

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

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

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

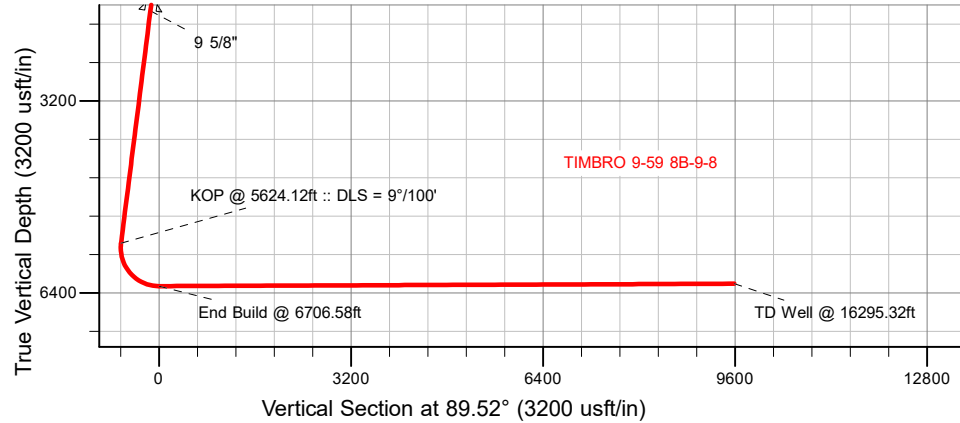
**06 April, 2019**

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

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1710.86	9 5/8"	9-5/8

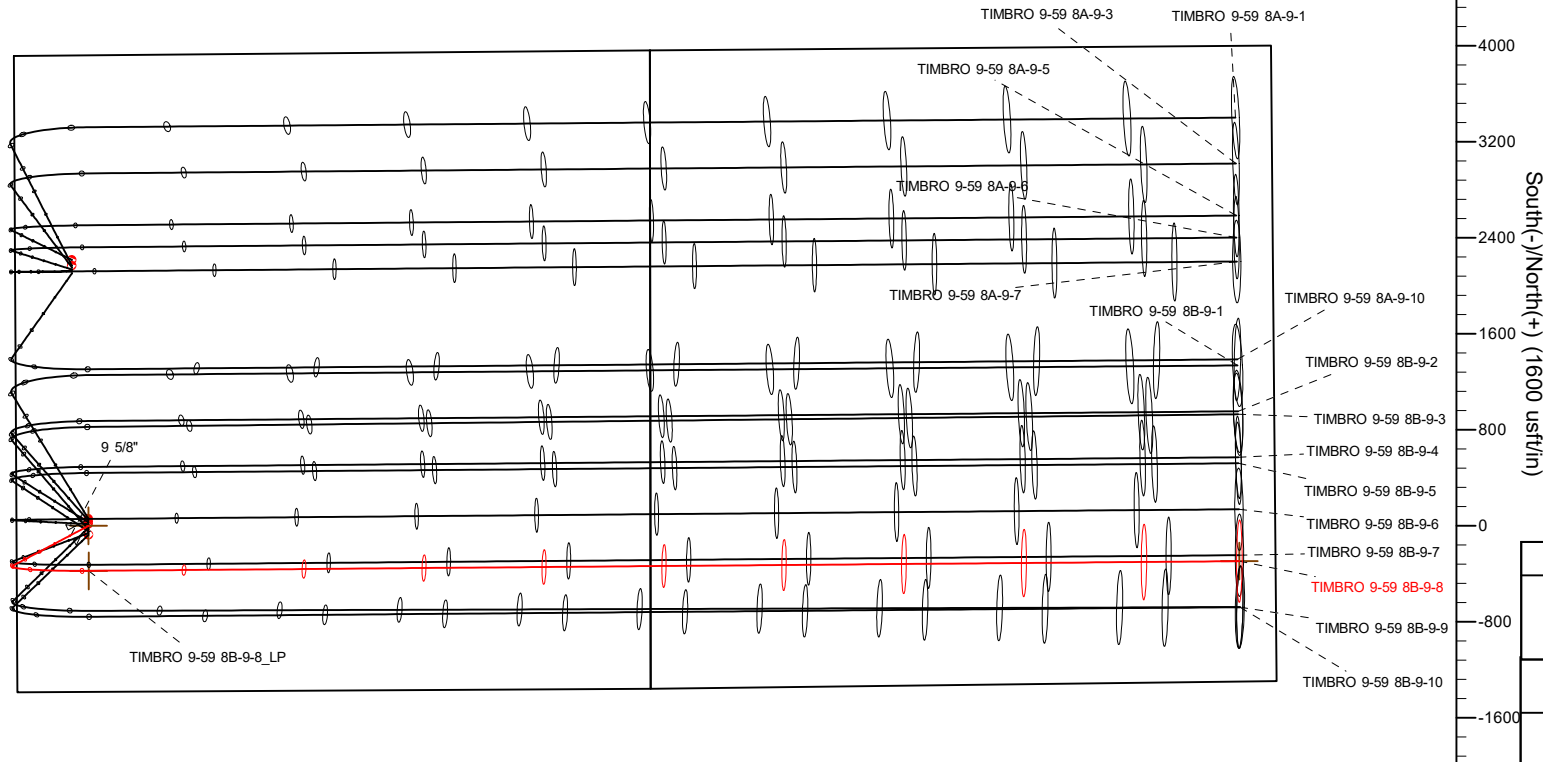
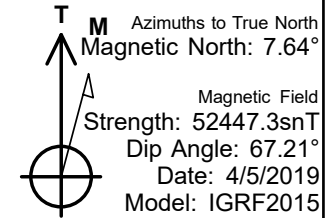
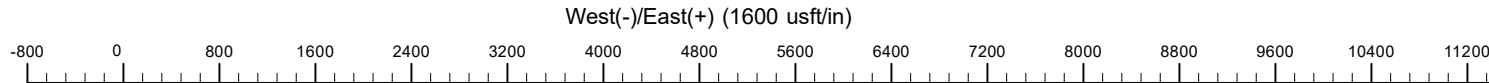


## SECTION DETAILS

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	350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	
3	754.50	8.09	242.20	753.16	-13.30	-25.22	2.00	242.20	-25.33	
4	5624.12	8.09	242.20	5574.32	-332.91	-631.42	0.00	0.00	-634.18	
5	6706.58	90.24	89.52	6289.00	-374.41	3.23	9.00	-152.43	0.09	
6	16295.32	90.24	89.52	6249.00	-293.96	9591.55	0.00	0.00	9588.75	TIMBRO 9-59 8B-9-8_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 9-59 8B-9-8_SHL	0.00	0.00	0.00	40.761531	-104.009523
TIMBRO 9-59 8B-9-8_BHL	6249.00	-293.96	9591.55	40.760719	-103.974900



SHL  
1383' FSL  
600' FWL

LP  
1008' FSL  
600' FWL

BHL  
1003' FSL  
300' FEL

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

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

Plan: Design #1 (TIMBRO 9-59 8B-9-8/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-9-8
<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-9-8	<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-9-8			
<b>Well Position</b>	<b>+N/-S</b>	-59.75 usft	<b>Northing:</b>	1,523,741.09 usft
	<b>+E/-W</b>	0.28 usft	<b>Easting:</b>	3,412,880.00 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	4/5/2019	7.64	67.21	52,447.32514198

<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	16,295.32	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	
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	
754.50	8.09	242.20	753.16	-13.30	-25.22	2.00	2.00	0.00	242.20	
5,624.12	8.09	242.20	5,574.32	-332.91	-631.42	0.00	0.00	0.00	0.00	
6,706.58	90.24	89.52	6,289.00	-374.41	3.23	9.00	7.59	-14.11	-152.43	
16,295.32	90.24	89.52	6,249.00	-293.96	9,591.55	0.00	0.00	0.00	0.00	TIMBRO 9-59 8B-9-8

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TIMBRO 9-59 8B-9-8
<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-9-8	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 350.00ft									
400.00	1.00	242.20	400.00	-0.20	-0.39	-0.39	2.00	2.00	0.00
500.00	3.00	242.20	499.93	-1.83	-3.47	-3.49	2.00	2.00	0.00
600.00	5.00	242.20	599.68	-5.08	-9.64	-9.69	2.00	2.00	0.00
700.00	7.00	242.20	699.13	-9.96	-18.89	-18.97	2.00	2.00	0.00
754.50	8.09	242.20	753.16	-13.30	-25.22	-25.33	2.00	2.00	0.00
Hold Tangent @ 754.50ft									
800.00	8.09	242.20	798.20	-16.28	-30.88	-31.02	0.00	0.00	0.00
900.00	8.09	242.20	897.21	-22.85	-43.33	-43.52	0.00	0.00	0.00
1,000.00	8.09	242.20	996.21	-29.41	-55.78	-56.02	0.00	0.00	0.00
1,100.00	8.09	242.20	1,095.22	-35.97	-68.23	-68.53	0.00	0.00	0.00
1,200.00	8.09	242.20	1,194.22	-42.54	-80.68	-81.03	0.00	0.00	0.00
1,300.00	8.09	242.20	1,293.23	-49.10	-93.13	-93.53	0.00	0.00	0.00
1,400.00	8.09	242.20	1,392.23	-55.66	-105.57	-106.04	0.00	0.00	0.00
1,500.00	8.09	242.20	1,491.24	-62.23	-118.02	-118.54	0.00	0.00	0.00
1,600.00	8.09	242.20	1,590.24	-68.79	-130.47	-131.04	0.00	0.00	0.00
1,700.00	8.09	242.20	1,689.25	-75.35	-142.92	-143.55	0.00	0.00	0.00
1,710.86	8.09	242.20	1,700.00	-76.07	-144.27	-144.90	0.00	0.00	0.00
9 5/8"									
1,800.00	8.09	242.20	1,788.25	-81.92	-155.37	-156.05	0.00	0.00	0.00
1,900.00	8.09	242.20	1,887.26	-88.48	-167.82	-168.55	0.00	0.00	0.00
2,000.00	8.09	242.20	1,986.26	-95.04	-180.27	-181.06	0.00	0.00	0.00
2,100.00	8.09	242.20	2,085.27	-101.61	-192.71	-193.56	0.00	0.00	0.00
2,200.00	8.09	242.20	2,184.27	-108.17	-205.16	-206.06	0.00	0.00	0.00
2,300.00	8.09	242.20	2,283.28	-114.73	-217.61	-218.57	0.00	0.00	0.00
2,400.00	8.09	242.20	2,382.28	-121.30	-230.06	-231.07	0.00	0.00	0.00
2,500.00	8.09	242.20	2,481.29	-127.86	-242.51	-243.57	0.00	0.00	0.00
2,600.00	8.09	242.20	2,580.29	-134.42	-254.96	-256.07	0.00	0.00	0.00
2,700.00	8.09	242.20	2,679.30	-140.99	-267.41	-268.58	0.00	0.00	0.00
2,800.00	8.09	242.20	2,778.30	-147.55	-279.85	-281.08	0.00	0.00	0.00
2,900.00	8.09	242.20	2,877.31	-154.11	-292.30	-293.58	0.00	0.00	0.00
3,000.00	8.09	242.20	2,976.31	-160.68	-304.75	-306.09	0.00	0.00	0.00
3,100.00	8.09	242.20	3,075.32	-167.24	-317.20	-318.59	0.00	0.00	0.00
3,200.00	8.09	242.20	3,174.32	-173.80	-329.65	-331.09	0.00	0.00	0.00
3,300.00	8.09	242.20	3,273.33	-180.37	-342.10	-343.60	0.00	0.00	0.00
3,400.00	8.09	242.20	3,372.33	-186.93	-354.55	-356.10	0.00	0.00	0.00
3,500.00	8.09	242.20	3,471.33	-193.49	-366.99	-368.60	0.00	0.00	0.00
3,600.00	8.09	242.20	3,570.34	-200.06	-379.44	-381.11	0.00	0.00	0.00
3,700.00	8.09	242.20	3,669.34	-206.62	-391.89	-393.61	0.00	0.00	0.00
3,800.00	8.09	242.20	3,768.35	-213.18	-404.34	-406.11	0.00	0.00	0.00
3,900.00	8.09	242.20	3,867.35	-219.75	-416.79	-418.62	0.00	0.00	0.00
4,000.00	8.09	242.20	3,966.36	-226.31	-429.24	-431.12	0.00	0.00	0.00
4,100.00	8.09	242.20	4,065.36	-232.87	-441.69	-443.62	0.00	0.00	0.00
4,200.00	8.09	242.20	4,164.37	-239.44	-454.13	-456.12	0.00	0.00	0.00
4,300.00	8.09	242.20	4,263.37	-246.00	-466.58	-468.63	0.00	0.00	0.00
4,400.00	8.09	242.20	4,362.38	-252.56	-479.03	-481.13	0.00	0.00	0.00
4,500.00	8.09	242.20	4,461.38	-259.13	-491.48	-493.63	0.00	0.00	0.00
4,600.00	8.09	242.20	4,560.39	-265.69	-503.93	-506.14	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-9-8
<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-9-8	<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	8.09	242.20	4,659.39	-272.25	-516.38	-518.64	0.00	0.00	0.00
4,800.00	8.09	242.20	4,758.40	-278.82	-528.83	-531.14	0.00	0.00	0.00
4,900.00	8.09	242.20	4,857.40	-285.38	-541.27	-543.65	0.00	0.00	0.00
5,000.00	8.09	242.20	4,956.41	-291.95	-553.72	-556.15	0.00	0.00	0.00
5,100.00	8.09	242.20	5,055.41	-298.51	-566.17	-568.65	0.00	0.00	0.00
5,200.00	8.09	242.20	5,154.42	-305.07	-578.62	-581.16	0.00	0.00	0.00
5,300.00	8.09	242.20	5,253.42	-311.64	-591.07	-593.66	0.00	0.00	0.00
5,400.00	8.09	242.20	5,352.43	-318.20	-603.52	-606.16	0.00	0.00	0.00
5,500.00	8.09	242.20	5,451.43	-324.76	-615.97	-618.67	0.00	0.00	0.00
5,600.00	8.09	242.20	5,550.44	-331.33	-628.41	-631.17	0.00	0.00	0.00
5,624.12	8.09	242.20	5,574.32	-332.91	-631.42	-634.18	0.00	0.00	0.00
KOP @ 5624.12ft :: DLS = 9°/100'									
5,700.00	3.75	184.93	5,649.83	-337.88	-636.36	-639.17	9.00	-5.72	-75.48
5,800.00	9.41	112.72	5,749.25	-344.31	-629.08	-631.94	9.00	5.66	-72.21
5,900.00	18.03	101.11	5,846.32	-350.46	-606.31	-609.22	9.00	8.61	-11.61
6,000.00	26.89	96.93	5,938.65	-356.18	-568.60	-571.56	9.00	8.86	-4.17
6,100.00	35.82	94.72	6,023.97	-361.33	-516.89	-519.89	9.00	8.93	-2.21
6,200.00	44.77	93.31	6,100.16	-365.78	-452.44	-455.49	9.00	8.95	-1.42
6,300.00	53.74	92.28	6,165.37	-369.42	-376.84	-379.92	9.00	8.97	-1.03
6,400.00	62.71	91.46	6,217.98	-372.17	-291.96	-295.07	9.00	8.97	-0.81
6,500.00	71.69	90.77	6,256.69	-373.95	-199.89	-203.02	9.00	8.98	-0.69
6,600.00	80.67	90.15	6,280.56	-374.72	-102.89	-106.03	9.00	8.98	-0.62
6,700.00	89.65	89.56	6,288.99	-374.46	-3.35	-6.49	9.00	8.98	-0.59
6,706.58	90.24	89.52	6,289.00	-374.41	3.23	0.09	9.00	8.98	-0.59
End Build @ 6706.58ft									
6,800.00	90.24	89.52	6,288.61	-373.62	96.65	93.51	0.00	0.00	0.00
6,900.00	90.24	89.52	6,288.19	-372.78	196.64	193.51	0.00	0.00	0.00
7,000.00	90.24	89.52	6,287.77	-371.94	296.64	293.51	0.00	0.00	0.00
7,100.00	90.24	89.52	6,287.36	-371.11	396.63	393.51	0.00	0.00	0.00
7,200.00	90.24	89.52	6,286.94	-370.27	496.63	493.51	0.00	0.00	0.00
7,300.00	90.24	89.52	6,286.52	-369.43	596.62	593.51	0.00	0.00	0.00
7,400.00	90.24	89.52	6,286.10	-368.59	696.62	693.51	0.00	0.00	0.00
7,500.00	90.24	89.52	6,285.69	-367.75	796.62	793.51	0.00	0.00	0.00
7,600.00	90.24	89.52	6,285.27	-366.91	896.61	893.51	0.00	0.00	0.00
7,700.00	90.24	89.52	6,284.85	-366.07	996.61	993.51	0.00	0.00	0.00
7,800.00	90.24	89.52	6,284.44	-365.23	1,096.60	1,093.50	0.00	0.00	0.00
7,900.00	90.24	89.52	6,284.02	-364.39	1,196.60	1,193.50	0.00	0.00	0.00
8,000.00	90.24	89.52	6,283.60	-363.55	1,296.59	1,293.50	0.00	0.00	0.00
8,100.00	90.24	89.52	6,283.18	-362.72	1,396.59	1,393.50	0.00	0.00	0.00
8,200.00	90.24	89.52	6,282.77	-361.88	1,496.59	1,493.50	0.00	0.00	0.00
8,300.00	90.24	89.52	6,282.35	-361.04	1,596.58	1,593.50	0.00	0.00	0.00
8,400.00	90.24	89.52	6,281.93	-360.20	1,696.58	1,693.50	0.00	0.00	0.00
8,500.00	90.24	89.52	6,281.52	-359.36	1,796.57	1,793.50	0.00	0.00	0.00
8,600.00	90.24	89.52	6,281.10	-358.52	1,896.57	1,893.50	0.00	0.00	0.00
8,700.00	90.24	89.52	6,280.68	-357.68	1,996.56	1,993.50	0.00	0.00	0.00
8,800.00	90.24	89.52	6,280.26	-356.84	2,096.56	2,093.50	0.00	0.00	0.00
8,900.00	90.24	89.52	6,279.85	-356.00	2,196.55	2,193.49	0.00	0.00	0.00
9,000.00	90.24	89.52	6,279.43	-355.17	2,296.55	2,293.49	0.00	0.00	0.00
9,100.00	90.24	89.52	6,279.01	-354.33	2,396.55	2,393.49	0.00	0.00	0.00
9,200.00	90.24	89.52	6,278.60	-353.49	2,496.54	2,493.49	0.00	0.00	0.00
9,300.00	90.24	89.52	6,278.18	-352.65	2,596.54	2,593.49	0.00	0.00	0.00
9,400.00	90.24	89.52	6,277.76	-351.81	2,696.53	2,693.49	0.00	0.00	0.00
9,500.00	90.24	89.52	6,277.34	-350.97	2,796.53	2,793.49	0.00	0.00	0.00
9,600.00	90.24	89.52	6,276.93	-350.13	2,896.52	2,893.49	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-9-8
<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-9-8	<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	6,276.51	-349.29	2,996.52	2,993.49	0.00	0.00	0.00	
9,800.00	90.24	89.52	6,276.09	-348.45	3,096.51	3,093.49	0.00	0.00	0.00	
9,900.00	90.24	89.52	6,275.68	-347.62	3,196.51	3,193.49	0.00	0.00	0.00	
10,000.00	90.24	89.52	6,275.26	-346.78	3,296.51	3,293.49	0.00	0.00	0.00	
10,100.00	90.24	89.52	6,274.84	-345.94	3,396.50	3,393.48	0.00	0.00	0.00	
10,200.00	90.24	89.52	6,274.42	-345.10	3,496.50	3,493.48	0.00	0.00	0.00	
10,300.00	90.24	89.52	6,274.01	-344.26	3,596.49	3,593.48	0.00	0.00	0.00	
10,400.00	90.24	89.52	6,273.59	-343.42	3,696.49	3,693.48	0.00	0.00	0.00	
10,500.00	90.24	89.52	6,273.17	-342.58	3,796.48	3,793.48	0.00	0.00	0.00	
10,600.00	90.24	89.52	6,272.76	-341.74	3,896.48	3,893.48	0.00	0.00	0.00	
10,700.00	90.24	89.52	6,272.34	-340.90	3,996.48	3,993.48	0.00	0.00	0.00	
10,800.00	90.24	89.52	6,271.92	-340.06	4,096.47	4,093.48	0.00	0.00	0.00	
10,900.00	90.24	89.52	6,271.50	-339.23	4,196.47	4,193.48	0.00	0.00	0.00	
11,000.00	90.24	89.52	6,271.09	-338.39	4,296.46	4,293.48	0.00	0.00	0.00	
11,100.00	90.24	89.52	6,270.67	-337.55	4,396.46	4,393.48	0.00	0.00	0.00	
11,200.00	90.24	89.52	6,270.25	-336.71	4,496.45	4,493.47	0.00	0.00	0.00	
11,300.00	90.24	89.52	6,269.84	-335.87	4,596.45	4,593.47	0.00	0.00	0.00	
11,400.00	90.24	89.52	6,269.42	-335.03	4,696.44	4,693.47	0.00	0.00	0.00	
11,500.00	90.24	89.52	6,269.00	-334.19	4,796.44	4,793.47	0.00	0.00	0.00	
11,600.00	90.24	89.52	6,268.59	-333.35	4,896.44	4,893.47	0.00	0.00	0.00	
11,700.00	90.24	89.52	6,268.17	-332.51	4,996.43	4,993.47	0.00	0.00	0.00	
11,800.00	90.24	89.52	6,267.75	-331.68	5,096.43	5,093.47	0.00	0.00	0.00	
11,900.00	90.24	89.52	6,267.33	-330.84	5,196.42	5,193.47	0.00	0.00	0.00	
12,000.00	90.24	89.52	6,266.92	-330.00	5,296.42	5,293.47	0.00	0.00	0.00	
12,100.00	90.24	89.52	6,266.50	-329.16	5,396.41	5,393.47	0.00	0.00	0.00	
12,200.00	90.24	89.52	6,266.08	-328.32	5,496.41	5,493.47	0.00	0.00	0.00	
12,300.00	90.24	89.52	6,265.67	-327.48	5,596.41	5,593.47	0.00	0.00	0.00	
12,400.00	90.24	89.52	6,265.25	-326.64	5,696.40	5,693.46	0.00	0.00	0.00	
12,500.00	90.24	89.52	6,264.83	-325.80	5,796.40	5,793.46	0.00	0.00	0.00	
12,600.00	90.24	89.52	6,264.41	-324.96	5,896.39	5,893.46	0.00	0.00	0.00	
12,700.00	90.24	89.52	6,264.00	-324.12	5,996.39	5,993.46	0.00	0.00	0.00	
12,800.00	90.24	89.52	6,263.58	-323.29	6,096.38	6,093.46	0.00	0.00	0.00	
12,900.00	90.24	89.52	6,263.16	-322.45	6,196.38	6,193.46	0.00	0.00	0.00	
13,000.00	90.24	89.52	6,262.75	-321.61	6,296.37	6,293.46	0.00	0.00	0.00	
13,100.00	90.24	89.52	6,262.33	-320.77	6,396.37	6,393.46	0.00	0.00	0.00	
13,200.00	90.24	89.52	6,261.91	-319.93	6,496.37	6,493.46	0.00	0.00	0.00	
13,300.00	90.24	89.52	6,261.49	-319.09	6,596.36	6,593.46	0.00	0.00	0.00	
13,400.00	90.24	89.52	6,261.08	-318.25	6,696.36	6,693.46	0.00	0.00	0.00	
13,500.00	90.24	89.52	6,260.66	-317.41	6,796.35	6,793.45	0.00	0.00	0.00	
13,600.00	90.24	89.52	6,260.24	-316.57	6,896.35	6,893.45	0.00	0.00	0.00	
13,700.00	90.24	89.52	6,259.83	-315.74	6,996.34	6,993.45	0.00	0.00	0.00	
13,800.00	90.24	89.52	6,259.41	-314.90	7,096.34	7,093.45	0.00	0.00	0.00	
13,900.00	90.24	89.52	6,258.99	-314.06	7,196.34	7,193.45	0.00	0.00	0.00	
14,000.00	90.24	89.52	6,258.57	-313.22	7,296.33	7,293.45	0.00	0.00	0.00	
14,100.00	90.24	89.52	6,258.16	-312.38	7,396.33	7,393.45	0.00	0.00	0.00	
14,200.00	90.24	89.52	6,257.74	-311.54	7,496.32	7,493.45	0.00	0.00	0.00	
14,300.00	90.24	89.52	6,257.32	-310.70	7,596.32	7,593.45	0.00	0.00	0.00	
14,400.00	90.24	89.52	6,256.91	-309.86	7,696.31	7,693.45	0.00	0.00	0.00	
14,500.00	90.24	89.52	6,256.49	-309.02	7,796.31	7,793.45	0.00	0.00	0.00	
14,600.00	90.24	89.52	6,256.07	-308.18	7,896.30	7,893.45	0.00	0.00	0.00	
14,700.00	90.24	89.52	6,255.65	-307.35	7,996.30	7,993.44	0.00	0.00	0.00	
14,800.00	90.24	89.52	6,255.24	-306.51	8,096.30	8,093.44	0.00	0.00	0.00	
14,900.00	90.24	89.52	6,254.82	-305.67	8,196.29	8,193.44	0.00	0.00	0.00	
15,000.00	90.24	89.52	6,254.40	-304.83	8,296.29	8,293.44	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-9-8
<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-9-8	<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	6,253.99	-303.99	8,396.28	8,393.44	0.00	0.00	0.00	
15,200.00	90.24	89.52	6,253.57	-303.15	8,496.28	8,493.44	0.00	0.00	0.00	
15,300.00	90.24	89.52	6,253.15	-302.31	8,596.27	8,593.44	0.00	0.00	0.00	
15,400.00	90.24	89.52	6,252.73	-301.47	8,696.27	8,693.44	0.00	0.00	0.00	
15,500.00	90.24	89.52	6,252.32	-300.63	8,796.26	8,793.44	0.00	0.00	0.00	
15,600.00	90.24	89.52	6,251.90	-299.80	8,896.26	8,893.44	0.00	0.00	0.00	
15,700.00	90.24	89.52	6,251.48	-298.96	8,996.26	8,993.44	0.00	0.00	0.00	
15,800.00	90.24	89.52	6,251.07	-298.12	9,096.25	9,093.44	0.00	0.00	0.00	
15,900.00	90.24	89.52	6,250.65	-297.28	9,196.25	9,193.43	0.00	0.00	0.00	
16,000.00	90.24	89.52	6,250.23	-296.44	9,296.24	9,293.43	0.00	0.00	0.00	
16,100.00	90.24	89.52	6,249.81	-295.60	9,396.24	9,393.43	0.00	0.00	0.00	
16,200.00	90.24	89.52	6,249.40	-294.76	9,496.23	9,493.43	0.00	0.00	0.00	
16,295.32	90.24	89.52	6,249.00	-293.96	9,591.55	9,588.75	0.00	0.00	0.00	
TD Well @ 16295.32ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,710.86	1,700.00	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	
350.00	350.00	0.00	0.00	Begin Nudge @ 350.00ft	
754.50	753.16	-13.30	-25.22	Hold Tangent @ 754.50ft	
5,624.12	5,574.32	-332.91	-631.42	KOP @ 5624.12ft :: DLS = 9°/100'	
6,706.58	6,289.00	-374.41	3.23	End Build @ 6706.58ft	
16,295.32	6,249.00	-293.96	9,591.55	TD Well @ 16295.32ft	