

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-65W-30 JOHNSON PAD**

**JOHNSON 01N-65W-30-4H**

**Wellbore #1**

**Plan: Design #2**

## **Standard Planning Report**

**05 June, 2018**

Project: WATTENBERG FIELD  
Site: 1N-65W-30 JOHNSON PAD  
Well: JOHNSON 01N-65W-30-4H  
Wellbore: Wellbore #1  
Design: Design #2

# VERDAD RESOURCES

## CASING DETAILS

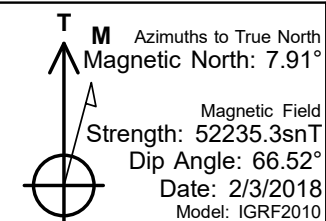
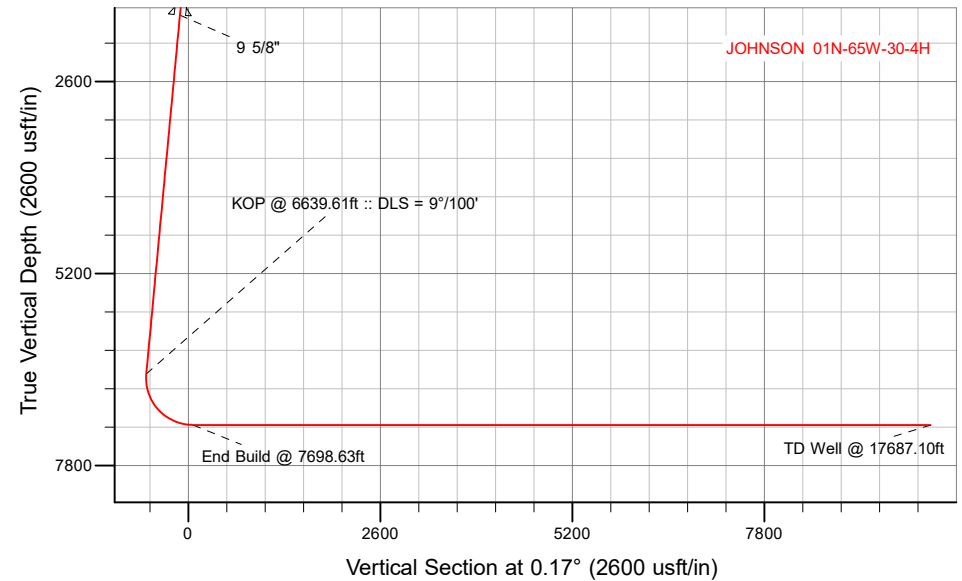
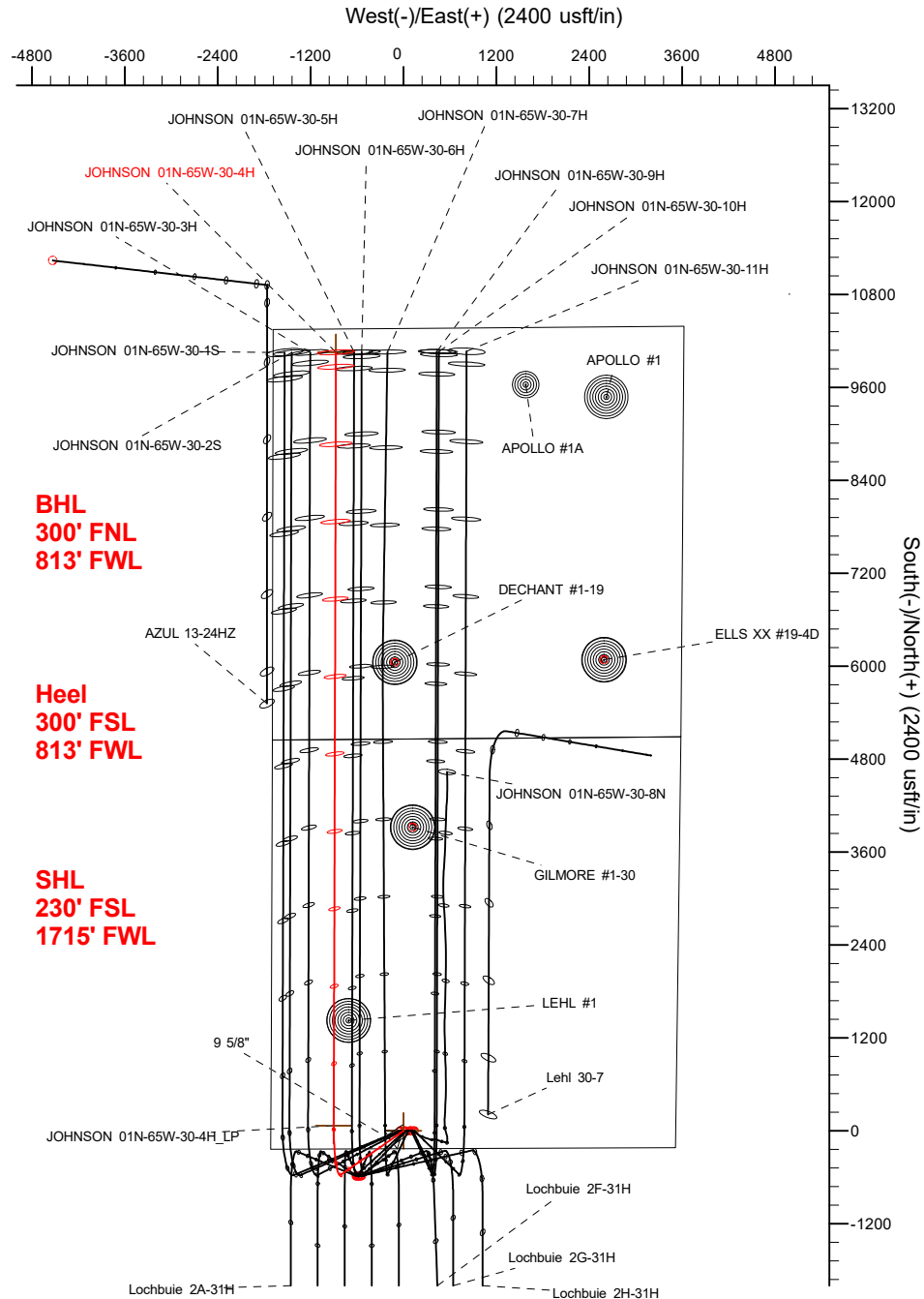
TVD	MD	Name	Size
1700.00	1715.04	9 5/8"	9-5/8

## 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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	712.50	9.25	235.00	710.49	-21.37	-30.52	2.00	235.00	-21.46	
4	6639.61	9.25	235.00	6560.53	-567.84	-810.95	0.00	0.00	-570.24	
5	7698.63	90.00	0.17	7250.00	66.31	-900.92	9.00	124.81	63.64	
6	17687.10	90.00	0.17	7250.00	10054.74	-872.12	0.00	0.00	10052.11	JOHNSON 01N-65W-30-4H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JOHNSON 01N-65W-30-4H_SHL	0.00	0.00	0.00	40.015684	-104.710027
JOHNSON 01N-65W-30-4H_BHL	7250.00	10054.74	-872.12	40.043286	-104.713142



## WELL DETAILS: JOHNSON 01N-65W-30-4H

GL = 500'

RKB = 20' @ 5020.00usft (RIG)

Plan: Design #2 (JOHNSON 01N-65W-30-4H/Wellbore #1)

Date: 6/5/2018

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 01N-65W-30-4H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Site:</b>	1N-65W-30 JOHNSON PAD	<b>North Reference:</b>	True
<b>Well:</b>	JOHNSON 01N-65W-30-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

<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		

Site		1N-65W-30 JOHNSON PAD			
Site Position:		Northing:	1,249,544.93 usft	Latitude:	40.015680
From:	Map	Easting:	3,221,340.35 usft	Longitude:	-104.709740
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.51 °

Well	JOHNSON 01N-65W-30-4H					
Well Position	+N/-S	1.45 usft	Northing:	1,249,545.67 usft	Latitude:	40.015684
	+E/-W	-80.38 usft	Easting:	3,221,259.95 usft	Longitude:	-104.710027
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,000.00 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>
	IGRF2010	2/3/2018	7.91	66.52	52,235.31908561

<b>Design</b>	Design #2			
<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	0.17

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/5/2018		
<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 #2 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	17,687.10	Design #2 (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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
712.50	9.25	235.00	710.49	-21.37	-30.52	2.00	2.00	0.00	235.00	
6,639.61	9.25	235.00	6,560.53	-567.84	-810.95	0.00	0.00	0.00	0.00	
7,698.63	90.00	0.17	7,250.00	66.31	-900.92	9.00	7.62	11.82	124.81	
17,687.10	90.00	0.17	7,250.00	10,054.74	-872.12	0.00	0.00	0.00	0.00	JOHNSON 01N-65W-

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 01N-65W-30-4H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Site:</b>	1N-65W-30 JOHNSON PAD	<b>North Reference:</b>	True
<b>Well:</b>	JOHNSON 01N-65W-30-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Tangent @ 250.00ft									
300.00	1.00	235.00	300.00	-0.25	-0.36	-0.25	2.00	2.00	0.00
400.00	3.00	235.00	399.93	-2.25	-3.22	-2.26	2.00	2.00	0.00
500.00	5.00	235.00	499.68	-6.25	-8.93	-6.28	2.00	2.00	0.00
600.00	7.00	235.00	599.13	-12.25	-17.49	-12.30	2.00	2.00	0.00
700.00	9.00	235.00	698.15	-20.23	-28.89	-20.32	2.00	2.00	0.00
712.50	9.25	235.00	710.49	-21.37	-30.52	-21.46	2.00	2.00	0.00
End Tangent @ 712.50ft									
800.00	9.25	235.00	796.86	-29.43	-42.04	-29.56	0.00	0.00	0.00
900.00	9.25	235.00	895.56	-38.65	-55.20	-38.82	0.00	0.00	0.00
1,000.00	9.25	235.00	994.26	-47.87	-68.37	-48.08	0.00	0.00	0.00
1,100.00	9.25	235.00	1,092.95	-57.09	-81.54	-57.34	0.00	0.00	0.00
1,200.00	9.25	235.00	1,191.65	-66.31	-94.71	-66.59	0.00	0.00	0.00
1,300.00	9.25	235.00	1,290.35	-75.53	-107.87	-75.85	0.00	0.00	0.00
1,400.00	9.25	235.00	1,389.05	-84.75	-121.04	-85.11	0.00	0.00	0.00
1,500.00	9.25	235.00	1,487.75	-93.97	-134.21	-94.37	0.00	0.00	0.00
1,600.00	9.25	235.00	1,586.45	-103.19	-147.38	-103.63	0.00	0.00	0.00
1,700.00	9.25	235.00	1,685.15	-112.41	-160.54	-112.89	0.00	0.00	0.00
1,715.04	9.25	235.00	1,700.00	-113.80	-162.52	-114.28	0.00	0.00	0.00
9 5/8"									
1,800.00	9.25	235.00	1,783.85	-121.63	-173.71	-122.15	0.00	0.00	0.00
1,900.00	9.25	235.00	1,882.55	-130.85	-186.88	-131.41	0.00	0.00	0.00
2,000.00	9.25	235.00	1,981.25	-140.07	-200.04	-140.67	0.00	0.00	0.00
2,100.00	9.25	235.00	2,079.95	-149.29	-213.21	-149.92	0.00	0.00	0.00
2,200.00	9.25	235.00	2,178.65	-158.51	-226.38	-159.18	0.00	0.00	0.00
2,300.00	9.25	235.00	2,277.35	-167.73	-239.55	-168.44	0.00	0.00	0.00
2,400.00	9.25	235.00	2,376.05	-176.95	-252.71	-177.70	0.00	0.00	0.00
2,500.00	9.25	235.00	2,474.75	-186.17	-265.88	-186.96	0.00	0.00	0.00
2,600.00	9.25	235.00	2,573.45	-195.39	-279.05	-196.22	0.00	0.00	0.00
2,700.00	9.25	235.00	2,672.15	-204.61	-292.21	-205.48	0.00	0.00	0.00
2,800.00	9.25	235.00	2,770.85	-213.83	-305.38	-214.74	0.00	0.00	0.00
2,900.00	9.25	235.00	2,869.55	-223.05	-318.55	-223.99	0.00	0.00	0.00
3,000.00	9.25	235.00	2,968.25	-232.27	-331.72	-233.25	0.00	0.00	0.00
3,100.00	9.25	235.00	3,066.95	-241.49	-344.88	-242.51	0.00	0.00	0.00
3,200.00	9.25	235.00	3,165.65	-250.71	-358.05	-251.77	0.00	0.00	0.00
3,300.00	9.25	235.00	3,264.35	-259.93	-371.22	-261.03	0.00	0.00	0.00
3,400.00	9.25	235.00	3,363.05	-269.15	-384.39	-270.29	0.00	0.00	0.00
3,500.00	9.25	235.00	3,461.75	-278.37	-397.55	-279.55	0.00	0.00	0.00
3,600.00	9.25	235.00	3,560.45	-287.59	-410.72	-288.81	0.00	0.00	0.00
3,700.00	9.25	235.00	3,659.15	-296.81	-423.89	-298.07	0.00	0.00	0.00
3,800.00	9.25	235.00	3,757.84	-306.03	-437.05	-307.32	0.00	0.00	0.00
3,900.00	9.25	235.00	3,856.54	-315.25	-450.22	-316.58	0.00	0.00	0.00
4,000.00	9.25	235.00	3,955.24	-324.47	-463.39	-325.84	0.00	0.00	0.00
4,100.00	9.25	235.00	4,053.94	-333.69	-476.56	-335.10	0.00	0.00	0.00
4,200.00	9.25	235.00	4,152.64	-342.91	-489.72	-344.36	0.00	0.00	0.00
4,300.00	9.25	235.00	4,251.34	-352.13	-502.89	-353.62	0.00	0.00	0.00
4,400.00	9.25	235.00	4,350.04	-361.35	-516.06	-362.88	0.00	0.00	0.00
4,500.00	9.25	235.00	4,448.74	-370.57	-529.23	-372.14	0.00	0.00	0.00
4,600.00	9.25	235.00	4,547.44	-379.79	-542.39	-381.40	0.00	0.00	0.00

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## Planning Report

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<b>Site:</b>	1N-65W-30 JOHNSON PAD	<b>North Reference:</b>	True
<b>Well:</b>	JOHNSON 01N-65W-30-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	9.25	235.00	4,646.14	-389.01	-555.56	-390.65	0.00	0.00	0.00	
4,800.00	9.25	235.00	4,744.84	-398.23	-568.73	-399.91	0.00	0.00	0.00	
4,900.00	9.25	235.00	4,843.54	-407.45	-581.89	-409.17	0.00	0.00	0.00	
5,000.00	9.25	235.00	4,942.24	-416.67	-595.06	-418.43	0.00	0.00	0.00	
5,100.00	9.25	235.00	5,040.94	-425.89	-608.23	-427.69	0.00	0.00	0.00	
5,200.00	9.25	235.00	5,139.64	-435.11	-621.40	-436.95	0.00	0.00	0.00	
5,300.00	9.25	235.00	5,238.34	-444.33	-634.56	-446.21	0.00	0.00	0.00	
5,400.00	9.25	235.00	5,337.04	-453.55	-647.73	-455.47	0.00	0.00	0.00	
5,500.00	9.25	235.00	5,435.74	-462.77	-660.90	-464.72	0.00	0.00	0.00	
5,600.00	9.25	235.00	5,534.44	-471.99	-674.07	-473.98	0.00	0.00	0.00	
5,700.00	9.25	235.00	5,633.14	-481.21	-687.23	-483.24	0.00	0.00	0.00	
5,800.00	9.25	235.00	5,731.84	-490.43	-700.40	-492.50	0.00	0.00	0.00	
5,900.00	9.25	235.00	5,830.54	-499.65	-713.57	-501.76	0.00	0.00	0.00	
6,000.00	9.25	235.00	5,929.24	-508.86	-726.73	-511.02	0.00	0.00	0.00	
6,100.00	9.25	235.00	6,027.94	-518.08	-739.90	-520.28	0.00	0.00	0.00	
6,200.00	9.25	235.00	6,126.64	-527.30	-753.07	-529.54	0.00	0.00	0.00	
6,300.00	9.25	235.00	6,225.34	-536.52	-766.24	-538.80	0.00	0.00	0.00	
6,400.00	9.25	235.00	6,324.04	-545.74	-779.40	-548.05	0.00	0.00	0.00	
6,500.00	9.25	235.00	6,422.74	-554.96	-792.57	-557.31	0.00	0.00	0.00	
6,600.00	9.25	235.00	6,521.43	-564.18	-805.74	-566.57	0.00	0.00	0.00	
6,639.61	9.25	235.00	6,560.53	-567.84	-810.95	-570.24	0.00	0.00	0.00	
<b>KOP @ 6639.61ft :: DLS = 9°/100'</b>										
6,700.00	7.58	271.10	6,620.31	-570.55	-818.92	-572.97	9.00	-2.76	59.78	
6,800.00	11.84	320.75	6,719.01	-562.46	-832.04	-564.92	9.00	4.26	49.65	
6,900.00	19.60	338.20	6,815.25	-538.89	-844.78	-541.39	9.00	7.75	17.45	
7,000.00	28.09	345.72	6,906.65	-500.43	-856.84	-502.97	9.00	8.49	7.51	
7,100.00	36.80	349.92	6,990.97	-448.02	-867.92	-450.59	9.00	8.72	4.20	
7,200.00	45.62	352.68	7,066.13	-382.95	-877.74	-385.55	9.00	8.82	2.76	
7,300.00	54.48	354.71	7,130.28	-306.82	-886.06	-309.45	9.00	8.86	2.03	
7,400.00	63.38	356.34	7,181.84	-221.51	-892.67	-224.16	9.00	8.89	1.63	
7,500.00	72.28	357.73	7,219.53	-129.12	-897.43	-131.79	9.00	8.91	1.39	
7,600.00	81.20	358.98	7,242.44	-31.93	-900.20	-34.60	9.00	8.92	1.26	
7,698.63	90.00	0.17	7,250.00	66.31	-900.92	63.64	9.00	8.92	1.20	
<b>End Build @ 7698.63ft</b>										
7,700.00	90.00	0.17	7,250.00	67.68	-900.92	65.01	0.00	0.00	0.00	
7,800.00	90.00	0.17	7,250.00	167.68	-900.63	165.01	0.00	0.00	0.00	
7,900.00	90.00	0.17	7,250.00	267.68	-900.34	265.01	0.00	0.00	0.00	
8,000.00	90.00	0.17	7,250.00	367.68	-900.05	365.01	0.00	0.00	0.00	
8,100.00	90.00	0.17	7,250.00	467.68	-899.76	465.01	0.00	0.00	0.00	
8,200.00	90.00	0.17	7,250.00	567.68	-899.48	565.01	0.00	0.00	0.00	
8,300.00	90.00	0.17	7,250.00	667.68	-899.19	665.01	0.00	0.00	0.00	
8,400.00	90.00	0.17	7,250.00	767.68	-898.90	765.01	0.00	0.00	0.00	
8,500.00	90.00	0.17	7,250.00	867.68	-898.61	865.01	0.00	0.00	0.00	
8,600.00	90.00	0.17	7,250.00	967.68	-898.32	965.01	0.00	0.00	0.00	
8,700.00	90.00	0.17	7,250.00	1,067.68	-898.03	1,065.01	0.00	0.00	0.00	
8,800.00	90.00	0.17	7,250.00	1,167.68	-897.75	1,165.01	0.00	0.00	0.00	
8,900.00	90.00	0.17	7,250.00	1,267.68	-897.46	1,265.01	0.00	0.00	0.00	
9,000.00	90.00	0.17	7,250.00	1,367.68	-897.17	1,365.01	0.00	0.00	0.00	
9,100.00	90.00	0.17	7,250.00	1,467.68	-896.88	1,465.01	0.00	0.00	0.00	
9,200.00	90.00	0.17	7,250.00	1,567.67	-896.59	1,565.01	0.00	0.00	0.00	
9,300.00	90.00	0.17	7,250.00	1,667.67	-896.30	1,665.01	0.00	0.00	0.00	
9,400.00	90.00	0.17	7,250.00	1,767.67	-896.02	1,765.01	0.00	0.00	0.00	
9,500.00	90.00	0.17	7,250.00	1,867.67	-895.73	1,865.01	0.00	0.00	0.00	
9,600.00	90.00	0.17	7,250.00	1,967.67	-895.44	1,965.01	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 JOHNSON 01N-65W-30-4H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Site:</b>	1N-65W-30 JOHNSON PAD	<b>North Reference:</b>	True
<b>Well:</b>	JOHNSON 01N-65W-30-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	90.00	0.17	7,250.00	2,067.67	-895.15	2,065.01	0.00	0.00	0.00	
9,800.00	90.00	0.17	7,250.00	2,167.67	-894.86	2,165.01	0.00	0.00	0.00	
9,900.00	90.00	0.17	7,250.00	2,267.67	-894.57	2,265.01	0.00	0.00	0.00	
10,000.00	90.00	0.17	7,250.00	2,367.67	-894.29	2,365.01	0.00	0.00	0.00	
10,100.00	90.00	0.17	7,250.00	2,467.67	-894.00	2,465.01	0.00	0.00	0.00	
10,200.00	90.00	0.17	7,250.00	2,567.67	-893.71	2,565.01	0.00	0.00	0.00	
10,300.00	90.00	0.17	7,250.00	2,667.67	-893.42	2,665.01	0.00	0.00	0.00	
10,400.00	90.00	0.17	7,250.00	2,767.67	-893.13	2,765.01	0.00	0.00	0.00	
10,500.00	90.00	0.17	7,250.00	2,867.67	-892.84	2,865.01	0.00	0.00	0.00	
10,600.00	90.00	0.17	7,250.00	2,967.67	-892.56	2,965.01	0.00	0.00	0.00	
10,700.00	90.00	0.17	7,250.00	3,067.67	-892.27	3,065.01	0.00	0.00	0.00	
10,800.00	90.00	0.17	7,250.00	3,167.67	-891.98	3,165.01	0.00	0.00	0.00	
10,900.00	90.00	0.17	7,250.00	3,267.67	-891.69	3,265.01	0.00	0.00	0.00	
11,000.00	90.00	0.17	7,250.00	3,367.67	-891.40	3,365.01	0.00	0.00	0.00	
11,100.00	90.00	0.17	7,250.00	3,467.67	-891.11	3,465.01	0.00	0.00	0.00	
11,200.00	90.00	0.17	7,250.00	3,567.67	-890.83	3,565.01	0.00	0.00	0.00	
11,300.00	90.00	0.17	7,250.00	3,667.67	-890.54	3,665.01	0.00	0.00	0.00	
11,400.00	90.00	0.17	7,250.00	3,767.67	-890.25	3,765.01	0.00	0.00	0.00	
11,500.00	90.00	0.17	7,250.00	3,867.67	-889.96	3,865.01	0.00	0.00	0.00	
11,600.00	90.00	0.17	7,250.00	3,967.66	-889.67	3,965.01	0.00	0.00	0.00	
11,700.00	90.00	0.17	7,250.00	4,067.66	-889.38	4,065.01	0.00	0.00	0.00	
11,800.00	90.00	0.17	7,250.00	4,167.66	-889.10	4,165.01	0.00	0.00	0.00	
11,900.00	90.00	0.17	7,250.00	4,267.66	-888.81	4,265.01	0.00	0.00	0.00	
12,000.00	90.00	0.17	7,250.00	4,367.66	-888.52	4,365.01	0.00	0.00	0.00	
12,100.00	90.00	0.17	7,250.00	4,467.66	-888.23	4,465.01	0.00	0.00	0.00	
12,200.00	90.00	0.17	7,250.00	4,567.66	-887.94	4,565.01	0.00	0.00	0.00	
12,300.00	90.00	0.17	7,250.00	4,667.66	-887.66	4,665.01	0.00	0.00	0.00	
12,400.00	90.00	0.17	7,250.00	4,767.66	-887.37	4,765.01	0.00	0.00	0.00	
12,500.00	90.00	0.17	7,250.00	4,867.66	-887.08	4,865.01	0.00	0.00	0.00	
12,600.00	90.00	0.17	7,250.00	4,967.66	-886.79	4,965.01	0.00	0.00	0.00	
12,700.00	90.00	0.17	7,250.00	5,067.66	-886.50	5,065.01	0.00	0.00	0.00	
12,800.00	90.00	0.17	7,250.00	5,167.66	-886.21	5,165.01	0.00	0.00	0.00	
12,900.00	90.00	0.17	7,250.00	5,267.66	-885.93	5,265.01	0.00	0.00	0.00	
13,000.00	90.00	0.17	7,250.00	5,367.66	-885.64	5,365.01	0.00	0.00	0.00	
13,100.00	90.00	0.17	7,250.00	5,467.66	-885.35	5,465.01	0.00	0.00	0.00	
13,200.00	90.00	0.17	7,250.00	5,567.66	-885.06	5,565.01	0.00	0.00	0.00	
13,300.00	90.00	0.17	7,250.00	5,667.66	-884.77	5,665.01	0.00	0.00	0.00	
13,400.00	90.00	0.17	7,250.00	5,767.66	-884.48	5,765.01	0.00	0.00	0.00	
13,500.00	90.00	0.17	7,250.00	5,867.66	-884.20	5,865.01	0.00	0.00	0.00	
13,600.00	90.00	0.17	7,250.00	5,967.66	-883.91	5,965.01	0.00	0.00	0.00	
13,700.00	90.00	0.17	7,250.00	6,067.66	-883.62	6,065.01	0.00	0.00	0.00	
13,800.00	90.00	0.17	7,250.00	6,167.66	-883.33	6,165.01	0.00	0.00	0.00	
13,900.00	90.00	0.17	7,250.00	6,267.66	-883.04	6,265.01	0.00	0.00	0.00	
14,000.00	90.00	0.17	7,250.00	6,367.65	-882.75	6,365.01	0.00	0.00	0.00	
14,100.00	90.00	0.17	7,250.00	6,467.65	-882.47	6,465.01	0.00	0.00	0.00	
14,200.00	90.00	0.17	7,250.00	6,567.65	-882.18	6,565.01	0.00	0.00	0.00	
14,300.00	90.00	0.17	7,250.00	6,667.65	-881.89	6,665.01	0.00	0.00	0.00	
14,400.00	90.00	0.17	7,250.00	6,767.65	-881.60	6,765.01	0.00	0.00	0.00	
14,500.00	90.00	0.17	7,250.00	6,867.65	-881.31	6,865.01	0.00	0.00	0.00	
14,600.00	90.00	0.17	7,250.00	6,967.65	-881.02	6,965.01	0.00	0.00	0.00	
14,700.00	90.00	0.17	7,250.00	7,067.65	-880.74	7,065.01	0.00	0.00	0.00	
14,800.00	90.00	0.17	7,250.00	7,167.65	-880.45	7,165.01	0.00	0.00	0.00	
14,900.00	90.00	0.17	7,250.00	7,267.65	-880.16	7,265.01	0.00	0.00	0.00	
15,000.00	90.00	0.17	7,250.00	7,367.65	-879.87	7,365.01	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 JOHNSON 01N-65W-30-4H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 5020.00usft (RIG)
<b>Site:</b>	1N-65W-30 JOHNSON PAD	<b>North Reference:</b>	True
<b>Well:</b>	JOHNSON 01N-65W-30-4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	90.00	0.17	7,250.00	7,467.65	-879.58	7,465.01	0.00	0.00	0.00	
15,200.00	90.00	0.17	7,250.00	7,567.65	-879.29	7,565.01	0.00	0.00	0.00	
15,300.00	90.00	0.17	7,250.00	7,667.65	-879.01	7,665.01	0.00	0.00	0.00	
15,400.00	90.00	0.17	7,250.00	7,767.65	-878.72	7,765.01	0.00	0.00	0.00	
15,500.00	90.00	0.17	7,250.00	7,867.65	-878.43	7,865.01	0.00	0.00	0.00	
15,600.00	90.00	0.17	7,250.00	7,967.65	-878.14	7,965.01	0.00	0.00	0.00	
15,700.00	90.00	0.17	7,250.00	8,067.65	-877.85	8,065.01	0.00	0.00	0.00	
15,800.00	90.00	0.17	7,250.00	8,167.65	-877.56	8,165.01	0.00	0.00	0.00	
15,900.00	90.00	0.17	7,250.00	8,267.65	-877.28	8,265.01	0.00	0.00	0.00	
16,000.00	90.00	0.17	7,250.00	8,367.65	-876.99	8,365.01	0.00	0.00	0.00	
16,100.00	90.00	0.17	7,250.00	8,467.65	-876.70	8,465.01	0.00	0.00	0.00	
16,200.00	90.00	0.17	7,250.00	8,567.65	-876.41	8,565.01	0.00	0.00	0.00	
16,300.00	90.00	0.17	7,250.00	8,667.65	-876.12	8,665.01	0.00	0.00	0.00	
16,400.00	90.00	0.17	7,250.00	8,767.64	-875.84	8,765.01	0.00	0.00	0.00	
16,500.00	90.00	0.17	7,250.00	8,867.64	-875.55	8,865.01	0.00	0.00	0.00	
16,600.00	90.00	0.17	7,250.00	8,967.64	-875.26	8,965.01	0.00	0.00	0.00	
16,700.00	90.00	0.17	7,250.00	9,067.64	-874.97	9,065.01	0.00	0.00	0.00	
16,800.00	90.00	0.17	7,250.00	9,167.64	-874.68	9,165.01	0.00	0.00	0.00	
16,900.00	90.00	0.17	7,250.00	9,267.64	-874.39	9,265.01	0.00	0.00	0.00	
17,000.00	90.00	0.17	7,250.00	9,367.64	-874.11	9,365.01	0.00	0.00	0.00	
17,100.00	90.00	0.17	7,250.00	9,467.64	-873.82	9,465.01	0.00	0.00	0.00	
17,200.00	90.00	0.17	7,250.00	9,567.64	-873.53	9,565.01	0.00	0.00	0.00	
17,300.00	90.00	0.17	7,250.00	9,667.64	-873.24	9,665.01	0.00	0.00	0.00	
17,400.00	90.00	0.17	7,250.00	9,767.64	-872.95	9,765.01	0.00	0.00	0.00	
17,500.00	90.00	0.17	7,250.00	9,867.64	-872.66	9,865.01	0.00	0.00	0.00	
17,600.00	90.00	0.17	7,250.00	9,967.64	-872.38	9,965.01	0.00	0.00	0.00	
17,687.10	90.00	0.17	7,250.00	10,054.74	-872.12	10,052.11	0.00	0.00	0.00	
TD Well @ 17687.10ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,715.04	1,700.00	9 5/8"	9-5/8	13-1/2

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Tangent @ 250.00ft
712.50	710.49	-21.37	-30.52	End Tangent @ 712.50ft
6,639.61	6,560.53	-567.84	-810.95	KOP @ 6639.61ft :: DLS = 9°/100'
7,698.63	7,250.00	66.31	-900.92	End Build @ 7698.63ft
17,687.10	7,250.00	10,054.74	-872.12	TD Well @ 17687.10ft