

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-01 TIMBRO 0101 PAD

TIMBRO 0112-01H

Plan A

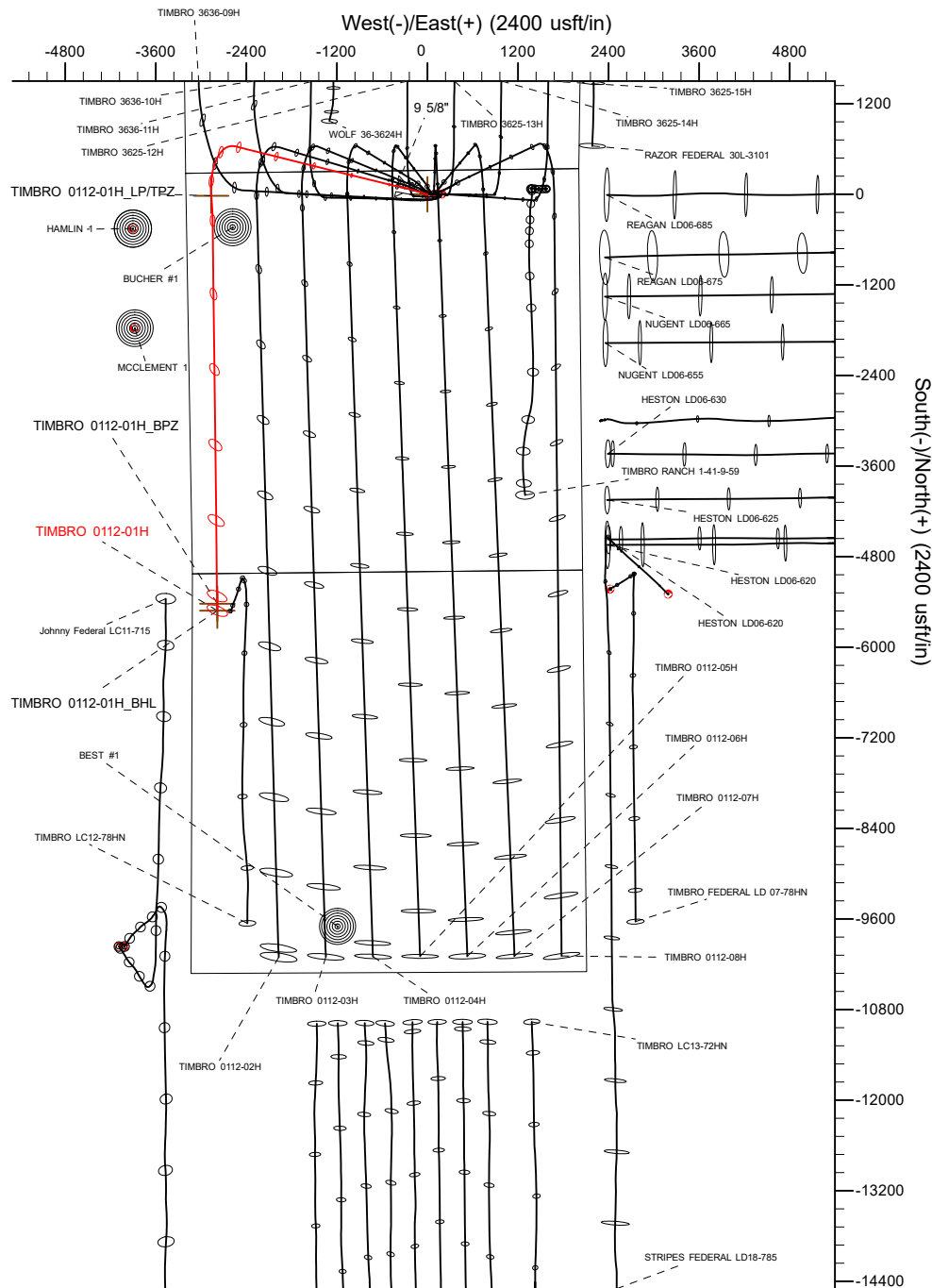
Plan: Design #1

Standard Planning Report

18 January, 2023

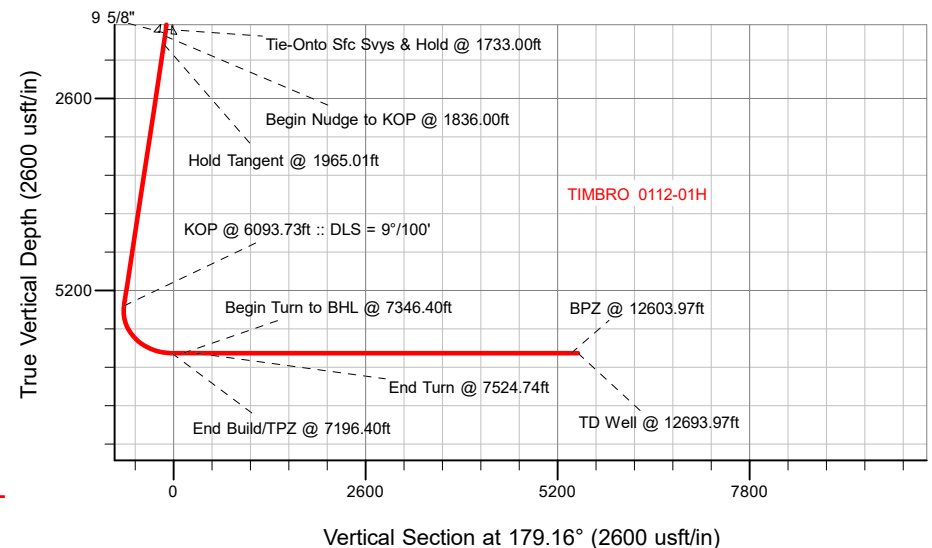
VERDAD RESOURCES


CASING DETAILS			
TVD	MD	Name	Size
1715.00	1791.62	9 5/8"	9-5/8



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	1733.00	28.71	281.28	1663.59	99.26	-377.22	0.00	0.00	-104.78	
2	1836.00	28.71	281.28	1753.93	108.94	-425.74	0.00	0.00	-115.17	
3	1965.01	30.92	283.96	1865.86	123.00	-488.30	2.00	32.26	-130.14	
4	6093.73	30.92	283.96	5407.83	634.80	-2547.15	0.00	0.00	-672.07	
5	7196.40	90.00	175.75	6050.00	-18.91	-2864.96	9.00	-105.76	-23.09	
6	7346.40	90.00	175.75	6050.00	-168.50	-2853.84	0.00	0.00	126.64	
7	7524.74	90.00	179.32	6050.00	-346.64	-2846.16	2.00	90.00	304.88	
8	12693.97	90.00	179.32	6050.00	-5515.50	-2784.52	0.00	0.00	5474.09	TIMBRO 0112-01H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
TIMBRO 0112-01H_SHL	0.00	0.00	0.00	40.786592	-103.924577	
TIMBRO 0112-01H_LP/TPZ	6050.00	-18.91	-2864.96	40.786540	-103.934923	
TIMBRO 0112-01H_BPZ	6050.00	-5425.51	-2784.24	40.771700	-103.934629	
TIMBRO 0112-01H_BHL	6050.00	-5515.50	-2784.52	40.771453	-103.934630	



 <p> M Azimuths to True North Magnetic North: 7.27° Magnetic Field Strength: 52069.5nT Dip Angle: 67.01° Date: 1/17/2023 Model: IGRF2020 </p>	WELL DETAILS: TIMBRO 0112-01H
	GL = 4939'
	RKB = 20' @ 4959.00usft (R/G)
	Plan: Design #1 (TIMBRO 0112-01H/Plan A)
	Date: 1/18/2023

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0112-01H
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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Design #1		

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

Well		TIMBRO 0112-01H				
Well Position	+N/-S	0.00 usft	Northing:	1,533,277.02 usft	Latitude:	40.786592
	+E/-W	0.00 usft	Easting:	3,436,246.44 usft	Longitude:	-103.924577
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,939.00 usft
Grid Convergence:		1.02 °				

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	1/17/2023	7.27	67.01	52,069.51566380

Design	Design #1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	1,733.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.16	

Plan Survey Tool Program		Date	1/18/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	20.00	1,733.00	SLB MWD Surface Surveys (Plan	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,733.00	12,693.97	Design #1 (Plan A)	ISCWSA MWD	
				Fixed:v2:standard declination	

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0112-01H	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
1,733.00	28.71	281.28	1,663.59	99.26	-377.22	0.00	0.00	0.00	0.00	
1,836.00	28.71	281.28	1,753.93	108.94	-425.74	0.00	0.00	0.00	0.00	
1,965.01	30.92	283.96	1,865.86	123.00	-488.30	2.00	1.71	2.08	32.26	
6,093.73	30.92	283.96	5,407.83	634.80	-2,547.15	0.00	0.00	0.00	0.00	
7,196.40	90.00	175.75	6,050.00	-18.91	-2,864.96	9.00	5.36	-9.81	-105.76	
7,346.40	90.00	175.75	6,050.00	-168.50	-2,853.84	0.00	0.00	0.00	0.00	
7,524.74	90.00	179.32	6,050.00	-346.64	-2,846.16	2.00	0.00	2.00	90.00	
12,693.97	90.00	179.32	6,050.00	-5,515.50	-2,784.52	0.00	0.00	0.00	0.00	TIMBRO 0112-01H_B

Planning Report

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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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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
134.00	0.34	72.68	134.00	0.10	0.32	-0.10	0.30	0.30	0.00
165.00	0.56	76.77	165.00	0.16	0.56	-0.15	0.72	0.71	13.19
193.00	0.39	120.21	193.00	0.15	0.77	-0.13	1.38	-0.61	155.14
223.00	0.72	158.56	223.00	-0.08	0.93	0.09	1.60	1.10	127.83
253.00	1.18	190.37	252.99	-0.56	0.94	0.57	2.28	1.53	106.03
282.00	1.94	192.40	281.98	-1.33	0.79	1.34	2.63	2.62	7.00
311.00	2.25	201.75	310.96	-2.34	0.47	2.35	1.59	1.07	32.24
341.00	2.51	213.68	340.94	-3.43	-0.11	3.43	1.86	0.87	39.77
371.00	2.31	237.05	370.91	-4.31	-0.99	4.30	3.32	-0.67	77.90
401.00	2.45	247.89	400.88	-4.88	-2.09	4.85	1.57	0.47	36.13
431.00	2.63	272.94	430.86	-5.09	-3.37	5.04	3.72	0.60	83.50
461.00	3.24	279.09	460.82	-4.92	-4.89	4.85	2.29	2.03	20.50
491.00	4.06	289.74	490.76	-4.42	-6.73	4.33	3.54	2.73	35.50
521.00	5.18	293.96	520.66	-3.52	-8.97	3.38	3.90	3.73	14.07
551.00	6.56	297.99	550.50	-2.16	-11.72	1.99	4.80	4.60	13.43
581.00	7.77	297.59	580.27	-0.42	-15.03	0.20	4.04	4.03	-1.33
611.00	8.80	296.23	609.95	1.54	-18.88	-1.81	3.49	3.43	-4.53
641.00	9.77	293.77	639.56	3.58	-23.27	-3.92	3.49	3.23	-8.20
671.00	10.79	292.13	669.08	5.66	-28.20	-6.07	3.54	3.40	-5.47
701.00	11.97	292.05	698.49	7.89	-33.69	-8.38	3.93	3.93	-0.27
731.00	13.20	291.31	727.76	10.30	-39.76	-10.88	4.13	4.10	-2.47
761.00	14.29	289.89	756.91	12.80	-46.44	-13.48	3.80	3.63	-4.73
791.00	14.93	289.92	785.94	15.38	-53.55	-16.16	2.13	2.13	0.10
821.00	15.29	289.22	814.90	18.00	-60.92	-18.89	1.35	1.20	-2.33
851.00	15.05	289.36	843.85	20.59	-68.33	-21.59	0.81	-0.80	0.47
881.00	15.18	289.11	872.81	23.17	-75.72	-24.28	0.48	0.43	-0.83
911.00	15.13	289.13	901.77	25.74	-83.13	-26.95	0.17	-0.17	0.07
941.00	15.41	288.51	930.71	28.29	-90.60	-29.61	1.08	0.93	-2.07
971.00	15.80	286.32	959.61	30.70	-98.30	-32.14	2.35	1.30	-7.30
1,001.00	16.10	284.89	988.45	32.92	-106.24	-34.47	1.65	1.00	-4.77
1,031.00	16.79	284.51	1,017.22	35.07	-114.46	-36.74	2.33	2.30	-1.27
1,061.00	17.15	285.29	1,045.92	37.32	-122.92	-39.12	1.42	1.20	2.60
1,091.00	18.07	284.48	1,074.51	39.65	-131.69	-41.58	3.17	3.07	-2.70
1,121.00	18.62	284.18	1,102.99	41.99	-140.84	-44.05	1.86	1.83	-1.00
1,151.00	18.73	283.76	1,131.41	44.31	-150.16	-46.50	0.58	0.37	-1.40
1,181.00	19.27	284.09	1,159.77	46.66	-159.64	-48.99	1.84	1.80	1.10
1,211.00	19.95	284.05	1,188.03	49.11	-169.41	-51.58	2.27	2.27	-0.13
1,241.00	20.14	285.11	1,216.22	51.69	-179.36	-54.32	1.37	0.63	3.53
1,271.00	20.44	285.27	1,244.35	54.42	-189.40	-57.19	1.02	1.00	0.53
1,301.00	20.86	285.33	1,272.43	57.21	-199.60	-60.13	1.40	1.40	0.20
1,331.00	21.63	284.85	1,300.39	60.04	-210.10	-63.11	2.63	2.57	-1.60
1,361.00	22.20	284.82	1,328.22	62.91	-220.92	-66.14	1.90	1.90	-0.10
1,391.00	22.72	285.03	1,355.94	65.86	-232.00	-69.25	1.75	1.73	0.70
1,421.00	23.56	285.04	1,383.53	68.92	-243.38	-72.48	2.80	2.80	0.03
1,451.00	24.16	285.08	1,410.97	72.07	-255.10	-75.80	2.00	2.00	0.13
1,481.00	24.23	284.27	1,438.33	75.19	-267.00	-79.09	1.13	0.23	-2.70
1,511.00	25.00	283.18	1,465.60	78.15	-279.13	-82.23	2.98	2.57	-3.63
1,541.00	25.41	283.36	1,492.75	81.08	-291.57	-85.35	1.39	1.37	0.60
1,571.00	26.09	283.77	1,519.77	84.14	-304.24	-88.59	2.34	2.27	1.37
1,601.00	26.64	282.67	1,546.65	87.18	-317.21	-91.83	2.45	1.83	-3.67
1,631.00	27.13	281.66	1,573.41	90.04	-330.47	-94.88	2.23	1.63	-3.37
1,661.00	27.37	281.04	1,600.08	92.75	-343.94	-97.78	1.24	0.80	-2.07

Planning Report

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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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
1,691.00	28.05	280.96	1,626.64	95.41	-357.63	-100.64	2.27	2.27	-0.27	
1,733.00	28.71	281.28	1,663.59	99.26	-377.22	-104.78	1.61	1.57	0.76	
Tie-Onto Sfc Svcs & Hold @ 1733.00ft										
1,791.62	28.71	281.28	1,715.00	104.77	-404.83	-110.69	0.00	0.00	0.00	
9 5/8"										
1,800.00	28.71	281.28	1,722.35	105.55	-408.78	-111.53	0.00	0.00	0.00	
1,836.00	28.71	281.28	1,753.93	108.94	-425.74	-115.17	0.00	0.00	0.00	
Begin Nudge to KOP @ 1836.00ft										
1,900.00	29.80	282.65	1,809.76	115.43	-456.33	-122.10	2.00	1.70	2.15	
1,965.01	30.92	283.96	1,865.86	123.00	-488.30	-130.14	2.00	1.72	2.01	
Hold Tangent @ 1965.01ft										
2,000.00	30.92	283.96	1,895.87	127.33	-505.75	-134.73	0.00	0.00	0.00	
2,100.00	30.92	283.96	1,981.66	139.73	-555.62	-147.86	0.00	0.00	0.00	
2,200.00	30.92	283.96	2,067.45	152.13	-605.49	-160.99	0.00	0.00	0.00	
2,300.00	30.92	283.96	2,153.24	164.52	-655.35	-174.11	0.00	0.00	0.00	
2,400.00	30.92	283.96	2,239.03	176.92	-705.22	-187.24	0.00	0.00	0.00	
2,500.00	30.92	283.96	2,324.82	189.31	-755.09	-200.36	0.00	0.00	0.00	
2,600.00	30.92	283.96	2,410.61	201.71	-804.95	-213.49	0.00	0.00	0.00	
2,700.00	30.92	283.96	2,496.39	214.11	-854.82	-226.61	0.00	0.00	0.00	
2,800.00	30.92	283.96	2,582.18	226.50	-904.69	-239.74	0.00	0.00	0.00	
2,900.00	30.92	283.96	2,667.97	238.90	-954.55	-252.87	0.00	0.00	0.00	
3,000.00	30.92	283.96	2,753.76	251.29	-1,004.42	-265.99	0.00	0.00	0.00	
3,100.00	30.92	283.96	2,839.55	263.69	-1,054.28	-279.12	0.00	0.00	0.00	
3,200.00	30.92	283.96	2,925.34	276.09	-1,104.15	-292.24	0.00	0.00	0.00	
3,300.00	30.92	283.96	3,011.13	288.48	-1,154.02	-305.37	0.00	0.00	0.00	
3,400.00	30.92	283.96	3,096.91	300.88	-1,203.88	-318.50	0.00	0.00	0.00	
3,500.00	30.92	283.96	3,182.70	313.27	-1,253.75	-331.62	0.00	0.00	0.00	
3,600.00	30.92	283.96	3,268.49	325.67	-1,303.62	-344.75	0.00	0.00	0.00	
3,700.00	30.92	283.96	3,354.28	338.07	-1,353.48	-357.87	0.00	0.00	0.00	
3,800.00	30.92	283.96	3,440.07	350.46	-1,403.35	-371.00	0.00	0.00	0.00	
3,900.00	30.92	283.96	3,525.86	362.86	-1,453.22	-384.12	0.00	0.00	0.00	
4,000.00	30.92	283.96	3,611.65	375.26	-1,503.08	-397.25	0.00	0.00	0.00	
4,100.00	30.92	283.96	3,697.43	387.65	-1,552.95	-410.38	0.00	0.00	0.00	
4,200.00	30.92	283.96	3,783.22	400.05	-1,602.81	-423.50	0.00	0.00	0.00	
4,300.00	30.92	283.96	3,869.01	412.44	-1,652.68	-436.63	0.00	0.00	0.00	
4,400.00	30.92	283.96	3,954.80	424.84	-1,702.55	-449.75	0.00	0.00	0.00	
4,500.00	30.92	283.96	4,040.59	437.24	-1,752.41	-462.88	0.00	0.00	0.00	
4,600.00	30.92	283.96	4,126.38	449.63	-1,802.28	-476.01	0.00	0.00	0.00	
4,700.00	30.92	283.96	4,212.17	462.03	-1,852.15	-489.13	0.00	0.00	0.00	
4,800.00	30.92	283.96	4,297.95	474.42	-1,902.01	-502.26	0.00	0.00	0.00	
4,900.00	30.92	283.96	4,383.74	486.82	-1,951.88	-515.38	0.00	0.00	0.00	
5,000.00	30.92	283.96	4,469.53	499.22	-2,001.75	-528.51	0.00	0.00	0.00	
5,100.00	30.92	283.96	4,555.32	511.61	-2,051.61	-541.63	0.00	0.00	0.00	
5,200.00	30.92	283.96	4,641.11	524.01	-2,101.48	-554.76	0.00	0.00	0.00	
5,300.00	30.92	283.96	4,726.90	536.41	-2,151.35	-567.89	0.00	0.00	0.00	
5,400.00	30.92	283.96	4,812.69	548.80	-2,201.21	-581.01	0.00	0.00	0.00	
5,500.00	30.92	283.96	4,898.47	561.20	-2,251.08	-594.14	0.00	0.00	0.00	
5,600.00	30.92	283.96	4,984.26	573.59	-2,300.94	-607.26	0.00	0.00	0.00	
5,700.00	30.92	283.96	5,070.05	585.99	-2,350.81	-620.39	0.00	0.00	0.00	
5,800.00	30.92	283.96	5,155.84	598.39	-2,400.68	-633.52	0.00	0.00	0.00	
5,900.00	30.92	283.96	5,241.63	610.78	-2,450.54	-646.64	0.00	0.00	0.00	
6,000.00	30.92	283.96	5,327.42	623.18	-2,500.41	-659.77	0.00	0.00	0.00	
6,093.73	30.92	283.96	5,407.83	634.80	-2,547.15	-672.07	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0112-01H
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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
KOP @ 6093.73ft :: DLS = 9°/100'										
6,100.00	30.77	282.90	5,413.21	635.54	-2,550.28	-672.86	9.00	-2.38	-16.93	
6,150.00	29.90	274.15	5,456.38	639.30	-2,575.19	-676.99	9.00	-1.73	-17.50	
6,200.00	29.64	265.09	5,499.81	639.15	-2,599.95	-677.19	9.00	-0.53	-18.11	
6,250.00	29.99	256.07	5,543.21	635.08	-2,624.41	-673.48	9.00	0.71	-18.06	
6,300.00	30.94	247.38	5,586.33	627.12	-2,648.42	-665.88	9.00	1.90	-17.36	
6,350.00	32.44	239.30	5,628.89	615.32	-2,671.83	-654.43	9.00	2.99	-16.18	
6,400.00	34.40	231.94	5,670.64	599.76	-2,694.49	-639.20	9.00	3.93	-14.71	
6,450.00	36.76	225.35	5,711.31	580.53	-2,716.27	-620.29	9.00	4.72	-13.18	
6,500.00	39.45	219.50	5,750.67	557.74	-2,737.03	-597.81	9.00	5.37	-11.71	
6,550.00	42.40	214.30	5,788.45	531.55	-2,756.64	-571.90	9.00	5.89	-10.39	
6,600.00	45.55	209.68	5,824.44	502.10	-2,774.98	-542.73	9.00	6.31	-9.25	
6,650.00	48.87	205.54	5,858.41	469.59	-2,791.94	-510.47	9.00	6.65	-8.28	
6,700.00	52.33	201.81	5,890.15	434.20	-2,807.42	-475.31	9.00	6.91	-7.46	
6,750.00	55.89	198.41	5,919.46	396.17	-2,821.32	-437.49	9.00	7.13	-6.79	
6,800.00	59.54	195.30	5,946.16	355.72	-2,833.55	-397.23	9.00	7.30	-6.23	
6,850.00	63.26	192.41	5,970.09	313.11	-2,844.04	-354.77	9.00	7.44	-5.78	
6,900.00	67.03	189.70	5,991.11	268.59	-2,852.72	-310.39	9.00	7.54	-5.41	
6,950.00	70.85	187.15	6,009.07	222.45	-2,859.54	-264.35	9.00	7.63	-5.11	
7,000.00	74.70	184.71	6,023.88	174.96	-2,864.46	-216.93	9.00	7.70	-4.88	
7,050.00	78.57	182.35	6,035.44	126.42	-2,867.44	-168.44	9.00	7.75	-4.70	
7,100.00	82.47	180.07	6,043.67	77.12	-2,868.48	-119.17	9.00	7.79	-4.58	
7,150.00	86.37	177.82	6,048.54	27.38	-2,867.56	-69.42	9.00	7.81	-4.50	
7,196.40	90.00	175.75	6,050.00	-18.91	-2,864.96	-23.09	9.00	7.82	-4.46	
End Build/TPZ @ 7196.40ft										
7,200.00	90.00	175.75	6,050.00	-22.50	-2,864.69	-19.50	0.00	0.00	0.00	
7,300.00	90.00	175.75	6,050.00	-122.23	-2,857.28	80.33	0.00	0.00	0.00	
7,346.40	90.00	175.75	6,050.00	-168.50	-2,853.84	126.64	0.00	0.00	0.00	
Begin Turn to BHL @ 7346.40ft										
7,400.00	90.00	176.82	6,050.00	-221.99	-2,850.37	180.17	2.00	0.00	2.00	
7,500.00	90.00	178.82	6,050.00	-321.91	-2,846.57	280.14	2.00	0.00	2.00	
7,524.74	90.00	179.32	6,050.00	-346.64	-2,846.16	304.88	2.00	0.00	2.00	
End Turn @ 7524.74ft										
7,600.00	90.00	179.32	6,050.00	-421.90	-2,845.27	380.14	0.00	0.00	0.00	
7,700.00	90.00	179.32	6,050.00	-521.89	-2,844.07	480.14	0.00	0.00	0.00	
7,800.00	90.00	179.32	6,050.00	-621.89	-2,842.88	580.14	0.00	0.00	0.00	
7,900.00	90.00	179.32	6,050.00	-721.88	-2,841.69	680.14	0.00	0.00	0.00	
8,000.00	90.00	179.32	6,050.00	-821.87	-2,840.50	780.14	0.00	0.00	0.00	
8,100.00	90.00	179.32	6,050.00	-921.86	-2,839.30	880.14	0.00	0.00	0.00	
8,200.00	90.00	179.32	6,050.00	-1,021.86	-2,838.11	980.14	0.00	0.00	0.00	
8,300.00	90.00	179.32	6,050.00	-1,121.85	-2,836.92	1,080.14	0.00	0.00	0.00	
8,400.00	90.00	179.32	6,050.00	-1,221.84	-2,835.73	1,180.14	0.00	0.00	0.00	
8,500.00	90.00	179.32	6,050.00	-1,321.84	-2,834.54	1,280.14	0.00	0.00	0.00	
8,600.00	90.00	179.32	6,050.00	-1,421.83	-2,833.34	1,380.14	0.00	0.00	0.00	
8,700.00	90.00	179.32	6,050.00	-1,521.82	-2,832.15	1,480.14	0.00	0.00	0.00	
8,800.00	90.00	179.32	6,050.00	-1,621.81	-2,830.96	1,580.14	0.00	0.00	0.00	
8,900.00	90.00	179.32	6,050.00	-1,721.81	-2,829.77	1,680.14	0.00	0.00	0.00	
9,000.00	90.00	179.32	6,050.00	-1,821.80	-2,828.57	1,780.14	0.00	0.00	0.00	
9,100.00	90.00	179.32	6,050.00	-1,921.79	-2,827.38	1,880.14	0.00	0.00	0.00	
9,200.00	90.00	179.32	6,050.00	-2,021.79	-2,826.19	1,980.14	0.00	0.00	0.00	
9,300.00	90.00	179.32	6,050.00	-2,121.78	-2,825.00	2,080.14	0.00	0.00	0.00	
9,400.00	90.00	179.32	6,050.00	-2,221.77	-2,823.80	2,180.14	0.00	0.00	0.00	
9,500.00	90.00	179.32	6,050.00	-2,321.76	-2,822.61	2,280.13	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0112-01H
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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
9,600.00	90.00	179.32	6,050.00	-2,421.76	-2,821.42	2,380.13	0.00	0.00	0.00	
9,700.00	90.00	179.32	6,050.00	-2,521.75	-2,820.23	2,480.13	0.00	0.00	0.00	
9,800.00	90.00	179.32	6,050.00	-2,621.74	-2,819.03	2,580.13	0.00	0.00	0.00	
9,900.00	90.00	179.32	6,050.00	-2,721.74	-2,817.84	2,680.13	0.00	0.00	0.00	
10,000.00	90.00	179.32	6,050.00	-2,821.73	-2,816.65	2,780.13	0.00	0.00	0.00	
10,100.00	90.00	179.32	6,050.00	-2,921.72	-2,815.46	2,880.13	0.00	0.00	0.00	
10,200.00	90.00	179.32	6,050.00	-3,021.71	-2,814.26	2,980.13	0.00	0.00	0.00	
10,300.00	90.00	179.32	6,050.00	-3,121.71	-2,813.07	3,080.13	0.00	0.00	0.00	
10,400.00	90.00	179.32	6,050.00	-3,221.70	-2,811.88	3,180.13	0.00	0.00	0.00	
10,500.00	90.00	179.32	6,050.00	-3,321.69	-2,810.69	3,280.13	0.00	0.00	0.00	
10,600.00	90.00	179.32	6,050.00	-3,421.69	-2,809.49	3,380.13	0.00	0.00	0.00	
10,700.00	90.00	179.32	6,050.00	-3,521.68	-2,808.30	3,480.13	0.00	0.00	0.00	
10,800.00	90.00	179.32	6,050.00	-3,621.67	-2,807.11	3,580.13	0.00	0.00	0.00	
10,900.00	90.00	179.32	6,050.00	-3,721.67	-2,805.92	3,680.13	0.00	0.00	0.00	
11,000.00	90.00	179.32	6,050.00	-3,821.66	-2,804.72	3,780.13	0.00	0.00	0.00	
11,100.00	90.00	179.32	6,050.00	-3,921.65	-2,803.53	3,880.13	0.00	0.00	0.00	
11,200.00	90.00	179.32	6,050.00	-4,021.64	-2,802.34	3,980.13	0.00	0.00	0.00	
11,300.00	90.00	179.32	6,050.00	-4,121.64	-2,801.15	4,080.13	0.00	0.00	0.00	
11,400.00	90.00	179.32	6,050.00	-4,221.63	-2,799.95	4,180.13	0.00	0.00	0.00	
11,500.00	90.00	179.32	6,050.00	-4,321.62	-2,798.76	4,280.13	0.00	0.00	0.00	
11,600.00	90.00	179.32	6,050.00	-4,421.62	-2,797.57	4,380.13	0.00	0.00	0.00	
11,700.00	90.00	179.32	6,050.00	-4,521.61	-2,796.38	4,480.13	0.00	0.00	0.00	
11,800.00	90.00	179.32	6,050.00	-4,621.60	-2,795.18	4,580.13	0.00	0.00	0.00	
11,900.00	90.00	179.32	6,050.00	-4,721.59	-2,793.99	4,680.13	0.00	0.00	0.00	
12,000.00	90.00	179.32	6,050.00	-4,821.59	-2,792.80	4,780.13	0.00	0.00	0.00	
12,100.00	90.00	179.32	6,050.00	-4,921.58	-2,791.61	4,880.13	0.00	0.00	0.00	
12,200.00	90.00	179.32	6,050.00	-5,021.57	-2,790.41	4,980.12	0.00	0.00	0.00	
12,300.00	90.00	179.32	6,050.00	-5,121.57	-2,789.22	5,080.12	0.00	0.00	0.00	
12,400.00	90.00	179.32	6,050.00	-5,221.56	-2,788.03	5,180.12	0.00	0.00	0.00	
12,500.00	90.00	179.32	6,050.00	-5,321.55	-2,786.84	5,280.12	0.00	0.00	0.00	
12,600.00	90.00	179.32	6,050.00	-5,421.54	-2,785.64	5,380.12	0.00	0.00	0.00	
12,603.97	90.00	179.32	6,050.00	-5,425.51	-2,785.60	5,384.09	0.00	0.00	0.00	
BPZ @ 12603.97ft										
12,693.97	90.00	179.32	6,050.00	-5,515.50	-2,784.52	5,474.09	0.00	0.00	0.00	
TD Well @ 12693.97ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,791.62	1,715.00	9 5/8"		9-5/8	13-1/2

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0112-01H
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 0112-01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Design #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,733.00	1,663.59	99.26	-377.22	Tie-onto Sfc Svys & Hold @ 1733.00ft
1,836.00	1,753.93	108.94	-425.74	Begin Nudge to KOP @ 1836.00ft
1,965.01	1,865.86	123.00	-488.30	Hold Tangent @ 1965.01ft
6,093.73	5,407.83	634.80	-2,547.15	KOP @ 6093.73ft :: DLS = 9°/100'
7,196.40	6,050.00	-18.91	-2,864.96	End Build/TPZ @ 7196.40ft
7,346.40	6,050.00	-168.50	-2,853.84	Begin Turn to BHL @ 7346.40ft
7,524.74	6,050.00	-346.64	-2,846.16	End Turn @ 7524.74ft
12,603.97	6,050.00	-5,425.51	-2,785.60	BPZ @ 12603.97ft
12,693.97	6,050.00	-5,515.50	-2,784.52	TD Well @ 12693.97ft