

VERDAD RESOURCES

WATTENBERG FIELD

9N-58W-19 TIMBRO FED 1931 PAD

TIMBRO FED 1931 08H

Wellbore #1

Plan: Design #3

Standard Planning Report

11 November, 2019

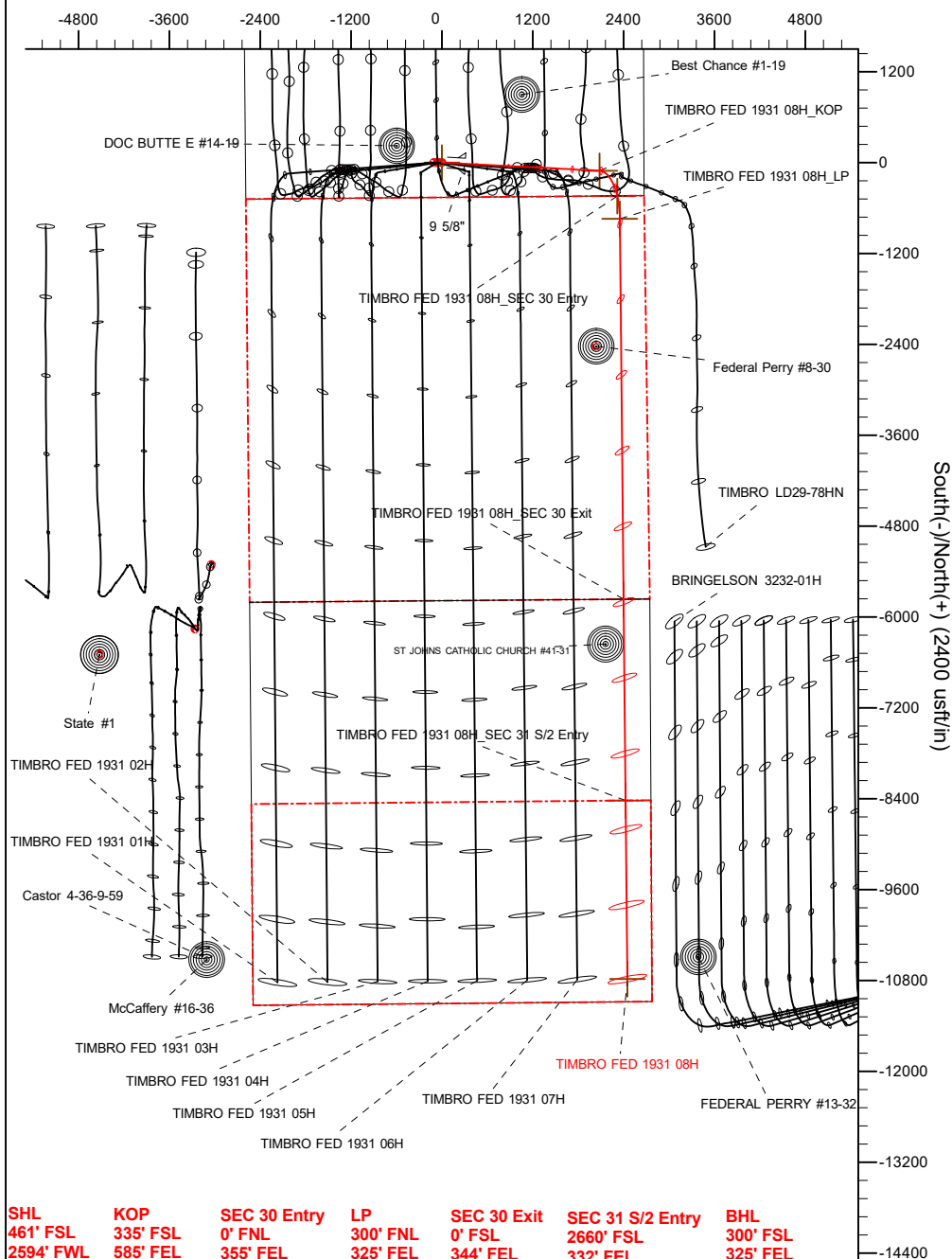
Project: WATTENBERG FIELD
Site: 9N-58W-19 TIMBRO FED 1931 PAD
Well: TIMBRO FED 1931 08H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1500.00	1548.49	9 5/8"	9-5/8

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

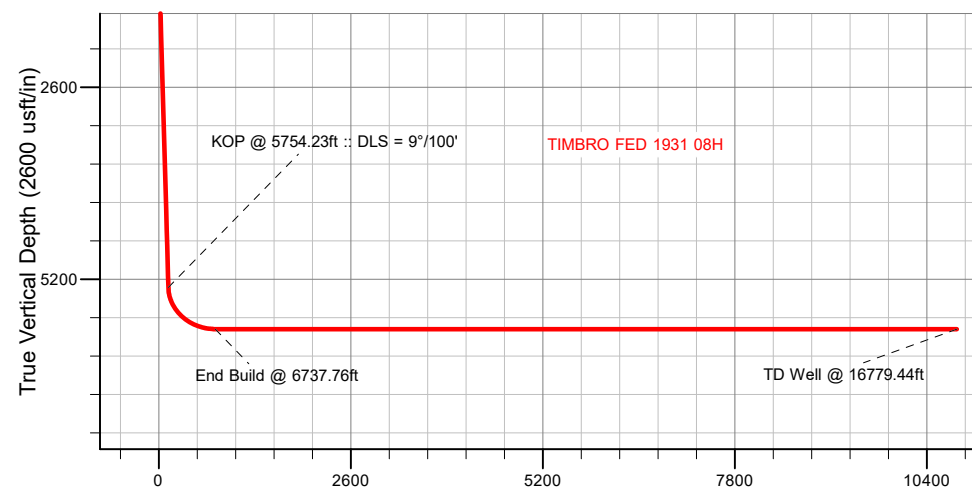


SECTION DETAILS

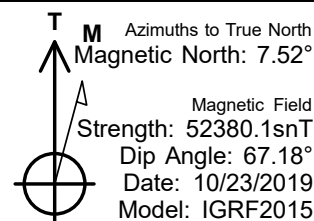
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSection	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1448.50	24.97	92.95	1409.35	-13.78	267.42	2.00	92.95	16.39	
4	5754.23	24.97	92.95	5312.62	-107.32	2082.65	0.00	0.00	127.67	
5	6737.76	90.00	179.44	5875.00	-741.14	2350.27	9.00	86.82	764.07	
6	16779.44	90.00	179.44	5875.00	-10782.33	2448.83	0.00	0.00	10805.75	TIMBRO FED 1931 08H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	MD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO FED 1931 08H_SHL	0.00		0.00	0.00	40.730445	-103.907244
TIMBRO FED 1931 08H_KOP	5312.62	5754.23	-107.32	2082.65	40.730151	-103.899729
TIMBRO FED 1931 08H_SEC 30 Entry	5806.59	6424.70	-440.86	2315.53	40.729235	-103.898889
TIMBRO FED 1931 08H_SEC 30 Exit	5875.00	11762.00	-5765.13	2399.59	40.714621	-103.898588
TIMBRO FED 1931 08H_SEC 31 S/2 Entry	5875.00	14420.60	-8423.60	2425.68	40.707324	-103.898495
TIMBRO FED 1931 08H_BHL	5875.00		-10782.33	2448.83	40.700850	-103.898412



Vertical Section at 179.44° (2600 usft/in)



WELL DETAILS: TIMBRO FED 1931 08H

GL = 4824'

RKB = 16' @ 4840.00usft (RIG)

Design #3 (TIMBRO FED 1931 08H/Wellbore #1)

SherryEnergy.com

Date: 11/11/2019

SHL	KOP	SEC 30 Entry	LP	SEC 30 Exit	SEC 31 S/2 Entry	BHL
461' FSL	335' FSL	0' FNL	300' FNL	0' FSL	2660' FSL	300' FSL
2594' FWL	585' FEL	355' FEL	325' FEL	344' FEL	332' FEL	325' FEL

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4840.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4840.00usft (RIG)
Site:	9N-58W-19 TIMBRO FED 1931 PAD	North Reference:	True
Well:	TIMBRO FED 1931 08H	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-58W-19 TIMBRO FED 1931 PAD			
Site Position:		Northing:	1,512,905.79 usft	Latitude:	40.730442
From:	Lat/Long	Easting:	3,441,248.06 usft	Longitude:	-103.907839
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.03 °

Well	TIMBRO FED 1931 08H					
Well Position	+N/-S	1.27 usft	Northing:	1,512,910.03 usft	Latitude:	40.730445
	+E/-W	164.99 usft	Easting:	3,441,413.00 usft	Longitude:	-103.907244
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,824.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/23/2019	7.52	67.18	52,380.13416083

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	179.44

Plan Survey Tool Program	Date	11/11/2019			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,700.00	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	
2	1,700.00	16,779.44	Design #3 (Wellbore #1)	ISCWSA REV 2 MWD	
				Fixed:v2:standard declination	

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	
1,448.50	24.97	92.95	1,409.35	-13.78	267.42	2.00	2.00	0.00	92.95	
5,754.23	24.97	92.95	5,312.62	-107.32	2,082.65	0.00	0.00	0.00	0.00	
6,737.76	90.00	179.44	5,875.00	-741.14	2,350.27	9.00	6.61	8.79	86.82	
16,779.44	90.00	179.44	5,875.00	-10,782.33	2,448.83	0.00	0.00	0.00	0.00	TIMBRO FED 1931 08H

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4840.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4840.00usft (RIG)
Site:	9N-58W-19 TIMBRO FED 1931 PAD	North Reference:	True
Well:	TIMBRO FED 1931 08H	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
Begin Nudge @ 200.00ft									
300.00	2.00	92.95	299.98	-0.09	1.74	0.11	2.00	2.00	0.00
400.00	4.00	92.95	399.84	-0.36	6.97	0.43	2.00	2.00	0.00
500.00	6.00	92.95	499.45	-0.81	15.67	0.96	2.00	2.00	0.00
600.00	8.00	92.95	598.70	-1.43	27.84	1.71	2.00	2.00	0.00
700.00	10.00	92.95	697.47	-2.24	43.46	2.66	2.00	2.00	0.00
800.00	12.00	92.95	795.62	-3.22	62.52	3.83	2.00	2.00	0.00
900.00	14.00	92.95	893.06	-4.38	84.98	5.21	2.00	2.00	0.00
1,000.00	16.00	92.95	989.64	-5.71	110.83	6.79	2.00	2.00	0.00
1,100.00	18.00	92.95	1,085.27	-7.22	140.03	8.58	2.00	2.00	0.00
1,200.00	20.00	92.95	1,179.82	-8.89	172.54	10.58	2.00	2.00	0.00
1,300.00	22.00	92.95	1,273.17	-10.74	208.33	12.77	2.00	2.00	0.00
1,400.00	24.00	92.95	1,365.21	-12.75	247.35	15.16	2.00	2.00	0.00
1,448.50	24.97	92.95	1,409.35	-13.78	267.42	16.39	2.00	2.00	0.00
Hold Tangent @ 1448.50ft									
1,500.00	24.97	92.95	1,456.04	-14.90	289.13	17.72	0.00	0.00	0.00
1,548.49	24.97	92.95	1,500.00	-15.95	309.58	18.98	0.00	0.00	0.00
9 5/8"									
1,600.00	24.97	92.95	1,546.69	-17.07	331.29	20.31	0.00	0.00	0.00
1,700.00	24.97	92.95	1,637.34	-19.24	373.45	22.89	0.00	0.00	0.00
1,800.00	24.97	92.95	1,728.00	-21.42	415.61	25.48	0.00	0.00	0.00
1,900.00	24.97	92.95	1,818.65	-23.59	457.77	28.06	0.00	0.00	0.00
2,000.00	24.97	92.95	1,909.30	-25.76	499.92	30.65	0.00	0.00	0.00
2,100.00	24.97	92.95	1,999.96	-27.93	542.08	33.23	0.00	0.00	0.00
2,200.00	24.97	92.95	2,090.61	-30.11	584.24	35.82	0.00	0.00	0.00
2,300.00	24.97	92.95	2,181.26	-32.28	626.40	38.40	0.00	0.00	0.00
2,400.00	24.97	92.95	2,271.91	-34.45	668.56	40.99	0.00	0.00	0.00
2,500.00	24.97	92.95	2,362.57	-36.63	710.72	43.57	0.00	0.00	0.00
2,600.00	24.97	92.95	2,453.22	-38.80	752.87	46.15	0.00	0.00	0.00
2,700.00	24.97	92.95	2,543.87	-40.97	795.03	48.74	0.00	0.00	0.00
2,800.00	24.97	92.95	2,634.53	-43.14	837.19	51.32	0.00	0.00	0.00
2,900.00	24.97	92.95	2,725.18	-45.32	879.35	53.91	0.00	0.00	0.00
3,000.00	24.97	92.95	2,815.83	-47.49	921.51	56.49	0.00	0.00	0.00
3,100.00	24.97	92.95	2,906.49	-49.66	963.67	59.08	0.00	0.00	0.00
3,200.00	24.97	92.95	2,997.14	-51.83	1,005.82	61.66	0.00	0.00	0.00
3,300.00	24.97	92.95	3,087.79	-54.01	1,047.98	64.25	0.00	0.00	0.00
3,400.00	24.97	92.95	3,178.44	-56.18	1,090.14	66.83	0.00	0.00	0.00
3,500.00	24.97	92.95	3,269.10	-58.35	1,132.30	69.41	0.00	0.00	0.00
3,600.00	24.97	92.95	3,359.75	-60.52	1,174.46	72.00	0.00	0.00	0.00
3,700.00	24.97	92.95	3,450.40	-62.70	1,216.62	74.58	0.00	0.00	0.00
3,800.00	24.97	92.95	3,541.06	-64.87	1,258.78	77.17	0.00	0.00	0.00
3,900.00	24.97	92.95	3,631.71	-67.04	1,300.93	79.75	0.00	0.00	0.00
4,000.00	24.97	92.95	3,722.36	-69.21	1,343.09	82.34	0.00	0.00	0.00
4,100.00	24.97	92.95	3,813.01	-71.39	1,385.25	84.92	0.00	0.00	0.00
4,200.00	24.97	92.95	3,903.67	-73.56	1,427.41	87.51	0.00	0.00	0.00
4,300.00	24.97	92.95	3,994.32	-75.73	1,469.57	90.09	0.00	0.00	0.00
4,400.00	24.97	92.95	4,084.97	-77.90	1,511.73	92.67	0.00	0.00	0.00
4,500.00	24.97	92.95	4,175.63	-80.08	1,553.88	95.26	0.00	0.00	0.00
4,600.00	24.97	92.95	4,266.28	-82.25	1,596.04	97.84	0.00	0.00	0.00
4,700.00	24.97	92.95	4,356.93	-84.42	1,638.20	100.43	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4840.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4840.00usft (RIG)
Site:	9N-58W-19 TIMBRO FED 1931 PAD	North Reference:	True
Well:	TIMBRO FED 1931 08H	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)	
4,800.00	24.97	92.95	4,447.58	-86.59	1,680.36	103.01	0.00	0.00	0.00	
4,900.00	24.97	92.95	4,538.24	-88.77	1,722.52	105.60	0.00	0.00	0.00	
5,000.00	24.97	92.95	4,628.89	-90.94	1,764.68	108.18	0.00	0.00	0.00	
5,100.00	24.97	92.95	4,719.54	-93.11	1,806.83	110.77	0.00	0.00	0.00	
5,200.00	24.97	92.95	4,810.20	-95.28	1,848.99	113.35	0.00	0.00	0.00	
5,300.00	24.97	92.95	4,900.85	-97.46	1,891.15	115.94	0.00	0.00	0.00	
5,400.00	24.97	92.95	4,991.50	-99.63	1,933.31	118.52	0.00	0.00	0.00	
5,500.00	24.97	92.95	5,082.15	-101.80	1,975.47	121.10	0.00	0.00	0.00	
5,600.00	24.97	92.95	5,172.81	-103.97	2,017.63	123.69	0.00	0.00	0.00	
5,700.00	24.97	92.95	5,263.46	-106.15	2,059.79	126.27	0.00	0.00	0.00	
5,754.23	24.97	92.95	5,312.62	-107.32	2,082.65	127.67	0.00	0.00	0.00	
KOP @ 5754.23ft :: DLS = 9°/100'										
5,800.00	25.51	102.54	5,354.04	-109.96	2,101.93	130.50	9.00	1.18	20.94	
5,900.00	28.65	121.16	5,443.22	-127.08	2,143.55	148.02	9.00	3.14	18.62	
6,000.00	33.80	135.47	5,528.83	-159.37	2,183.66	180.71	9.00	5.15	14.31	
6,100.00	40.19	146.05	5,608.74	-206.06	2,221.26	227.76	9.00	6.39	10.58	
6,200.00	47.30	154.04	5,680.99	-265.99	2,255.43	288.02	9.00	7.12	7.99	
6,300.00	54.86	160.34	5,743.80	-337.68	2,285.33	360.00	9.00	7.56	6.30	
6,400.00	62.69	165.55	5,795.63	-419.37	2,310.22	441.93	9.00	7.83	5.21	
6,500.00	70.68	170.06	5,835.20	-509.05	2,329.50	531.80	9.00	7.99	4.51	
6,600.00	78.77	174.14	5,861.53	-604.51	2,342.67	627.38	9.00	8.09	4.08	
6,700.00	86.92	178.00	5,873.98	-703.40	2,349.43	726.33	9.00	8.15	3.86	
6,737.76	90.00	179.44	5,875.00	-741.14	2,350.27	764.07	9.00	8.16	3.80	
End Build @ 6737.76ft										
6,800.00	90.00	179.44	5,875.00	-803.37	2,350.88	826.31	0.00	0.00	0.00	
6,900.00	90.00	179.44	5,875.00	-903.36	2,351.86	926.31	0.00	0.00	0.00	
7,000.00	90.00	179.44	5,875.00	-1,003.36	2,352.85	1,026.31	0.00	0.00	0.00	
7,100.00	90.00	179.44	5,875.00	-1,103.35	2,353.83	1,126.31	0.00	0.00	0.00	
7,200.00	90.00	179.44	5,875.00	-1,203.35	2,354.81	1,226.31	0.00	0.00	0.00	
7,300.00	90.00	179.44	5,875.00	-1,303.34	2,355.79	1,326.31	0.00	0.00	0.00	
7,400.00	90.00	179.44	5,875.00	-1,403.34	2,356.77	1,426.31	0.00	0.00	0.00	
7,500.00	90.00	179.44	5,875.00	-1,503.33	2,357.75	1,526.31	0.00	0.00	0.00	
7,600.00	90.00	179.44	5,875.00	-1,603.33	2,358.73	1,626.31	0.00	0.00	0.00	
7,700.00	90.00	179.44	5,875.00	-1,703.33	2,359.72	1,726.31	0.00	0.00	0.00	
7,800.00	90.00	179.44	5,875.00	-1,803.32	2,360.70	1,826.31	0.00	0.00	0.00	
7,900.00	90.00	179.44	5,875.00	-1,903.32	2,361.68	1,926.31	0.00	0.00	0.00	
8,000.00	90.00	179.44	5,875.00	-2,003.31	2,362.66	2,026.31	0.00	0.00	0.00	
8,100.00	90.00	179.44	5,875.00	-2,103.31	2,363.64	2,126.31	0.00	0.00	0.00	
8,200.00	90.00	179.44	5,875.00	-2,203.30	2,364.62	2,226.31	0.00	0.00	0.00	
8,300.00	90.00	179.44	5,875.00	-2,303.30	2,365.61	2,326.31	0.00	0.00	0.00	
8,400.00	90.00	179.44	5,875.00	-2,403.29	2,366.59	2,426.31	0.00	0.00	0.00	
8,500.00	90.00	179.44	5,875.00	-2,503.29	2,367.57	2,526.31	0.00	0.00	0.00	
8,600.00	90.00	179.44	5,875.00	-2,603.28	2,368.55	2,626.31	0.00	0.00	0.00	
8,700.00	90.00	179.44	5,875.00	-2,703.28	2,369.53	2,726.31	0.00	0.00	0.00	
8,800.00	90.00	179.44	5,875.00	-2,803.27	2,370.51	2,826.31	0.00	0.00	0.00	
8,900.00	90.00	179.44	5,875.00	-2,903.27	2,371.49	2,926.31	0.00	0.00	0.00	
9,000.00	90.00	179.44	5,875.00	-3,003.26	2,372.48	3,026.31	0.00	0.00	0.00	
9,100.00	90.00	179.44	5,875.00	-3,103.26	2,373.46	3,126.31	0.00	0.00	0.00	
9,200.00	90.00	179.44	5,875.00	-3,203.25	2,374.44	3,226.31	0.00	0.00	0.00	
9,300.00	90.00	179.44	5,875.00	-3,303.25	2,375.42	3,326.31	0.00	0.00	0.00	
9,400.00	90.00	179.44	5,875.00	-3,403.24	2,376.40	3,426.31	0.00	0.00	0.00	
9,500.00	90.00	179.44	5,875.00	-3,503.24	2,377.38	3,526.31	0.00	0.00	0.00	
9,600.00	90.00	179.44	5,875.00	-3,603.23	2,378.37	3,626.31	0.00	0.00	0.00	
9,700.00	90.00	179.44	5,875.00	-3,703.23	2,379.35	3,726.31	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4840.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4840.00usft (RIG)
Site:	9N-58W-19 TIMBRO FED 1931 PAD	North Reference:	True
Well:	TIMBRO FED 1931 08H	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)	
9,800.00	90.00	179.44	5,875.00	-3,803.22	2,380.33	3,826.31	0.00	0.00	0.00	
9,900.00	90.00	179.44	5,875.00	-3,903.22	2,381.31	3,926.31	0.00	0.00	0.00	
10,000.00	90.00	179.44	5,875.00	-4,003.21	2,382.29	4,026.31	0.00	0.00	0.00	
10,100.00	90.00	179.44	5,875.00	-4,103.21	2,383.27	4,126.31	0.00	0.00	0.00	
10,200.00	90.00	179.44	5,875.00	-4,203.20	2,384.25	4,226.31	0.00	0.00	0.00	
10,300.00	90.00	179.44	5,875.00	-4,303.20	2,385.24	4,326.31	0.00	0.00	0.00	
10,400.00	90.00	179.44	5,875.00	-4,403.20	2,386.22	4,426.31	0.00	0.00	0.00	
10,500.00	90.00	179.44	5,875.00	-4,503.19	2,387.20	4,526.31	0.00	0.00	0.00	
10,600.00	90.00	179.44	5,875.00	-4,603.19	2,388.18	4,626.31	0.00	0.00	0.00	
10,700.00	90.00	179.44	5,875.00	-4,703.18	2,389.16	4,726.31	0.00	0.00	0.00	
10,800.00	90.00	179.44	5,875.00	-4,803.18	2,390.14	4,826.31	0.00	0.00	0.00	
10,900.00	90.00	179.44	5,875.00	-4,903.17	2,391.12	4,926.31	0.00	0.00	0.00	
11,000.00	90.00	179.44	5,875.00	-5,003.17	2,392.11	5,026.31	0.00	0.00	0.00	
11,100.00	90.00	179.44	5,875.00	-5,103.16	2,393.09	5,126.31	0.00	0.00	0.00	
11,200.00	90.00	179.44	5,875.00	-5,203.16	2,394.07	5,226.31	0.00	0.00	0.00	
11,300.00	90.00	179.44	5,875.00	-5,303.15	2,395.05	5,326.31	0.00	0.00	0.00	
11,400.00	90.00	179.44	5,875.00	-5,403.15	2,396.03	5,426.31	0.00	0.00	0.00	
11,500.00	90.00	179.44	5,875.00	-5,503.14	2,397.01	5,526.31	0.00	0.00	0.00	
11,600.00	90.00	179.44	5,875.00	-5,603.14	2,398.00	5,626.31	0.00	0.00	0.00	
11,700.00	90.00	179.44	5,875.00	-5,703.13	2,398.98	5,726.31	0.00	0.00	0.00	
11,800.00	90.00	179.44	5,875.00	-5,803.13	2,399.96	5,826.31	0.00	0.00	0.00	
11,900.00	90.00	179.44	5,875.00	-5,903.12	2,400.94	5,926.31	0.00	0.00	0.00	
12,000.00	90.00	179.44	5,875.00	-6,003.12	2,401.92	6,026.31	0.00	0.00	0.00	
12,100.00	90.00	179.44	5,875.00	-6,103.11	2,402.90	6,126.31	0.00	0.00	0.00	
12,200.00	90.00	179.44	5,875.00	-6,203.11	2,403.88	6,226.31	0.00	0.00	0.00	
12,300.00	90.00	179.44	5,875.00	-6,303.10	2,404.87	6,326.31	0.00	0.00	0.00	
12,400.00	90.00	179.44	5,875.00	-6,403.10	2,405.85	6,426.31	0.00	0.00	0.00	
12,500.00	90.00	179.44	5,875.00	-6,503.09	2,406.83	6,526.31	0.00	0.00	0.00	
12,600.00	90.00	179.44	5,875.00	-6,603.09	2,407.81	6,626.31	0.00	0.00	0.00	
12,700.00	90.00	179.44	5,875.00	-6,703.08	2,408.79	6,726.31	0.00	0.00	0.00	
12,800.00	90.00	179.44	5,875.00	-6,803.08	2,409.77	6,826.31	0.00	0.00	0.00	
12,900.00	90.00	179.44	5,875.00	-6,903.07	2,410.75	6,926.31	0.00	0.00	0.00	
13,000.00	90.00	179.44	5,875.00	-7,003.07	2,411.74	7,026.31	0.00	0.00	0.00	
13,100.00	90.00	179.44	5,875.00	-7,103.07	2,412.72	7,126.31	0.00	0.00	0.00	
13,200.00	90.00	179.44	5,875.00	-7,203.06	2,413.70	7,226.31	0.00	0.00	0.00	
13,300.00	90.00	179.44	5,875.00	-7,303.06	2,414.68	7,326.31	0.00	0.00	0.00	
13,400.00	90.00	179.44	5,875.00	-7,403.05	2,415.66	7,426.31	0.00	0.00	0.00	
13,500.00	90.00	179.44	5,875.00	-7,503.05	2,416.64	7,526.31	0.00	0.00	0.00	
13,600.00	90.00	179.44	5,875.00	-7,603.04	2,417.63	7,626.31	0.00	0.00	0.00	
13,700.00	90.00	179.44	5,875.00	-7,703.04	2,418.61	7,726.31	0.00	0.00	0.00	
13,800.00	90.00	179.44	5,875.00	-7,803.03	2,419.59	7,826.31	0.00	0.00	0.00	
13,900.00	90.00	179.44	5,875.00	-7,903.03	2,420.57	7,926.31	0.00	0.00	0.00	
14,000.00	90.00	179.44	5,875.00	-8,003.02	2,421.55	8,026.31	0.00	0.00	0.00	
14,100.00	90.00	179.44	5,875.00	-8,103.02	2,422.53	8,126.31	0.00	0.00	0.00	
14,200.00	90.00	179.44	5,875.00	-8,203.01	2,423.51	8,226.31	0.00	0.00	0.00	
14,300.00	90.00	179.44	5,875.00	-8,303.01	2,424.50	8,326.31	0.00	0.00	0.00	
14,400.00	90.00	179.44	5,875.00	-8,403.00	2,425.48	8,426.31	0.00	0.00	0.00	
14,500.00	90.00	179.44	5,875.00	-8,503.00	2,426.46	8,526.31	0.00	0.00	0.00	
14,600.00	90.00	179.44	5,875.00	-8,602.99	2,427.44	8,626.31	0.00	0.00	0.00	
14,700.00	90.00	179.44	5,875.00	-8,702.99	2,428.42	8,726.31	0.00	0.00	0.00	
14,800.00	90.00	179.44	5,875.00	-8,802.98	2,429.40	8,826.31	0.00	0.00	0.00	
14,900.00	90.00	179.44	5,875.00	-8,902.98	2,430.38	8,926.31	0.00	0.00	0.00	
15,000.00	90.00	179.44	5,875.00	-9,002.97	2,431.37	9,026.31	0.00	0.00	0.00	
15,100.00	90.00	179.44	5,875.00	-9,102.97	2,432.35	9,126.31	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 08H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4840.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4840.00usft (RIG)
Site:	9N-58W-19 TIMBRO FED 1931 PAD	North Reference:	True
Well:	TIMBRO FED 1931 08H	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)
15,200.00	90.00	179.44	5,875.00	-9,202.96	2,433.33	9,226.31	0.00	0.00	0.00
15,300.00	90.00	179.44	5,875.00	-9,302.96	2,434.31	9,326.31	0.00	0.00	0.00
15,400.00	90.00	179.44	5,875.00	-9,402.95	2,435.29	9,426.31	0.00	0.00	0.00
15,500.00	90.00	179.44	5,875.00	-9,502.95	2,436.27	9,526.31	0.00	0.00	0.00
15,600.00	90.00	179.44	5,875.00	-9,602.94	2,437.26	9,626.31	0.00	0.00	0.00
15,700.00	90.00	179.44	5,875.00	-9,702.94	2,438.24	9,726.31	0.00	0.00	0.00
15,800.00	90.00	179.44	5,875.00	-9,802.94	2,439.22	9,826.31	0.00	0.00	0.00
15,900.00	90.00	179.44	5,875.00	-9,902.93	2,440.20	9,926.31	0.00	0.00	0.00
16,000.00	90.00	179.44	5,875.00	-10,002.93	2,441.18	10,026.31	0.00	0.00	0.00
16,100.00	90.00	179.44	5,875.00	-10,102.92	2,442.16	10,126.31	0.00	0.00	0.00
16,200.00	90.00	179.44	5,875.00	-10,202.92	2,443.14	10,226.31	0.00	0.00	0.00
16,300.00	90.00	179.44	5,875.00	-10,302.91	2,444.13	10,326.31	0.00	0.00	0.00
16,400.00	90.00	179.44	5,875.00	-10,402.91	2,445.11	10,426.31	0.00	0.00	0.00
16,500.00	90.00	179.44	5,875.00	-10,502.90	2,446.09	10,526.31	0.00	0.00	0.00
16,600.00	90.00	179.44	5,875.00	-10,602.90	2,447.07	10,626.31	0.00	0.00	0.00
16,700.00	90.00	179.44	5,875.00	-10,702.89	2,448.05	10,726.31	0.00	0.00	0.00
16,779.44	90.00	179.44	5,875.00	-10,782.33	2,448.83	10,805.75	0.00	0.00	0.00
TD Well @ 16779.44ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,548.49	1,500.00	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)	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft
1,448.50	1,409.35	-13.78	267.42	Hold Tangent @ 1448.50ft
5,754.23	5,312.62	-107.32	2,082.65	KOP @ 5754.23ft :: DLS = 9°/100'
6,737.76	5,875.00	-741.14	2,350.27	End Build @ 6737.76ft
16,779.44	5,875.00	-10,782.33	2,448.83	TD Well @ 16779.44ft