

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-17 TIMBRO 1717 PAD

TIMBRO 1717-13H

Wellbore #1

Plan: Design #3

Standard Planning Report

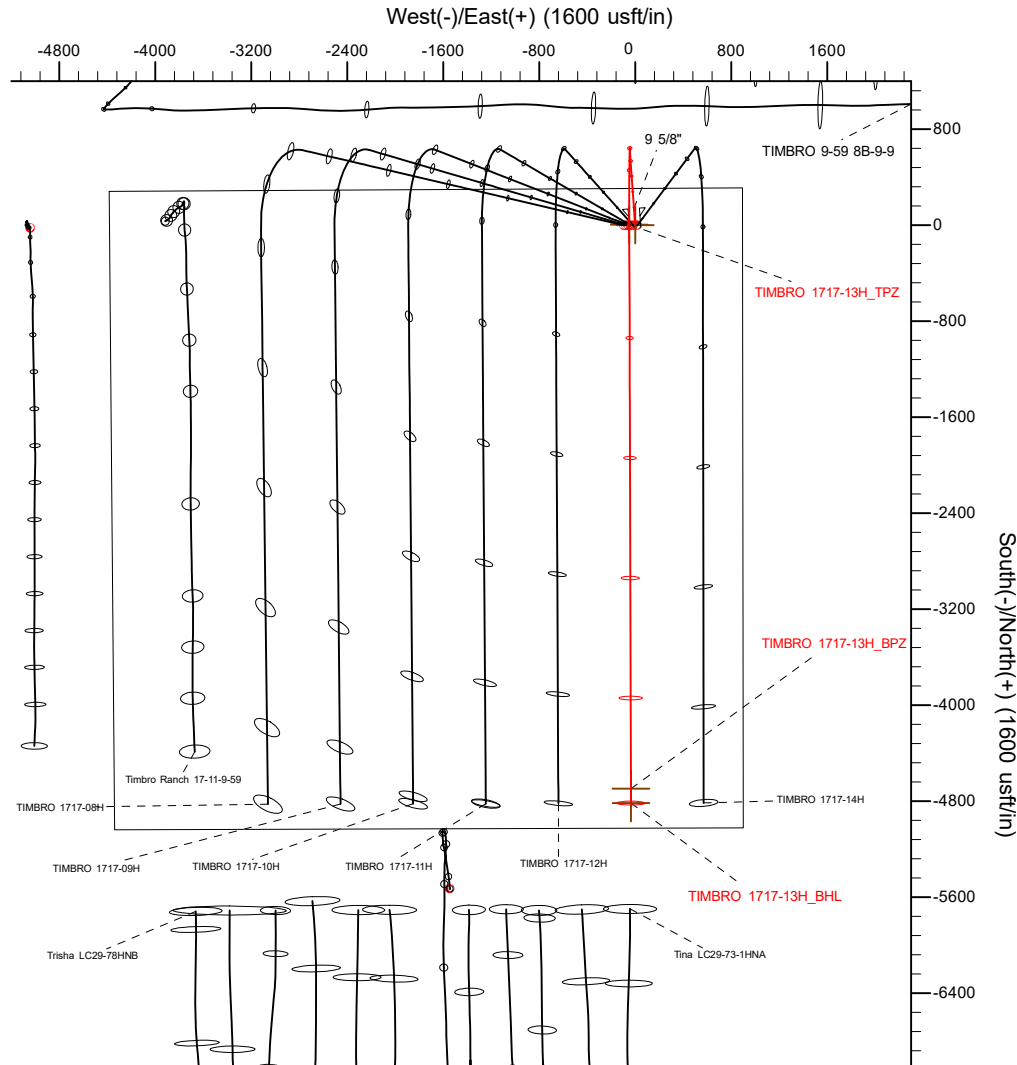
11 May, 2021

Project: WATTENBERG FIELD
 Site: 9N-59W-17 TIMBRO 1717 PAD
 Well: TIMBRO 1717-13H
 Wellbore: Wellbore #1
 Design: Design #3

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1708.50	9 5/8"	9-5/8



SHL
306 FNL
895' FEL

TPZ
300' FNL
944' FEL

BPZ
330' FSL
935' FEL

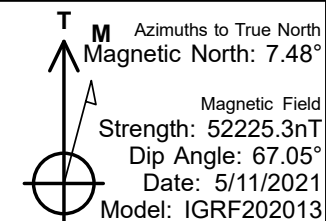
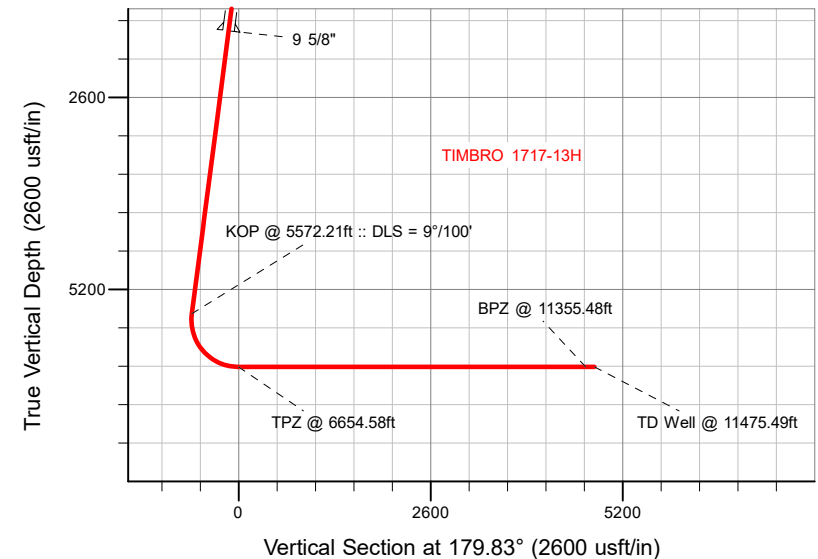
BHL
210' FSL
935' FEL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	448.00	0.00	0.00	448.00	0.00	0.00	0.00	0.00	0.00	
3	819.50	7.43	356.00	818.46	24.00	-1.68	2.00	356.00	-24.00	
4	5572.21	7.43	356.00	5531.26	637.09	-44.55	0.00	0.00	-637.22	
5	6654.58	90.00	179.83	6250.00	5.78	-48.89	9.00	-176.14	-5.92	
6	11475.49	90.00	179.83	6250.00	-4815.11	-34.25	0.00	0.00	4814.99	TIMBRO 1717-13H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 1717-13H_SHL	0.00	0.00	0.00	0.00	40.756951	-103.995838
TIMBRO 1717-13H_TPZ	6654.58	6250.00	5.78	-48.89	40.756967	-103.996015
TIMBRO 1717-13H_BPZ	11355.48	6250.00	-4695.10	-34.61	40.744064	-103.995963
TIMBRO 1717-13H_BHL	11475.49	6250.00	-4815.11	-34.25	40.743735	-103.995961



WELL DETAILS: TIMBRO 1717-13H

GL = 5011'

RKB = 20' @ 5031.00usft (RIG)

Plan: Design #3 (TIMBRO 1717-13H/Wellbore #1)

Date: 5/11/2021

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-13H
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 1717-13H	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 1717-13H				
Well Position	+N/-S	0.00 usft	Northing:	1,522,136.81 usft	Latitude:	40.756951
	+E/-W	0.00 usft	Easting:	3,416,698.90 usft	Longitude:	-103.995838
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	52,225.28095640

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	179.83	

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	11,475.49	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 1717-13H
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 1717-13H	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	
448.00	0.00	0.00	448.00	0.00	0.00	0.00	0.00	0.00	0.00	
819.50	7.43	356.00	818.46	24.00	-1.68	2.00	2.00	0.00	356.00	
5,572.21	7.43	356.00	5,531.26	637.09	-44.55	0.00	0.00	0.00	0.00	
6,654.58	90.00	179.83	6,250.00	5.78	-48.89	9.00	7.63	-16.28	-176.14	
11,475.49	90.00	179.83	6,250.00	-4,815.11	-34.25	0.00	0.00	0.00	0.00	TIMBRO 1717-13H_E

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-13H
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 1717-13H	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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
448.00	0.00	0.00	448.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 448.00ft									
500.00	1.04	356.00	500.00	0.47	-0.03	-0.47	2.00	2.00	0.00
600.00	3.04	356.00	599.93	4.02	-0.28	-4.02	2.00	2.00	0.00
700.00	5.04	356.00	699.68	11.05	-0.77	-11.05	2.00	2.00	0.00
800.00	7.04	356.00	799.11	21.55	-1.51	-21.55	2.00	2.00	0.00
819.50	7.43	356.00	818.46	24.00	-1.68	-24.00	2.00	2.00	0.00
Hold Tangent @ 819.50ft									
900.00	7.43	356.00	898.28	34.38	-2.40	-34.39	0.00	0.00	0.00
1,000.00	7.43	356.00	997.44	47.28	-3.31	-47.29	0.00	0.00	0.00
1,100.00	7.43	356.00	1,096.60	60.18	-4.21	-60.19	0.00	0.00	0.00
1,200.00	7.43	356.00	1,195.76	73.08	-5.11	-73.09	0.00	0.00	0.00
1,300.00	7.43	356.00	1,294.93	85.98	-6.01	-86.00	0.00	0.00	0.00
1,400.00	7.43	356.00	1,394.09	98.88	-6.91	-98.90	0.00	0.00	0.00
1,500.00	7.43	356.00	1,493.25	111.78	-7.82	-111.80	0.00	0.00	0.00
1,600.00	7.43	356.00	1,592.41	124.68	-8.72	-124.71	0.00	0.00	0.00
1,700.00	7.43	356.00	1,691.57	137.58	-9.62	-137.61	0.00	0.00	0.00
1,708.50	7.43	356.00	1,700.00	138.68	-9.70	-138.70	0.00	0.00	0.00
9 5/8"									
1,800.00	7.43	356.00	1,790.73	150.48	-10.52	-150.51	0.00	0.00	0.00
1,900.00	7.43	356.00	1,889.89	163.38	-11.42	-163.41	0.00	0.00	0.00
2,000.00	7.43	356.00	1,989.05	176.28	-12.33	-176.32	0.00	0.00	0.00
2,100.00	7.43	356.00	2,088.21	189.18	-13.23	-189.22	0.00	0.00	0.00
2,200.00	7.43	356.00	2,187.37	202.08	-14.13	-202.12	0.00	0.00	0.00
2,300.00	7.43	356.00	2,286.53	214.98	-15.03	-215.02	0.00	0.00	0.00
2,400.00	7.43	356.00	2,385.69	227.88	-15.93	-227.93	0.00	0.00	0.00
2,500.00	7.43	356.00	2,484.85	240.78	-16.84	-240.83	0.00	0.00	0.00
2,600.00	7.43	356.00	2,584.01	253.68	-17.74	-253.73	0.00	0.00	0.00
2,700.00	7.43	356.00	2,683.17	266.58	-18.64	-266.63	0.00	0.00	0.00
2,800.00	7.43	356.00	2,782.33	279.48	-19.54	-279.54	0.00	0.00	0.00
2,900.00	7.43	356.00	2,881.49	292.38	-20.45	-292.44	0.00	0.00	0.00
3,000.00	7.43	356.00	2,980.65	305.28	-21.35	-305.34	0.00	0.00	0.00
3,100.00	7.43	356.00	3,079.81	318.18	-22.25	-318.24	0.00	0.00	0.00
3,200.00	7.43	356.00	3,178.97	331.08	-23.15	-331.15	0.00	0.00	0.00
3,300.00	7.43	356.00	3,278.13	343.98	-24.05	-344.05	0.00	0.00	0.00
3,400.00	7.43	356.00	3,377.29	356.88	-24.96	-356.95	0.00	0.00	0.00
3,500.00	7.43	356.00	3,476.45	369.78	-25.86	-369.85	0.00	0.00	0.00
3,600.00	7.43	356.00	3,575.61	382.68	-26.76	-382.76	0.00	0.00	0.00
3,700.00	7.43	356.00	3,674.77	395.58	-27.66	-395.66	0.00	0.00	0.00
3,800.00	7.43	356.00	3,773.93	408.48	-28.56	-408.56	0.00	0.00	0.00
3,900.00	7.43	356.00	3,873.09	421.38	-29.47	-421.46	0.00	0.00	0.00
4,000.00	7.43	356.00	3,972.25	434.28	-30.37	-434.37	0.00	0.00	0.00
4,100.00	7.43	356.00	4,071.42	447.18	-31.27	-447.27	0.00	0.00	0.00
4,200.00	7.43	356.00	4,170.58	460.08	-32.17	-460.17	0.00	0.00	0.00
4,300.00	7.43	356.00	4,269.74	472.98	-33.07	-473.08	0.00	0.00	0.00
4,400.00	7.43	356.00	4,368.90	485.88	-33.98	-485.98	0.00	0.00	0.00
4,500.00	7.43	356.00	4,468.06	498.78	-34.88	-498.88	0.00	0.00	0.00
4,600.00	7.43	356.00	4,567.22	511.68	-35.78	-511.78	0.00	0.00	0.00

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-13H
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 1717-13H	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	7.43	356.00	4,666.38	524.58	-36.68	-524.69	0.00	0.00	0.00
4,800.00	7.43	356.00	4,765.54	537.48	-37.58	-537.59	0.00	0.00	0.00
4,900.00	7.43	356.00	4,864.70	550.38	-38.49	-550.49	0.00	0.00	0.00
5,000.00	7.43	356.00	4,963.86	563.28	-39.39	-563.39	0.00	0.00	0.00
5,100.00	7.43	356.00	5,063.02	576.18	-40.29	-576.30	0.00	0.00	0.00
5,200.00	7.43	356.00	5,162.18	589.08	-41.19	-589.20	0.00	0.00	0.00
5,300.00	7.43	356.00	5,261.34	601.98	-42.09	-602.10	0.00	0.00	0.00
5,400.00	7.43	356.00	5,360.50	614.88	-43.00	-615.00	0.00	0.00	0.00
5,500.00	7.43	356.00	5,459.66	627.78	-43.90	-627.91	0.00	0.00	0.00
5,572.21	7.43	356.00	5,531.26	637.09	-44.55	-637.22	0.00	0.00	0.00
KOP @ 5572.21ft :: DLS = 9°/100'									
5,600.00	4.94	354.04	5,558.89	640.08	-44.80	-640.21	9.00	-8.97	-7.04
5,700.00	4.12	186.77	5,658.78	640.79	-45.67	-640.93	9.00	-0.82	-167.28
5,800.00	13.10	181.97	5,757.55	625.87	-46.49	-626.01	9.00	8.98	-4.80
5,900.00	22.09	181.05	5,852.78	595.69	-47.22	-595.82	9.00	9.00	-0.92
6,000.00	31.09	180.65	5,942.11	550.97	-47.86	-551.11	9.00	9.00	-0.40
6,100.00	40.09	180.42	6,023.34	492.84	-48.39	-492.98	9.00	9.00	-0.23
6,200.00	49.09	180.26	6,094.49	422.71	-48.80	-422.85	9.00	9.00	-0.16
6,300.00	58.09	180.14	6,153.78	342.31	-49.07	-342.45	9.00	9.00	-0.12
6,400.00	67.09	180.04	6,199.77	253.63	-49.20	-253.77	9.00	9.00	-0.10
6,500.00	76.09	179.95	6,231.32	158.85	-49.19	-158.99	9.00	9.00	-0.09
6,600.00	85.09	179.87	6,247.66	60.29	-49.03	-60.44	9.00	9.00	-0.08
6,654.58	90.00	179.83	6,250.00	5.78	-48.89	-5.92	9.00	9.00	-0.08
TPZ @ 6654.58ft									
6,700.00	90.00	179.83	6,250.00	-39.64	-48.75	39.49	0.00	0.00	0.00
6,800.00	90.00	179.83	6,250.00	-139.64	-48.45	139.49	0.00	0.00	0.00
6,900.00	90.00	179.83	6,250.00	-239.64	-48.14	239.49	0.00	0.00	0.00
7,000.00	90.00	179.83	6,250.00	-339.64	-47.84	339.49	0.00	0.00	0.00
7,100.00	90.00	179.83	6,250.00	-439.64	-47.53	439.49	0.00	0.00	0.00
7,200.00	90.00	179.83	6,250.00	-539.64	-47.23	539.49	0.00	0.00	0.00
7,300.00	90.00	179.83	6,250.00	-639.64	-46.93	639.49	0.00	0.00	0.00
7,400.00	90.00	179.83	6,250.00	-739.64	-46.62	739.49	0.00	0.00	0.00
7,500.00	90.00	179.83	6,250.00	-839.64	-46.32	839.49	0.00	0.00	0.00
7,600.00	90.00	179.83	6,250.00	-939.64	-46.02	939.49	0.00	0.00	0.00
7,700.00	90.00	179.83	6,250.00	-1,039.64	-45.71	1,039.49	0.00	0.00	0.00
7,800.00	90.00	179.83	6,250.00	-1,139.63	-45.41	1,139.49	0.00	0.00	0.00
7,900.00	90.00	179.83	6,250.00	-1,239.63	-45.11	1,239.49	0.00	0.00	0.00
8,000.00	90.00	179.83	6,250.00	-1,339.63	-44.80	1,339.49	0.00	0.00	0.00
8,100.00	90.00	179.83	6,250.00	-1,439.63	-44.50	1,439.49	0.00	0.00	0.00
8,200.00	90.00	179.83	6,250.00	-1,539.63	-44.19	1,539.49	0.00	0.00	0.00
8,300.00	90.00	179.83	6,250.00	-1,639.63	-43.89	1,639.49	0.00	0.00	0.00
8,400.00	90.00	179.83	6,250.00	-1,739.63	-43.59	1,739.49	0.00	0.00	0.00
8,500.00	90.00	179.83	6,250.00	-1,839.63	-43.28	1,839.49	0.00	0.00	0.00
8,600.00	90.00	179.83	6,250.00	-1,939.63	-42.98	1,939.49	0.00	0.00	0.00
8,700.00	90.00	179.83	6,250.00	-2,039.63	-42.68	2,039.49	0.00	0.00	0.00
8,800.00	90.00	179.83	6,250.00	-2,139.63	-42.37	2,139.49	0.00	0.00	0.00
8,900.00	90.00	179.83	6,250.00	-2,239.63	-42.07	2,239.49	0.00	0.00	0.00
9,000.00	90.00	179.83	6,250.00	-2,339.63	-41.77	2,339.49	0.00	0.00	0.00
9,100.00	90.00	179.83	6,250.00	-2,439.63	-41.46	2,439.49	0.00	0.00	0.00
9,200.00	90.00	179.83	6,250.00	-2,539.63	-41.16	2,539.49	0.00	0.00	0.00
9,300.00	90.00	179.83	6,250.00	-2,639.63	-40.85	2,639.49	0.00	0.00	0.00
9,400.00	90.00	179.83	6,250.00	-2,739.63	-40.55	2,739.49	0.00	0.00	0.00
9,500.00	90.00	179.83	6,250.00	-2,839.63	-40.25	2,839.49	0.00	0.00	0.00
9,600.00	90.00	179.83	6,250.00	-2,939.63	-39.94	2,939.49	0.00	0.00	0.00

VERDAD RESOURCES

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 1717-13H
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 1717-13H	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	179.83	6,250.00	-3,039.63	-39.64	3,039.49	0.00	0.00	0.00	
9,800.00	90.00	179.83	6,250.00	-3,139.63	-39.34	3,139.49	0.00	0.00	0.00	
9,900.00	90.00	179.83	6,250.00	-3,239.62	-39.03	3,239.49	0.00	0.00	0.00	
10,000.00	90.00	179.83	6,250.00	-3,339.62	-38.73	3,339.49	0.00	0.00	0.00	
10,100.00	90.00	179.83	6,250.00	-3,439.62	-38.43	3,439.49	0.00	0.00	0.00	
10,200.00	90.00	179.83	6,250.00	-3,539.62	-38.12	3,539.49	0.00	0.00	0.00	
10,300.00	90.00	179.83	6,250.00	-3,639.62	-37.82	3,639.49	0.00	0.00	0.00	
10,400.00	90.00	179.83	6,250.00	-3,739.62	-37.51	3,739.49	0.00	0.00	0.00	
10,500.00	90.00	179.83	6,250.00	-3,839.62	-37.21	3,839.49	0.00	0.00	0.00	
10,600.00	90.00	179.83	6,250.00	-3,939.62	-36.91	3,939.49	0.00	0.00	0.00	
10,700.00	90.00	179.83	6,250.00	-4,039.62	-36.60	4,039.49	0.00	0.00	0.00	
10,800.00	90.00	179.83	6,250.00	-4,139.62	-36.30	4,139.49	0.00	0.00	0.00	
10,900.00	90.00	179.83	6,250.00	-4,239.62	-36.00	4,239.49	0.00	0.00	0.00	
11,000.00	90.00	179.83	6,250.00	-4,339.62	-35.69	4,339.49	0.00	0.00	0.00	
11,100.00	90.00	179.83	6,250.00	-4,439.62	-35.39	4,439.49	0.00	0.00	0.00	
11,200.00	90.00	179.83	6,250.00	-4,539.62	-35.09	4,539.49	0.00	0.00	0.00	
11,300.00	90.00	179.83	6,250.00	-4,639.62	-34.78	4,639.49	0.00	0.00	0.00	
11,355.48	90.00	179.83	6,250.00	-4,695.10	-34.61	4,694.97	0.00	0.00	0.00	
BPZ @ 11355.48ft										
11,400.00	90.00	179.83	6,250.00	-4,739.62	-34.48	4,739.49	0.00	0.00	0.00	
11,475.49	90.00	179.83	6,250.00	-4,815.11	-34.25	4,814.98	0.00	0.00	0.00	
TD Well @ 11475.49ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,708.50	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)		
448.00	448.00	0.00	0.00	Begin Nudge @ 448.00ft	
819.50	818.46	24.00	-1.68	Hold Tangent @ 819.50ft	
5,572.21	5,531.26	637.09	-44.55	KOP @ 5572.21ft :: DLS = 9°/100'	
6,654.58	6,250.00	5.78	-48.89	TPZ @ 6654.58ft	
11,355.48	6,250.00	-4,695.10	-34.61	BPZ @ 11355.48ft	
11,475.49	6,250.00	-4,815.11	-34.25	TD Well @ 11475.49ft	