

VERDAD RESOURCES

**WATTENBERG FIELD
TIMBRO 9-59-8A-9 PAD
TIMBRO 9-59 8A-9-10**

Wellbore #1

Plan: Design #1

Standard Planning Report

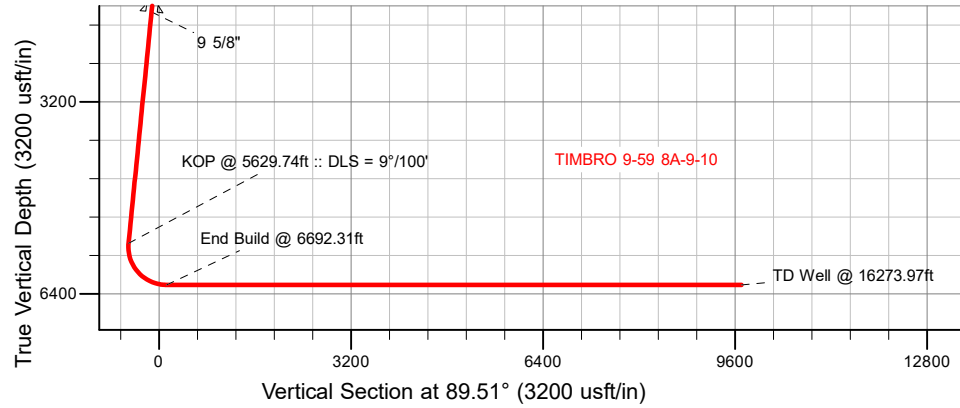
12 March, 2019

Project: WATTENBERG FIELD
Site: TIMBRO 9-59-8A-9 PAD
Well: TIMBRO 9-59 8A-9-10
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1716.91	9 5/8"	9-5/8

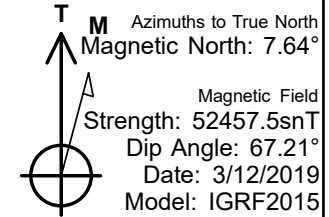
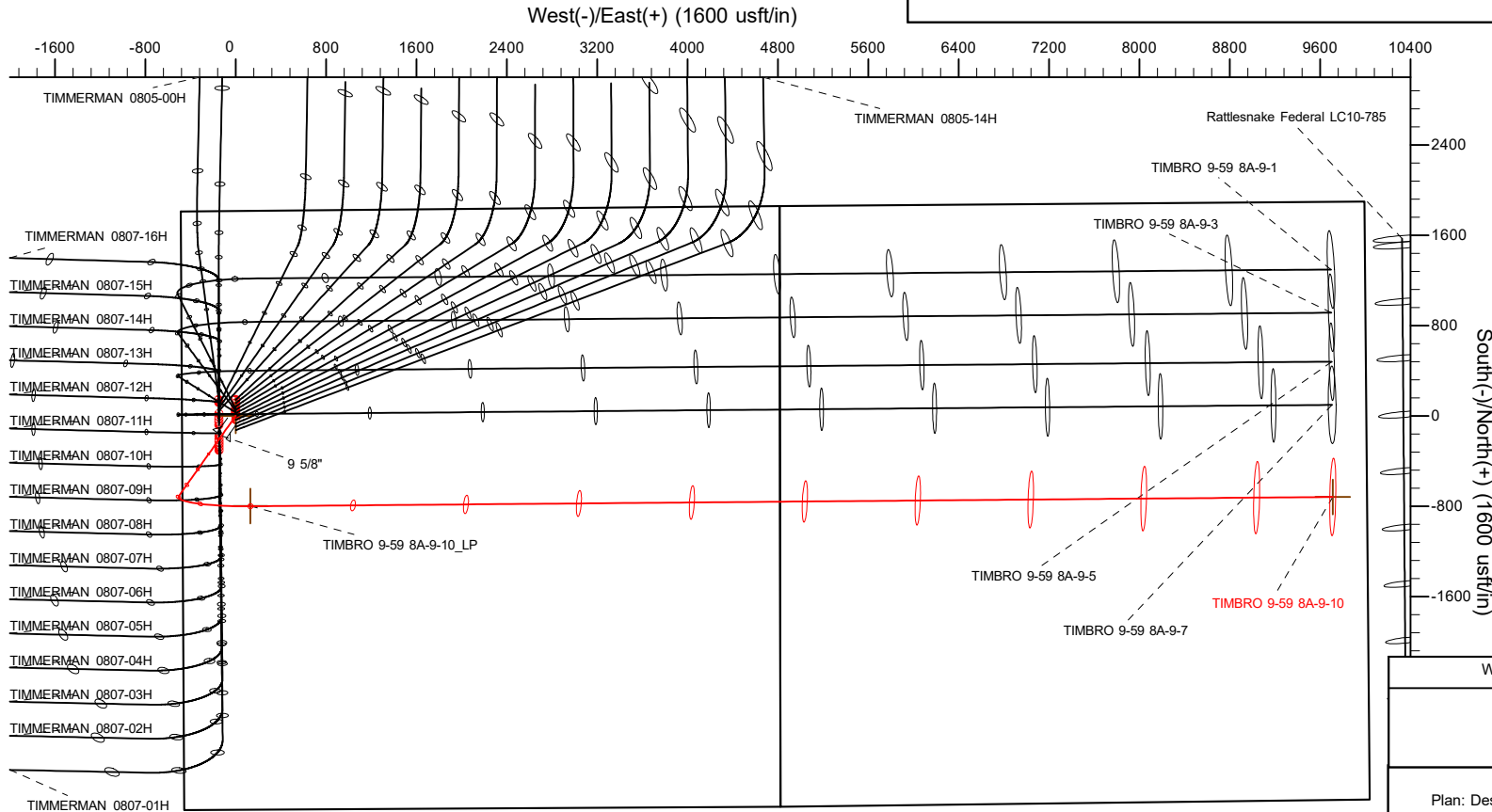


SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	682.50	9.65	215.34	680.22	-33.07	-23.45	2.00	215.34	-23.73	
4	5629.74	9.65	215.34	5557.46	-709.56	-503.14	0.00	0.00	-509.19	
5	6692.31	90.00	89.51	6250.00	-799.58	131.21	9.00	-125.45	124.36	
6	16273.97	90.00	89.51	6250.00	-717.27	9712.50	0.00	0.00	9706.01	TIMBRO 9-59 8A-9-10_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 9-59 8A-9-10_SHL	0.00	0.00	0.00	40.767308	-104.010018
TIMBRO 9-59 8A-9-10_BHL	6250.00	-717.27	9712.50	40.765334	-103.974956



SHL
1816' FNL
475' FWL

LP
2615' FNL
600' FWL

BHL
2615' FNL
300' FEL

WELL DETAILS: TIMBRO 9-59 8A-9-10

GL = 5077'

RKB = 24' @ 5101.00usft (RIG)

Plan: Design #1 (TIMBRO 9-59 8A-9-10/Wellbore #1)

Date: 3/12/2019

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 9-59 8A-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5101.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5101.00usft (RIG)
Site:	TIMBRO 9-59-8A-9 PAD	North Reference:	True
Well:	TIMBRO 9-59 8A-9-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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		TIMBRO 9-59-8A-9 PAD			
Site Position:		Northing:	1,525,923.38 usft	Latitude:	40.767528
From:	Lat/Long	Easting:	3,412,705.62 usft	Longitude:	-104.010020
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.96 °

Well	TIMBRO 9-59 8A-9-10					
Well Position	+N/-S	-80.16 usft	Northing:	1,525,843.24 usft	Latitude:	40.767308
	+E/-W	0.55 usft	Easting:	3,412,707.52 usft	Longitude:	-104.010018
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,077.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/12/2019	7.64	67.21	52,457.51223079

Design	Design #1			
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	89.51

Plan Survey Tool Program	Date	3/12/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	16,273.97	Design #1 (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	
682.50	9.65	215.34	680.22	-33.07	-23.45	2.00	2.00	0.00	215.34	
5,629.74	9.65	215.34	5,557.46	-709.56	-503.14	0.00	0.00	0.00	0.00	
6,692.31	90.00	89.51	6,250.00	-799.58	131.21	9.00	7.56	-11.84	-125.45	
16,273.97	90.00	89.51	6,250.00	-717.27	9,712.50	0.00	0.00	0.00	0.00	TIMBRO 9-59 8A-9-10

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5101.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5101.00usft (RIG)
Site:	TIMBRO 9-59-8A-9 PAD	North Reference:	True
Well:	TIMBRO 9-59 8A-9-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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
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	215.34	299.98	-1.42	-1.01	-1.02	2.00	2.00	0.00
400.00	4.00	215.34	399.84	-5.69	-4.04	-4.09	2.00	2.00	0.00
500.00	6.00	215.34	499.45	-12.80	-9.08	-9.19	2.00	2.00	0.00
600.00	8.00	215.34	598.70	-22.74	-16.13	-16.32	2.00	2.00	0.00
682.50	9.65	215.34	680.22	-33.07	-23.45	-23.73	2.00	2.00	0.00
Hold Tangent @ 682.50ft									
700.00	9.65	215.34	697.47	-35.46	-25.14	-25.45	0.00	0.00	0.00
800.00	9.65	215.34	796.06	-49.13	-34.84	-35.26	0.00	0.00	0.00
900.00	9.65	215.34	894.64	-62.81	-44.54	-45.07	0.00	0.00	0.00
1,000.00	9.65	215.34	993.23	-76.48	-54.23	-54.88	0.00	0.00	0.00
1,100.00	9.65	215.34	1,091.81	-90.16	-63.93	-64.70	0.00	0.00	0.00
1,200.00	9.65	215.34	1,190.40	-103.83	-73.62	-74.51	0.00	0.00	0.00
1,300.00	9.65	215.34	1,288.98	-117.50	-83.32	-84.32	0.00	0.00	0.00
1,400.00	9.65	215.34	1,387.57	-131.18	-93.02	-94.14	0.00	0.00	0.00
1,500.00	9.65	215.34	1,486.15	-144.85	-102.71	-103.95	0.00	0.00	0.00
1,600.00	9.65	215.34	1,584.74	-158.53	-112.41	-113.76	0.00	0.00	0.00
1,700.00	9.65	215.34	1,683.32	-172.20	-122.11	-123.57	0.00	0.00	0.00
1,716.91	9.65	215.34	1,700.00	-174.51	-123.75	-125.23	0.00	0.00	0.00
9 5/8"									
1,800.00	9.65	215.34	1,781.91	-185.87	-131.80	-133.39	0.00	0.00	0.00
1,900.00	9.65	215.34	1,880.49	-199.55	-141.50	-143.20	0.00	0.00	0.00
2,000.00	9.65	215.34	1,979.08	-213.22	-151.19	-153.01	0.00	0.00	0.00
2,100.00	9.65	215.34	2,077.66	-226.90	-160.89	-162.82	0.00	0.00	0.00
2,200.00	9.65	215.34	2,176.25	-240.57	-170.59	-172.64	0.00	0.00	0.00
2,300.00	9.65	215.34	2,274.83	-254.25	-180.28	-182.45	0.00	0.00	0.00
2,400.00	9.65	215.34	2,373.42	-267.92	-189.98	-192.26	0.00	0.00	0.00
2,500.00	9.65	215.34	2,472.00	-281.59	-199.67	-202.08	0.00	0.00	0.00
2,600.00	9.65	215.34	2,570.59	-295.27	-209.37	-211.89	0.00	0.00	0.00
2,700.00	9.65	215.34	2,669.17	-308.94	-219.07	-221.70	0.00	0.00	0.00
2,800.00	9.65	215.34	2,767.76	-322.62	-228.76	-231.51	0.00	0.00	0.00
2,900.00	9.65	215.34	2,866.34	-336.29	-238.46	-241.33	0.00	0.00	0.00
3,000.00	9.65	215.34	2,964.93	-349.96	-248.16	-251.14	0.00	0.00	0.00
3,100.00	9.65	215.34	3,063.51	-363.64	-257.85	-260.95	0.00	0.00	0.00
3,200.00	9.65	215.34	3,162.10	-377.31	-267.55	-270.76	0.00	0.00	0.00
3,300.00	9.65	215.34	3,260.68	-390.99	-277.24	-280.58	0.00	0.00	0.00
3,400.00	9.65	215.34	3,359.27	-404.66	-286.94	-290.39	0.00	0.00	0.00
3,500.00	9.65	215.34	3,457.85	-418.33	-296.64	-300.20	0.00	0.00	0.00
3,600.00	9.65	215.34	3,556.44	-432.01	-306.33	-310.02	0.00	0.00	0.00
3,700.00	9.65	215.34	3,655.02	-445.68	-316.03	-319.83	0.00	0.00	0.00
3,800.00	9.65	215.34	3,753.61	-459.36	-325.72	-329.64	0.00	0.00	0.00
3,900.00	9.65	215.34	3,852.19	-473.03	-335.42	-339.45	0.00	0.00	0.00
4,000.00	9.65	215.34	3,950.78	-486.70	-345.12	-349.27	0.00	0.00	0.00
4,100.00	9.65	215.34	4,049.36	-500.38	-354.81	-359.08	0.00	0.00	0.00
4,200.00	9.65	215.34	4,147.95	-514.05	-364.51	-368.89	0.00	0.00	0.00
4,300.00	9.65	215.34	4,246.54	-527.73	-374.20	-378.70	0.00	0.00	0.00
4,400.00	9.65	215.34	4,345.12	-541.40	-383.90	-388.52	0.00	0.00	0.00
4,500.00	9.65	215.34	4,443.71	-555.07	-393.60	-398.33	0.00	0.00	0.00
4,600.00	9.65	215.34	4,542.29	-568.75	-403.29	-408.14	0.00	0.00	0.00
4,700.00	9.65	215.34	4,640.88	-582.42	-412.99	-417.95	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5101.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5101.00usft (RIG)
Site:	TIMBRO 9-59-8A-9 PAD	North Reference:	True
Well:	TIMBRO 9-59 8A-9-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)
4,800.00	9.65	215.34	4,739.46	-596.10	-422.69	-427.77	0.00	0.00	0.00
4,900.00	9.65	215.34	4,838.05	-609.77	-432.38	-437.58	0.00	0.00	0.00
5,000.00	9.65	215.34	4,936.63	-623.45	-442.08	-447.39	0.00	0.00	0.00
5,100.00	9.65	215.34	5,035.22	-637.12	-451.77	-457.21	0.00	0.00	0.00
5,200.00	9.65	215.34	5,133.80	-650.79	-461.47	-467.02	0.00	0.00	0.00
5,300.00	9.65	215.34	5,232.39	-664.47	-471.17	-476.83	0.00	0.00	0.00
5,400.00	9.65	215.34	5,330.97	-678.14	-480.86	-486.64	0.00	0.00	0.00
5,500.00	9.65	215.34	5,429.56	-691.82	-490.56	-496.46	0.00	0.00	0.00
5,600.00	9.65	215.34	5,528.14	-705.49	-500.25	-506.27	0.00	0.00	0.00
5,629.74	9.65	215.34	5,557.46	-709.56	-503.14	-509.19	0.00	0.00	0.00
KOP @ 5629.74ft :: DLS = 9°/100'									
5,700.00	7.88	174.46	5,626.96	-719.16	-506.08	-512.21	9.00	-2.52	-58.19
5,800.00	12.45	128.15	5,725.52	-732.67	-496.93	-503.17	9.00	4.57	-46.30
5,900.00	20.22	111.49	5,821.46	-745.69	-472.32	-478.68	9.00	7.77	-16.66
6,000.00	28.70	104.09	5,912.42	-757.89	-432.87	-439.34	9.00	8.48	-7.40
6,100.00	37.41	99.89	5,996.17	-768.97	-379.56	-386.12	9.00	8.71	-4.20
6,200.00	46.21	97.10	6,070.64	-778.67	-313.68	-320.33	9.00	8.81	-2.79
6,300.00	55.07	95.03	6,134.00	-786.75	-236.87	-243.59	9.00	8.86	-2.07
6,400.00	63.96	93.37	6,184.68	-793.00	-151.01	-157.79	9.00	8.89	-1.66
6,500.00	72.86	91.94	6,221.45	-797.27	-58.22	-65.04	9.00	8.90	-1.43
6,600.00	81.77	90.65	6,243.38	-799.46	39.21	32.37	9.00	8.91	-1.29
6,692.31	90.00	89.51	6,250.00	-799.58	131.21	124.36	9.00	8.92	-1.24
End Build @ 6692.31ft									
6,700.00	90.00	89.51	6,250.00	-799.51	138.89	132.05	0.00	0.00	0.00
6,800.00	90.00	89.51	6,250.00	-798.65	238.89	232.05	0.00	0.00	0.00
6,900.00	90.00	89.51	6,250.00	-797.80	338.88	332.05	0.00	0.00	0.00
7,000.00	90.00	89.51	6,250.00	-796.94	438.88	432.05	0.00	0.00	0.00
7,100.00	90.00	89.51	6,250.00	-796.08	538.88	532.05	0.00	0.00	0.00
7,200.00	90.00	89.51	6,250.00	-795.22	638.87	632.05	0.00	0.00	0.00
7,300.00	90.00	89.51	6,250.00	-794.36	738.87	732.05	0.00	0.00	0.00
7,400.00	90.00	89.51	6,250.00	-793.50	838.87	832.05	0.00	0.00	0.00
7,500.00	90.00	89.51	6,250.00	-792.64	938.86	932.05	0.00	0.00	0.00
7,600.00	90.00	89.51	6,250.00	-791.78	1,038.86	1,032.05	0.00	0.00	0.00
7,700.00	90.00	89.51	6,250.00	-790.92	1,138.85	1,132.05	0.00	0.00	0.00
7,800.00	90.00	89.51	6,250.00	-790.06	1,238.85	1,232.05	0.00	0.00	0.00
7,900.00	90.00	89.51	6,250.00	-789.20	1,338.85	1,332.05	0.00	0.00	0.00
8,000.00	90.00	89.51	6,250.00	-788.35	1,438.84	1,432.05	0.00	0.00	0.00
8,100.00	90.00	89.51	6,250.00	-787.49	1,538.84	1,532.05	0.00	0.00	0.00
8,200.00	90.00	89.51	6,250.00	-786.63	1,638.84	1,632.05	0.00	0.00	0.00
8,300.00	90.00	89.51	6,250.00	-785.77	1,738.83	1,732.05	0.00	0.00	0.00
8,400.00	90.00	89.51	6,250.00	-784.91	1,838.83	1,832.05	0.00	0.00	0.00
8,500.00	90.00	89.51	6,250.00	-784.05	1,938.83	1,932.05	0.00	0.00	0.00
8,600.00	90.00	89.51	6,250.00	-783.19	2,038.82	2,032.05	0.00	0.00	0.00
8,700.00	90.00	89.51	6,250.00	-782.33	2,138.82	2,132.05	0.00	0.00	0.00
8,800.00	90.00	89.51	6,250.00	-781.47	2,238.81	2,232.05	0.00	0.00	0.00
8,900.00	90.00	89.51	6,250.00	-780.61	2,338.81	2,332.05	0.00	0.00	0.00
9,000.00	90.00	89.51	6,250.00	-779.75	2,438.81	2,432.05	0.00	0.00	0.00
9,100.00	90.00	89.51	6,250.00	-778.90	2,538.80	2,532.05	0.00	0.00	0.00
9,200.00	90.00	89.51	6,250.00	-778.04	2,638.80	2,632.05	0.00	0.00	0.00
9,300.00	90.00	89.51	6,250.00	-777.18	2,738.80	2,732.05	0.00	0.00	0.00
9,400.00	90.00	89.51	6,250.00	-776.32	2,838.79	2,832.05	0.00	0.00	0.00
9,500.00	90.00	89.51	6,250.00	-775.46	2,938.79	2,932.05	0.00	0.00	0.00
9,600.00	90.00	89.51	6,250.00	-774.60	3,038.78	3,032.05	0.00	0.00	0.00
9,700.00	90.00	89.51	6,250.00	-773.74	3,138.78	3,132.05	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 9-59 8A-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5101.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5101.00usft (RIG)
Site:	TIMBRO 9-59-8A-9 PAD	North Reference:	True
Well:	TIMBRO 9-59 8A-9-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)	
9,800.00	90.00	89.51	6,250.00	-772.88	3,238.78	3,232.05	0.00	0.00	0.00	
9,900.00	90.00	89.51	6,250.00	-772.02	3,338.77	3,332.05	0.00	0.00	0.00	
10,000.00	90.00	89.51	6,250.00	-771.16	3,438.77	3,432.05	0.00	0.00	0.00	
10,100.00	90.00	89.51	6,250.00	-770.31	3,538.77	3,532.05	0.00	0.00	0.00	
10,200.00	90.00	89.51	6,250.00	-769.45	3,638.76	3,632.05	0.00	0.00	0.00	
10,300.00	90.00	89.51	6,250.00	-768.59	3,738.76	3,732.05	0.00	0.00	0.00	
10,400.00	90.00	89.51	6,250.00	-767.73	3,838.76	3,832.05	0.00	0.00	0.00	
10,500.00	90.00	89.51	6,250.00	-766.87	3,938.75	3,932.05	0.00	0.00	0.00	
10,600.00	90.00	89.51	6,250.00	-766.01	4,038.75	4,032.05	0.00	0.00	0.00	
10,700.00	90.00	89.51	6,250.00	-765.15	4,138.74	4,132.05	0.00	0.00	0.00	
10,800.00	90.00	89.51	6,250.00	-764.29	4,238.74	4,232.05	0.00	0.00	0.00	
10,900.00	90.00	89.51	6,250.00	-763.43	4,338.74	4,332.05	0.00	0.00	0.00	
11,000.00	90.00	89.51	6,250.00	-762.57	4,438.73	4,432.05	0.00	0.00	0.00	
11,100.00	90.00	89.51	6,250.00	-761.71	4,538.73	4,532.05	0.00	0.00	0.00	
11,200.00	90.00	89.51	6,250.00	-760.86	4,638.73	4,632.05	0.00	0.00	0.00	
11,300.00	90.00	89.51	6,250.00	-760.00	4,738.72	4,732.05	0.00	0.00	0.00	
11,400.00	90.00	89.51	6,250.00	-759.14	4,838.72	4,832.05	0.00	0.00	0.00	
11,500.00	90.00	89.51	6,250.00	-758.28	4,938.71	4,932.05	0.00	0.00	0.00	
11,600.00	90.00	89.51	6,250.00	-757.42	5,038.71	5,032.05	0.00	0.00	0.00	
11,700.00	90.00	89.51	6,250.00	-756.56	5,138.71	5,132.05	0.00	0.00	0.00	
11,800.00	90.00	89.51	6,250.00	-755.70	5,238.70	5,232.05	0.00	0.00	0.00	
11,900.00	90.00	89.51	6,250.00	-754.84	5,338.70	5,332.05	0.00	0.00	0.00	
12,000.00	90.00	89.51	6,250.00	-753.98	5,438.70	5,432.05	0.00	0.00	0.00	
12,100.00	90.00	89.51	6,250.00	-753.12	5,538.69	5,532.05	0.00	0.00	0.00	
12,200.00	90.00	89.51	6,250.00	-752.26	5,638.69	5,632.05	0.00	0.00	0.00	
12,300.00	90.00	89.51	6,250.00	-751.41	5,738.69	5,732.05	0.00	0.00	0.00	
12,400.00	90.00	89.51	6,250.00	-750.55	5,838.68	5,832.05	0.00	0.00	0.00	
12,500.00	90.00	89.51	6,250.00	-749.69	5,938.68	5,932.05	0.00	0.00	0.00	
12,600.00	90.00	89.51	6,250.00	-748.83	6,038.67	6,032.05	0.00	0.00	0.00	
12,700.00	90.00	89.51	6,250.00	-747.97	6,138.67	6,132.05	0.00	0.00	0.00	
12,800.00	90.00	89.51	6,250.00	-747.11	6,238.67	6,232.05	0.00	0.00	0.00	
12,900.00	90.00	89.51	6,250.00	-746.25	6,338.66	6,332.05	0.00	0.00	0.00	
13,000.00	90.00	89.51	6,250.00	-745.39	6,438.66	6,432.05	0.00	0.00	0.00	
13,100.00	90.00	89.51	6,250.00	-744.53	6,538.66	6,532.05	0.00	0.00	0.00	
13,200.00	90.00	89.51	6,250.00	-743.67	6,638.65	6,632.05	0.00	0.00	0.00	
13,300.00	90.00	89.51	6,250.00	-742.81	6,738.65	6,732.05	0.00	0.00	0.00	
13,400.00	90.00	89.51	6,250.00	-741.96	6,838.64	6,832.05	0.00	0.00	0.00	
13,500.00	90.00	89.51	6,250.00	-741.10	6,938.64	6,932.05	0.00	0.00	0.00	
13,600.00	90.00	89.51	6,250.00	-740.24	7,038.64	7,032.05	0.00	0.00	0.00	
13,700.00	90.00	89.51	6,250.00	-739.38	7,138.63	7,132.05	0.00	0.00	0.00	
13,800.00	90.00	89.51	6,250.00	-738.52	7,238.63	7,232.05	0.00	0.00	0.00	
13,900.00	90.00	89.51	6,250.00	-737.66	7,338.63	7,332.05	0.00	0.00	0.00	
14,000.00	90.00	89.51	6,250.00	-736.80	7,438.62	7,432.05	0.00	0.00	0.00	
14,100.00	90.00	89.51	6,250.00	-735.94	7,538.62	7,532.05	0.00	0.00	0.00	
14,200.00	90.00	89.51	6,250.00	-735.08	7,638.62	7,632.05	0.00	0.00	0.00	
14,300.00	90.00	89.51	6,250.00	-734.22	7,738.61	7,732.05	0.00	0.00	0.00	
14,400.00	90.00	89.51	6,250.00	-733.37	7,838.61	7,832.05	0.00	0.00	0.00	
14,500.00	90.00	89.51	6,250.00	-732.51	7,938.60	7,932.05	0.00	0.00	0.00	
14,600.00	90.00	89.51	6,250.00	-731.65	8,038.60	8,032.05	0.00	0.00	0.00	
14,700.00	90.00	89.51	6,250.00	-730.79	8,138.60	8,132.05	0.00	0.00	0.00	
14,800.00	90.00	89.51	6,250.00	-729.93	8,238.59	8,232.05	0.00	0.00	0.00	
14,900.00	90.00	89.51	6,250.00	-729.07	8,338.59	8,332.05	0.00	0.00	0.00	
15,000.00	90.00	89.51	6,250.00	-728.21	8,438.59	8,432.05	0.00	0.00	0.00	
15,100.00	90.00	89.51	6,250.00	-727.35	8,538.58	8,532.05	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 9-59 8A-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5101.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5101.00usft (RIG)
Site:	TIMBRO 9-59-8A-9 PAD	North Reference:	True
Well:	TIMBRO 9-59 8A-9-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)	
15,200.00	90.00	89.51	6,250.00	-726.49	8,638.58	8,632.05	0.00	0.00	0.00	
15,300.00	90.00	89.51	6,250.00	-725.63	8,738.57	8,732.05	0.00	0.00	0.00	
15,400.00	90.00	89.51	6,250.00	-724.77	8,838.57	8,832.05	0.00	0.00	0.00	
15,500.00	90.00	89.51	6,250.00	-723.92	8,938.57	8,932.05	0.00	0.00	0.00	
15,600.00	90.00	89.51	6,250.00	-723.06	9,038.56	9,032.05	0.00	0.00	0.00	
15,700.00	90.00	89.51	6,250.00	-722.20	9,138.56	9,132.05	0.00	0.00	0.00	
15,800.00	90.00	89.51	6,250.00	-721.34	9,238.56	9,232.05	0.00	0.00	0.00	
15,900.00	90.00	89.51	6,250.00	-720.48	9,338.55	9,332.05	0.00	0.00	0.00	
16,000.00	90.00	89.51	6,250.00	-719.62	9,438.55	9,432.05	0.00	0.00	0.00	
16,100.00	90.00	89.51	6,250.00	-718.76	9,538.55	9,532.05	0.00	0.00	0.00	
16,200.00	90.00	89.51	6,250.00	-717.90	9,638.54	9,632.05	0.00	0.00	0.00	
16,273.97	90.00	89.51	6,250.00	-717.27	9,712.50	9,706.01	0.00	0.00	0.00	
TD Well @ 16273.97ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,716.91	1,700.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
200.00	200.00	+N/-S (usft)	+E/-W (usft)	Begin Nudge @ 200.00ft	
682.50	680.22	-33.07	-23.45	Hold Tangent @ 682.50ft	
5,629.74	5,557.46	-709.56	-503.14	KOP @ 5629.74ft :: DLS = 9°/100'	
6,692.31	6,250.00	-799.58	131.21	End Build @ 6692.31ft	
16,273.97	6,250.00	-717.27	9,712.50	TD Well @ 16273.97ft	