

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**9N-59W-17 TIMBRO 1717 PAD**

**TIMBRO 1717-08H**

**Wellbore #1**

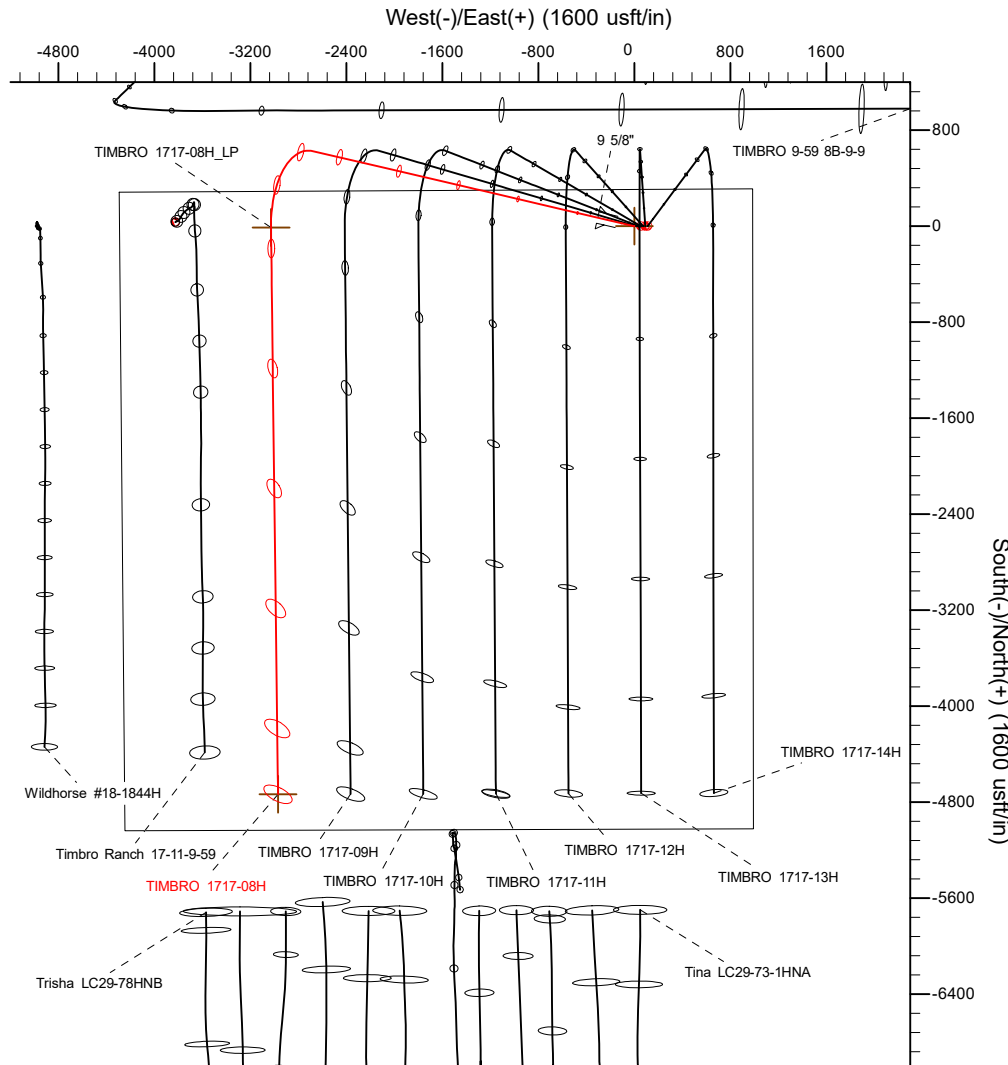
**Plan: Design #2**

## **Standard Planning Report**

**24 February, 2020**

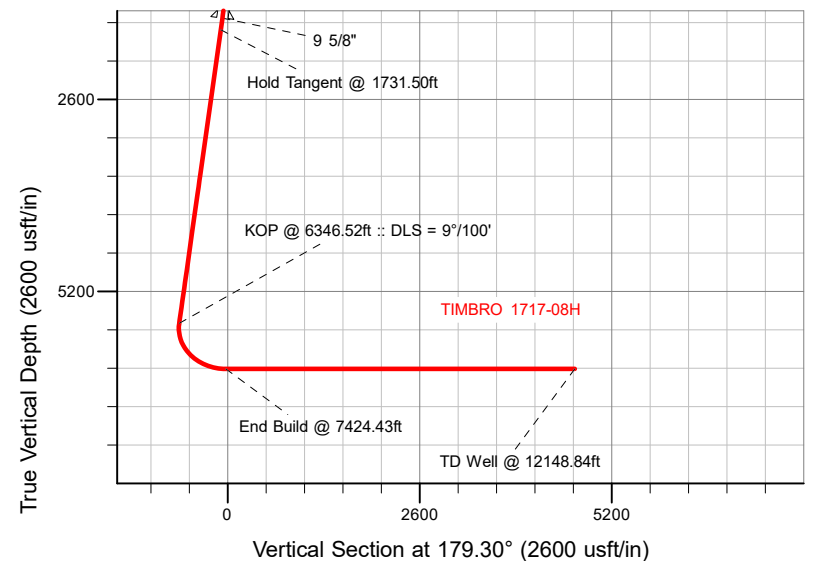
# VERDAD RESOURCES

CASING DETAILS			
TVD	MD	Name	Size
1500.00	1549.34	9 5/8"	9-5/8



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1731.50	30.63	283.16	1659.59	91.00	-389.21	2.00	283.16		-95.75
4	6346.52	30.63	283.16	5630.70	626.33	-2678.78	0.00	0.00		-659.01
5	7424.43	90.00	179.30	6250.00	-9.85	-3027.00	9.00	-101.99		-27.13
6	12148.84	90.00	179.30	6250.00	-4733.90	-2968.99	0.00	0.00	4697.28	TIMBRO 1717-08H_BHL

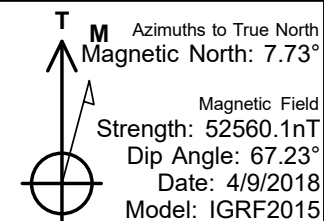
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 1717-08H_SHL	0.00	0.00	0.00	40.756950	-103.996170
TIMBRO 1717-08H_BHL	6250.00	-4733.90	-2968.99	40.743956	-104.006885



SHL  
306 FNL  
987' FEL

LP  
300' FNL  
1262' FWL

**BHL**  
**300' FSL**  
**1278' FWL**



WELL DETAILS: TIMBRO 1717-08H
GL = 5010'
RKB = 20' @ 5030.00usft (R/G)
Plan: Design #2 (TIMBRO 1717-08H/Wellbore #1)
Date: 2/24/2020

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 1717-08H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Site:</b>	9N-59W-17 TIMBRO 1717 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 1717-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

<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		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 1717-08H				
Well Position	+N/-S	0.00 usft	Northing:	1,522,134.77 usft	Latitude:	40.756950
	+E/-W	0.00 usft	Easting:	3,416,606.92 usft	Longitude:	-103.996170
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,010.00 usft
Grid Convergence:		0.97 °				

<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	4/9/2018	7.73	67.23	52,560.14696525

<b>Design</b>	Design #2				
<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	179.30	

<b>Plan Survey Tool Program</b>		<b>Date</b>	2/24/2020		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	1,500.00	Design #2 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	
2	1,500.00	12,148.84	Design #2 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 1717-08H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Site:</b>	9N-59W-17 TIMBRO 1717 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 1717-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,731.50	30.63	283.16	1,659.59	91.00	-389.21	2.00	2.00	0.00	283.16	
6,346.52	30.63	283.16	5,630.70	626.33	-2,678.78	0.00	0.00	0.00	0.00	
7,424.43	90.00	179.30	6,250.00	-9.85	-3,027.00	9.00	5.51	-9.64	-101.99	
12,148.84	90.00	179.30	6,250.00	-4,733.90	-2,968.99	0.00	0.00	0.00	0.00	TIMBRO 1717-08H_E

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 1717-08H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Site:</b>	9N-59W-17 TIMBRO 1717 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 1717-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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
Begin Nudge @ 200.00ft									
300.00	2.00	283.16	299.98	0.40	-1.70	-0.42	2.00	2.00	0.00
400.00	4.00	283.16	399.84	1.59	-6.80	-1.67	2.00	2.00	0.00
500.00	6.00	283.16	499.45	3.57	-15.28	-3.76	2.00	2.00	0.00
600.00	8.00	283.16	598.70	6.35	-27.15	-6.68	2.00	2.00	0.00
700.00	10.00	283.16	697.47	9.91	-42.38	-10.43	2.00	2.00	0.00
800.00	12.00	283.16	795.62	14.25	-60.96	-15.00	2.00	2.00	0.00
900.00	14.00	283.16	893.06	19.37	-82.86	-20.38	2.00	2.00	0.00
1,000.00	16.00	283.16	989.64	25.27	-108.06	-26.58	2.00	2.00	0.00
1,100.00	18.00	283.16	1,085.27	31.92	-136.53	-33.59	2.00	2.00	0.00
1,200.00	20.00	283.16	1,179.82	39.33	-168.23	-41.39	2.00	2.00	0.00
1,300.00	22.00	283.16	1,273.17	47.49	-203.12	-49.97	2.00	2.00	0.00
1,400.00	24.00	283.16	1,365.21	56.39	-241.17	-59.33	2.00	2.00	0.00
1,500.00	26.00	283.16	1,455.84	66.01	-282.32	-69.45	2.00	2.00	0.00
1,549.34	26.99	283.16	1,500.00	71.02	-303.75	-74.73	2.00	2.00	0.00
9 5/8"									
1,600.00	28.00	283.16	1,544.94	76.35	-326.52	-80.33	2.00	2.00	0.00
1,700.00	30.00	283.16	1,632.39	87.38	-373.73	-91.94	2.00	2.00	0.00
1,731.50	30.63	283.16	1,659.59	91.00	-389.21	-95.75	2.00	2.00	0.00
Hold Tangent @ 1731.50ft									
1,800.00	30.63	283.16	1,718.53	98.95	-423.20	-104.11	0.00	0.00	0.00
1,900.00	30.63	283.16	1,804.58	110.55	-472.81	-116.32	0.00	0.00	0.00
2,000.00	30.63	283.16	1,890.62	122.15	-522.42	-128.52	0.00	0.00	0.00
2,100.00	30.63	283.16	1,976.67	133.75	-572.03	-140.73	0.00	0.00	0.00
2,200.00	30.63	283.16	2,062.72	145.35	-621.64	-152.93	0.00	0.00	0.00
2,300.00	30.63	283.16	2,148.77	156.95	-671.25	-165.14	0.00	0.00	0.00
2,400.00	30.63	283.16	2,234.81	168.55	-720.86	-177.34	0.00	0.00	0.00
2,500.00	30.63	283.16	2,320.86	180.15	-770.47	-189.54	0.00	0.00	0.00
2,600.00	30.63	283.16	2,406.91	191.75	-820.08	-201.75	0.00	0.00	0.00
2,700.00	30.63	283.16	2,492.96	203.34	-869.70	-213.95	0.00	0.00	0.00
2,800.00	30.63	283.16	2,579.01	214.94	-919.31	-226.16	0.00	0.00	0.00
2,900.00	30.63	283.16	2,665.05	226.54	-968.92	-238.36	0.00	0.00	0.00
3,000.00	30.63	283.16	2,751.10	238.14	-1,018.53	-250.57	0.00	0.00	0.00
3,100.00	30.63	283.16	2,837.15	249.74	-1,068.14	-262.77	0.00	0.00	0.00
3,200.00	30.63	283.16	2,923.20	261.34	-1,117.75	-274.98	0.00	0.00	0.00
3,300.00	30.63	283.16	3,009.24	272.94	-1,167.36	-287.18	0.00	0.00	0.00
3,400.00	30.63	283.16	3,095.29	284.54	-1,216.97	-299.39	0.00	0.00	0.00
3,500.00	30.63	283.16	3,181.34	296.14	-1,266.59	-311.59	0.00	0.00	0.00
3,600.00	30.63	283.16	3,267.39	307.74	-1,316.20	-323.80	0.00	0.00	0.00
3,700.00	30.63	283.16	3,353.43	319.34	-1,365.81	-336.00	0.00	0.00	0.00
3,800.00	30.63	283.16	3,439.48	330.94	-1,415.42	-348.21	0.00	0.00	0.00
3,900.00	30.63	283.16	3,525.53	342.54	-1,465.03	-360.41	0.00	0.00	0.00
4,000.00	30.63	283.16	3,611.58	354.14	-1,514.64	-372.62	0.00	0.00	0.00
4,100.00	30.63	283.16	3,697.62	365.74	-1,564.25	-384.82	0.00	0.00	0.00
4,200.00	30.63	283.16	3,783.67	377.34	-1,613.86	-397.03	0.00	0.00	0.00
4,300.00	30.63	283.16	3,869.72	388.94	-1,663.47	-409.23	0.00	0.00	0.00
4,400.00	30.63	283.16	3,955.77	400.54	-1,713.09	-421.44	0.00	0.00	0.00
4,500.00	30.63	283.16	4,041.81	412.14	-1,762.70	-433.64	0.00	0.00	0.00
4,600.00	30.63	283.16	4,127.86	423.74	-1,812.31	-445.85	0.00	0.00	0.00
4,700.00	30.63	283.16	4,213.91	435.34	-1,861.92	-458.05	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 1717-08H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Site:</b>	9N-59W-17 TIMBRO 1717 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 1717-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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)
4,800.00	30.63	283.16	4,299.96	446.94	-1,911.53	-470.26	0.00	0.00	0.00
4,900.00	30.63	283.16	4,386.00	458.54	-1,961.14	-482.46	0.00	0.00	0.00
5,000.00	30.63	283.16	4,472.05	470.14	-2,010.75	-494.67	0.00	0.00	0.00
5,100.00	30.63	283.16	4,558.10	481.74	-2,060.36	-506.87	0.00	0.00	0.00
5,200.00	30.63	283.16	4,644.15	493.34	-2,109.98	-519.08	0.00	0.00	0.00
5,300.00	30.63	283.16	4,730.19	504.94	-2,159.59	-531.28	0.00	0.00	0.00
5,400.00	30.63	283.16	4,816.24	516.54	-2,209.20	-543.49	0.00	0.00	0.00
5,500.00	30.63	283.16	4,902.29	528.14	-2,258.81	-555.69	0.00	0.00	0.00
5,600.00	30.63	283.16	4,988.34	539.74	-2,308.42	-567.90	0.00	0.00	0.00
5,700.00	30.63	283.16	5,074.38	551.33	-2,358.03	-580.10	0.00	0.00	0.00
5,800.00	30.63	283.16	5,160.43	562.93	-2,407.64	-592.31	0.00	0.00	0.00
5,900.00	30.63	283.16	5,246.48	574.53	-2,457.25	-604.51	0.00	0.00	0.00
6,000.00	30.63	283.16	5,332.53	586.13	-2,506.86	-616.72	0.00	0.00	0.00
6,100.00	30.63	283.16	5,418.57	597.73	-2,556.48	-628.92	0.00	0.00	0.00
6,200.00	30.63	283.16	5,504.62	609.33	-2,606.09	-641.13	0.00	0.00	0.00
6,300.00	30.63	283.16	5,590.67	620.93	-2,655.70	-653.33	0.00	0.00	0.00
6,346.52	30.63	283.16	5,630.70	626.33	-2,678.78	-659.01	0.00	0.00	0.00
KOP @ 6346.52ft :: DLS = 9°/100'									
6,400.00	29.97	273.70	5,676.90	630.30	-2,705.39	-663.30	9.00	-1.24	-17.68
6,500.00	30.59	255.84	5,763.44	625.67	-2,755.08	-659.29	9.00	0.62	-17.86
6,600.00	33.47	239.71	5,848.36	605.50	-2,803.66	-639.71	9.00	2.88	-16.13
6,700.00	38.09	226.46	5,929.59	570.27	-2,849.92	-605.04	9.00	4.63	-13.25
6,800.00	43.91	215.96	6,005.12	520.85	-2,892.74	-556.15	9.00	5.82	-10.50
6,900.00	50.50	207.58	6,073.08	458.46	-2,931.04	-494.23	9.00	6.59	-8.38
7,000.00	57.58	200.71	6,131.82	384.63	-2,963.90	-420.81	9.00	7.08	-6.87
7,100.00	64.98	194.86	6,179.87	301.19	-2,990.50	-337.70	9.00	7.40	-5.85
7,200.00	72.58	189.69	6,216.06	210.18	-3,010.19	-246.94	9.00	7.60	-5.17
7,300.00	80.31	184.93	6,239.49	113.85	-3,022.48	-150.77	9.00	7.72	-4.75
7,400.00	88.09	180.39	6,249.59	14.57	-3,027.07	-51.56	9.00	7.79	-4.54
7,424.43	90.00	179.30	6,250.00	-9.85	-3,027.00	-27.13	9.00	7.80	-4.49
End Build @ 7424.43ft									
7,500.00	90.00	179.30	6,250.00	-85.41	-3,026.07	48.44	0.00	0.00	0.00
7,600.00	90.00	179.30	6,250.00	-185.41	-3,024.85	148.44	0.00	0.00	0.00
7,700.00	90.00	179.30	6,250.00	-285.40	-3,023.62	248.44	0.00	0.00	0.00
7,800.00	90.00	179.30	6,250.00	-385.39	-3,022.39	348.44	0.00	0.00	0.00
7,900.00	90.00	179.30	6,250.00	-485.38	-3,021.16	448.44	0.00	0.00	0.00
8,000.00	90.00	179.30	6,250.00	-585.38	-3,019.93	548.44	0.00	0.00	0.00
8,100.00	90.00	179.30	6,250.00	-685.37	-3,018.71	648.44	0.00	0.00	0.00
8,200.00	90.00	179.30	6,250.00	-785.36	-3,017.48	748.44	0.00	0.00	0.00
8,300.00	90.00	179.30	6,250.00	-885.35	-3,016.25	848.44	0.00	0.00	0.00
8,400.00	90.00	179.30	6,250.00	-985.35	-3,015.02	948.44	0.00	0.00	0.00
8,500.00	90.00	179.30	6,250.00	-1,085.34	-3,013.79	1,048.44	0.00	0.00	0.00
8,600.00	90.00	179.30	6,250.00	-1,185.33	-3,012.57	1,148.44	0.00	0.00	0.00
8,700.00	90.00	179.30	6,250.00	-1,285.32	-3,011.34	1,248.44	0.00	0.00	0.00
8,800.00	90.00	179.30	6,250.00	-1,385.32	-3,010.11	1,348.44	0.00	0.00	0.00
8,900.00	90.00	179.30	6,250.00	-1,485.31	-3,008.88	1,448.44	0.00	0.00	0.00
9,000.00	90.00	179.30	6,250.00	-1,585.30	-3,007.65	1,548.44	0.00	0.00	0.00
9,100.00	90.00	179.30	6,250.00	-1,685.29	-3,006.43	1,648.44	0.00	0.00	0.00
9,200.00	90.00	179.30	6,250.00	-1,785.29	-3,005.20	1,748.44	0.00	0.00	0.00
9,300.00	90.00	179.30	6,250.00	-1,885.28	-3,003.97	1,848.44	0.00	0.00	0.00
9,400.00	90.00	179.30	6,250.00	-1,985.27	-3,002.74	1,948.44	0.00	0.00	0.00
9,500.00	90.00	179.30	6,250.00	-2,085.26	-3,001.51	2,048.44	0.00	0.00	0.00
9,600.00	90.00	179.30	6,250.00	-2,185.26	-3,000.29	2,148.44	0.00	0.00	0.00
9,700.00	90.00	179.30	6,250.00	-2,285.25	-2,999.06	2,248.44	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 1717-08H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5030.00usft (RIG)
<b>Site:</b>	9N-59W-17 TIMBRO 1717 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 1717-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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)	
9,800.00	90.00	179.30	6,250.00	-2,385.24	-2,997.83	2,348.44	0.00	0.00	0.00	
9,900.00	90.00	179.30	6,250.00	-2,485.23	-2,996.60	2,448.44	0.00	0.00	0.00	
10,000.00	90.00	179.30	6,250.00	-2,585.23	-2,995.37	2,548.44	0.00	0.00	0.00	
10,100.00	90.00	179.30	6,250.00	-2,685.22	-2,994.15	2,648.44	0.00	0.00	0.00	
10,200.00	90.00	179.30	6,250.00	-2,785.21	-2,992.92	2,748.44	0.00	0.00	0.00	
10,300.00	90.00	179.30	6,250.00	-2,885.20	-2,991.69	2,848.44	0.00	0.00	0.00	
10,400.00	90.00	179.30	6,250.00	-2,985.20	-2,990.46	2,948.44	0.00	0.00	0.00	
10,500.00	90.00	179.30	6,250.00	-3,085.19	-2,989.23	3,048.44	0.00	0.00	0.00	
10,600.00	90.00	179.30	6,250.00	-3,185.18	-2,988.01	3,148.44	0.00	0.00	0.00	
10,700.00	90.00	179.30	6,250.00	-3,285.17	-2,986.78	3,248.44	0.00	0.00	0.00	
10,800.00	90.00	179.30	6,250.00	-3,385.17	-2,985.55	3,348.44	0.00	0.00	0.00	
10,900.00	90.00	179.30	6,250.00	-3,485.16	-2,984.32	3,448.44	0.00	0.00	0.00	
11,000.00	90.00	179.30	6,250.00	-3,585.15	-2,983.09	3,548.44	0.00	0.00	0.00	
11,100.00	90.00	179.30	6,250.00	-3,685.14	-2,981.87	3,648.44	0.00	0.00	0.00	
11,200.00	90.00	179.30	6,250.00	-3,785.14	-2,980.64	3,748.44	0.00	0.00	0.00	
11,300.00	90.00	179.30	6,250.00	-3,885.13	-2,979.41	3,848.44	0.00	0.00	0.00	
11,400.00	90.00	179.30	6,250.00	-3,985.12	-2,978.18	3,948.44	0.00	0.00	0.00	
11,500.00	90.00	179.30	6,250.00	-4,085.11	-2,976.95	4,048.44	0.00	0.00	0.00	
11,600.00	90.00	179.30	6,250.00	-4,185.11	-2,975.73	4,148.44	0.00	0.00	0.00	
11,700.00	90.00	179.30	6,250.00	-4,285.10	-2,974.50	4,248.44	0.00	0.00	0.00	
11,800.00	90.00	179.30	6,250.00	-4,385.09	-2,973.27	4,348.44	0.00	0.00	0.00	
11,900.00	90.00	179.30	6,250.00	-4,485.08	-2,972.04	4,448.44	0.00	0.00	0.00	
12,000.00	90.00	179.30	6,250.00	-4,585.08	-2,970.81	4,548.44	0.00	0.00	0.00	
12,100.00	90.00	179.30	6,250.00	-4,685.07	-2,969.59	4,648.44	0.00	0.00	0.00	
12,148.84	90.00	179.30	6,250.00	-4,733.90	-2,968.99	4,697.28	0.00	0.00	0.00	
TD Well @ 12148.84ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,549.34	1,500.00	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	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft	
1,731.50	1,659.59	91.00	-389.21	Hold Tangent @ 1731.50ft	
6,346.52	5,630.70	626.33	-2,678.78	KOP @ 6346.52ft :: DLS = 9°/100'	
7,424.43	6,250.00	-9.85	-3,027.00	End Build @ 7424.43ft	
12,148.84	6,250.00	-4,733.90	-2,968.99	TD Well @ 12148.84ft	