

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

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

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**05 February, 2018**

Project: WATTENBERG FIELD  
 Site: 1N-65W-30 JOHNSON PAD  
 Well: JOHNSON 1N-65W-30-1S  
 Wellbore: Wellbore #1  
 Design: Design #1

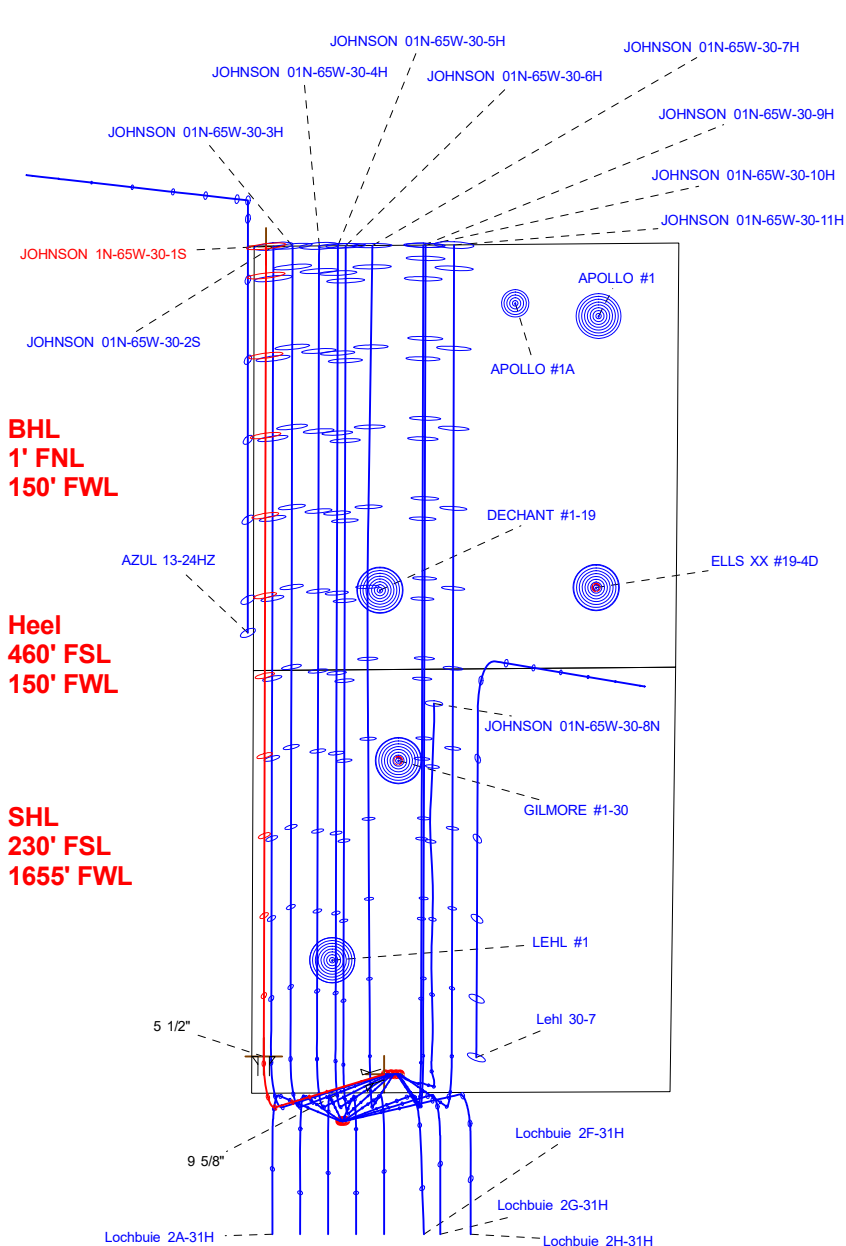
# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1726.75	9 5/8"	9-5/8
7400.00	7938.61	5 1/2"	5-1/2

West(-)/East(+) (2400 usft/in)

-4800 -3600 -2400 -1200 0 1200 2400 3600 4800 6000



**BHL**  
**1' FNL**  
**150' FWL**

**Heel**  
**460' FSL**  
**150' FWL**

**SHL**  
**230' FSL**  
**1655' FWL**

## SECTION DETAILS

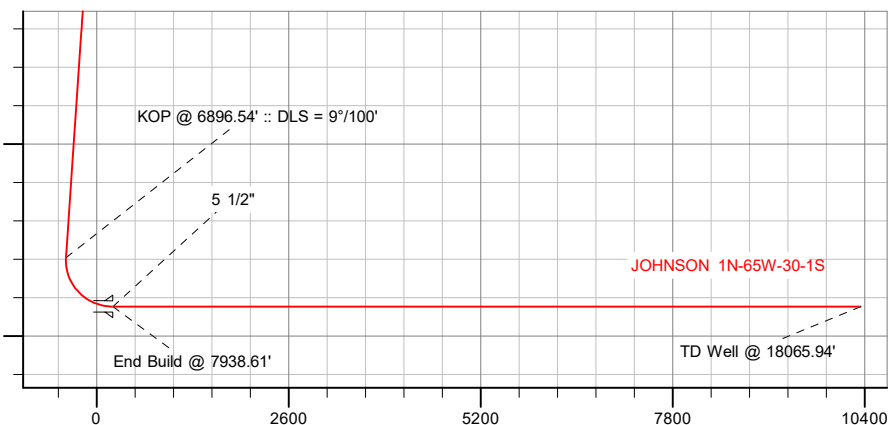
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	900.00	13.00	253.10	894.44	-21.34	-70.25	2.00	253.10	-21.55	
4	6896.54	13.00	253.10	6737.29	-413.48	-1360.93	0.00	0.00	-417.52	
5	7938.61	90.00	0.17	7400.00	222.19	-1505.28	9.00	106.66	217.72	
6	18065.94	90.00	0.17	7400.00	10349.47	-1474.89	0.00	0.00	10345.05	JOHNSON 1N-65W-30-1S_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

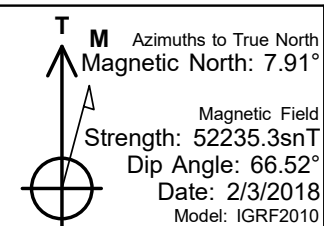
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JOHNSON 1N-65W-30-1S_SHL	0.00	0.00	0.00	40.015684	-104.710241
JOHNSON 1N-65W-30-1S_BHL	7400.00	10349.47	-1474.89	40.044095	-104.715509

South(-)/North(+) (2400 usft/in)

True Vertical Depth (2600 usft/in)



Vertical Section at 0.17° (2600 usft/in)



## WELL DETAILS: JOHNSON 1N-65W-30-1S

GL = 5000'

RKB = 20' @ 5020.00usft (RIG)

Plan: Design #1 (JOHNSON 1N-65W-30-1S/Wellbore #1)

Created By: \_\_\_\_\_ Date: 2/5/2018  
 Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 1N-65W-30-1S
<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 1N-65W-30-1S	<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>	1N-65W-30 JOHNSON PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,249,544.93 usft	<b>Latitude:</b> 40.015680
<b>From:</b>	Map	<b>Easting:</b>	3,221,340.35 usft	<b>Longitude:</b> -104.709740
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.51 °

<b>Well</b>	JOHNSON 1N-65W-30-1S			
<b>Well Position</b>	<b>+N/-S</b>	1.45 usft	<b>Northing:</b>	1,249,545.13 usft
	<b>+E/-W</b>	-140.32 usft	<b>Easting:</b>	3,221,200.01 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 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	52,235.29747530

<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	0.17

<b>Plan Survey Tool Program</b>	<b>Date</b>	2/5/2018		
<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 #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	18,065.94	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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	13.00	253.10	894.44	-21.34	-70.25	2.00	2.00	0.00	253.10	
6,896.54	13.00	253.10	6,737.29	-413.48	-1,360.93	0.00	0.00	0.00	0.00	
7,938.61	90.00	0.17	7,400.00	222.19	-1,505.28	9.00	7.39	10.27	106.66	
18,065.94	90.00	0.17	7,400.00	10,349.47	-1,474.89	0.00	0.00	0.00	0.00	JOHNSON 1N-65W-3

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 1N-65W-30-1S
<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 1N-65W-30-1S	<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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00'									
300.00	1.00	253.10	300.00	-0.13	-0.42	-0.13	2.00	2.00	0.00
400.00	3.00	253.10	399.93	-1.14	-3.76	-1.15	2.00	2.00	0.00
500.00	5.00	253.10	499.68	-3.17	-10.43	-3.20	2.00	2.00	0.00
600.00	7.00	253.10	599.13	-6.21	-20.43	-6.27	2.00	2.00	0.00
700.00	9.00	253.10	698.15	-10.25	-33.75	-10.35	2.00	2.00	0.00
800.00	11.00	253.10	796.63	-15.30	-50.36	-15.45	2.00	2.00	0.00
900.00	13.00	253.10	894.44	-21.34	-70.25	-21.55	2.00	2.00	0.00
End Nudge @ 900.00'									
1,000.00	13.00	253.10	991.87	-27.88	-91.78	-28.16	0.00	0.00	0.00
1,100.00	13.00	253.10	1,089.31	-34.42	-113.30	-34.76	0.00	0.00	0.00
1,200.00	13.00	253.10	1,186.75	-40.96	-134.82	-41.36	0.00	0.00	0.00
1,300.00	13.00	253.10	1,284.19	-47.50	-156.35	-47.97	0.00	0.00	0.00
1,400.00	13.00	253.10	1,381.62	-54.04	-177.87	-54.57	0.00	0.00	0.00
1,500.00	13.00	253.10	1,479.06	-60.58	-199.40	-61.17	0.00	0.00	0.00
1,600.00	13.00	253.10	1,576.50	-67.12	-220.92	-67.78	0.00	0.00	0.00
1,700.00	13.00	253.10	1,673.93	-73.66	-242.44	-74.38	0.00	0.00	0.00
1,726.75	13.00	253.10	1,700.00	-75.41	-248.20	-76.15	0.00	0.00	0.00
9 5/8"									
1,800.00	13.00	253.10	1,771.37	-80.20	-263.97	-80.98	0.00	0.00	0.00
1,900.00	13.00	253.10	1,868.81	-86.74	-285.49	-87.59	0.00	0.00	0.00
2,000.00	13.00	253.10	1,966.24	-93.28	-307.01	-94.19	0.00	0.00	0.00
2,100.00	13.00	253.10	2,063.68	-99.82	-328.54	-100.79	0.00	0.00	0.00
2,200.00	13.00	253.10	2,161.12	-106.36	-350.06	-107.39	0.00	0.00	0.00
2,300.00	13.00	253.10	2,258.56	-112.90	-371.58	-114.00	0.00	0.00	0.00
2,400.00	13.00	253.10	2,355.99	-119.44	-393.11	-120.60	0.00	0.00	0.00
2,500.00	13.00	253.10	2,453.43	-125.97	-414.63	-127.20	0.00	0.00	0.00
2,600.00	13.00	253.10	2,550.87	-132.51	-436.16	-133.81	0.00	0.00	0.00
2,700.00	13.00	253.10	2,648.30	-139.05	-457.68	-140.41	0.00	0.00	0.00
2,800.00	13.00	253.10	2,745.74	-145.59	-479.20	-147.01	0.00	0.00	0.00
2,900.00	13.00	253.10	2,843.18	-152.13	-500.73	-153.62	0.00	0.00	0.00
3,000.00	13.00	253.10	2,940.61	-158.67	-522.25	-160.22	0.00	0.00	0.00
3,100.00	13.00	253.10	3,038.05	-165.21	-543.77	-166.82	0.00	0.00	0.00
3,200.00	13.00	253.10	3,135.49	-171.75	-565.30	-173.43	0.00	0.00	0.00
3,300.00	13.00	253.10	3,232.93	-178.29	-586.82	-180.03	0.00	0.00	0.00
3,400.00	13.00	253.10	3,330.36	-184.83	-608.34	-186.63	0.00	0.00	0.00
3,500.00	13.00	253.10	3,427.80	-191.37	-629.87	-193.24	0.00	0.00	0.00
3,600.00	13.00	253.10	3,525.24	-197.91	-651.39	-199.84	0.00	0.00	0.00
3,700.00	13.00	253.10	3,622.67	-204.45	-672.91	-206.44	0.00	0.00	0.00
3,800.00	13.00	253.10	3,720.11	-210.99	-694.44	-213.05	0.00	0.00	0.00
3,900.00	13.00	253.10	3,817.55	-217.53	-715.96	-219.65	0.00	0.00	0.00
4,000.00	13.00	253.10	3,914.98	-224.07	-737.49	-226.25	0.00	0.00	0.00
4,100.00	13.00	253.10	4,012.42	-230.60	-759.01	-232.86	0.00	0.00	0.00
4,200.00	13.00	253.10	4,109.86	-237.14	-780.53	-239.46	0.00	0.00	0.00
4,300.00	13.00	253.10	4,207.30	-243.68	-802.06	-246.06	0.00	0.00	0.00
4,400.00	13.00	253.10	4,304.73	-250.22	-823.58	-252.67	0.00	0.00	0.00
4,500.00	13.00	253.10	4,402.17	-256.76	-845.10	-259.27	0.00	0.00	0.00
4,600.00	13.00	253.10	4,499.61	-263.30	-866.63	-265.87	0.00	0.00	0.00
4,700.00	13.00	253.10	4,597.04	-269.84	-888.15	-272.47	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 1N-65W-30-1S
<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 1N-65W-30-1S	<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)
4,800.00	13.00	253.10	4,694.48	-276.38	-909.67	-279.08	0.00	0.00	0.00
4,900.00	13.00	253.10	4,791.92	-282.92	-931.20	-285.68	0.00	0.00	0.00
5,000.00	13.00	253.10	4,889.35	-289.46	-952.72	-292.28	0.00	0.00	0.00
5,100.00	13.00	253.10	4,986.79	-296.00	-974.25	-298.89	0.00	0.00	0.00
5,200.00	13.00	253.10	5,084.23	-302.54	-995.77	-305.49	0.00	0.00	0.00
5,300.00	13.00	253.10	5,181.67	-309.08	-1,017.29	-312.09	0.00	0.00	0.00
5,400.00	13.00	253.10	5,279.10	-315.62	-1,038.82	-318.70	0.00	0.00	0.00
5,500.00	13.00	253.10	5,376.54	-322.16	-1,060.34	-325.30	0.00	0.00	0.00
5,600.00	13.00	253.10	5,473.98	-328.70	-1,081.86	-331.90	0.00	0.00	0.00
5,700.00	13.00	253.10	5,571.41	-335.23	-1,103.39	-338.51	0.00	0.00	0.00
5,800.00	13.00	253.10	5,668.85	-341.77	-1,124.91	-345.11	0.00	0.00	0.00
5,900.00	13.00	253.10	5,766.29	-348.31	-1,146.43	-351.71	0.00	0.00	0.00
6,000.00	13.00	253.10	5,863.72	-354.85	-1,167.96	-358.32	0.00	0.00	0.00
6,100.00	13.00	253.10	5,961.16	-361.39	-1,189.48	-364.92	0.00	0.00	0.00
6,200.00	13.00	253.10	6,058.60	-367.93	-1,211.01	-371.52	0.00	0.00	0.00
6,300.00	13.00	253.10	6,156.04	-374.47	-1,232.53	-378.13	0.00	0.00	0.00
6,400.00	13.00	253.10	6,253.47	-381.01	-1,254.05	-384.73	0.00	0.00	0.00
6,500.00	13.00	253.10	6,350.91	-387.55	-1,275.58	-391.33	0.00	0.00	0.00
6,600.00	13.00	253.10	6,448.35	-394.09	-1,297.10	-397.94	0.00	0.00	0.00
6,700.00	13.00	253.10	6,545.78	-400.63	-1,318.62	-404.54	0.00	0.00	0.00
6,800.00	13.00	253.10	6,643.22	-407.17	-1,340.15	-411.14	0.00	0.00	0.00
6,896.54	13.00	253.10	6,737.29	-413.48	-1,360.93	-417.52	0.00	0.00	0.00
<b>KOP @ 6896.54' :: DLS = 9°/100'</b>									
6,900.00	12.91	254.43	6,740.66	-413.70	-1,361.67	-417.74	9.00	-2.48	38.58
6,950.00	12.49	274.92	6,789.46	-414.73	-1,372.44	-418.80	9.00	-0.85	40.96
7,000.00	13.60	294.34	6,838.19	-411.85	-1,383.19	-415.95	9.00	2.22	38.85
7,050.00	15.93	309.53	6,886.56	-405.05	-1,393.84	-409.19	9.00	4.66	30.38
7,100.00	19.04	320.42	6,934.25	-394.39	-1,404.34	-398.56	9.00	6.22	21.77
7,150.00	22.61	328.17	6,980.99	-379.94	-1,414.61	-384.13	9.00	7.13	15.50
7,200.00	26.45	333.83	7,026.47	-361.77	-1,424.59	-365.99	9.00	7.68	11.34
7,250.00	30.46	338.13	7,070.43	-340.00	-1,434.23	-344.26	9.00	8.02	8.59
7,300.00	34.58	341.50	7,112.59	-314.77	-1,443.46	-319.06	9.00	8.24	6.74
7,350.00	38.77	344.23	7,152.68	-286.24	-1,452.22	-290.54	9.00	8.39	5.45
7,400.00	43.02	346.49	7,190.47	-254.57	-1,460.46	-258.90	9.00	8.50	4.54
7,450.00	47.31	348.43	7,225.71	-219.96	-1,468.14	-224.32	9.00	8.57	3.86
7,500.00	51.63	350.11	7,258.20	-182.63	-1,475.20	-187.01	9.00	8.63	3.36
7,550.00	55.96	351.60	7,287.73	-142.81	-1,481.59	-147.21	9.00	8.67	2.98
7,600.00	60.31	352.94	7,314.12	-100.74	-1,487.29	-105.15	9.00	8.71	2.69
7,650.00	64.68	354.18	7,337.20	-56.68	-1,492.26	-61.11	9.00	8.73	2.47
7,700.00	69.05	355.33	7,356.84	-10.91	-1,496.45	-15.35	9.00	8.75	2.30
7,750.00	73.44	356.41	7,372.92	36.30	-1,499.86	31.85	9.00	8.76	2.16
7,800.00	77.82	357.44	7,385.32	84.66	-1,502.45	80.20	9.00	8.77	2.07
7,850.00	82.21	358.44	7,393.99	133.85	-1,504.22	129.39	9.00	8.78	2.00
7,900.00	86.61	359.42	7,398.86	183.60	-1,505.14	179.13	9.00	8.79	1.96
7,938.61	90.00	0.17	7,400.00	222.18	-1,505.28	217.72	9.00	8.79	1.94
<b>End Build @ 7938.61' - 5 1/2"</b>									
8,000.00	90.00	0.17	7,400.00	283.57	-1,505.09	279.11	0.00	0.00	0.00
8,100.00	90.00	0.17	7,400.00	383.57	-1,504.79	379.11	0.00	0.00	0.00
8,200.00	90.00	0.17	7,400.00	483.57	-1,504.49	479.11	0.00	0.00	0.00
8,300.00	90.00	0.17	7,400.00	583.57	-1,504.19	579.11	0.00	0.00	0.00
8,400.00	90.00	0.17	7,400.00	683.57	-1,503.89	679.11	0.00	0.00	0.00
8,500.00	90.00	0.17	7,400.00	783.57	-1,503.59	779.11	0.00	0.00	0.00
8,600.00	90.00	0.17	7,400.00	883.57	-1,503.29	879.11	0.00	0.00	0.00
8,700.00	90.00	0.17	7,400.00	983.57	-1,502.99	979.11	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 1N-65W-30-1S
<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 1N-65W-30-1S	<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)	
8,800.00	90.00	0.17	7,400.00	1,083.57	-1,502.69	1,079.11	0.00	0.00	0.00	
8,900.00	90.00	0.17	7,400.00	1,183.57	-1,502.39	1,179.11	0.00	0.00	0.00	
9,000.00	90.00	0.17	7,400.00	1,283.57	-1,502.09	1,279.11	0.00	0.00	0.00	
9,100.00	90.00	0.17	7,400.00	1,383.57	-1,501.79	1,379.11	0.00	0.00	0.00	
9,200.00	90.00	0.17	7,400.00	1,483.57	-1,501.49	1,479.11	0.00	0.00	0.00	
9,300.00	90.00	0.17	7,400.00	1,583.57	-1,501.19	1,579.11	0.00	0.00	0.00	
9,400.00	90.00	0.17	7,400.00	1,683.57	-1,500.89	1,679.11	0.00	0.00	0.00	
9,500.00	90.00	0.17	7,400.00	1,783.57	-1,500.59	1,779.11	0.00	0.00	0.00	
9,600.00	90.00	0.17	7,400.00	1,883.57	-1,500.29	1,879.11	0.00	0.00	0.00	
9,700.00	90.00	0.17	7,400.00	1,983.56	-1,499.99	1,979.11	0.00	0.00	0.00	
9,800.00	90.00	0.17	7,400.00	2,083.56	-1,499.69	2,079.11	0.00	0.00	0.00	
9,900.00	90.00	0.17	7,400.00	2,183.56	-1,499.39	2,179.11	0.00	0.00	0.00	
10,000.00	90.00	0.17	7,400.00	2,283.56	-1,499.09	2,279.11	0.00	0.00	0.00	
10,100.00	90.00	0.17	7,400.00	2,383.56	-1,498.79	2,379.11	0.00	0.00	0.00	
10,200.00	90.00	0.17	7,400.00	2,483.56	-1,498.49	2,479.11	0.00	0.00	0.00	
10,300.00	90.00	0.17	7,400.00	2,583.56	-1,498.19	2,579.11	0.00	0.00	0.00	
10,400.00	90.00	0.17	7,400.00	2,683.56	-1,497.89	2,679.11	0.00	0.00	0.00	
10,500.00	90.00	0.17	7,400.00	2,783.56	-1,497.59	2,779.11	0.00	0.00	0.00	
10,600.00	90.00	0.17	7,400.00	2,883.56	-1,497.29	2,879.11	0.00	0.00	0.00	
10,700.00	90.00	0.17	7,400.00	2,983.56	-1,496.99	2,979.11	0.00	0.00	0.00	
10,800.00	90.00	0.17	7,400.00	3,083.56	-1,496.69	3,079.11	0.00	0.00	0.00	
10,900.00	90.00	0.17	7,400.00	3,183.56	-1,496.39	3,179.11	0.00	0.00	0.00	
11,000.00	90.00	0.17	7,400.00	3,283.56	-1,496.09	3,279.11	0.00	0.00	0.00	
11,100.00	90.00	0.17	7,400.00	3,383.56	-1,495.79	3,379.11	0.00	0.00	0.00	
11,200.00	90.00	0.17	7,400.00	3,483.56	-1,495.49	3,479.11	0.00	0.00	0.00	
11,300.00	90.00	0.17	7,400.00	3,583.56	-1,495.19	3,579.11	0.00	0.00	0.00	
11,400.00	90.00	0.17	7,400.00	3,683.56	-1,494.89	3,679.11	0.00	0.00	0.00	
11,500.00	90.00	0.17	7,400.00	3,783.56	-1,494.59	3,779.11	0.00	0.00	0.00	
11,600.00	90.00	0.17	7,400.00	3,883.56	-1,494.29	3,879.11	0.00	0.00	0.00	
11,700.00	90.00	0.17	7,400.00	3,983.56	-1,493.99	3,979.11	0.00	0.00	0.00	
11,800.00	90.00	0.17	7,400.00	4,083.56	-1,493.69	4,079.11	0.00	0.00	0.00	
11,900.00	90.00	0.17	7,400.00	4,183.55	-1,493.39	4,179.11	0.00	0.00	0.00	
12,000.00	90.00	0.17	7,400.00	4,283.55	-1,493.09	4,279.11	0.00	0.00	0.00	
12,100.00	90.00	0.17	7,400.00	4,383.55	-1,492.79	4,379.11	0.00	0.00	0.00	
12,200.00	90.00	0.17	7,400.00	4,483.55	-1,492.49	4,479.11	0.00	0.00	0.00	
12,300.00	90.00	0.17	7,400.00	4,583.55	-1,492.19	4,579.11	0.00	0.00	0.00	
12,400.00	90.00	0.17	7,400.00	4,683.55	-1,491.89	4,679.11	0.00	0.00	0.00	
12,500.00	90.00	0.17	7,400.00	4,783.55	-1,491.59	4,779.11	0.00	0.00	0.00	
12,600.00	90.00	0.17	7,400.00	4,883.55	-1,491.29	4,879.11	0.00	0.00	0.00	
12,700.00	90.00	0.17	7,400.00	4,983.55	-1,490.99	4,979.11	0.00	0.00	0.00	
12,800.00	90.00	0.17	7,400.00	5,083.55	-1,490.69	5,079.11	0.00	0.00	0.00	
12,900.00	90.00	0.17	7,400.00	5,183.55	-1,490.39	5,179.11	0.00	0.00	0.00	
13,000.00	90.00	0.17	7,400.00	5,283.55	-1,490.09	5,279.11	0.00	0.00	0.00	
13,100.00	90.00	0.17	7,400.00	5,383.55	-1,489.79	5,379.11	0.00	0.00	0.00	
13,200.00	90.00	0.17	7,400.00	5,483.55	-1,489.49	5,479.11	0.00	0.00	0.00	
13,300.00	90.00	0.17	7,400.00	5,583.55	-1,489.19	5,579.11	0.00	0.00	0.00	
13,400.00	90.00	0.17	7,400.00	5,683.55	-1,488.89	5,679.11	0.00	0.00	0.00	
13,500.00	90.00	0.17	7,400.00	5,783.55	-1,488.59	5,779.11	0.00	0.00	0.00	
13,600.00	90.00	0.17	7,400.00	5,883.55	-1,488.29	5,879.11	0.00	0.00	0.00	
13,700.00	90.00	0.17	7,400.00	5,983.55	-1,487.99	5,979.11	0.00	0.00	0.00	
13,800.00	90.00	0.17	7,400.00	6,083.55	-1,487.69	6,079.11	0.00	0.00	0.00	
13,900.00	90.00	0.17	7,400.00	6,183.55	-1,487.39	6,179.11	0.00	0.00	0.00	
14,000.00	90.00	0.17	7,400.00	6,283.55	-1,487.09	6,279.11	0.00	0.00	0.00	
14,100.00	90.00	0.17	7,400.00	6,383.54	-1,486.79	6,379.11	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 1N-65W-30-1S
<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 1N-65W-30-1S	<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)	
14,200.00	90.00	0.17	7,400.00	6,483.54	-1,486.49	6,479.11	0.00	0.00	0.00	
14,300.00	90.00	0.17	7,400.00	6,583.54	-1,486.19	6,579.11	0.00	0.00	0.00	
14,400.00	90.00	0.17	7,400.00	6,683.54	-1,485.89	6,679.11	0.00	0.00	0.00	
14,500.00	90.00	0.17	7,400.00	6,783.54	-1,485.59	6,779.11	0.00	0.00	0.00	
14,600.00	90.00	0.17	7,400.00	6,883.54	-1,485.29	6,879.11	0.00	0.00	0.00	
14,700.00	90.00	0.17	7,400.00	6,983.54	-1,484.99	6,979.11	0.00	0.00	0.00	
14,800.00	90.00	0.17	7,400.00	7,083.54	-1,484.69	7,079.11	0.00	0.00	0.00	
14,900.00	90.00	0.17	7,400.00	7,183.54	-1,484.39	7,179.11	0.00	0.00	0.00	
15,000.00	90.00	0.17	7,400.00	7,283.54	-1,484.09	7,279.11	0.00	0.00	0.00	
15,100.00	90.00	0.17	7,400.00	7,383.54	-1,483.79	7,379.11	0.00	0.00	0.00	
15,200.00	90.00	0.17	7,400.00	7,483.54	-1,483.49	7,479.11	0.00	0.00	0.00	
15,300.00	90.00	0.17	7,400.00	7,583.54	-1,483.19	7,579.11	0.00	0.00	0.00	
15,400.00	90.00	0.17	7,400.00	7,683.54	-1,482.89	7,679.11	0.00	0.00	0.00	
15,500.00	90.00	0.17	7,400.00	7,783.54	-1,482.59	7,779.11	0.00	0.00	0.00	
15,600.00	90.00	0.17	7,400.00	7,883.54	-1,482.29	7,879.11	0.00	0.00	0.00	
15,700.00	90.00	0.17	7,400.00	7,983.54	-1,481.99	7,979.11	0.00	0.00	0.00	
15,800.00	90.00	0.17	7,400.00	8,083.54	-1,481.69	8,079.11	0.00	0.00	0.00	
15,900.00	90.00	0.17	7,400.00	8,183.54	-1,481.39	8,179.11	0.00	0.00	0.00	
16,000.00	90.00	0.17	7,400.00	8,283.54	-1,481.09	8,279.11	0.00	0.00	0.00	
16,100.00	90.00	0.17	7,400.00	8,383.54	-1,480.79	8,379.11	0.00	0.00	0.00	
16,200.00	90.00	0.17	7,400.00	8,483.54	-1,480.49	8,479.11	0.00	0.00	0.00	
16,300.00	90.00	0.17	7,400.00	8,583.54	-1,480.19	8,579.11	0.00	0.00	0.00	
16,400.00	90.00	0.17	7,400.00	8,683.53	-1,479.89	8,679.11	0.00	0.00	0.00	
16,500.00	90.00	0.17	7,400.00	8,783.53	-1,479.59	8,779.11	0.00	0.00	0.00	
16,600.00	90.00	0.17	7,400.00	8,883.53	-1,479.29	8,879.11	0.00	0.00	0.00	
16,700.00	90.00	0.17	7,400.00	8,983.53	-1,478.99	8,979.11	0.00	0.00	0.00	
16,800.00	90.00	0.17	7,400.00	9,083.53	-1,478.69	9,079.11	0.00	0.00	0.00	
16,900.00	90.00	0.17	7,400.00	9,183.53	-1,478.39	9,179.11	0.00	0.00	0.00	
17,000.00	90.00	0.17	7,400.00	9,283.53	-1,478.09	9,279.11	0.00	0.00	0.00	
17,100.00	90.00	0.17	7,400.00	9,383.53	-1,477.79	9,379.11	0.00	0.00	0.00	
17,200.00	90.00	0.17	7,400.00	9,483.53	-1,477.49	9,479.11	0.00	0.00	0.00	
17,300.00	90.00	0.17	7,400.00	9,583.53	-1,477.19	9,579.11	0.00	0.00	0.00	
17,400.00	90.00	0.17	7,400.00	9,683.53	-1,476.89	9,679.11	0.00	0.00	0.00	
17,500.00	90.00	0.17	7,400.00	9,783.53	-1,476.59	9,779.11	0.00	0.00	0.00	
17,600.00	90.00	0.17	7,400.00	9,883.53	-1,476.29	9,879.11	0.00	0.00	0.00	
17,700.00	90.00	0.17	7,400.00	9,983.53	-1,475.99	9,979.11	0.00	0.00	0.00	
17,800.00	90.00	0.17	7,400.00	10,083.53	-1,475.69	10,079.11	0.00	0.00	0.00	
17,900.00	90.00	0.17	7,400.00	10,183.53	-1,475.39	10,179.11	0.00	0.00	0.00	
18,000.00	90.00	0.17	7,400.00	10,283.53	-1,475.09	10,279.11	0.00	0.00	0.00	
18,065.94	90.00	0.17	7,400.00	10,349.47	-1,474.89	10,345.05	0.00	0.00	0.00	
TD Well @ 18065.94'										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,726.75	1,700.00	9 5/8"		9-5/8	13-1/2
7,938.61	7,400.00	5 1/2"		5-1/2	8-1/2

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 1N-65W-30-1S
<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 1N-65W-30-1S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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 Nudge @ 250.00'	
900.00	894.44	-21.34	-70.25	End Nudge @ 900.00'	
6,896.54	6,737.29	-413.48	-1,360.93	KOP @ 6896.54' :: DLS = 9°/100'	
7,938.61	7,400.00	222.19	-1,505.28	End Build @ 7938.61'	
18,065.94	7,400.00	10,349.47	-1,474.89	TD Well @ 18065.94'	