

VERDAD RESOURCES

WATTENBERG FIELD

TIMBRO 9-59-8B PAD

TIMBRO 9-59 8B-9-10

Wellbore #1

Plan: Design #1

Standard Planning Report

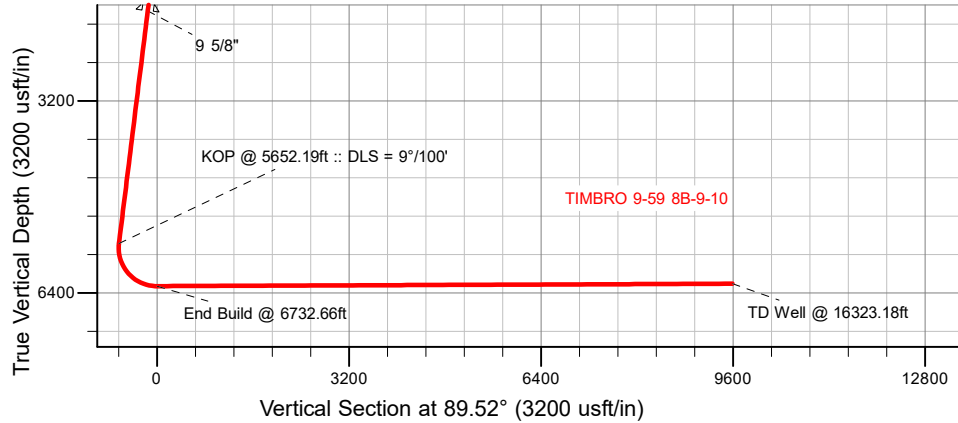
06 April, 2019

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

VERDAD RESOURCES

CASING DETAILS

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

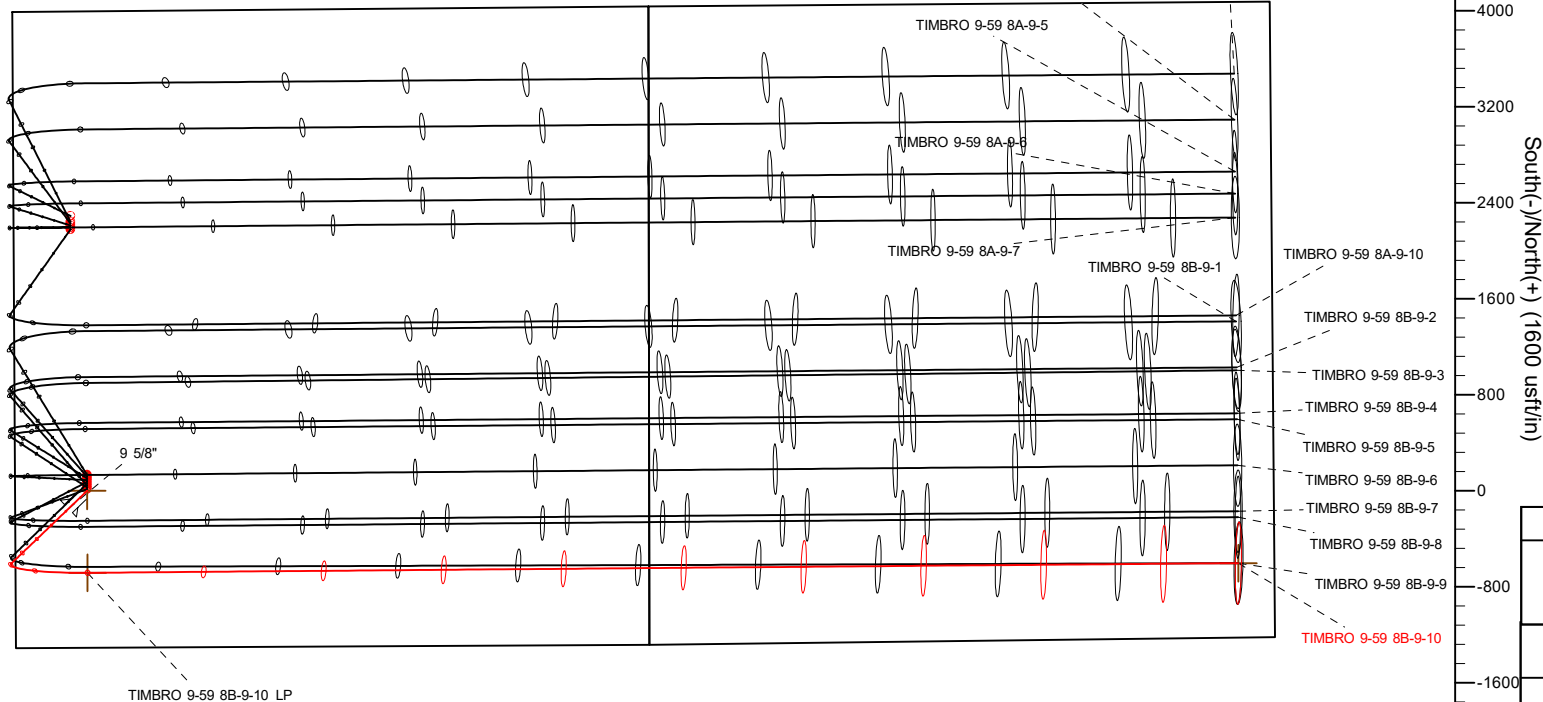
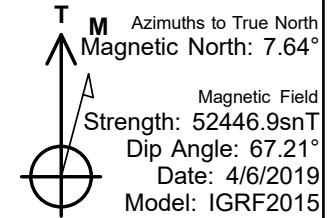
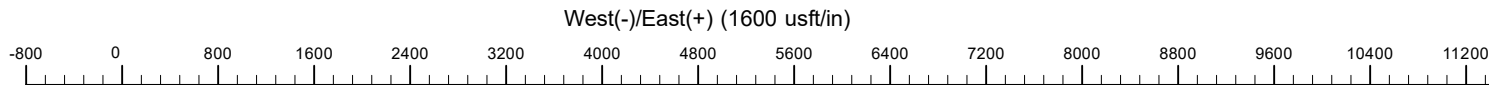


SECTION DETAILS

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	226.20	680.22	-28.06	-29.26	2.00	226.20	-29.49	
4	5652.19	9.65	226.20	5579.59	-604.66	-630.53	0.00	0.00	-635.57	
5	6732.66	90.24	89.52	6289.00	-682.43	4.65	9.00	-136.25	-1.07	
6	16323.18	90.24	89.52	6249.00	-601.82	9594.75	0.00	0.00	9589.37	TIMBRO 9-59 8B-9-10_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 9-59 8B-9-10_SHL	0.00	0.00	0.00	40.761325	-104.009521
TIMBRO 9-59 8B-9-10_BHL	6249.00	-601.82	9594.75	40.759668	-103.974887



SHL
1308' FSL
600' FWL

LP
625' FSL
600' FWL

BHL
620' FSL
300' FEL

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

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

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

Date: 4/6/2019

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 9-59 8B-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	TIMBRO 9-59-8B PAD	North Reference:	True
Well:	TIMBRO 9-59 8B-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 9-59-8B PAD			
Site Position:		Northing:	1,523,800.83 usft	Latitude: 40.761695
From:	Lat/Long	Easting:	3,412,878.72 usft	Longitude: -104.009524
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.96 °

Well	TIMBRO 9-59 8B-9-10			
Well Position	+N/-S	-134.81 usft	Northing:	1,523,666.06 usft
	+E/-W	0.83 usft	Easting:	3,412,881.81 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 5,045.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/6/2019	7.64	67.21	52,446.90648082

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	89.52

Plan Survey Tool Program	Date	4/6/2019		
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	16,323.18	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	226.20	680.22	-28.06	-29.26	2.00	2.00	0.00	226.20	
5,652.19	9.65	226.20	5,579.59	-604.66	-630.53	0.00	0.00	0.00	0.00	
6,732.66	90.24	89.52	6,289.00	-682.43	4.65	9.00	7.46	-12.65	-136.25	
16,323.18	90.24	89.52	6,249.00	-601.82	9,594.75	0.00	0.00	0.00	0.00	TIMBRO 9-59 8B-9-10

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	TIMBRO 9-59-8B PAD	North Reference:	True
Well:	TIMBRO 9-59 8B-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	226.20	299.98	-1.21	-1.26	-1.27	2.00	2.00	0.00
400.00	4.00	226.20	399.84	-4.83	-5.04	-5.08	2.00	2.00	0.00
500.00	6.00	226.20	499.45	-10.86	-11.33	-11.42	2.00	2.00	0.00
600.00	8.00	226.20	598.70	-19.30	-20.12	-20.28	2.00	2.00	0.00
682.50	9.65	226.20	680.22	-28.06	-29.26	-29.49	2.00	2.00	0.00
Hold Tangent @ 682.50ft									
700.00	9.65	226.20	697.47	-30.09	-31.37	-31.63	0.00	0.00	0.00
800.00	9.65	226.20	796.06	-41.69	-43.47	-43.82	0.00	0.00	0.00
900.00	9.65	226.20	894.64	-53.29	-55.57	-56.02	0.00	0.00	0.00
1,000.00	9.65	226.20	993.23	-64.89	-67.67	-68.21	0.00	0.00	0.00
1,100.00	9.65	226.20	1,091.81	-76.50	-79.77	-80.41	0.00	0.00	0.00
1,200.00	9.65	226.20	1,190.40	-88.10	-91.87	-92.60	0.00	0.00	0.00
1,300.00	9.65	226.20	1,288.98	-99.70	-103.97	-104.80	0.00	0.00	0.00
1,400.00	9.65	226.20	1,387.57	-111.30	-116.07	-116.99	0.00	0.00	0.00
1,500.00	9.65	226.20	1,486.15	-122.91	-128.17	-129.19	0.00	0.00	0.00
1,600.00	9.65	226.20	1,584.74	-134.51	-140.26	-141.39	0.00	0.00	0.00
1,700.00	9.65	226.20	1,683.32	-146.11	-152.36	-153.58	0.00	0.00	0.00
1,716.91	9.65	226.20	1,700.00	-148.07	-154.41	-155.64	0.00	0.00	0.00
9 5/8"									
1,800.00	9.65	226.20	1,781.91	-157.71	-164.46	-165.78	0.00	0.00	0.00
1,900.00	9.65	226.20	1,880.49	-169.32	-176.56	-177.97	0.00	0.00	0.00
2,000.00	9.65	226.20	1,979.08	-180.92	-188.66	-190.17	0.00	0.00	0.00
2,100.00	9.65	226.20	2,077.66	-192.52	-200.76	-202.36	0.00	0.00	0.00
2,200.00	9.65	226.20	2,176.25	-204.12	-212.86	-214.56	0.00	0.00	0.00
2,300.00	9.65	226.20	2,274.83	-215.72	-224.96	-226.76	0.00	0.00	0.00
2,400.00	9.65	226.20	2,373.42	-227.33	-237.05	-238.95	0.00	0.00	0.00
2,500.00	9.65	226.20	2,472.00	-238.93	-249.15	-251.15	0.00	0.00	0.00
2,600.00	9.65	226.20	2,570.59	-250.53	-261.25	-263.34	0.00	0.00	0.00
2,700.00	9.65	226.20	2,669.17	-262.13	-273.35	-275.54	0.00	0.00	0.00
2,800.00	9.65	226.20	2,767.76	-273.74	-285.45	-287.73	0.00	0.00	0.00
2,900.00	9.65	226.20	2,866.34	-285.34	-297.55	-299.93	0.00	0.00	0.00
3,000.00	9.65	226.20	2,964.93	-296.94	-309.65	-312.12	0.00	0.00	0.00
3,100.00	9.65	226.20	3,063.51	-308.54	-321.75	-324.32	0.00	0.00	0.00
3,200.00	9.65	226.20	3,162.10	-320.15	-333.84	-336.52	0.00	0.00	0.00
3,300.00	9.65	226.20	3,260.68	-331.75	-345.94	-348.71	0.00	0.00	0.00
3,400.00	9.65	226.20	3,359.27	-343.35	-358.04	-360.91	0.00	0.00	0.00
3,500.00	9.65	226.20	3,457.85	-354.95	-370.14	-373.10	0.00	0.00	0.00
3,600.00	9.65	226.20	3,556.44	-366.56	-382.24	-385.30	0.00	0.00	0.00
3,700.00	9.65	226.20	3,655.02	-378.16	-394.34	-397.49	0.00	0.00	0.00
3,800.00	9.65	226.20	3,753.61	-389.76	-406.44	-409.69	0.00	0.00	0.00
3,900.00	9.65	226.20	3,852.19	-401.36	-418.54	-421.88	0.00	0.00	0.00
4,000.00	9.65	226.20	3,950.78	-412.96	-430.64	-434.08	0.00	0.00	0.00
4,100.00	9.65	226.20	4,049.36	-424.57	-442.73	-446.28	0.00	0.00	0.00
4,200.00	9.65	226.20	4,147.95	-436.17	-454.83	-458.47	0.00	0.00	0.00
4,300.00	9.65	226.20	4,246.54	-447.77	-466.93	-470.67	0.00	0.00	0.00
4,400.00	9.65	226.20	4,345.12	-459.37	-479.03	-482.86	0.00	0.00	0.00
4,500.00	9.65	226.20	4,443.71	-470.98	-491.13	-495.06	0.00	0.00	0.00
4,600.00	9.65	226.20	4,542.29	-482.58	-503.23	-507.25	0.00	0.00	0.00
4,700.00	9.65	226.20	4,640.88	-494.18	-515.33	-519.45	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 8B-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	TIMBRO 9-59-8B PAD	North Reference:	True
Well:	TIMBRO 9-59 8B-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	226.20	4,739.46	-505.78	-527.43	-531.64	0.00	0.00	0.00
4,900.00	9.65	226.20	4,838.05	-517.39	-539.52	-543.84	0.00	0.00	0.00
5,000.00	9.65	226.20	4,936.63	-528.99	-551.62	-556.04	0.00	0.00	0.00
5,100.00	9.65	226.20	5,035.22	-540.59	-563.72	-568.23	0.00	0.00	0.00
5,200.00	9.65	226.20	5,133.80	-552.19	-575.82	-580.43	0.00	0.00	0.00
5,300.00	9.65	226.20	5,232.39	-563.79	-587.92	-592.62	0.00	0.00	0.00
5,400.00	9.65	226.20	5,330.97	-575.40	-600.02	-604.82	0.00	0.00	0.00
5,500.00	9.65	226.20	5,429.56	-587.00	-612.12	-617.01	0.00	0.00	0.00
5,600.00	9.65	226.20	5,528.14	-598.60	-624.22	-629.21	0.00	0.00	0.00
5,652.19	9.65	226.20	5,579.59	-604.66	-630.53	-635.57	0.00	0.00	0.00
KOP @ 5652.19ft :: DLS = 9°/100'									
5,700.00	7.18	201.68	5,626.90	-610.21	-634.53	-639.62	9.00	-5.16	-51.30
5,800.00	9.16	135.94	5,726.07	-621.76	-631.30	-636.48	9.00	1.98	-65.74
5,900.00	16.65	112.51	5,823.54	-632.99	-612.49	-617.77	9.00	7.50	-23.43
6,000.00	25.14	103.95	5,916.90	-643.61	-578.56	-583.93	9.00	8.49	-8.56
6,100.00	33.88	99.55	6,003.85	-653.38	-530.36	-535.81	9.00	8.74	-4.39
6,200.00	42.72	96.81	6,082.25	-662.05	-469.06	-474.59	9.00	8.84	-2.75
6,300.00	51.61	94.85	6,150.17	-669.40	-396.17	-401.77	9.00	8.89	-1.95
6,400.00	60.52	93.33	6,205.94	-675.25	-313.50	-319.15	9.00	8.91	-1.52
6,500.00	69.45	92.05	6,248.19	-679.47	-223.07	-228.76	9.00	8.93	-1.27
6,600.00	78.38	90.92	6,275.87	-681.94	-127.12	-132.83	9.00	8.93	-1.13
6,700.00	87.32	89.86	6,288.30	-682.60	-28.00	-33.72	9.00	8.94	-1.06
6,732.66	90.24	89.52	6,289.00	-682.43	4.65	-1.07	9.00	8.94	-1.04
End Build @ 6732.66ft									
6,800.00	90.24	89.52	6,288.72	-681.86	71.98	66.27	0.00	0.00	0.00
6,900.00	90.24	89.52	6,288.30	-681.02	171.98	166.27	0.00	0.00	0.00
7,000.00	90.24	89.52	6,287.88	-680.18	271.98	266.27	0.00	0.00	0.00
7,100.00	90.24	89.52	6,287.46	-679.34	371.97	366.27	0.00	0.00	0.00
7,200.00	90.24	89.52	6,287.05	-678.50	471.97	466.27	0.00	0.00	0.00
7,300.00	90.24	89.52	6,286.63	-677.66	571.96	566.27	0.00	0.00	0.00
7,400.00	90.24	89.52	6,286.21	-676.82	671.96	666.26	0.00	0.00	0.00
7,500.00	90.24	89.52	6,285.80	-675.98	771.95	766.26	0.00	0.00	0.00
7,600.00	90.24	89.52	6,285.38	-675.14	871.95	866.26	0.00	0.00	0.00
7,700.00	90.24	89.52	6,284.96	-674.30	971.95	966.26	0.00	0.00	0.00
7,800.00	90.24	89.52	6,284.55	-673.46	1,071.94	1,066.26	0.00	0.00	0.00
7,900.00	90.24	89.52	6,284.13	-672.62	1,171.94	1,166.26	0.00	0.00	0.00
8,000.00	90.24	89.52	6,283.71	-671.77	1,271.93	1,266.26	0.00	0.00	0.00
8,100.00	90.24	89.52	6,283.29	-670.93	1,371.93	1,366.26	0.00	0.00	0.00
8,200.00	90.24	89.52	6,282.88	-670.09	1,471.92	1,466.26	0.00	0.00	0.00
8,300.00	90.24	89.52	6,282.46	-669.25	1,571.92	1,566.26	0.00	0.00	0.00
8,400.00	90.24	89.52	6,282.04	-668.41	1,671.91	1,666.26	0.00	0.00	0.00
8,500.00	90.24	89.52	6,281.63	-667.57	1,771.91	1,766.26	0.00	0.00	0.00
8,600.00	90.24	89.52	6,281.21	-666.73	1,871.91	1,866.25	0.00	0.00	0.00
8,700.00	90.24	89.52	6,280.79	-665.89	1,971.90	1,966.25	0.00	0.00	0.00
8,800.00	90.24	89.52	6,280.37	-665.05	2,071.90	2,066.25	0.00	0.00	0.00
8,900.00	90.24	89.52	6,279.96	-664.21	2,171.89	2,166.25	0.00	0.00	0.00
9,000.00	90.24	89.52	6,279.54	-663.37	2,271.89	2,266.25	0.00	0.00	0.00
9,100.00	90.24	89.52	6,279.12	-662.53	2,371.88	2,366.25	0.00	0.00	0.00
9,200.00	90.24	89.52	6,278.71	-661.69	2,471.88	2,466.25	0.00	0.00	0.00
9,300.00	90.24	89.52	6,278.29	-660.85	2,571.87	2,566.25	0.00	0.00	0.00
9,400.00	90.24	89.52	6,277.87	-660.01	2,671.87	2,666.25	0.00	0.00	0.00
9,500.00	90.24	89.52	6,277.46	-659.17	2,771.87	2,766.25	0.00	0.00	0.00
9,600.00	90.24	89.52	6,277.04	-658.33	2,871.86	2,866.25	0.00	0.00	0.00
9,700.00	90.24	89.52	6,276.62	-657.49	2,971.86	2,966.24	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 8B-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	TIMBRO 9-59-8B PAD	North Reference:	True
Well:	TIMBRO 9-59 8B-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	90.24	89.52	6,276.20	-656.65	3,071.85	3,066.24	0.00	0.00	0.00	
9,900.00	90.24	89.52	6,275.79	-655.81	3,171.85	3,166.24	0.00	0.00	0.00	
10,000.00	90.24	89.52	6,275.37	-654.96	3,271.84	3,266.24	0.00	0.00	0.00	
10,100.00	90.24	89.52	6,274.95	-654.12	3,371.84	3,366.24	0.00	0.00	0.00	
10,200.00	90.24	89.52	6,274.54	-653.28	3,471.84	3,466.24	0.00	0.00	0.00	
10,300.00	90.24	89.52	6,274.12	-652.44	3,571.83	3,566.24	0.00	0.00	0.00	
10,400.00	90.24	89.52	6,273.70	-651.60	3,671.83	3,666.24	0.00	0.00	0.00	
10,500.00	90.24	89.52	6,273.29	-650.76	3,771.82	3,766.24	0.00	0.00	0.00	
10,600.00	90.24	89.52	6,272.87	-649.92	3,871.82	3,866.24	0.00	0.00	0.00	
10,700.00	90.24	89.52	6,272.45	-649.08	3,971.81	3,966.24	0.00	0.00	0.00	
10,800.00	90.24	89.52	6,272.03	-648.24	4,071.81	4,066.24	0.00	0.00	0.00	
10,900.00	90.24	89.52	6,271.62	-647.40	4,171.80	4,166.23	0.00	0.00	0.00	
11,000.00	90.24	89.52	6,271.20	-646.56	4,271.80	4,266.23	0.00	0.00	0.00	
11,100.00	90.24	89.52	6,270.78	-645.72	4,371.80	4,366.23	0.00	0.00	0.00	
11,200.00	90.24	89.52	6,270.37	-644.88	4,471.79	4,466.23	0.00	0.00	0.00	
11,300.00	90.24	89.52	6,269.95	-644.04	4,571.79	4,566.23	0.00	0.00	0.00	
11,400.00	90.24	89.52	6,269.53	-643.20	4,671.78	4,666.23	0.00	0.00	0.00	
11,500.00	90.24	89.52	6,269.11	-642.36	4,771.78	4,766.23	0.00	0.00	0.00	
11,600.00	90.24	89.52	6,268.70	-641.52	4,871.77	4,866.23	0.00	0.00	0.00	
11,700.00	90.24	89.52	6,268.28	-640.68	4,971.77	4,966.23	0.00	0.00	0.00	
11,800.00	90.24	89.52	6,267.86	-639.84	5,071.76	5,066.23	0.00	0.00	0.00	
11,900.00	90.24	89.52	6,267.45	-639.00	5,171.76	5,166.23	0.00	0.00	0.00	
12,000.00	90.24	89.52	6,267.03	-638.15	5,271.76	5,266.22	0.00	0.00	0.00	
12,100.00	90.24	89.52	6,266.61	-637.31	5,371.75	5,366.22	0.00	0.00	0.00	
12,200.00	90.24	89.52	6,266.20	-636.47	5,471.75	5,466.22	0.00	0.00	0.00	
12,300.00	90.24	89.52	6,265.78	-635.63	5,571.74	5,566.22	0.00	0.00	0.00	
12,400.00	90.24	89.52	6,265.36	-634.79	5,671.74	5,666.22	0.00	0.00	0.00	
12,500.00	90.24	89.52	6,264.94	-633.95	5,771.73	5,766.22	0.00	0.00	0.00	
12,600.00	90.24	89.52	6,264.53	-633.11	5,871.73	5,866.22	0.00	0.00	0.00	
12,700.00	90.24	89.52	6,264.11	-632.27	5,971.73	5,966.22	0.00	0.00	0.00	
12,800.00	90.24	89.52	6,263.69	-631.43	6,071.72	6,066.22	0.00	0.00	0.00	
12,900.00	90.24	89.52	6,263.28	-630.59	6,171.72	6,166.22	0.00	0.00	0.00	
13,000.00	90.24	89.52	6,262.86	-629.75	6,271.71	6,266.22	0.00	0.00	0.00	
13,100.00	90.24	89.52	6,262.44	-628.91	6,371.71	6,366.22	0.00	0.00	0.00	
13,200.00	90.24	89.52	6,262.03	-628.07	6,471.70	6,466.21	0.00	0.00	0.00	
13,300.00	90.24	89.52	6,261.61	-627.23	6,571.70	6,566.21	0.00	0.00	0.00	
13,400.00	90.24	89.52	6,261.19	-626.39	6,671.69	6,666.21	0.00	0.00	0.00	
13,500.00	90.24	89.52	6,260.77	-625.55	6,771.69	6,766.21	0.00	0.00	0.00	
13,600.00	90.24	89.52	6,260.36	-624.71	6,871.69	6,866.21	0.00	0.00	0.00	
13,700.00	90.24	89.52	6,259.94	-623.87	6,971.68	6,966.21	0.00	0.00	0.00	
13,800.00	90.24	89.52	6,259.52	-623.03	7,071.68	7,066.21	0.00	0.00	0.00	
13,900.00	90.24	89.52	6,259.11	-622.18	7,171.67	7,166.21	0.00	0.00	0.00	
14,000.00	90.24	89.52	6,258.69	-621.34	7,271.67	7,266.21	0.00	0.00	0.00	
14,100.00	90.24	89.52	6,258.27	-620.50	7,371.66	7,366.21	0.00	0.00	0.00	
14,200.00	90.24	89.52	6,257.85	-619.66	7,471.66	7,466.21	0.00	0.00	0.00	
14,300.00	90.24	89.52	6,257.44	-618.82	7,571.65	7,566.20	0.00	0.00	0.00	
14,400.00	90.24	89.52	6,257.02	-617.98	7,671.65	7,666.20	0.00	0.00	0.00	
14,500.00	90.24	89.52	6,256.60	-617.14	7,771.65	7,766.20	0.00	0.00	0.00	
14,600.00	90.24	89.52	6,256.19	-616.30	7,871.64	7,866.20	0.00	0.00	0.00	
14,700.00	90.24	89.52	6,255.77	-615.46	7,971.64	7,966.20	0.00	0.00	0.00	
14,800.00	90.24	89.52	6,255.35	-614.62	8,071.63	8,066.20	0.00	0.00	0.00	
14,900.00	90.24	89.52	6,254.94	-613.78	8,171.63	8,166.20	0.00	0.00	0.00	
15,000.00	90.24	89.52	6,254.52	-612.94	8,271.62	8,266.20	0.00	0.00	0.00	
15,100.00	90.24	89.52	6,254.10	-612.10	8,371.62	8,366.20	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 8B-9-10
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5069.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5069.00usft (RIG)
Site:	TIMBRO 9-59-8B PAD	North Reference:	True
Well:	TIMBRO 9-59 8B-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	90.24	89.52	6,253.68	-611.26	8,471.62	8,466.20	0.00	0.00	0.00	
15,300.00	90.24	89.52	6,253.27	-610.42	8,571.61	8,566.20	0.00	0.00	0.00	
15,400.00	90.24	89.52	6,252.85	-609.58	8,671.61	8,666.20	0.00	0.00	0.00	
15,500.00	90.24	89.52	6,252.43	-608.74	8,771.60	8,766.19	0.00	0.00	0.00	
15,600.00	90.24	89.52	6,252.02	-607.90	8,871.60	8,866.19	0.00	0.00	0.00	
15,700.00	90.24	89.52	6,251.60	-607.06	8,971.59	8,966.19	0.00	0.00	0.00	
15,800.00	90.24	89.52	6,251.18	-606.22	9,071.59	9,066.19	0.00	0.00	0.00	
15,900.00	90.24	89.52	6,250.76	-605.37	9,171.58	9,166.19	0.00	0.00	0.00	
16,000.00	90.24	89.52	6,250.35	-604.53	9,271.58	9,266.19	0.00	0.00	0.00	
16,100.00	90.24	89.52	6,249.93	-603.69	9,371.58	9,366.19	0.00	0.00	0.00	
16,200.00	90.24	89.52	6,249.51	-602.85	9,471.57	9,466.19	0.00	0.00	0.00	
16,300.00	90.24	89.52	6,249.10	-602.01	9,571.57	9,566.19	0.00	0.00	0.00	
16,323.18	90.24	89.52	6,249.00	-601.82	9,594.75	9,589.37	0.00	0.00	0.00	
TD Well @ 16323.18ft										

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	-28.06	-29.26	Hold Tangent @ 682.50ft	
5,652.19	5,579.59	-604.66	-630.53	KOP @ 5652.19ft :: DLS = 9°/100'	
6,732.66	6,289.00	-682.43	4.65	End Build @ 6732.66ft	
16,323.18	6,249.00	-601.82	9,594.75	TD Well @ 16323.18ft	