

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**TIMBRO 9-59-8B PAD**

**TIMBRO 9-59 8B-9-5**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

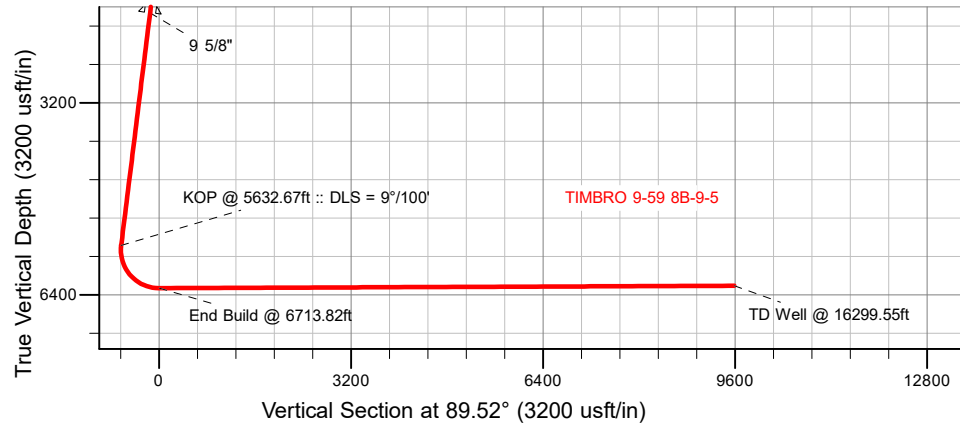
**06 April, 2019**

Project: WATTENBERG FIELD  
Site: TIMBRO 9-59-8B PAD  
Well: TIMBRO 9-59 8B-9-5  
Wellbore: Wellbore #1  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1712.70	9 5/8"	9-5/8

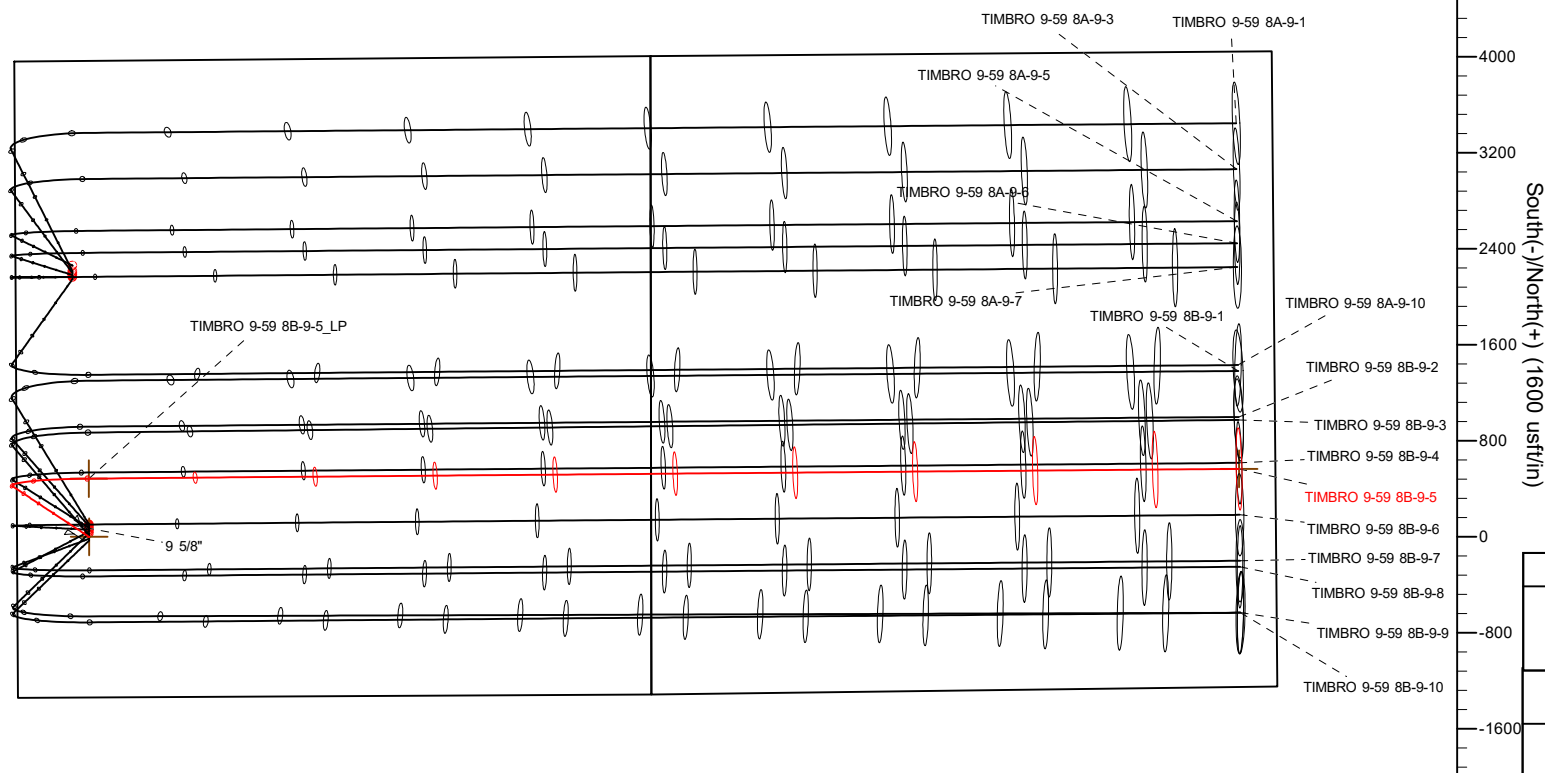
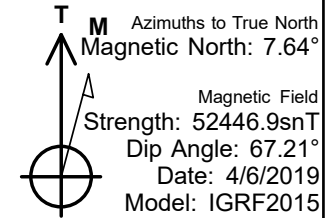
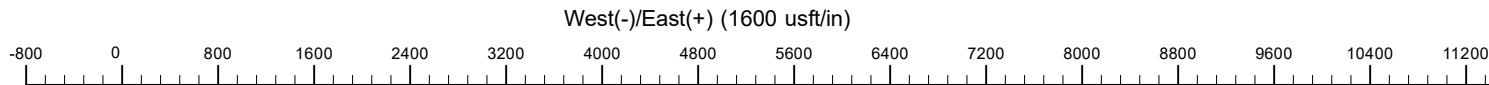


## SECTION DETAILS

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	280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	
3	706.50	8.53	303.50	704.93	17.49	-26.43	2.00	303.50	-26.28	
4	5632.67	8.53	303.50	5576.60	420.78	-635.73	0.00	0.00	-632.19	
5	6713.82	90.24	89.52	6289.00	486.11	-1.83	9.00	145.70	2.24	
6	16299.55	90.24	89.52	6249.00	566.96	9583.48	0.00	0.00	9587.89	TIMBRO 9-59 8B-9-5_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 9-59 8B-9-5_SHL	0.00	0.00	0.00	40.761407	-104.009522
TIMBRO 9-59 8B-9-5_BHL	6249.00	566.96	9583.48	40.762958	-103.974927



SHL  
1338' FSL  
600' FWL

LP  
1824' FSL  
600' FWL

BHL  
1819' FSL  
300' FEL

## WELL DETAILS: TIMBRO 9-59 8B-9-5

GL = 5045'  
RKB = 24' @ 5069.00usft (RIG)

Plan: Design #1 (TIMBRO 9-59 8B-9-5/Wellbore #1)

Date: 4/6/2019

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-5
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	TIMBRO 9-59-8B PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8B-9-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<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>	TIMBRO 9-59-8B PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,523,800.83 usft	<b>Latitude:</b> 40.761695
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,412,878.72 usft	<b>Longitude:</b> -104.009524
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.96 °

<b>Well</b>	TIMBRO 9-59 8B-9-5			
<b>Well Position</b>	<b>+N/-S</b>	-104.94 usft	<b>Northing:</b>	1,523,695.92 usft
	<b>+E/-W</b>	0.55 usft	<b>Easting:</b>	3,412,881.03 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 5,045.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	4/6/2019	7.64	67.21	52,446.94821987

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<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	89.52

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/6/2019		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	16,299.55	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	0.00	
706.50	8.53	303.50	704.93	17.49	-26.43	2.00	2.00	0.00	303.50	
5,632.67	8.53	303.50	5,576.60	420.78	-635.73	0.00	0.00	0.00	0.00	
6,713.82	90.24	89.52	6,289.00	486.11	-1.83	9.00	7.56	13.51	145.70	
16,299.55	90.24	89.52	6,249.00	566.96	9,583.48	0.00	0.00	0.00	0.00	TIMBRO 9-59 8B-9-5

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-5
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	TIMBRO 9-59-8B PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8B-9-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<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
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
280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 280.00ft									
300.00	0.40	303.50	300.00	0.04	-0.06	-0.06	2.00	2.00	0.00
400.00	2.40	303.50	399.96	1.39	-2.10	-2.08	2.00	2.00	0.00
500.00	4.40	303.50	499.78	4.66	-7.04	-7.00	2.00	2.00	0.00
600.00	6.40	303.50	599.33	9.85	-14.89	-14.80	2.00	2.00	0.00
700.00	8.40	303.50	698.50	16.96	-25.63	-25.48	2.00	2.00	0.00
706.50	8.53	303.50	704.93	17.49	-26.43	-26.28	2.00	2.00	0.00
Hold Tangent @ 706.50ft									
800.00	8.53	303.50	797.39	25.15	-37.99	-37.78	0.00	0.00	0.00
900.00	8.53	303.50	896.29	33.33	-50.36	-50.08	0.00	0.00	0.00
1,000.00	8.53	303.50	995.18	41.52	-62.73	-62.38	0.00	0.00	0.00
1,100.00	8.53	303.50	1,094.07	49.71	-75.10	-74.68	0.00	0.00	0.00
1,200.00	8.53	303.50	1,192.97	57.89	-87.47	-86.98	0.00	0.00	0.00
1,300.00	8.53	303.50	1,291.86	66.08	-99.83	-99.28	0.00	0.00	0.00
1,400.00	8.53	303.50	1,390.76	74.27	-112.20	-111.58	0.00	0.00	0.00
1,500.00	8.53	303.50	1,489.65	82.45	-124.57	-123.88	0.00	0.00	0.00
1,600.00	8.53	303.50	1,588.54	90.64	-136.94	-136.18	0.00	0.00	0.00
1,700.00	8.53	303.50	1,687.44	98.83	-149.31	-148.48	0.00	0.00	0.00
1,712.70	8.53	303.50	1,700.00	99.87	-150.88	-150.04	0.00	0.00	0.00
9 5/8"									
1,800.00	8.53	303.50	1,786.33	107.01	-161.68	-160.78	0.00	0.00	0.00
1,900.00	8.53	303.50	1,885.22	115.20	-174.05	-173.08	0.00	0.00	0.00
2,000.00	8.53	303.50	1,984.12	123.39	-186.42	-185.38	0.00	0.00	0.00
2,100.00	8.53	303.50	2,083.01	131.57	-198.78	-197.68	0.00	0.00	0.00
2,200.00	8.53	303.50	2,181.91	139.76	-211.15	-209.98	0.00	0.00	0.00
2,300.00	8.53	303.50	2,280.80	147.95	-223.52	-222.27	0.00	0.00	0.00
2,400.00	8.53	303.50	2,379.69	156.13	-235.89	-234.57	0.00	0.00	0.00
2,500.00	8.53	303.50	2,478.59	164.32	-248.26	-246.87	0.00	0.00	0.00
2,600.00	8.53	303.50	2,577.48	172.51	-260.63	-259.17	0.00	0.00	0.00
2,700.00	8.53	303.50	2,676.37	180.69	-273.00	-271.47	0.00	0.00	0.00
2,800.00	8.53	303.50	2,775.27	188.88	-285.37	-283.77	0.00	0.00	0.00
2,900.00	8.53	303.50	2,874.16	197.07	-297.73	-296.07	0.00	0.00	0.00
3,000.00	8.53	303.50	2,973.06	205.25	-310.10	-308.37	0.00	0.00	0.00
3,100.00	8.53	303.50	3,071.95	213.44	-322.47	-320.67	0.00	0.00	0.00
3,200.00	8.53	303.50	3,170.84	221.63	-334.84	-332.97	0.00	0.00	0.00
3,300.00	8.53	303.50	3,269.74	229.81	-347.21	-345.27	0.00	0.00	0.00
3,400.00	8.53	303.50	3,368.63	238.00	-359.58	-357.57	0.00	0.00	0.00
3,500.00	8.53	303.50	3,467.53	246.19	-371.95	-369.87	0.00	0.00	0.00
3,600.00	8.53	303.50	3,566.42	254.37	-384.32	-382.17	0.00	0.00	0.00
3,700.00	8.53	303.50	3,665.31	262.56	-396.69	-394.47	0.00	0.00	0.00
3,800.00	8.53	303.50	3,764.21	270.75	-409.05	-406.77	0.00	0.00	0.00
3,900.00	8.53	303.50	3,863.10	278.93	-421.42	-419.07	0.00	0.00	0.00
4,000.00	8.53	303.50	3,961.99	287.12	-433.79	-431.37	0.00	0.00	0.00
4,100.00	8.53	303.50	4,060.89	295.31	-446.16	-443.67	0.00	0.00	0.00
4,200.00	8.53	303.50	4,159.78	303.49	-458.53	-455.97	0.00	0.00	0.00
4,300.00	8.53	303.50	4,258.68	311.68	-470.90	-468.27	0.00	0.00	0.00
4,400.00	8.53	303.50	4,357.57	319.87	-483.27	-480.57	0.00	0.00	0.00
4,500.00	8.53	303.50	4,456.46	328.05	-495.64	-492.87	0.00	0.00	0.00
4,600.00	8.53	303.50	4,555.36	336.24	-508.00	-505.17	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-5
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	TIMBRO 9-59-8B PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8B-9-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<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)
4,700.00	8.53	303.50	4,654.25	344.43	-520.37	-517.47	0.00	0.00	0.00
4,800.00	8.53	303.50	4,753.15	352.61	-532.74	-529.77	0.00	0.00	0.00
4,900.00	8.53	303.50	4,852.04	360.80	-545.11	-542.07	0.00	0.00	0.00
5,000.00	8.53	303.50	4,950.93	368.99	-557.48	-554.37	0.00	0.00	0.00
5,100.00	8.53	303.50	5,049.83	377.17	-569.85	-566.67	0.00	0.00	0.00
5,200.00	8.53	303.50	5,148.72	385.36	-582.22	-578.97	0.00	0.00	0.00
5,300.00	8.53	303.50	5,247.61	393.55	-594.59	-591.27	0.00	0.00	0.00
5,400.00	8.53	303.50	5,346.51	401.73	-606.95	-603.57	0.00	0.00	0.00
5,500.00	8.53	303.50	5,445.40	409.92	-619.32	-615.87	0.00	0.00	0.00
5,600.00	8.53	303.50	5,544.30	418.11	-631.69	-628.17	0.00	0.00	0.00
5,632.67	8.53	303.50	5,576.60	420.78	-635.73	-632.19	0.00	0.00	0.00
KOP @ 5632.67ft :: DLS = 9°/100'									
5,700.00	4.90	347.66	5,643.50	426.35	-640.52	-636.92	9.00	-5.39	65.59
5,800.00	9.32	58.74	5,742.86	434.74	-634.50	-630.83	9.00	4.42	71.08
5,900.00	17.64	74.20	5,840.05	443.08	-612.95	-609.22	9.00	8.32	15.46
6,000.00	26.40	79.77	5,932.68	451.17	-576.42	-572.62	9.00	8.76	5.57
6,100.00	35.28	82.69	6,018.45	458.81	-525.79	-521.92	9.00	8.88	2.92
6,200.00	44.20	84.55	6,095.27	465.81	-462.31	-458.39	9.00	8.92	1.86
6,300.00	53.15	85.89	6,161.24	472.00	-387.54	-383.58	9.00	8.94	1.34
6,400.00	62.10	86.95	6,214.73	477.23	-303.34	-299.33	9.00	8.96	1.06
6,500.00	71.07	87.85	6,254.43	481.36	-211.76	-207.72	9.00	8.96	0.90
6,600.00	80.03	88.65	6,279.36	484.30	-115.07	-111.01	9.00	8.97	0.80
6,700.00	89.00	89.41	6,288.91	485.98	-15.64	-11.57	9.00	8.97	0.76
6,713.82	90.24	89.52	6,289.00	486.11	-1.83	2.24	9.00	8.97	0.75
End Build @ 6713.82ft									
6,800.00	90.24	89.52	6,288.64	486.84	84.35	88.43	0.00	0.00	0.00
6,900.00	90.24	89.52	6,288.22	487.68	184.35	188.43	0.00	0.00	0.00
7,000.00	90.24	89.52	6,287.80	488.52	284.34	288.43	0.00	0.00	0.00
7,100.00	90.24	89.52	6,287.39	489.37	384.34	388.42	0.00	0.00	0.00
7,200.00	90.24	89.52	6,286.97	490.21	484.33	488.42	0.00	0.00	0.00
7,300.00	90.24	89.52	6,286.55	491.05	584.33	588.42	0.00	0.00	0.00
7,400.00	90.24	89.52	6,286.14	491.90	684.33	688.42	0.00	0.00	0.00
7,500.00	90.24	89.52	6,285.72	492.74	784.32	788.42	0.00	0.00	0.00
7,600.00	90.24	89.52	6,285.30	493.58	884.32	888.42	0.00	0.00	0.00
7,700.00	90.24	89.52	6,284.88	494.43	984.31	988.42	0.00	0.00	0.00
7,800.00	90.24	89.52	6,284.47	495.27	1,084.31	1,088.42	0.00	0.00	0.00
7,900.00	90.24	89.52	6,284.05	496.11	1,184.30	1,188.42	0.00	0.00	0.00
8,000.00	90.24	89.52	6,283.63	496.96	1,284.30	1,288.42	0.00	0.00	0.00
8,100.00	90.24	89.52	6,283.21	497.80	1,384.29	1,388.42	0.00	0.00	0.00
8,200.00	90.24	89.52	6,282.80	498.64	1,484.29	1,488.42	0.00	0.00	0.00
8,300.00	90.24	89.52	6,282.38	499.49	1,584.29	1,588.41	0.00	0.00	0.00
8,400.00	90.24	89.52	6,281.96	500.33	1,684.28	1,688.41	0.00	0.00	0.00
8,500.00	90.24	89.52	6,281.55	501.17	1,784.28	1,788.41	0.00	0.00	0.00
8,600.00	90.24	89.52	6,281.13	502.02	1,884.27	1,888.41	0.00	0.00	0.00
8,700.00	90.24	89.52	6,280.71	502.86	1,984.27	1,988.41	0.00	0.00	0.00
8,800.00	90.24	89.52	6,280.29	503.70	2,084.26	2,088.41	0.00	0.00	0.00
8,900.00	90.24	89.52	6,279.88	504.55	2,184.26	2,188.41	0.00	0.00	0.00
9,000.00	90.24	89.52	6,279.46	505.39	2,284.25	2,288.41	0.00	0.00	0.00
9,100.00	90.24	89.52	6,279.04	506.23	2,384.25	2,388.41	0.00	0.00	0.00
9,200.00	90.24	89.52	6,278.62	507.08	2,484.25	2,488.41	0.00	0.00	0.00
9,300.00	90.24	89.52	6,278.21	507.92	2,584.24	2,588.41	0.00	0.00	0.00
9,400.00	90.24	89.52	6,277.79	508.76	2,684.24	2,688.40	0.00	0.00	0.00
9,500.00	90.24	89.52	6,277.37	509.61	2,784.23	2,788.40	0.00	0.00	0.00
9,600.00	90.24	89.52	6,276.96	510.45	2,884.23	2,888.40	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-5
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	TIMBRO 9-59-8B PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8B-9-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<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)	
9,700.00	90.24	89.52	6,276.54	511.29	2,984.22	2,988.40	0.00	0.00	0.00	
9,800.00	90.24	89.52	6,276.12	512.14	3,084.22	3,088.40	0.00	0.00	0.00	
9,900.00	90.24	89.52	6,275.70	512.98	3,184.21	3,188.40	0.00	0.00	0.00	
10,000.00	90.24	89.52	6,275.29	513.83	3,284.21	3,288.40	0.00	0.00	0.00	
10,100.00	90.24	89.52	6,274.87	514.67	3,384.21	3,388.40	0.00	0.00	0.00	
10,200.00	90.24	89.52	6,274.45	515.51	3,484.20	3,488.40	0.00	0.00	0.00	
10,300.00	90.24	89.52	6,274.03	516.36	3,584.20	3,588.40	0.00	0.00	0.00	
10,400.00	90.24	89.52	6,273.62	517.20	3,684.19	3,688.40	0.00	0.00	0.00	
10,500.00	90.24	89.52	6,273.20	518.04	3,784.19	3,788.40	0.00	0.00	0.00	
10,600.00	90.24	89.52	6,272.78	518.89	3,884.18	3,888.39	0.00	0.00	0.00	
10,700.00	90.24	89.52	6,272.37	519.73	3,984.18	3,988.39	0.00	0.00	0.00	
10,800.00	90.24	89.52	6,271.95	520.57	4,084.18	4,088.39	0.00	0.00	0.00	
10,900.00	90.24	89.52	6,271.53	521.42	4,184.17	4,188.39	0.00	0.00	0.00	
11,000.00	90.24	89.52	6,271.11	522.26	4,284.17	4,288.39	0.00	0.00	0.00	
11,100.00	90.24	89.52	6,270.70	523.10	4,384.16	4,388.39	0.00	0.00	0.00	
11,200.00	90.24	89.52	6,270.28	523.95	4,484.16	4,488.39	0.00	0.00	0.00	
11,300.00	90.24	89.52	6,269.86	524.79	4,584.15	4,588.39	0.00	0.00	0.00	
11,400.00	90.24	89.52	6,269.44	525.63	4,684.15	4,688.39	0.00	0.00	0.00	
11,500.00	90.24	89.52	6,269.03	526.48	4,784.14	4,788.39	0.00	0.00	0.00	
11,600.00	90.24	89.52	6,268.61	527.32	4,884.14	4,888.39	0.00	0.00	0.00	
11,700.00	90.24	89.52	6,268.19	528.16	4,984.14	4,988.38	0.00	0.00	0.00	
11,800.00	90.24	89.52	6,267.78	529.01	5,084.13	5,088.38	0.00	0.00	0.00	
11,900.00	90.24	89.52	6,267.36	529.85	5,184.13	5,188.38	0.00	0.00	0.00	
12,000.00	90.24	89.52	6,266.94	530.69	5,284.12	5,288.38	0.00	0.00	0.00	
12,100.00	90.24	89.52	6,266.52	531.54	5,384.12	5,388.38	0.00	0.00	0.00	
12,200.00	90.24	89.52	6,266.11	532.38	5,484.11	5,488.38	0.00	0.00	0.00	
12,300.00	90.24	89.52	6,265.69	533.22	5,584.11	5,588.38	0.00	0.00	0.00	
12,400.00	90.24	89.52	6,265.27	534.07	5,684.10	5,688.38	0.00	0.00	0.00	
12,500.00	90.24	89.52	6,264.85	534.91	5,784.10	5,788.38	0.00	0.00	0.00	
12,600.00	90.24	89.52	6,264.44	535.75	5,884.10	5,888.38	0.00	0.00	0.00	
12,700.00	90.24	89.52	6,264.02	536.60	5,984.09	5,988.38	0.00	0.00	0.00	
12,800.00	90.24	89.52	6,263.60	537.44	6,084.09	6,088.38	0.00	0.00	0.00	
12,900.00	90.24	89.52	6,263.19	538.28	6,184.08	6,188.37	0.00	0.00	0.00	
13,000.00	90.24	89.52	6,262.77	539.13	6,284.08	6,288.37	0.00	0.00	0.00	
13,100.00	90.24	89.52	6,262.35	539.97	6,384.07	6,388.37	0.00	0.00	0.00	
13,200.00	90.24	89.52	6,261.93	540.82	6,484.07	6,488.37	0.00	0.00	0.00	
13,300.00	90.24	89.52	6,261.52	541.66	6,584.06	6,588.37	0.00	0.00	0.00	
13,400.00	90.24	89.52	6,261.10	542.50	6,684.06	6,688.37	0.00	0.00	0.00	
13,500.00	90.24	89.52	6,260.68	543.35	6,784.06	6,788.37	0.00	0.00	0.00	
13,600.00	90.24	89.52	6,260.26	544.19	6,884.05	6,888.37	0.00	0.00	0.00	
13,700.00	90.24	89.52	6,259.85	545.03	6,984.05	6,988.37	0.00	0.00	0.00	
13,800.00	90.24	89.52	6,259.43	545.88	7,084.04	7,088.37	0.00	0.00	0.00	
13,900.00	90.24	89.52	6,259.01	546.72	7,184.04	7,188.37	0.00	0.00	0.00	
14,000.00	90.24	89.52	6,258.60	547.56	7,284.03	7,288.37	0.00	0.00	0.00	
14,100.00	90.24	89.52	6,258.18	548.41	7,384.03	7,388.36	0.00	0.00	0.00	
14,200.00	90.24	89.52	6,257.76	549.25	7,484.02	7,488.36	0.00	0.00	0.00	
14,300.00	90.24	89.52	6,257.34	550.09	7,584.02	7,588.36	0.00	0.00	0.00	
14,400.00	90.24	89.52	6,256.93	550.94	7,684.02	7,688.36	0.00	0.00	0.00	
14,500.00	90.24	89.52	6,256.51	551.78	7,784.01	7,788.36	0.00	0.00	0.00	
14,600.00	90.24	89.52	6,256.09	552.62	7,884.01	7,888.36	0.00	0.00	0.00	
14,700.00	90.24	89.52	6,255.67	553.47	7,984.00	7,988.36	0.00	0.00	0.00	
14,800.00	90.24	89.52	6,255.26	554.31	8,084.00	8,088.36	0.00	0.00	0.00	
14,900.00	90.24	89.52	6,254.84	555.15	8,183.99	8,188.36	0.00	0.00	0.00	
15,000.00	90.24	89.52	6,254.42	556.00	8,283.99	8,288.36	0.00	0.00	0.00	

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-5
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 24' @ 5069.00usft (RIG)
<b>Site:</b>	TIMBRO 9-59-8B PAD	<b>North Reference:</b>	True
<b>Well:</b>	TIMBRO 9-59 8B-9-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<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)	
15,100.00	90.24	89.52	6,254.01	556.84	8,383.98	8,388.36	0.00	0.00	0.00	
15,200.00	90.24	89.52	6,253.59	557.68	8,483.98	8,488.35	0.00	0.00	0.00	
15,300.00	90.24	89.52	6,253.17	558.53	8,583.98	8,588.35	0.00	0.00	0.00	
15,400.00	90.24	89.52	6,252.75	559.37	8,683.97	8,688.35	0.00	0.00	0.00	
15,500.00	90.24	89.52	6,252.34	560.21	8,783.97	8,788.35	0.00	0.00	0.00	
15,600.00	90.24	89.52	6,251.92	561.06	8,883.96	8,888.35	0.00	0.00	0.00	
15,700.00	90.24	89.52	6,251.50	561.90	8,983.96	8,988.35	0.00	0.00	0.00	
15,800.00	90.24	89.52	6,251.08	562.74	9,083.95	9,088.35	0.00	0.00	0.00	
15,900.00	90.24	89.52	6,250.67	563.59	9,183.95	9,188.35	0.00	0.00	0.00	
16,000.00	90.24	89.52	6,250.25	564.43	9,283.94	9,288.35	0.00	0.00	0.00	
16,100.00	90.24	89.52	6,249.83	565.27	9,383.94	9,388.35	0.00	0.00	0.00	
16,200.00	90.24	89.52	6,249.42	566.12	9,483.94	9,488.35	0.00	0.00	0.00	
16,299.55	90.24	89.52	6,249.00	566.96	9,583.48	9,587.89	0.00	0.00	0.00	
TD Well @ 16299.55ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,712.70	1,700.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
280.00	280.00	+N/-S (usft)	+E/-W (usft)	Begin Nudge @ 280.00ft	
706.50	704.93	17.49	-26.43	Hold Tangent @ 706.50ft	
5,632.67	5,576.60	420.78	-635.73	KOP @ 5632.67ft :: DLS = 9°/100'	
6,713.82	6,289.00	486.11	-1.83	End Build @ 6713.82ft	
16,299.55	6,249.00	566.96	9,583.48	TD Well @ 16299.55ft	