	-291.27	-327.99	0.00	0.00	0.00
3,300.00	9.86	318.27	3,262.00	339.35	-302.67	-340.82	0.00	0.00	0.00
3,400.00	9.86	318.27	3,360.52	352.13	-314.07	-353.66	0.00	0.00	0.00
3,500.00	9.86	318.27	3,459.04	364.91	-325.46	-366.50	0.00	0.00	0.00
3,600.00	9.86	318.27	3,557.57	377.69	-336.86	-379.33	0.00	0.00	0.00
3,700.00	9.86	318.27	3,656.09	390.47	-348.26	-392.17	0.00	0.00	0.00
3,800.00	9.86	318.27	3,754.61	403.25	-359.66	-405.00	0.00	0.00	0.00
3,900.00	9.86	318.27	3,853.14	416.03	-371.06	-417.84	0.00	0.00	0.00
4,000.00	9.86	318.27	3,951.66	428.81	-382.46	-430.67	0.00	0.00	0.00
4,100.00	9.86	318.27	4,050.18	441.59	-393.85	-443.51	0.00	0.00	0.00
4,200.00	9.86	318.27	4,148.70	454.37	-405.25	-456.34	0.00	0.00	0.00
4,300.00	9.86	318.27	4,247.23	467.15	-416.65	-469.18	0.00	0.00	0.00
4,400.00	9.86	318.27	4,345.75	479.93	-428.05	-482.01	0.00	0.00	0.00
4,500.00	9.86	318.27	4,444.27	492.70	-439.45	-494.85	0.00	0.00	0.00
4,600.00	9.86	318.27	4,542.80	505.48	-450.84	-507.68	0.00	0.00	0.00

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5030.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5030.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-12H	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	9.86	318.27	4,641.32	518.26	-462.24	-520.52	0.00	0.00	0.00
4,800.00	9.86	318.27	4,739.84	531.04	-473.64	-533.35	0.00	0.00	0.00
4,900.00	9.86	318.27	4,838.36	543.82	-485.04	-546.19	0.00	0.00	0.00
5,000.00	9.86	318.27	4,936.89	556.60	-496.44	-559.02	0.00	0.00	0.00
5,100.00	9.86	318.27	5,035.41	569.38	-507.84	-571.86	0.00	0.00	0.00
5,200.00	9.86	318.27	5,133.93	582.16	-519.23	-584.69	0.00	0.00	0.00
5,300.00	9.86	318.27	5,232.46	594.94	-530.63	-597.53	0.00	0.00	0.00
5,400.00	9.86	318.27	5,330.98	607.72	-542.03	-610.36	0.00	0.00	0.00
5,500.00	9.86	318.27	5,429.50	620.50	-553.43	-623.20	0.00	0.00	0.00
5,600.00	9.86	318.27	5,528.02	633.28	-564.83	-636.03	0.00	0.00	0.00
5,608.48	9.86	318.27	5,536.38	634.36	-565.79	-637.12	0.00	0.00	0.00
KOP @ 5608.48ft :: DLS = 9°/100'									
5,700.00	6.62	262.22	5,627.07	639.51	-576.25	-642.31	9.00	-3.54	-61.25
5,800.00	11.83	213.04	5,725.88	630.11	-587.58	-632.98	9.00	5.21	-49.17
5,900.00	19.93	198.22	5,822.02	605.28	-598.52	-608.20	9.00	8.10	-14.82
6,000.00	28.56	191.92	5,913.13	565.62	-608.81	-568.58	9.00	8.63	-6.30
6,100.00	37.36	188.39	5,996.96	512.10	-618.19	-515.11	9.00	8.80	-3.53
6,200.00	46.23	186.05	6,071.44	446.04	-626.44	-449.10	9.00	8.87	-2.34
6,300.00	55.13	184.32	6,134.75	369.08	-633.35	-372.17	9.00	8.90	-1.73
6,400.00	64.05	182.93	6,185.33	283.10	-638.75	-286.22	9.00	8.92	-1.39
6,500.00	72.98	181.74	6,221.92	190.22	-642.51	-193.36	9.00	8.93	-1.19
6,600.00	81.92	180.66	6,243.63	92.73	-644.53	-95.88	9.00	8.94	-1.08
6,690.42	90.00	179.72	6,250.00	2.62	-644.83	-5.77	9.00	8.94	-1.04
TPZ @ 6690.42ft									
6,700.00	90.00	179.72	6,250.00	-6.97	-644.78	3.82	0.00	0.00	0.00
6,800.00	90.00	179.72	6,250.00	-106.97	-644.29	103.82	0.00	0.00	0.00
6,900.00	90.00	179.72	6,250.00	-206.96	-643.81	203.82	0.00	0.00	0.00
7,000.00	90.00	179.72	6,250.00	-306.96	-643.32	303.82	0.00	0.00	0.00
7,100.00	90.00	179.72	6,250.00	-406.96	-642.83	403.82	0.00	0.00	0.00
7,200.00	90.00	179.72	6,250.00	-506.96	-642.35	503.82	0.00	0.00	0.00
7,300.00	90.00	179.72	6,250.00	-606.96	-641.86	603.82	0.00	0.00	0.00
7,400.00	90.00	179.72	6,250.00	-706.96	-641.37	703.82	0.00	0.00	0.00
7,500.00	90.00	179.72	6,250.00	-806.96	-640.89	803.82	0.00	0.00	0.00
7,600.00	90.00	179.72	6,250.00	-906.96	-640.40	903.82	0.00	0.00	0.00
7,700.00	90.00	179.72	6,250.00	-1,006.96	-639.91	1,003.82	0.00	0.00	0.00
7,800.00	90.00	179.72	6,250.00	-1,106.95	-639.43	1,103.82	0.00	0.00	0.00
7,900.00	90.00	179.72	6,250.00	-1,206.95	-638.94	1,203.82	0.00	0.00	0.00
8,000.00	90.00	179.72	6,250.00	-1,306.95	-638.45	1,303.82	0.00	0.00	0.00
8,100.00	90.00	179.72	6,250.00	-1,406.95	-637.96	1,403.82	0.00	0.00	0.00
8,200.00	90.00	179.72	6,250.00	-1,506.95	-637.48	1,503.82	0.00	0.00	0.00
8,300.00	90.00	179.72	6,250.00	-1,606.95	-636.99	1,603.82	0.00	0.00	0.00
8,400.00	90.00	179.72	6,250.00	-1,706.95	-636.50	1,703.82	0.00	0.00	0.00
8,500.00	90.00	179.72	6,250.00	-1,806.95	-636.02	1,803.82	0.00	0.00	0.00
8,600.00	90.00	179.72	6,250.00	-1,906.94	-635.53	1,903.82	0.00	0.00	0.00
8,700.00	90.00	179.72	6,250.00	-2,006.94	-635.04	2,003.82	0.00	0.00	0.00
8,800.00	90.00	179.72	6,250.00	-2,106.94	-634.56	2,103.82	0.00	0.00	0.00
8,900.00	90.00	179.72	6,250.00	-2,206.94	-634.07	2,203.82	0.00	0.00	0.00
9,000.00	90.00	179.72	6,250.00	-2,306.94	-633.58	2,303.82	0.00	0.00	0.00
9,100.00	90.00	179.72	6,250.00	-2,406.94	-633.10	2,403.82	0.00	0.00	0.00
9,200.00	90.00	179.72	6,250.00	-2,506.94	-632.61	2,503.82	0.00	0.00	0.00
9,300.00	90.00	179.72	6,250.00	-2,606.94	-632.12	2,603.82	0.00	0.00	0.00
9,400.00	90.00	179.72	6,250.00	-2,706.94	-631.64	2,703.82	0.00	0.00	0.00
9,500.00	90.00	179.72	6,250.00	-2,806.93	-631.15	2,803.82	0.00	0.00	0.00
9,600.00	90.00	179.72	6,250.00	-2,906.93	-630.66	2,903.82	0.00	0.00	0.00

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5030.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5030.00usft (RIG)
Site:	9N-59W-17 TIMBRO 1717 PAD	North Reference:	True
Well:	TIMBRO 1717-12H	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)	
9,700.00	90.00	179.72	6,250.00	-3,006.93	-630.18	3,003.82	0.00	0.00	0.00	
9,800.00	90.00	179.72	6,250.00	-3,106.93	-629.69	3,103.82	0.00	0.00	0.00	
9,900.00	90.00	179.72	6,250.00	-3,206.93	-629.20	3,203.82	0.00	0.00	0.00	
10,000.00	90.00	179.72	6,250.00	-3,306.93	-628.72	3,303.82	0.00	0.00	0.00	
10,100.00	90.00	179.72	6,250.00	-3,406.93	-628.23	3,403.82	0.00	0.00	0.00	
10,200.00	90.00	179.72	6,250.00	-3,506.93	-627.74	3,503.82	0.00	0.00	0.00	
10,300.00	90.00	179.72	6,250.00	-3,606.92	-627.26	3,603.82	0.00	0.00	0.00	
10,400.00	90.00	179.72	6,250.00	-3,706.92	-626.77	3,703.82	0.00	0.00	0.00	
10,500.00	90.00	179.72	6,250.00	-3,806.92	-626.28	3,803.82	0.00	0.00	0.00	
10,600.00	90.00	179.72	6,250.00	-3,906.92	-625.79	3,903.82	0.00	0.00	0.00	
10,700.00	90.00	179.72	6,250.00	-4,006.92	-625.31	4,003.82	0.00	0.00	0.00	
10,800.00	90.00	179.72	6,250.00	-4,106.92	-624.82	4,103.82	0.00	0.00	0.00	
10,900.00	90.00	179.72	6,250.00	-4,206.92	-624.33	4,203.82	0.00	0.00	0.00	
11,000.00	90.00	179.72	6,250.00	-4,306.92	-623.85	4,303.82	0.00	0.00	0.00	
11,100.00	90.00	179.72	6,250.00	-4,406.92	-623.36	4,403.82	0.00	0.00	0.00	
11,200.00	90.00	179.72	6,250.00	-4,506.91	-622.87	4,503.82	0.00	0.00	0.00	
11,300.00	90.00	179.72	6,250.00	-4,606.91	-622.39	4,603.82	0.00	0.00	0.00	
11,389.97	90.00	179.72	6,250.00	-4,696.88	-621.95	4,693.79	0.00	0.00	0.00	
BPZ @ 11389.97ft										
11,400.00	90.00	179.72	6,250.00	-4,706.91	-621.90	4,703.82	0.00	0.00	0.00	
11,500.00	90.00	179.72	6,250.00	-4,806.91	-621.41	4,803.82	0.00	0.00	0.00	
11,509.98	90.00	179.72	6,250.00	-4,816.89	-621.36	4,813.79	0.00	0.00	0.00	
TD Well @ 11509.98ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,714.58	1,700.00	9 5/8"	9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
398.70	398.70	0.00	0.00	Begin Nudge @ 398.70ft	
891.70	889.27	31.58	-28.17	Hold Tangent @ 891.70ft	
5,608.48	5,536.38	634.36	-565.79	KOP @ 5608.48ft :: DLS = 9°/100'	
6,690.42	6,250.00	2.62	-644.83	TPZ @ 6690.42ft	
11,389.97	6,250.00	-4,696.88	-621.95	BPZ @ 11389.97ft	
11,509.98	6,250.00	-4,816.89	-621.36	TD Well @ 11509.98ft	