

VERDAD RESOURCES

WATTENBERG FIELD

9N-58W-19 TIMBRO FED 1931 PAD

TIMBRO FED 1931 03H

Wellbore #1

Plan: Design #3

Standard Planning Report

11 November, 2019

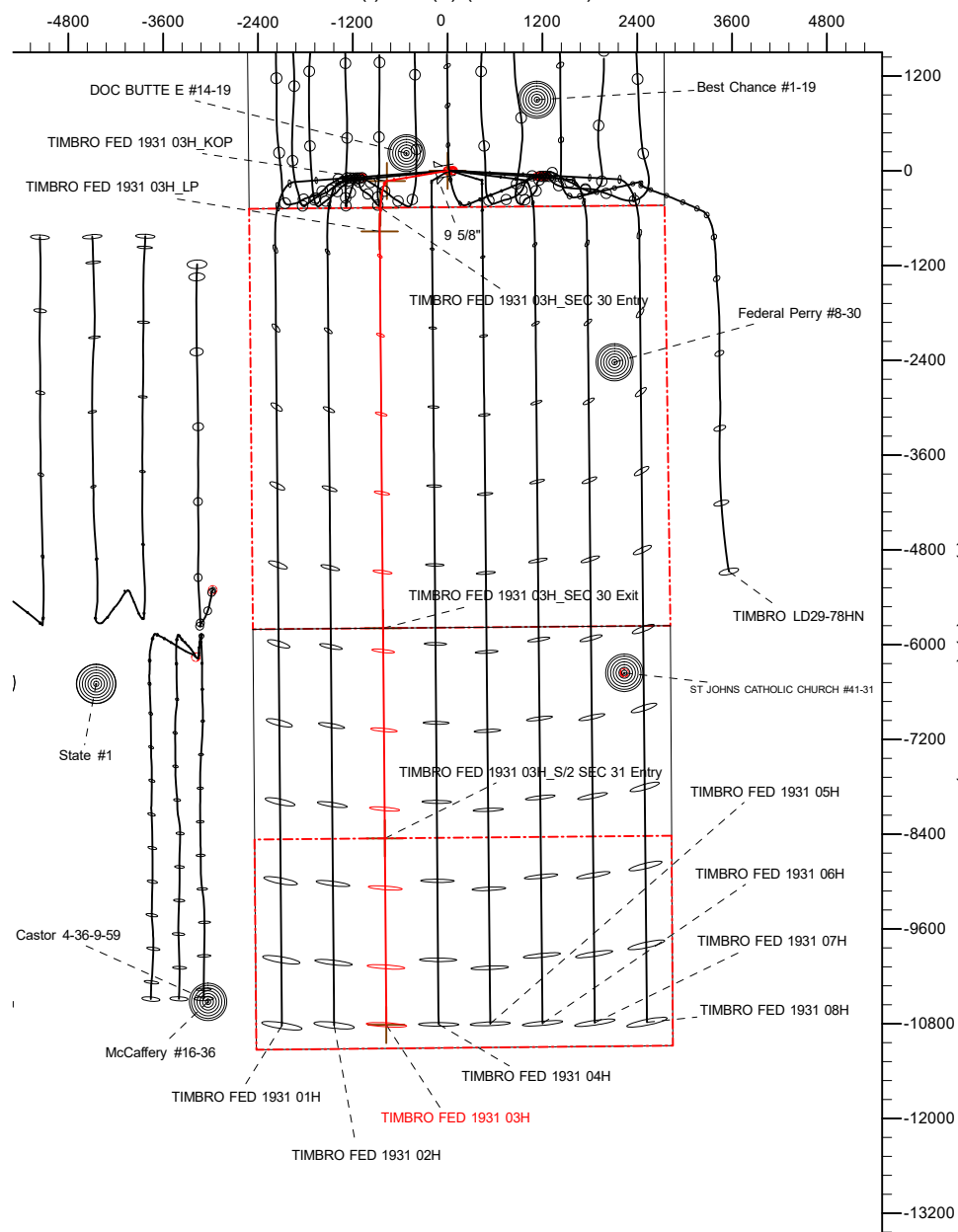
Project: WATTENBERG FIELD
Site: 9N-58W-19 TIMBRO FED 1931 PAD
Well: TIMBRO FED 1931 03H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1500.00	1511.26	9 5/8"	9-5/8

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



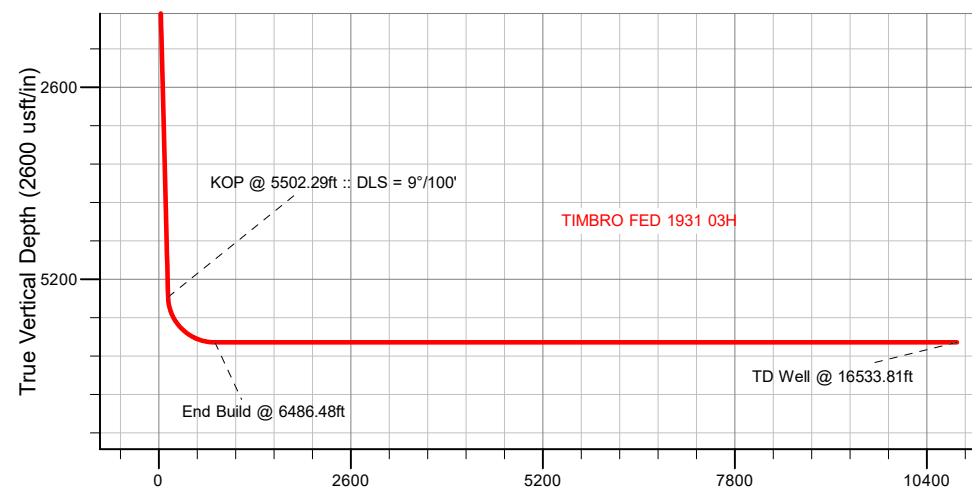
SHL 461' FSL 2519' FWL	KOP 335' FSL 1750' FWL	SEC 30 Entry 0' FNL 1663' FWL	LP 300' FNL 1651' FWL	SEC 30 Exit 0' FSL 1648' FWL	SEC 31 S/2 Entry 2660' FSL 1649' FWL	BHL 300' FSL 1648' FWL
------------------------------	------------------------------	-------------------------------------	-----------------------------	------------------------------------	--	------------------------------

SECTION DETAILS

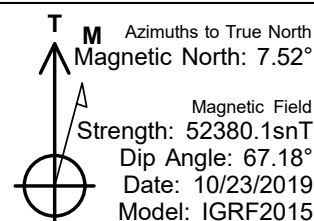
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	751.00	9.02	260.40	749.14	-5.91	-34.93	2.00	260.40	5.61	
4	5502.29	9.02	260.40	5441.67	-130.13	-769.40	0.00	0.00	123.55	
5	6486.48	90.00	179.51	6055.00	-767.35	-860.11	9.00	-81.00	759.97	
6	16533.81	90.00	179.51	6055.00	-10814.32	-774.48	0.00	0.00	10807.30	TIMBRO FED 1931 03H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	MD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO FED 1931 03H_SHL	0.00		0.00	0.00	40.730444	-103.907515
TIMBRO FED 1931 03H_KOP	5441.67	5502.29	-130.13	-769.40	40.730087	-103.910291
TIMBRO FED 1931 03H_SEC 30 Entry	5981.21	6175.00	-468.06	-851.09	40.729159	-103.910585
TIMBRO FED 1931 03H_SEC 30 Exit	6055.00	11511.34	-5792.03	-817.29	40.714546	-103.910463
TIMBRO FED 1931 03H_S/2 SEC 31 Entry	6055.00	14172.50	-8453.09	-794.61	40.707242	-103.910381
TIMBRO FED 1931 03H_BHL	6055.00		-10814.32	-774.48	40.700761	-103.910308



Vertical Section at 179.51° (2600 usft/in)



WELL DETAILS: TIMBRO FED 1931 03H

GL = 4824'

RKB = 16' @ 4840.00usft (RIG)

Design #3 (TIMBRO FED 1931 03H/Wellbore #1)

SherryEnergy.com

Date: 11/11/2019

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 03H
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 03H	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 03H			
Well Position	+N/-S	0.68 usft	Northing:	1,512,908.09 usft
	+E/-W	89.99 usft	Easting:	3,441,338.02 usft
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	52,380.10696643

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	179.51

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	16,533.81	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
751.00	9.02	260.40	749.14	-5.91	-34.93	2.00	2.00	0.00	260.40	
5,502.29	9.02	260.40	5,441.67	-130.13	-769.40	0.00	0.00	0.00	0.00	
6,486.48	90.00	179.51	6,055.00	-767.35	-860.11	9.00	8.23	-8.22	-81.00	
16,533.81	90.00	179.51	6,055.00	-10,814.32	-774.48	0.00	0.00	0.00	0.00	TIMBRO FED 1931 03H

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO FED 1931 03H
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 03H	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
Begin Nudge @ 300.00ft									
400.00	2.00	260.40	399.98	-0.29	-1.72	0.28	2.00	2.00	0.00
500.00	4.00	260.40	499.84	-1.16	-6.88	1.10	2.00	2.00	0.00
600.00	6.00	260.40	599.45	-2.62	-15.47	2.48	2.00	2.00	0.00
700.00	8.00	260.40	698.70	-4.65	-27.49	4.41	2.00	2.00	0.00
751.00	9.02	260.40	749.14	-5.91	-34.93	5.61	2.00	2.00	0.00
Hold Tangent @ 751.00ft									
800.00	9.02	260.40	797.53	-7.19	-42.51	6.83	0.00	0.00	0.00
900.00	9.02	260.40	896.30	-9.80	-57.96	9.31	0.00	0.00	0.00
1,000.00	9.02	260.40	995.06	-12.42	-73.42	11.79	0.00	0.00	0.00
1,100.00	9.02	260.40	1,093.82	-15.03	-88.88	14.27	0.00	0.00	0.00
1,200.00	9.02	260.40	1,192.59	-17.65	-104.34	16.75	0.00	0.00	0.00
1,300.00	9.02	260.40	1,291.35	-20.26	-119.80	19.24	0.00	0.00	0.00
1,400.00	9.02	260.40	1,390.11	-22.88	-135.26	21.72	0.00	0.00	0.00
1,500.00	9.02	260.40	1,488.88	-25.49	-150.71	24.20	0.00	0.00	0.00
1,511.26	9.02	260.40	1,500.00	-25.79	-152.45	24.48	0.00	0.00	0.00
9 5/8"									
1,600.00	9.02	260.40	1,587.64	-28.11	-166.17	26.68	0.00	0.00	0.00
1,700.00	9.02	260.40	1,686.40	-30.72	-181.63	29.17	0.00	0.00	0.00
1,800.00	9.02	260.40	1,785.17	-33.34	-197.09	31.65	0.00	0.00	0.00
1,900.00	9.02	260.40	1,883.93	-35.95	-212.55	34.13	0.00	0.00	0.00
2,000.00	9.02	260.40	1,982.69	-38.56	-228.01	36.61	0.00	0.00	0.00
2,100.00	9.02	260.40	2,081.46	-41.18	-243.46	39.10	0.00	0.00	0.00
2,200.00	9.02	260.40	2,180.22	-43.79	-258.92	41.58	0.00	0.00	0.00
2,300.00	9.02	260.40	2,278.98	-46.41	-274.38	44.06	0.00	0.00	0.00
2,400.00	9.02	260.40	2,377.75	-49.02	-289.84	46.54	0.00	0.00	0.00
2,500.00	9.02	260.40	2,476.51	-51.64	-305.30	49.02	0.00	0.00	0.00
2,600.00	9.02	260.40	2,575.27	-54.25	-320.76	51.51	0.00	0.00	0.00
2,700.00	9.02	260.40	2,674.04	-56.87	-336.21	53.99	0.00	0.00	0.00
2,800.00	9.02	260.40	2,772.80	-59.48	-351.67	56.47	0.00	0.00	0.00
2,900.00	9.02	260.40	2,871.56	-62.10	-367.13	58.95	0.00	0.00	0.00
3,000.00	9.02	260.40	2,970.33	-64.71	-382.59	61.44	0.00	0.00	0.00
3,100.00	9.02	260.40	3,069.09	-67.32	-398.05	63.92	0.00	0.00	0.00
3,200.00	9.02	260.40	3,167.85	-69.94	-413.51	66.40	0.00	0.00	0.00
3,300.00	9.02	260.40	3,266.62	-72.55	-428.96	68.88	0.00	0.00	0.00
3,400.00	9.02	260.40	3,365.38	-75.17	-444.42	71.37	0.00	0.00	0.00
3,500.00	9.02	260.40	3,464.14	-77.78	-459.88	73.85	0.00	0.00	0.00
3,600.00	9.02	260.40	3,562.91	-80.40	-475.34	76.33	0.00	0.00	0.00
3,700.00	9.02	260.40	3,661.67	-83.01	-490.80	78.81	0.00	0.00	0.00
3,800.00	9.02	260.40	3,760.43	-85.63	-506.26	81.29	0.00	0.00	0.00
3,900.00	9.02	260.40	3,859.20	-88.24	-521.71	83.78	0.00	0.00	0.00
4,000.00	9.02	260.40	3,957.96	-90.86	-537.17	86.26	0.00	0.00	0.00
4,100.00	9.02	260.40	4,056.72	-93.47	-552.63	88.74	0.00	0.00	0.00
4,200.00	9.02	260.40	4,155.49	-96.09	-568.09	91.22	0.00	0.00	0.00
4,300.00	9.02	260.40	4,254.25	-98.70	-583.55	93.71	0.00	0.00	0.00
4,400.00	9.02	260.40	4,353.01	-101.31	-599.01	96.19	0.00	0.00	0.00
4,500.00	9.02	260.40	4,451.78	-103.93	-614.47	98.67	0.00	0.00	0.00
4,600.00	9.02	260.40	4,550.54	-106.54	-629.92	101.15	0.00	0.00	0.00
4,700.00	9.02	260.40	4,649.30	-109.16	-645.38	103.63	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 03H
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 03H	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	9.02	260.40	4,748.07	-111.77	-660.84	106.12	0.00	0.00	0.00
4,900.00	9.02	260.40	4,846.83	-114.39	-676.30	108.60	0.00	0.00	0.00
5,000.00	9.02	260.40	4,945.59	-117.00	-691.76	111.08	0.00	0.00	0.00
5,100.00	9.02	260.40	5,044.36	-119.62	-707.22	113.56	0.00	0.00	0.00
5,200.00	9.02	260.40	5,143.12	-122.23	-722.67	116.05	0.00	0.00	0.00
5,300.00	9.02	260.40	5,241.89	-124.85	-738.13	118.53	0.00	0.00	0.00
5,400.00	9.02	260.40	5,340.65	-127.46	-753.59	121.01	0.00	0.00	0.00
5,500.00	9.02	260.40	5,439.41	-130.07	-769.05	123.49	0.00	0.00	0.00
5,502.29	9.02	260.40	5,441.67	-130.13	-769.40	123.55	0.00	0.00	0.00
KOP @ 5502.29ft :: DLS = 9°/100'									
5,600.00	13.52	220.18	5,537.61	-140.16	-784.36	133.45	9.00	4.61	-41.16
5,700.00	21.11	203.46	5,633.07	-165.66	-799.10	158.82	9.00	7.59	-16.72
5,800.00	29.48	195.61	5,723.43	-205.96	-812.92	199.00	9.00	8.37	-7.86
5,900.00	38.12	191.04	5,806.46	-260.07	-825.47	253.00	9.00	8.64	-4.57
6,000.00	46.88	187.95	5,880.13	-326.64	-836.45	319.47	9.00	8.76	-3.08
6,100.00	55.70	185.65	5,942.62	-404.04	-845.59	396.79	9.00	8.82	-2.30
6,200.00	64.55	183.79	5,992.38	-490.37	-852.65	483.06	9.00	8.85	-1.86
6,300.00	73.42	182.19	6,028.21	-583.50	-857.48	576.14	9.00	8.87	-1.60
6,400.00	82.31	180.72	6,049.21	-681.13	-859.93	673.75	9.00	8.89	-1.46
6,486.48	90.00	179.51	6,055.00	-767.35	-860.11	759.97	9.00	8.89	-1.40
End Build @ 6486.48ft									
6,500.00	90.00	179.51	6,055.00	-780.87	-859.99	773.49	0.00	0.00	0.00
6,600.00	90.00	179.51	6,055.00	-880.87	-859.14	873.49	0.00	0.00	0.00
6,700.00	90.00	179.51	6,055.00	-980.86	-858.29	973.49	0.00	0.00	0.00
6,800.00	90.00	179.51	6,055.00	-1,080.86	-857.44	1,073.49	0.00	0.00	0.00
6,900.00	90.00	179.51	6,055.00	-1,180.86	-856.58	1,173.49	0.00	0.00	0.00
7,000.00	90.00	179.51	6,055.00	-1,280.85	-855.73	1,273.49	0.00	0.00	0.00
7,100.00	90.00	179.51	6,055.00	-1,380.85	-854.88	1,373.49	0.00	0.00	0.00
7,200.00	90.00	179.51	6,055.00	-1,480.85	-854.03	1,473.49	0.00	0.00	0.00
7,300.00	90.00	179.51	6,055.00	-1,580.84	-853.17	1,573.49	0.00	0.00	0.00
7,400.00	90.00	179.51	6,055.00	-1,680.84	-852.32	1,673.49	0.00	0.00	0.00
7,500.00	90.00	179.51	6,055.00	-1,780.83	-851.47	1,773.49	0.00	0.00	0.00
7,600.00	90.00	179.51	6,055.00	-1,880.83	-850.62	1,873.49	0.00	0.00	0.00
7,700.00	90.00	179.51	6,055.00	-1,980.83	-849.77	1,973.49	0.00	0.00	0.00
7,800.00	90.00	179.51	6,055.00	-2,080.82	-848.91	2,073.49	0.00	0.00	0.00
7,900.00	90.00	179.51	6,055.00	-2,180.82	-848.06	2,173.49	0.00	0.00	0.00
8,000.00	90.00	179.51	6,055.00	-2,280.82	-847.21	2,273.49	0.00	0.00	0.00
8,100.00	90.00	179.51	6,055.00	-2,380.81	-846.36	2,373.49	0.00	0.00	0.00
8,200.00	90.00	179.51	6,055.00	-2,480.81	-845.51	2,473.49	0.00	0.00	0.00
8,300.00	90.00	179.51	6,055.00	-2,580.81	-844.65	2,573.49	0.00	0.00	0.00
8,400.00	90.00	179.51	6,055.00	-2,680.80	-843.80	2,673.49	0.00	0.00	0.00
8,500.00	90.00	179.51	6,055.00	-2,780.80	-842.95	2,773.49	0.00	0.00	0.00
8,600.00	90.00	179.51	6,055.00	-2,880.80	-842.10	2,873.49	0.00	0.00	0.00
8,700.00	90.00	179.51	6,055.00	-2,980.79	-841.24	2,973.49	0.00	0.00	0.00
8,800.00	90.00	179.51	6,055.00	-3,080.79	-840.39	3,073.49	0.00	0.00	0.00
8,900.00	90.00	179.51	6,055.00	-3,180.78	-839.54	3,173.49	0.00	0.00	0.00
9,000.00	90.00	179.51	6,055.00	-3,280.78	-838.69	3,273.49	0.00	0.00	0.00
9,100.00	90.00	179.51	6,055.00	-3,380.78	-837.84	3,373.49	0.00	0.00	0.00
9,200.00	90.00	179.51	6,055.00	-3,480.77	-836.98	3,473.49	0.00	0.00	0.00
9,300.00	90.00	179.51	6,055.00	-3,580.77	-836.13	3,573.49	0.00	0.00	0.00
9,400.00	90.00	179.51	6,055.00	-3,680.77	-835.28	3,673.49	0.00	0.00	0.00
9,500.00	90.00	179.51	6,055.00	-3,780.76	-834.43	3,773.49	0.00	0.00	0.00
9,600.00	90.00	179.51	6,055.00	-3,880.76	-833.57	3,873.49	0.00	0.00	0.00
9,700.00	90.00	179.51	6,055.00	-3,980.76	-832.72	3,973.49	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 03H
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 03H	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	179.51	6,055.00	-4,080.75	-831.87	4,073.49	0.00	0.00	0.00	
9,900.00	90.00	179.51	6,055.00	-4,180.75	-831.02	4,173.49	0.00	0.00	0.00	
10,000.00	90.00	179.51	6,055.00	-4,280.74	-830.17	4,273.49	0.00	0.00	0.00	
10,100.00	90.00	179.51	6,055.00	-4,380.74	-829.31	4,373.49	0.00	0.00	0.00	
10,200.00	90.00	179.51	6,055.00	-4,480.74	-828.46	4,473.49	0.00	0.00	0.00	
10,300.00	90.00	179.51	6,055.00	-4,580.73	-827.61	4,573.49	0.00	0.00	0.00	
10,400.00	90.00	179.51	6,055.00	-4,680.73	-826.76	4,673.49	0.00	0.00	0.00	
10,500.00	90.00	179.51	6,055.00	-4,780.73	-825.90	4,773.49	0.00	0.00	0.00	
10,600.00	90.00	179.51	6,055.00	-4,880.72	-825.05	4,873.49	0.00	0.00	0.00	
10,700.00	90.00	179.51	6,055.00	-4,980.72	-824.20	4,973.49	0.00	0.00	0.00	
10,800.00	90.00	179.51	6,055.00	-5,080.72	-823.35	5,073.49	0.00	0.00	0.00	
10,900.00	90.00	179.51	6,055.00	-5,180.71	-822.50	5,173.49	0.00	0.00	0.00	
11,000.00	90.00	179.51	6,055.00	-5,280.71	-821.64	5,273.49	0.00	0.00	0.00	
11,100.00	90.00	179.51	6,055.00	-5,380.70	-820.79	5,373.49	0.00	0.00	0.00	
11,200.00	90.00	179.51	6,055.00	-5,480.70	-819.94	5,473.49	0.00	0.00	0.00	
11,300.00	90.00	179.51	6,055.00	-5,580.70	-819.09	5,573.49	0.00	0.00	0.00	
11,400.00	90.00	179.51	6,055.00	-5,680.69	-818.23	5,673.49	0.00	0.00	0.00	
11,500.00	90.00	179.51	6,055.00	-5,780.69	-817.38	5,773.49	0.00	0.00	0.00	
11,600.00	90.00	179.51	6,055.00	-5,880.69	-816.53	5,873.49	0.00	0.00	0.00	
11,700.00	90.00	179.51	6,055.00	-5,980.68	-815.68	5,973.49	0.00	0.00	0.00	
11,800.00	90.00	179.51	6,055.00	-6,080.68	-814.83	6,073.49	0.00	0.00	0.00	
11,900.00	90.00	179.51	6,055.00	-6,180.68	-813.97	6,173.49	0.00	0.00	0.00	
12,000.00	90.00	179.51	6,055.00	-6,280.67	-813.12	6,273.49	0.00	0.00	0.00	
12,100.00	90.00	179.51	6,055.00	-6,380.67	-812.27	6,373.49	0.00	0.00	0.00	
12,200.00	90.00	179.51	6,055.00	-6,480.66	-811.42	6,473.49	0.00	0.00	0.00	
12,300.00	90.00	179.51	6,055.00	-6,580.66	-810.56	6,573.49	0.00	0.00	0.00	
12,400.00	90.00	179.51	6,055.00	-6,680.66	-809.71	6,673.49	0.00	0.00	0.00	
12,500.00	90.00	179.51	6,055.00	-6,780.65	-808.86	6,773.49	0.00	0.00	0.00	
12,600.00	90.00	179.51	6,055.00	-6,880.65	-808.01	6,873.49	0.00	0.00	0.00	
12,700.00	90.00	179.51	6,055.00	-6,980.65	-807.16	6,973.49	0.00	0.00	0.00	
12,800.00	90.00	179.51	6,055.00	-7,080.64	-806.30	7,073.49	0.00	0.00	0.00	
12,900.00	90.00	179.51	6,055.00	-7,180.64	-805.45	7,173.49	0.00	0.00	0.00	
13,000.00	90.00	179.51	6,055.00	-7,280.64	-804.60	7,273.49	0.00	0.00	0.00	
13,100.00	90.00	179.51	6,055.00	-7,380.63	-803.75	7,373.49	0.00	0.00	0.00	
13,200.00	90.00	179.51	6,055.00	-7,480.63	-802.89	7,473.49	0.00	0.00	0.00	
13,300.00	90.00	179.51	6,055.00	-7,580.62	-802.04	7,573.49	0.00	0.00	0.00	
13,400.00	90.00	179.51	6,055.00	-7,680.62	-801.19	7,673.49	0.00	0.00	0.00	
13,500.00	90.00	179.51	6,055.00	-7,780.62	-800.34	7,773.49	0.00	0.00	0.00	
13,600.00	90.00	179.51	6,055.00	-7,880.61	-799.49	7,873.49	0.00	0.00	0.00	
13,700.00	90.00	179.51	6,055.00	-7,980.61	-798.63	7,973.49	0.00	0.00	0.00	
13,800.00	90.00	179.51	6,055.00	-8,080.61	-797.78	8,073.49	0.00	0.00	0.00	
13,900.00	90.00	179.51	6,055.00	-8,180.60	-796.93	8,173.49	0.00	0.00	0.00	
14,000.00	90.00	179.51	6,055.00	-8,280.60	-796.08	8,273.49	0.00	0.00	0.00	
14,100.00	90.00	179.51	6,055.00	-8,380.60	-795.22	8,373.49	0.00	0.00	0.00	
14,200.00	90.00	179.51	6,055.00	-8,480.59	-794.37	8,473.49	0.00	0.00	0.00	
14,300.00	90.00	179.51	6,055.00	-8,580.59	-793.52	8,573.49	0.00	0.00	0.00	
14,400.00	90.00	179.51	6,055.00	-8,680.58	-792.67	8,673.49	0.00	0.00	0.00	
14,500.00	90.00	179.51	6,055.00	-8,780.58	-791.82	8,773.49	0.00	0.00	0.00	
14,600.00	90.00	179.51	6,055.00	-8,880.58	-790.96	8,873.49	0.00	0.00	0.00	
14,700.00	90.00	179.51	6,055.00	-8,980.57	-790.11	8,973.49	0.00	0.00	0.00	
14,800.00	90.00	179.51	6,055.00	-9,080.57	-789.26	9,073.49	0.00	0.00	0.00	
14,900.00	90.00	179.51	6,055.00	-9,180.57	-788.41	9,173.49	0.00	0.00	0.00	
15,000.00	90.00	179.51	6,055.00	-9,280.56	-787.55	9,273.49	0.00	0.00	0.00	
15,100.00	90.00	179.51	6,055.00	-9,380.56	-786.70	9,373.49	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 03H
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 03H	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	179.51	6,055.00	-9,480.56	-785.85	9,473.49	0.00	0.00	0.00	
15,300.00	90.00	179.51	6,055.00	-9,580.55	-785.00	9,573.49	0.00	0.00	0.00	
15,400.00	90.00	179.51	6,055.00	-9,680.55	-784.15	9,673.49	0.00	0.00	0.00	
15,500.00	90.00	179.51	6,055.00	-9,780.54	-783.29	9,773.49	0.00	0.00	0.00	
15,600.00	90.00	179.51	6,055.00	-9,880.54	-782.44	9,873.49	0.00	0.00	0.00	
15,700.00	90.00	179.51	6,055.00	-9,980.54	-781.59	9,973.49	0.00	0.00	0.00	
15,800.00	90.00	179.51	6,055.00	-10,080.53	-780.74	10,073.49	0.00	0.00	0.00	
15,900.00	90.00	179.51	6,055.00	-10,180.53	-779.89	10,173.49	0.00	0.00	0.00	
16,000.00	90.00	179.51	6,055.00	-10,280.53	-779.03	10,273.49	0.00	0.00	0.00	
16,100.00	90.00	179.51	6,055.00	-10,380.52	-778.18	10,373.49	0.00	0.00	0.00	
16,200.00	90.00	179.51	6,055.00	-10,480.52	-777.33	10,473.49	0.00	0.00	0.00	
16,300.00	90.00	179.51	6,055.00	-10,580.52	-776.48	10,573.49	0.00	0.00	0.00	
16,400.00	90.00	179.51	6,055.00	-10,680.51	-775.62	10,673.49	0.00	0.00	0.00	
16,500.00	90.00	179.51	6,055.00	-10,780.51	-774.77	10,773.49	0.00	0.00	0.00	
16,533.81	90.00	179.51	6,055.00	-10,814.32	-774.48	10,807.30	0.00	0.00	0.00	
TD Well @ 16533.81ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,511.26	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	
300.00	300.00	0.00	0.00	Begin Nudge @ 300.00ft	
751.00	749.14	-5.91	-34.93	Hold Tangent @ 751.00ft	
5,502.29	5,441.67	-130.13	-769.40	KOP @ 5502.29ft :: DLS = 9°/100'	
6,486.48	6,055.00	-767.35	-860.11	End Build @ 6486.48ft	
16,533.81	6,055.00	-10,814.32	-774.48	TD Well @ 16533.81ft	