

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**9N-59W-01 TIMBRO 0101 PAD**

**TIMBRO 0112-03H**

**Plan A**

**Plan: Design #1**

## **Standard Planning Report**

**18 January, 2023**

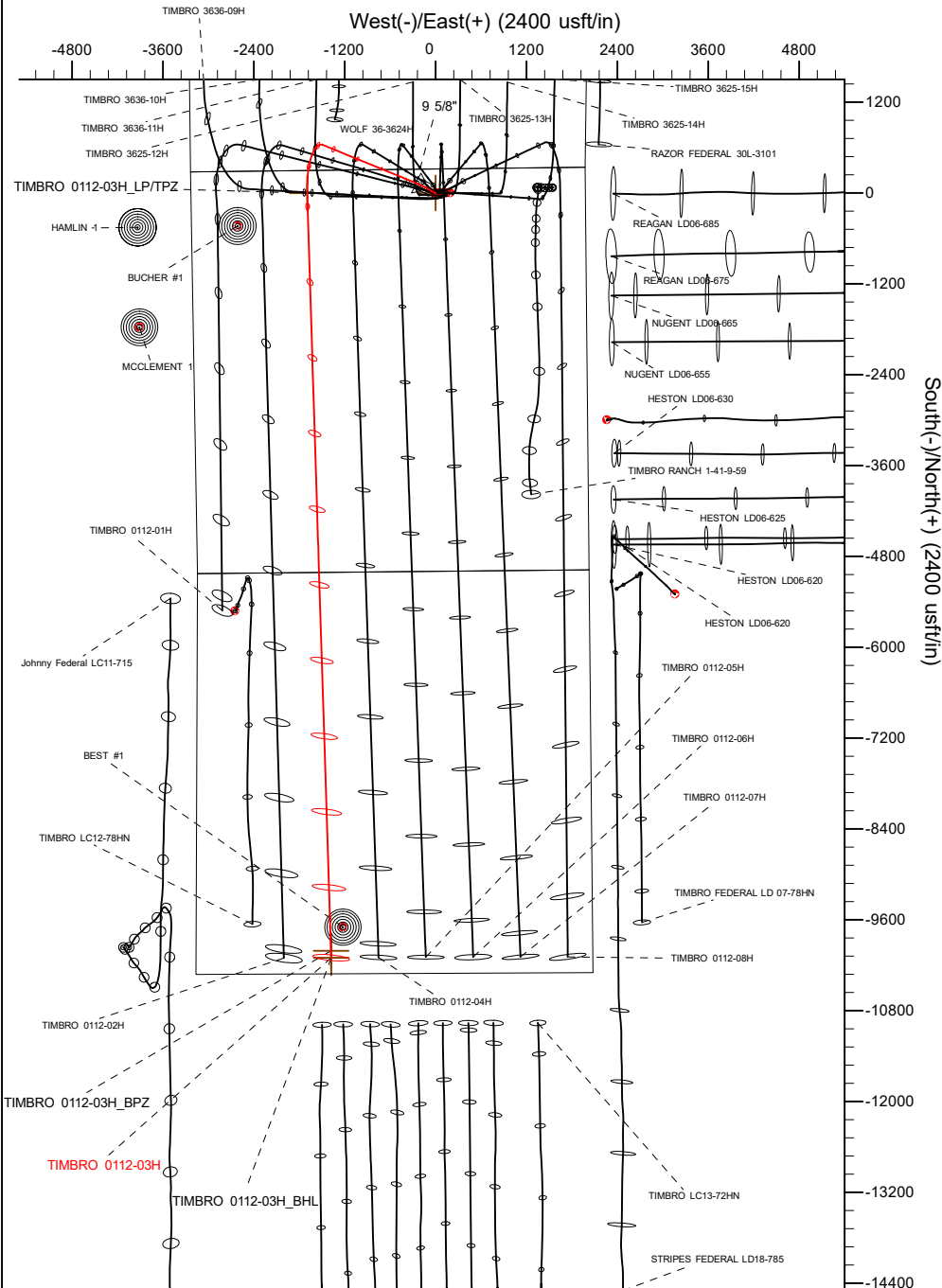
Project: WATTENBERG FIELD  
Site: 9N-59W-01 TIMBRO 0101 PAD  
Well: TIMBRO 0112-03H  
Wellbore: Plan A  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1715.00	1754.02	9 5/8"	9-5/8

West(-)/East(+) (2400 usft/in)

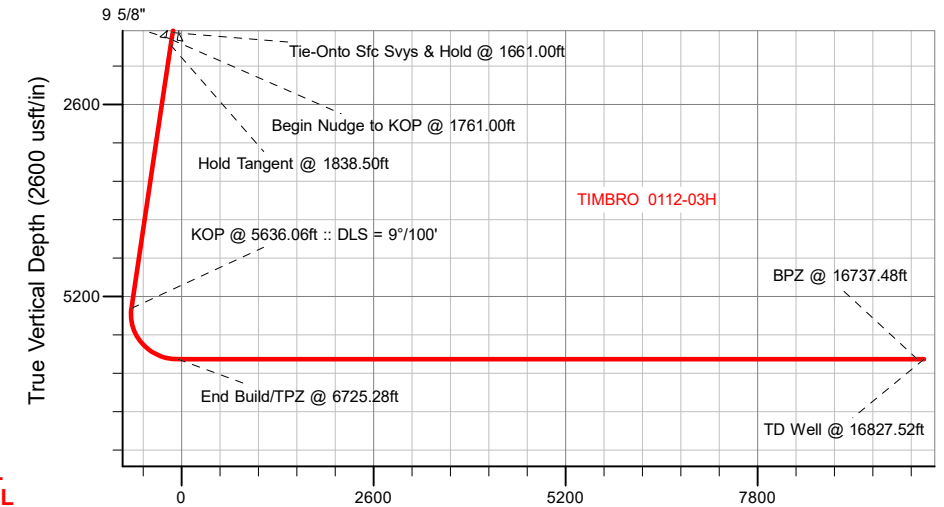


## SECTION DETAILS

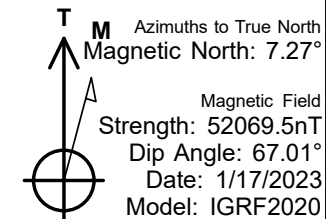
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	1661.00	21.34	294.65	1628.36	114.36	-223.61	0.00	0.00	-121.33	
2	1761.00	21.34	294.65	1721.50	129.54	-256.69	0.00	0.00	-137.54	
3	1838.50	20.04	292.26	1794.00	140.45	-281.79	2.00	-148.11	-149.23	
4	5636.06	20.04	292.26	5361.63	633.41	-1486.14	0.00	0.00	-679.78	
5	6725.28	90.00	178.20	6050.00	-3.85	-1695.55	9.00	-112.75	-49.41	
6	16827.52	90.00	178.20	6050.00	-10101.12	-1378.81	0.00	0.00	10052.83	TIMBRO 0112-03H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 0112-03H_SHL	0.00	0.00	0.00	40.786591	-103.924461
TIMBRO 0112-03H_LP/TPZ	6050.00	-3.85	-1695.55	40.786580	-103.930583
TIMBRO 0112-03H_BPZ	6050.00	-10011.13	-1381.57	40.759113	-103.929448
TIMBRO 0112-03H_BHL	6050.00	-10101.12	-1378.81	40.758866	-103.929438



Vertical Section at 178.20° (2600 usft/in)



## WELL DETAILS: TIMBRO 0112-03H

GL = 4939'

RKB = 20' @ 4959.00usft (RIG)

Plan: Design #1 (TIMBRO 0112-03H/Plan A)

Date: 1/18/2023

SHL  
316' FNL  
1977' FEL

LP  
300' FNL  
1532' FWL

BPZ  
300' FSL  
1782' FWL

BHL  
210' FSL  
1785' FWL

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #1		

<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		

<b>Site</b>	9N-59W-01 TIMBRO 0101 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,533,230.40 usft	<b>Latitude:</b> 40.786474
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,436,039.96 usft	<b>Longitude:</b> -103.925326
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	

<b>Well</b>	TIMBRO 0112-03H			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,533,277.23 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,436,278.56 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>		1.02 °	<b>Ground Level:</b>	4,939.00 usft

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF202013	1/17/2023	7.27	67.01	52,069.52638281

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	1,661.00
<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	178.20

<b>Plan Survey Tool Program</b>		<b>Date</b>	1/18/2023		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	20.00	1,661.00	SLB MWD Surface Surveys (Plan	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,661.00	16,827.52	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0112-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4959.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0112-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Design #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
1,661.00	21.34	294.65	1,628.36	114.36	-223.61	0.00	0.00	0.00	0.00	
1,761.00	21.34	294.65	1,721.50	129.54	-256.69	0.00	0.00	0.00	0.00	
1,838.50	20.04	292.26	1,794.00	140.45	-281.79	2.00	-1.68	-3.08	-148.11	
5,636.06	20.04	292.26	5,361.63	633.41	-1,486.14	0.00	0.00	0.00	0.00	
6,725.28	90.00	178.20	6,050.00	-3.85	-1,695.55	9.00	6.42	-10.47	-112.75	
16,827.52	90.00	178.20	6,050.00	-10,101.12	-1,378.81	0.00	0.00	0.00	0.00	TIMBRO 0112-03H_B

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #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
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00
169.00	0.22	207.91	169.00	-0.25	-0.13	0.25	0.15	0.15	0.00
197.00	0.20	209.03	197.00	-0.34	-0.18	0.34	0.07	-0.07	4.00
227.00	0.28	132.97	227.00	-0.44	-0.15	0.43	1.01	0.27	-253.53
257.00	0.25	316.96	257.00	-0.44	-0.15	0.44	1.77	-0.10	-586.70
286.00	0.29	268.64	286.00	-0.40	-0.26	0.39	0.77	0.14	-166.62
315.00	0.17	247.64	315.00	-0.41	-0.38	0.40	0.50	-0.41	-72.41
345.00	0.90	258.87	345.00	-0.48	-0.65	0.46	2.45	2.43	37.43
375.00	1.10	260.31	374.99	-0.57	-1.16	0.53	0.67	0.67	4.80
405.00	1.58	262.03	404.98	-0.68	-1.86	0.62	1.61	1.60	5.73
435.00	2.04	263.27	434.97	-0.80	-2.80	0.71	1.54	1.53	4.13
465.00	2.11	265.23	464.95	-0.91	-3.88	0.78	0.33	0.23	6.53
495.00	2.42	271.46	494.93	-0.93	-5.06	0.78	1.32	1.03	20.77
525.00	3.15	284.60	524.89	-0.71	-6.49	0.51	3.22	2.43	43.80
555.00	3.55	289.03	554.84	-0.20	-8.17	-0.06	1.59	1.33	14.77
585.00	3.80	295.27	584.78	0.53	-9.94	-0.84	1.57	0.83	20.80
615.00	4.04	294.94	614.71	1.40	-11.80	-1.77	0.80	0.80	-1.10
645.00	4.61	298.06	644.62	2.41	-13.82	-2.84	2.05	1.90	10.40
675.00	5.29	302.30	674.51	3.72	-16.06	-4.22	2.57	2.27	14.13
705.00	6.16	302.93	704.36	5.33	-18.58	-5.91	2.91	2.90	2.10
735.00	6.42	300.65	734.18	7.06	-21.37	-7.73	1.20	0.87	-7.60
765.00	7.28	297.09	763.97	8.78	-24.51	-9.55	3.20	2.87	-11.87
795.00	7.62	294.70	793.71	10.48	-28.00	-11.35	1.53	1.13	-7.97
825.00	8.09	295.22	823.43	12.21	-31.72	-13.20	1.58	1.57	1.73
855.00	8.36	297.11	853.12	14.10	-35.57	-15.21	1.27	0.90	6.30
885.00	8.70	299.86	882.79	16.22	-39.48	-17.46	1.77	1.13	9.17
915.00	9.46	298.25	912.41	18.52	-43.62	-19.88	2.67	2.53	-5.37
945.00	9.95	299.73	941.98	20.97	-48.04	-22.47	1.83	1.63	4.93
975.00	10.53	301.12	971.51	23.68	-52.64	-25.32	2.10	1.93	4.63
1,005.00	11.37	304.67	1,000.96	26.77	-57.42	-28.56	3.59	2.80	11.83
1,035.00	12.18	304.24	1,030.33	30.24	-62.47	-32.18	2.72	2.70	-1.43
1,065.00	12.41	303.46	1,059.64	33.80	-67.77	-35.91	0.95	0.77	-2.60
1,095.00	13.00	302.53	1,088.91	37.39	-73.31	-39.67	2.08	1.97	-3.10
1,125.00	13.39	301.88	1,118.11	41.04	-79.10	-43.50	1.39	1.30	-2.17
1,155.00	13.82	302.39	1,147.27	44.79	-85.08	-47.44	1.49	1.43	1.70
1,185.00	14.67	300.56	1,176.35	48.64	-91.37	-51.49	3.21	2.83	-6.10
1,215.00	15.06	303.84	1,205.35	52.74	-97.88	-55.79	3.09	1.30	10.93
1,245.00	15.89	303.90	1,234.26	57.20	-104.53	-60.46	2.77	2.77	0.20
1,275.00	16.15	303.50	1,263.09	61.80	-111.42	-65.27	0.94	0.87	-1.33
1,305.00	16.54	301.47	1,291.88	66.33	-118.54	-70.02	2.31	1.30	-6.77
1,335.00	16.28	298.79	1,320.66	70.58	-125.87	-74.50	2.67	-0.87	-8.93
1,365.00	16.40	295.61	1,349.45	74.44	-133.37	-78.59	3.01	0.40	-10.60
1,395.00	16.82	293.69	1,378.20	78.01	-141.16	-82.41	2.30	1.40	-6.40
1,425.00	17.32	292.99	1,406.88	81.50	-149.25	-86.15	1.80	1.67	-2.33
1,455.00	18.20	292.85	1,435.45	85.07	-157.68	-89.98	2.94	2.93	-0.47
1,485.00	18.97	292.91	1,463.88	88.78	-166.49	-93.97	2.57	2.57	0.20
1,515.00	19.95	293.30	1,492.17	92.71	-175.68	-98.18	3.30	3.27	1.30
1,545.00	20.69	293.66	1,520.30	96.86	-185.23	-102.63	2.50	2.47	1.20
1,575.00	21.45	294.27	1,548.29	101.24	-195.09	-107.32	2.64	2.53	2.03
1,605.00	21.49	294.81	1,576.21	105.80	-205.08	-112.19	0.67	0.13	1.80
1,635.00	21.34	294.84	1,604.14	110.40	-215.02	-117.10	0.50	-0.50	0.10
1,661.00	21.34	294.65	1,628.36	114.36	-223.61	-121.33	0.27	0.00	-0.73

Tie-onto Sfc Svcs & Hold @ 1661.00ft

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #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)
1,700.00	21.34	294.65	1,664.68	120.28	-236.51	-127.65	0.00	0.00	0.00
1,754.02	21.34	294.65	1,715.00	128.48	-254.38	-136.40	0.00	0.00	0.00
9 5/8"									
1,761.00	21.34	294.65	1,721.50	129.54	-256.69	-137.54	0.00	0.00	0.00
Begin Nudge to KOP @ 1761.00ft									
1,800.00	20.68	293.48	1,757.91	135.24	-269.45	-143.64	2.00	-1.69	-2.99
1,838.50	20.04	292.26	1,794.00	140.45	-281.79	-149.23	2.00	-1.67	-3.18
Hold Tangent @ 1838.50ft									
1,900.00	20.04	292.26	1,851.78	148.43	-301.30	-157.82	0.00	0.00	0.00
2,000.00	20.04	292.26	1,945.72	161.41	-333.01	-171.79	0.00	0.00	0.00
2,100.00	20.04	292.26	2,039.67	174.39	-364.72	-185.76	0.00	0.00	0.00
2,200.00	20.04	292.26	2,133.62	187.37	-396.44	-199.73	0.00	0.00	0.00
2,300.00	20.04	292.26	2,227.56	200.36	-428.15	-213.71	0.00	0.00	0.00
2,400.00	20.04	292.26	2,321.51	213.34	-459.87	-227.68	0.00	0.00	0.00
2,500.00	20.04	292.26	2,415.45	226.32	-491.58	-241.65	0.00	0.00	0.00
2,600.00	20.04	292.26	2,509.40	239.30	-523.29	-255.62	0.00	0.00	0.00
2,700.00	20.04	292.26	2,603.34	252.28	-555.01	-269.59	0.00	0.00	0.00
2,800.00	20.04	292.26	2,697.29	265.26	-586.72	-283.56	0.00	0.00	0.00
2,900.00	20.04	292.26	2,791.23	278.24	-618.44	-297.53	0.00	0.00	0.00
3,000.00	20.04	292.26	2,885.18	291.22	-650.15	-311.50	0.00	0.00	0.00
3,100.00	20.04	292.26	2,979.12	304.20	-681.86	-325.47	0.00	0.00	0.00
3,200.00	20.04	292.26	3,073.07	317.18	-713.58	-339.44	0.00	0.00	0.00
3,300.00	20.04	292.26	3,167.01	330.16	-745.29	-353.41	0.00	0.00	0.00
3,400.00	20.04	292.26	3,260.96	343.15	-777.00	-367.38	0.00	0.00	0.00
3,500.00	20.04	292.26	3,354.91	356.13	-808.72	-381.35	0.00	0.00	0.00
3,600.00	20.04	292.26	3,448.85	369.11	-840.43	-395.32	0.00	0.00	0.00
3,700.00	20.04	292.26	3,542.80	382.09	-872.15	-409.29	0.00	0.00	0.00
3,800.00	20.04	292.26	3,636.74	395.07	-903.86	-423.27	0.00	0.00	0.00
3,900.00	20.04	292.26	3,730.69	408.05	-935.57	-437.24	0.00	0.00	0.00
4,000.00	20.04	292.26	3,824.63	421.03	-967.29	-451.21	0.00	0.00	0.00
4,100.00	20.04	292.26	3,918.58	434.01	-999.00	-465.18	0.00	0.00	0.00
4,200.00	20.04	292.26	4,012.52	446.99	-1,030.71	-479.15	0.00	0.00	0.00
4,300.00	20.04	292.26	4,106.47	459.97	-1,062.43	-493.12	0.00	0.00	0.00
4,400.00	20.04	292.26	4,200.41	472.95	-1,094.14	-507.09	0.00	0.00	0.00
4,500.00	20.04	292.26	4,294.36	485.94	-1,125.86	-521.06	0.00	0.00	0.00
4,600.00	20.04	292.26	4,388.30	498.92	-1,157.57	-535.03	0.00	0.00	0.00
4,700.00	20.04	292.26	4,482.25	511.90	-1,189.28	-549.00	0.00	0.00	0.00
4,800.00	20.04	292.26	4,576.20	524.88	-1,221.00	-562.97	0.00	0.00	0.00
4,900.00	20.04	292.26	4,670.14	537.86	-1,252.71	-576.94	0.00	0.00	0.00
5,000.00	20.04	292.26	4,764.09	550.84	-1,284.42	-590.91	0.00	0.00	0.00
5,100.00	20.04	292.26	4,858.03	563.82	-1,316.14	-604.88	0.00	0.00	0.00
5,200.00	20.04	292.26	4,951.98	576.80	-1,347.85	-618.85	0.00	0.00	0.00
5,300.00	20.04	292.26	5,045.92	589.78	-1,379.57	-632.83	0.00	0.00	0.00
5,400.00	20.04	292.26	5,139.87	602.76	-1,411.28	-646.80	0.00	0.00	0.00
5,500.00	20.04	292.26	5,233.81	615.74	-1,442.99	-660.77	0.00	0.00	0.00
5,600.00	20.04	292.26	5,327.76	628.73	-1,474.71	-674.74	0.00	0.00	0.00
5,636.06	20.04	292.26	5,361.63	633.41	-1,486.14	-679.78	0.00	0.00	0.00
KOP @ 5636.06ft :: DLS = 9°/100'									
5,650.00	19.59	288.81	5,374.75	635.06	-1,490.57	-681.57	9.00	-3.25	-24.77
5,700.00	18.56	275.37	5,422.03	638.51	-1,506.43	-685.52	9.00	-2.06	-26.88
5,750.00	18.55	261.19	5,469.45	638.04	-1,522.22	-685.54	9.00	-0.01	-28.35
5,800.00	19.57	247.74	5,516.73	633.65	-1,537.84	-681.64	9.00	2.04	-26.91
5,850.00	21.47	236.07	5,563.58	625.36	-1,553.19	-673.84	9.00	3.80	-23.33

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #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)	
5,900.00	24.04	226.50	5,609.70	613.24	-1,568.18	-662.20	9.00	5.14	-19.14	
5,950.00	27.09	218.82	5,654.81	597.35	-1,582.71	-646.77	9.00	6.10	-15.36	
6,000.00	30.48	212.66	5,698.63	577.79	-1,596.70	-627.66	9.00	6.78	-12.32	
6,050.00	34.11	207.66	5,740.90	554.69	-1,610.06	-604.99	9.00	7.25	-10.00	
6,100.00	37.90	203.54	5,781.35	528.18	-1,622.71	-578.89	9.00	7.58	-8.26	
6,150.00	41.81	200.06	5,819.73	498.43	-1,634.57	-549.53	9.00	7.83	-6.94	
6,200.00	45.82	197.09	5,855.80	465.62	-1,645.56	-517.08	9.00	8.01	-5.95	
6,250.00	49.89	194.50	5,889.35	429.96	-1,655.62	-481.75	9.00	8.14	-5.18	
6,300.00	54.01	192.20	5,920.17	391.66	-1,664.69	-443.76	9.00	8.24	-4.59	
6,350.00	58.17	190.14	5,948.06	350.96	-1,672.71	-403.33	9.00	8.32	-4.13	
6,400.00	62.36	188.25	5,972.86	308.11	-1,679.63	-360.72	9.00	8.38	-3.78	
6,450.00	66.57	186.50	5,994.41	263.38	-1,685.40	-316.19	9.00	8.43	-3.50	
6,500.00	70.81	184.86	6,012.58	217.04	-1,690.00	-270.02	9.00	8.47	-3.28	
6,550.00	75.05	183.30	6,027.25	169.38	-1,693.40	-222.48	9.00	8.49	-3.11	
6,600.00	79.31	181.81	6,038.35	120.68	-1,695.57	-173.88	9.00	8.51	-2.99	
6,650.00	83.57	180.35	6,045.78	71.26	-1,696.50	-124.52	9.00	8.53	-2.91	
6,700.00	87.84	178.92	6,049.53	21.42	-1,696.18	-74.68	9.00	8.54	-2.86	
6,725.28	90.00	178.20	6,050.00	-3.85	-1,695.55	-49.41	9.00	8.54	-2.85	
End Build/TPZ @ 6725.28ft										
6,800.00	90.00	178.20	6,050.00	-78.53	-1,693.20	25.31	0.00	0.00	0.00	
6,900.00	90.00	178.20	6,050.00	-178.48	-1,690.07	125.31	0.00	0.00	0.00	
7,000.00	90.00	178.20	6,050.00	-278.43	-1,686.93	225.31	0.00	0.00	0.00	
7,100.00	90.00	178.20	6,050.00	-378.39	-1,683.80	325.31	0.00	0.00	0.00	
7,200.00	90.00	178.20	6,050.00	-478.34	-1,680.66	425.31	0.00	0.00	0.00	
7,300.00	90.00	178.20	6,050.00	-578.29	-1,677.53	525.31	0.00	0.00	0.00	
7,400.00	90.00	178.20	6,050.00	-678.24	-1,674.39	625.31	0.00	0.00	0.00	
7,500.00	90.00	178.20	6,050.00	-778.19	-1,671.26	725.31	0.00	0.00	0.00	
7,600.00	90.00	178.20	6,050.00	-878.14	-1,668.12	825.31	0.00	0.00	0.00	
7,700.00	90.00	178.20	6,050.00	-978.09	-1,664.99	925.31	0.00	0.00	0.00	
7,800.00	90.00	178.20	6,050.00	-1,078.04	-1,661.85	1,025.31	0.00	0.00	0.00	
7,900.00	90.00	178.20	6,050.00	-1,177.99	-1,658.72	1,125.31	0.00	0.00	0.00	
8,000.00	90.00	178.20	6,050.00	-1,277.94	-1,655.58	1,225.31	0.00	0.00	0.00	
8,100.00	90.00	178.20	6,050.00	-1,377.89	-1,652.45	1,325.31	0.00	0.00	0.00	
8,200.00	90.00	178.20	6,050.00	-1,477.84	-1,649.31	1,425.31	0.00	0.00	0.00	
8,300.00	90.00	178.20	6,050.00	-1,577.80	-1,646.17	1,525.31	0.00	0.00	0.00	
8,400.00	90.00	178.20	6,050.00	-1,677.75	-1,643.04	1,625.31	0.00	0.00	0.00	
8,500.00	90.00	178.20	6,050.00	-1,777.70	-1,639.90	1,725.31	0.00	0.00	0.00	
8,600.00	90.00	178.20	6,050.00	-1,877.65	-1,636.77	1,825.31	0.00	0.00	0.00	
8,700.00	90.00	178.20	6,050.00	-1,977.60	-1,633.63	1,925.31	0.00	0.00	0.00	
8,800.00	90.00	178.20	6,050.00	-2,077.55	-1,630.50	2,025.31	0.00	0.00	0.00	
8,900.00	90.00	178.20	6,050.00	-2,177.50	-1,627.36	2,125.31	0.00	0.00	0.00	
9,000.00	90.00	178.20	6,050.00	-2,277.45	-1,624.23	2,225.31	0.00	0.00	0.00	
9,100.00	90.00	178.20	6,050.00	-2,377.40	-1,621.09	2,325.31	0.00	0.00	0.00	
9,200.00	90.00	178.20	6,050.00	-2,477.35	-1,617.96	2,425.31	0.00	0.00	0.00	
9,300.00	90.00	178.20	6,050.00	-2,577.30	-1,614.82	2,525.31	0.00	0.00	0.00	
9,400.00	90.00	178.20	6,050.00	-2,677.25	-1,611.69	2,625.31	0.00	0.00	0.00	
9,500.00	90.00	178.20	6,050.00	-2,777.21	-1,608.55	2,725.31	0.00	0.00	0.00	
9,600.00	90.00	178.20	6,050.00	-2,877.16	-1,605.42	2,825.31	0.00	0.00	0.00	
9,700.00	90.00	178.20	6,050.00	-2,977.11	-1,602.28	2,925.31	0.00	0.00	0.00	
9,800.00	90.00	178.20	6,050.00	-3,077.06	-1,599.14	3,025.31	0.00	0.00	0.00	
9,900.00	90.00	178.20	6,050.00	-3,177.01	-1,596.01	3,125.31	0.00	0.00	0.00	
10,000.00	90.00	178.20	6,050.00	-3,276.96	-1,592.87	3,225.31	0.00	0.00	0.00	
10,100.00	90.00	178.20	6,050.00	-3,376.91	-1,589.74	3,325.31	0.00	0.00	0.00	
10,200.00	90.00	178.20	6,050.00	-3,476.86	-1,586.60	3,425.31	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #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)
10,300.00	90.00	178.20	6,050.00	-3,576.81	-1,583.47	3,525.31	0.00	0.00	0.00
10,400.00	90.00	178.20	6,050.00	-3,676.76	-1,580.33	3,625.31	0.00	0.00	0.00
10,500.00	90.00	178.20	6,050.00	-3,776.71	-1,577.20	3,725.31	0.00	0.00	0.00
10,600.00	90.00	178.20	6,050.00	-3,876.66	-1,574.06	3,825.31	0.00	0.00	0.00
10,700.00	90.00	178.20	6,050.00	-3,976.62	-1,570.93	3,925.31	0.00	0.00	0.00
10,800.00	90.00	178.20	6,050.00	-4,076.57	-1,567.79	4,025.31	0.00	0.00	0.00
10,900.00	90.00	178.20	6,050.00	-4,176.52	-1,564.66	4,125.31	0.00	0.00	0.00
11,000.00	90.00	178.20	6,050.00	-4,276.47	-1,561.52	4,225.31	0.00	0.00	0.00
11,100.00	90.00	178.20	6,050.00	-4,376.42	-1,558.39	4,325.31	0.00	0.00	0.00
11,200.00	90.00	178.20	6,050.00	-4,476.37	-1,555.25	4,425.31	0.00	0.00	0.00
11,300.00	90.00	178.20	6,050.00	-4,576.32	-1,552.11	4,525.31	0.00	0.00	0.00
11,400.00	90.00	178.20	6,050.00	-4,676.27	-1,548.98	4,625.31	0.00	0.00	0.00
11,500.00	90.00	178.20	6,050.00	-4,776.22	-1,545.84	4,725.31	0.00	0.00	0.00
11,600.00	90.00	178.20	6,050.00	-4,876.17	-1,542.71	4,825.31	0.00	0.00	0.00
11,700.00	90.00	178.20	6,050.00	-4,976.12	-1,539.57	4,925.31	0.00	0.00	0.00
11,800.00	90.00	178.20	6,050.00	-5,076.07	-1,536.44	5,025.31	0.00	0.00	0.00
11,900.00	90.00	178.20	6,050.00	-5,176.03	-1,533.30	5,125.31	0.00	0.00	0.00
12,000.00	90.00	178.20	6,050.00	-5,275.98	-1,530.17	5,225.31	0.00	0.00	0.00
12,100.00	90.00	178.20	6,050.00	-5,375.93	-1,527.03	5,325.31	0.00	0.00	0.00
12,200.00	90.00	178.20	6,050.00	-5,475.88	-1,523.90	5,425.31	0.00	0.00	0.00
12,300.00	90.00	178.20	6,050.00	-5,575.83	-1,520.76	5,525.31	0.00	0.00	0.00
12,400.00	90.00	178.20	6,050.00	-5,675.78	-1,517.63	5,625.31	0.00	0.00	0.00
12,500.00	90.00	178.20	6,050.00	-5,775.73	-1,514.49	5,725.31	0.00	0.00	0.00
12,600.00	90.00	178.20	6,050.00	-5,875.68	-1,511.36	5,825.31	0.00	0.00	0.00
12,700.00	90.00	178.20	6,050.00	-5,975.63	-1,508.22	5,925.31	0.00	0.00	0.00
12,800.00	90.00	178.20	6,050.00	-6,075.58	-1,505.08	6,025.31	0.00	0.00	0.00
12,900.00	90.00	178.20	6,050.00	-6,175.53	-1,501.95	6,125.31	0.00	0.00	0.00
13,000.00	90.00	178.20	6,050.00	-6,275.48	-1,498.81	6,225.31	0.00	0.00	0.00
13,100.00	90.00	178.20	6,050.00	-6,375.44	-1,495.68	6,325.31	0.00	0.00	0.00
13,200.00	90.00	178.20	6,050.00	-6,475.39	-1,492.54	6,425.31	0.00	0.00	0.00
13,300.00	90.00	178.20	6,050.00	-6,575.34	-1,489.41	6,525.31	0.00	0.00	0.00
13,400.00	90.00	178.20	6,050.00	-6,675.29	-1,486.27	6,625.31	0.00	0.00	0.00
13,500.00	90.00	178.20	6,050.00	-6,775.24	-1,483.14	6,725.31	0.00	0.00	0.00
13,600.00	90.00	178.20	6,050.00	-6,875.19	-1,480.00	6,825.31	0.00	0.00	0.00
13,700.00	90.00	178.20	6,050.00	-6,975.14	-1,476.87	6,925.31	0.00	0.00	0.00
13,800.00	90.00	178.20	6,050.00	-7,075.09	-1,473.73	7,025.31	0.00	0.00	0.00
13,900.00	90.00	178.20	6,050.00	-7,175.04	-1,470.60	7,125.31	0.00	0.00	0.00
14,000.00	90.00	178.20	6,050.00	-7,274.99	-1,467.46	7,225.31	0.00	0.00	0.00
14,100.00	90.00	178.20	6,050.00	-7,374.94	-1,464.33	7,325.31	0.00	0.00	0.00
14,200.00	90.00	178.20	6,050.00	-7,474.89	-1,461.19	7,425.31	0.00	0.00	0.00
14,300.00	90.00	178.20	6,050.00	-7,574.85	-1,458.05	7,525.31	0.00	0.00	0.00
14,400.00	90.00	178.20	6,050.00	-7,674.80	-1,454.92	7,625.31	0.00	0.00	0.00
14,500.00	90.00	178.20	6,050.00	-7,774.75	-1,451.78	7,725.31	0.00	0.00	0.00
14,600.00	90.00	178.20	6,050.00	-7,874.70	-1,448.65	7,825.31	0.00	0.00	0.00
14,700.00	90.00	178.20	6,050.00	-7,974.65	-1,445.51	7,925.31	0.00	0.00	0.00
14,800.00	90.00	178.20	6,050.00	-8,074.60	-1,442.38	8,025.31	0.00	0.00	0.00
14,900.00	90.00	178.20	6,050.00	-8,174.55	-1,439.24	8,125.31	0.00	0.00	0.00
15,000.00	90.00	178.20	6,050.00	-8,274.50	-1,436.11	8,225.31	0.00	0.00	0.00
15,100.00	90.00	178.20	6,050.00	-8,374.45	-1,432.97	8,325.31	0.00	0.00	0.00
15,200.00	90.00	178.20	6,050.00	-8,474.40	-1,429.84	8,425.31	0.00	0.00	0.00
15,300.00	90.00	178.20	6,050.00	-8,574.35	-1,426.70	8,525.31	0.00	0.00	0.00
15,400.00	90.00	178.20	6,050.00	-8,674.31	-1,423.57	8,625.31	0.00	0.00	0.00
15,500.00	90.00	178.20	6,050.00	-8,774.26	-1,420.43	8,725.31	0.00	0.00	0.00
15,600.00	90.00	178.20	6,050.00	-8,874.21	-1,417.30	8,825.31	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 0112-03H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4959.00usft (RIG)
<b>Site:</b>	9N-59W-01 TIMBRO 0101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 0112-03H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Design #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)	
15,700.00	90.00	178.20	6,050.00	-8,974.16	-1,414.16	8,925.31	0.00	0.00	0.00	
15,800.00	90.00	178.20	6,050.00	-9,074.11	-1,411.02	9,025.31	0.00	0.00	0.00	
15,900.00	90.00	178.20	6,050.00	-9,174.06	-1,407.89	9,125.31	0.00	0.00	0.00	
16,000.00	90.00	178.20	6,050.00	-9,274.01	-1,404.75	9,225.31	0.00	0.00	0.00	
16,100.00	90.00	178.20	6,050.00	-9,373.96	-1,401.62	9,325.31	0.00	0.00	0.00	
16,200.00	90.00	178.20	6,050.00	-9,473.91	-1,398.48	9,425.31	0.00	0.00	0.00	
16,300.00	90.00	178.20	6,050.00	-9,573.86	-1,395.35	9,525.31	0.00	0.00	0.00	
16,400.00	90.00	178.20	6,050.00	-9,673.81	-1,392.21	9,625.31	0.00	0.00	0.00	
16,500.00	90.00	178.20	6,050.00	-9,773.76	-1,389.08	9,725.31	0.00	0.00	0.00	
16,600.00	90.00	178.20	6,050.00	-9,873.72	-1,385.94	9,825.31	0.00	0.00	0.00	
16,700.00	90.00	178.20	6,050.00	-9,973.67	-1,382.81	9,925.31	0.00	0.00	0.00	
16,737.48	90.00	178.20	6,050.00	-10,011.13	-1,381.63	9,962.79	0.00	0.00	0.00	
BPZ @ 16737.48ft										
16,800.00	90.00	178.20	6,050.00	-10,073.62	-1,379.67	10,025.31	0.00	0.00	0.00	
16,827.52	90.00	178.20	6,050.00	-10,101.12	-1,378.81	10,052.83	0.00	0.00	0.00	
TD Well @ 16827.52ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,754.02	1,715.00	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	
1,661.00	1,628.36	114.36	-223.61	Tie-onto Sfc Svys & Hold @ 1661.00ft	
1,761.00	1,721.50	129.54	-256.69	Begin Nudge to KOP @ 1761.00ft	
1,838.50	1,794.00	140.45	-281.79	Hold Tangent @ 1838.50ft	
5,636.06	5,361.63	633.41	-1,486.14	KOP @ 5636.06ft :: DLS = 9°/100'	
6,725.28	6,050.00	-3.85	-1,695.55	End Build/TPZ @ 6725.28ft	
16,737.48	6,050.00	-10,011.13	-1,381.63	BPZ @ 16737.48ft	
16,827.52	6,050.00	-10,101.12	-1,378.81	TD Well @ 16827.52ft	