

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**JOHNSON 01N-65W-30-6H**

**Wellbore #1**

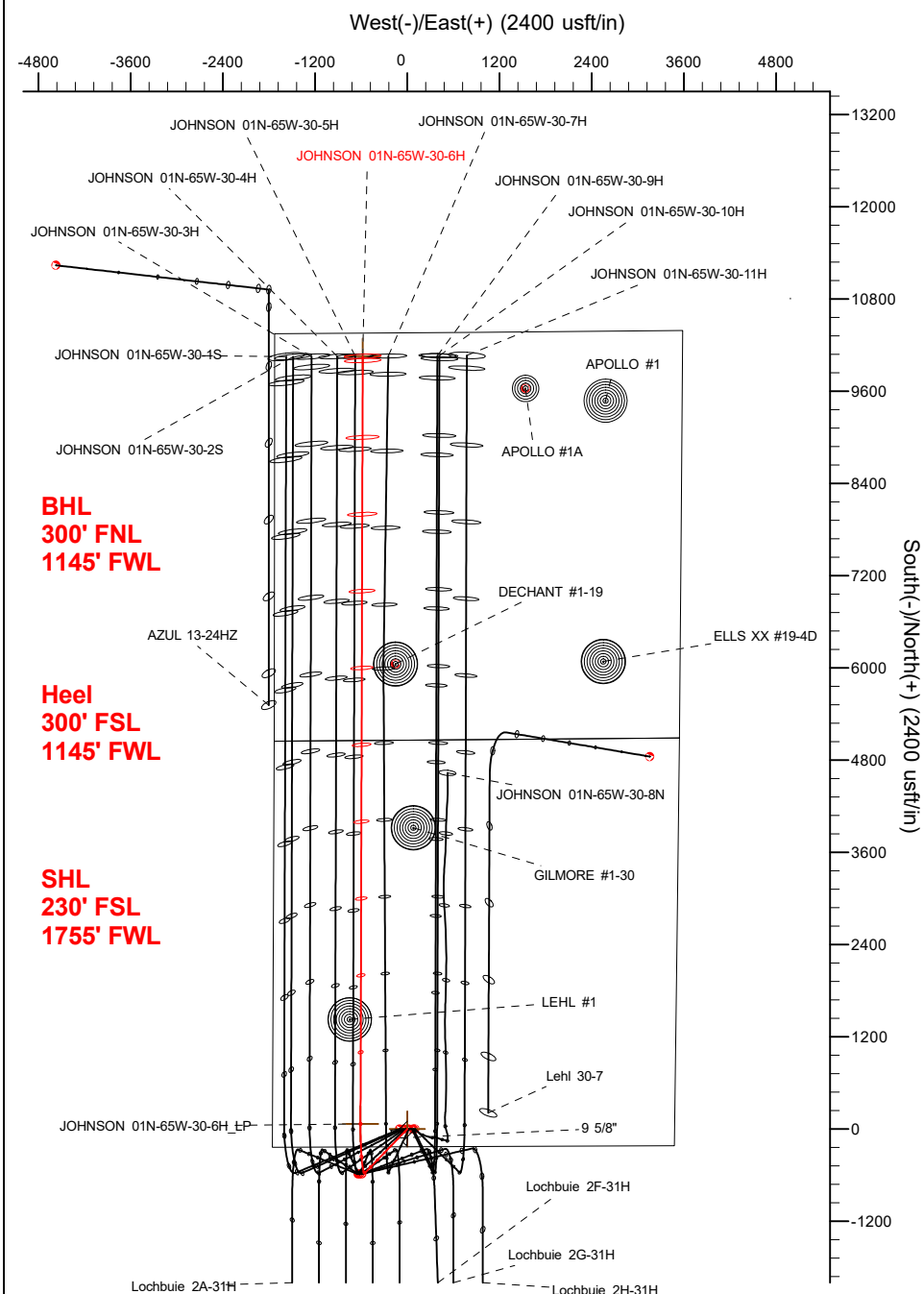
**Plan: Design #2**

## **Standard Planning Report**

**05 June, 2018**

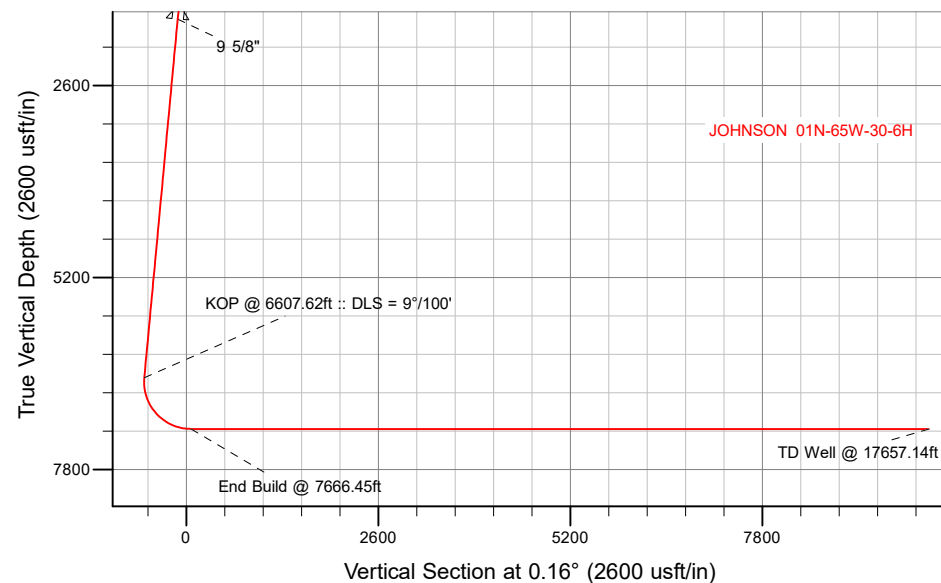
# VERDAD RESOURCES


CASING DETAILS			
TVD	MD	Name	Size
1700.00	1709.98	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	617.50	7.35	224.00	616.49	-16.93	-16.35	2.00	224.00		-16.98
4	6607.62	7.35	224.00	6557.39	-568.18	-548.68	0.00	0.00		-569.71
5	7666.45	90.00	0.16	7250.00	65.90	-608.74	9.00	135.93		64.20
6	17657.14	90.00	0.16	7250.00	10056.55	-580.11	0.00	0.00	10054.90	JOHNSON 01N-65W-30-6H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
JOHNSON 01N-65W-30-6H_SHL	0.00	0.00	0.00	40.015685	-104.709884	
JOHNSON 01N-65W-30-6H_BHL	7250.00	10056.55	-580.11	40.043292	-104.711956	



	WELL DETAILS: JOHNSON 01N-65W-30-6H
	GL = 5000'
	RKB = 20' @ 5020.00usft (RIG)
	Plan: Design #2 (JOHNSON 01N-65W-30-6H/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-30-6H
<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-30-6H	<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		

<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 01N-65W-30-6H			
<b>Well Position</b>	<b>+N/-S</b>	1.81 usft	<b>Northing:</b>	1,249,546.39 usft
	<b>+E/-W</b>	-40.33 usft	<b>Easting:</b>	3,221,300.00 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	52,235.33405198

<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	0.16

<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	17,657.14	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	
617.50	7.35	224.00	616.49	-16.93	-16.35	2.00	2.00	0.00	224.00	
6,607.62	7.35	224.00	6,557.39	-568.18	-548.68	0.00	0.00	0.00	0.00	
7,666.45	90.00	0.16	7,250.00	65.90	-608.74	9.00	7.81	12.86	135.93	
17,657.14	90.00	0.16	7,250.00	10,056.55	-580.11	0.00	0.00	0.00	0.00	JOHNSON 01N-65W-

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## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 01N-65W-30-6H
<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-30-6H	<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	224.00	300.00	-0.31	-0.30	-0.31	2.00	2.00	0.00
400.00	3.00	224.00	399.93	-2.82	-2.73	-2.83	2.00	2.00	0.00
500.00	5.00	224.00	499.68	-7.84	-7.57	-7.86	2.00	2.00	0.00
600.00	7.00	224.00	599.13	-15.36	-14.83	-15.40	2.00	2.00	0.00
617.50	7.35	224.00	616.49	-16.93	-16.35	-16.98	2.00	2.00	0.00
End Tangent @ 617.50ft									
700.00	7.35	224.00	698.32	-24.52	-23.68	-24.59	0.00	0.00	0.00
800.00	7.35	224.00	797.49	-33.73	-32.57	-33.82	0.00	0.00	0.00
900.00	7.35	224.00	896.67	-42.93	-41.46	-43.05	0.00	0.00	0.00
1,000.00	7.35	224.00	995.85	-52.13	-50.34	-52.27	0.00	0.00	0.00
1,100.00	7.35	224.00	1,095.03	-61.34	-59.23	-61.50	0.00	0.00	0.00
1,200.00	7.35	224.00	1,194.21	-70.54	-68.12	-70.73	0.00	0.00	0.00
1,300.00	7.35	224.00	1,293.38	-79.74	-77.00	-79.95	0.00	0.00	0.00
1,400.00	7.35	224.00	1,392.56	-88.94	-85.89	-89.18	0.00	0.00	0.00
1,500.00	7.35	224.00	1,491.74	-98.15	-94.78	-98.41	0.00	0.00	0.00
1,600.00	7.35	224.00	1,590.92	-107.35	-103.66	-107.64	0.00	0.00	0.00
1,700.00	7.35	224.00	1,690.10	-116.55	-112.55	-116.86	0.00	0.00	0.00
1,709.98	7.35	224.00	1,700.00	-117.47	-113.44	-117.79	0.00	0.00	0.00
9 5/8"									
1,800.00	7.35	224.00	1,789.28	-125.75	-121.44	-126.09	0.00	0.00	0.00
1,900.00	7.35	224.00	1,888.45	-134.96	-130.32	-135.32	0.00	0.00	0.00
2,000.00	7.35	224.00	1,987.63	-144.16	-139.21	-144.55	0.00	0.00	0.00
2,100.00	7.35	224.00	2,086.81	-153.36	-148.10	-153.77	0.00	0.00	0.00
2,200.00	7.35	224.00	2,185.99	-162.56	-156.99	-163.00	0.00	0.00	0.00
2,300.00	7.35	224.00	2,285.17	-171.77	-165.87	-172.23	0.00	0.00	0.00
2,400.00	7.35	224.00	2,384.35	-180.97	-174.76	-181.46	0.00	0.00	0.00
2,500.00	7.35	224.00	2,483.52	-190.17	-183.65	-190.68	0.00	0.00	0.00
2,600.00	7.35	224.00	2,582.70	-199.37	-192.53	-199.91	0.00	0.00	0.00
2,700.00	7.35	224.00	2,681.88	-208.58	-201.42	-209.14	0.00	0.00	0.00
2,800.00	7.35	224.00	2,781.06	-217.78	-210.31	-218.36	0.00	0.00	0.00
2,900.00	7.35	224.00	2,880.24	-226.98	-219.19	-227.59	0.00	0.00	0.00
3,000.00	7.35	224.00	2,979.42	-236.18	-228.08	-236.82	0.00	0.00	0.00
3,100.00	7.35	224.00	3,078.59	-245.39	-236.97	-246.05	0.00	0.00	0.00
3,200.00	7.35	224.00	3,177.77	-254.59	-245.85	-255.27	0.00	0.00	0.00
3,300.00	7.35	224.00	3,276.95	-263.79	-254.74	-264.50	0.00	0.00	0.00
3,400.00	7.35	224.00	3,376.13	-272.99	-263.63	-273.73	0.00	0.00	0.00
3,500.00	7.35	224.00	3,475.31	-282.20	-272.51	-282.96	0.00	0.00	0.00
3,600.00	7.35	224.00	3,574.49	-291.40	-281.40	-292.18	0.00	0.00	0.00
3,700.00	7.35	224.00	3,673.66	-300.60	-290.29	-301.41	0.00	0.00	0.00
3,800.00	7.35	224.00	3,772.84	-309.80	-299.17	-310.64	0.00	0.00	0.00
3,900.00	7.35	224.00	3,872.02	-319.01	-308.06	-319.86	0.00	0.00	0.00
4,000.00	7.35	224.00	3,971.20	-328.21	-316.95	-329.09	0.00	0.00	0.00
4,100.00	7.35	224.00	4,070.38	-337.41	-325.83	-338.32	0.00	0.00	0.00
4,200.00	7.35	224.00	4,169.56	-346.61	-334.72	-347.55	0.00	0.00	0.00
4,300.00	7.35	224.00	4,268.73	-355.82	-343.61	-356.77	0.00	0.00	0.00
4,400.00	7.35	224.00	4,367.91	-365.02	-352.49	-366.00	0.00	0.00	0.00
4,500.00	7.35	224.00	4,467.09	-374.22	-361.38	-375.23	0.00	0.00	0.00
4,600.00	7.35	224.00	4,566.27	-383.42	-370.27	-384.46	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 01N-65W-30-6H
<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-30-6H	<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	7.35	224.00	4,665.45	-392.63	-379.15	-393.68	0.00	0.00	0.00
4,800.00	7.35	224.00	4,764.63	-401.83	-388.04	-402.91	0.00	0.00	0.00
4,900.00	7.35	224.00	4,863.80	-411.03	-396.93	-412.14	0.00	0.00	0.00
5,000.00	7.35	224.00	4,962.98	-420.23	-405.81	-421.37	0.00	0.00	0.00
5,100.00	7.35	224.00	5,062.16	-429.44	-414.70	-430.59	0.00	0.00	0.00
5,200.00	7.35	224.00	5,161.34	-438.64	-423.59	-439.82	0.00	0.00	0.00
5,300.00	7.35	224.00	5,260.52	-447.84	-432.48	-449.05	0.00	0.00	0.00
5,400.00	7.35	224.00	5,359.70	-457.04	-441.36	-458.27	0.00	0.00	0.00
5,500.00	7.35	224.00	5,458.87	-466.25	-450.25	-467.50	0.00	0.00	0.00
5,600.00	7.35	224.00	5,558.05	-475.45	-459.14	-476.73	0.00	0.00	0.00
5,700.00	7.35	224.00	5,657.23	-484.65	-468.02	-485.96	0.00	0.00	0.00
5,800.00	7.35	224.00	5,756.41	-493.85	-476.91	-495.18	0.00	0.00	0.00
5,900.00	7.35	224.00	5,855.59	-503.06	-485.80	-504.41	0.00	0.00	0.00
6,000.00	7.35	224.00	5,954.77	-512.26	-494.68	-513.64	0.00	0.00	0.00
6,100.00	7.35	224.00	6,053.94	-521.46	-503.57	-522.87	0.00	0.00	0.00
6,200.00	7.35	224.00	6,153.12	-530.66	-512.46	-532.09	0.00	0.00	0.00
6,300.00	7.35	224.00	6,252.30	-539.87	-521.34	-541.32	0.00	0.00	0.00
6,400.00	7.35	224.00	6,351.48	-549.07	-530.23	-550.55	0.00	0.00	0.00
6,500.00	7.35	224.00	6,450.66	-558.27	-539.12	-559.77	0.00	0.00	0.00
6,600.00	7.35	224.00	6,549.84	-567.47	-548.00	-569.00	0.00	0.00	0.00
6,607.62	7.35	224.00	6,557.39	-568.18	-548.68	-569.71	0.00	0.00	0.00
<b>KOP @ 6607.62ft :: DLS = 9°/100'</b>									
6,700.00	5.93	300.82	6,649.31	-569.98	-556.90	-571.54	9.00	-1.54	83.16
6,800.00	13.04	337.48	6,747.95	-556.89	-565.67	-558.46	9.00	7.11	36.66
6,900.00	21.60	347.13	6,843.35	-528.46	-574.11	-530.06	9.00	8.56	9.64
7,000.00	30.41	351.41	6,933.14	-485.40	-582.01	-487.02	9.00	8.81	4.28
7,100.00	39.30	353.90	7,015.12	-428.77	-589.17	-430.41	9.00	8.89	2.49
7,200.00	48.22	355.59	7,087.28	-359.96	-595.42	-361.62	9.00	8.92	1.69
7,300.00	57.17	356.86	7,147.82	-280.67	-600.60	-282.34	9.00	8.94	1.27
7,400.00	66.12	357.90	7,195.27	-192.85	-604.59	-194.54	9.00	8.95	1.04
7,500.00	75.08	358.80	7,228.45	-98.66	-607.29	-100.36	9.00	8.96	0.90
7,600.00	84.04	359.63	7,246.55	-0.43	-608.62	-2.13	9.00	8.96	0.83
7,666.45	90.00	0.16	7,250.00	65.90	-608.74	64.20	9.00	8.96	0.80
<b>End Build @ 7666.45ft</b>									
7,700.00	90.00	0.16	7,250.00	99.45	-608.64	97.75	0.00	0.00	0.00
7,800.00	90.00	0.16	7,250.00	199.45	-608.36	197.75	0.00	0.00	0.00
7,900.00	90.00	0.16	7,250.00	299.45	-608.07	297.75	0.00	0.00	0.00
8,000.00	90.00	0.16	7,250.00	399.45	-607.78	397.75	0.00	0.00	0.00
8,100.00	90.00	0.16	7,250.00	499.45	-607.50	497.75	0.00	0.00	0.00
8,200.00	90.00	0.16	7,250.00	599.45	-607.21	597.75	0.00	0.00	0.00
8,300.00	90.00	0.16	7,250.00	699.45	-606.92	697.75	0.00	0.00	0.00
8,400.00	90.00	0.16	7,250.00	799.45	-606.64	797.75	0.00	0.00	0.00
8,500.00	90.00	0.16	7,250.00	899.45	-606.35	897.75	0.00	0.00	0.00
8,600.00	90.00	0.16	7,250.00	999.45	-606.06	997.75	0.00	0.00	0.00
8,700.00	90.00	0.16	7,250.00	1,099.45	-605.78	1,097.75	0.00	0.00	0.00
8,800.00	90.00	0.16	7,250.00	1,199.45	-605.49	1,197.75	0.00	0.00	0.00
8,900.00	90.00	0.16	7,250.00	1,299.45	-605.20	1,297.75	0.00	0.00	0.00
9,000.00	90.00	0.16	7,250.00	1,399.45	-604.92	1,397.75	0.00	0.00	0.00
9,100.00	90.00	0.16	7,250.00	1,499.45	-604.63	1,497.75	0.00	0.00	0.00
9,200.00	90.00	0.16	7,250.00	1,599.45	-604.35	1,597.75	0.00	0.00	0.00
9,300.00	90.00	0.16	7,250.00	1,699.45	-604.06	1,697.75	0.00	0.00	0.00
9,400.00	90.00	0.16	7,250.00	1,799.45	-603.77	1,797.75	0.00	0.00	0.00
9,500.00	90.00	0.16	7,250.00	1,899.44	-603.49	1,897.75	0.00	0.00	0.00
9,600.00	90.00	0.16	7,250.00	1,999.44	-603.20	1,997.75	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well JOHNSON 01N-65W-30-6H
<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-30-6H	<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	0.16	7,250.00	2,099.44	-602.91	2,097.75	0.00	0.00	0.00	
9,800.00	90.00	0.16	7,250.00	2,199.44	-602.63	2,197.75	0.00	0.00	0.00	
9,900.00	90.00	0.16	7,250.00	2,299.44	-602.34	2,297.75	0.00	0.00	0.00	
10,000.00	90.00	0.16	7,250.00	2,399.44	-602.05	2,397.75	0.00	0.00	0.00	
10,100.00	90.00	0.16	7,250.00	2,499.44	-601.77	2,497.75	0.00	0.00	0.00	
10,200.00	90.00	0.16	7,250.00	2,599.44	-601.48	2,597.75	0.00	0.00	0.00	
10,300.00	90.00	0.16	7,250.00	2,699.44	-601.19	2,697.75	0.00	0.00	0.00	
10,400.00	90.00	0.16	7,250.00	2,799.44	-600.91	2,797.75	0.00	0.00	0.00	
10,500.00	90.00	0.16	7,250.00	2,899.44	-600.62	2,897.75	0.00	0.00	0.00	
10,600.00	90.00	0.16	7,250.00	2,999.44	-600.33	2,997.75	0.00	0.00	0.00	
10,700.00	90.00	0.16	7,250.00	3,099.44	-600.05	3,097.75	0.00	0.00	0.00	
10,800.00	90.00	0.16	7,250.00	3,199.44	-599.76	3,197.75	0.00	0.00	0.00	
10,900.00	90.00	0.16	7,250.00	3,299.44	-599.47	3,297.75	0.00	0.00	0.00	
11,000.00	90.00	0.16	7,250.00	3,399.44	-599.19	3,397.75	0.00	0.00	0.00	
11,100.00	90.00	0.16	7,250.00	3,499.44	-598.90	3,497.75	0.00	0.00	0.00	
11,200.00	90.00	0.16	7,250.00	3,599.44	-598.61	3,597.75	0.00	0.00	0.00	
11,300.00	90.00	0.16	7,250.00	3,699.44	-598.33	3,697.75	0.00	0.00	0.00	
11,400.00	90.00	0.16	7,250.00	3,799.44	-598.04	3,797.75	0.00	0.00	0.00	
11,500.00	90.00	0.16	7,250.00	3,899.44	-597.75	3,897.75	0.00	0.00	0.00	
11,600.00	90.00	0.16	7,250.00	3,999.44	-597.47	3,997.75	0.00	0.00	0.00	
11,700.00	90.00	0.16	7,250.00	4,099.44	-597.18	4,097.75	0.00	0.00	0.00	
11,800.00	90.00	0.16	7,250.00	4,199.44	-596.89	4,197.75	0.00	0.00	0.00	
11,900.00	90.00	0.16	7,250.00	4,299.43	-596.61	4,297.75	0.00	0.00	0.00	
12,000.00	90.00	0.16	7,250.00	4,399.43	-596.32	4,397.75	0.00	0.00	0.00	
12,100.00	90.00	0.16	7,250.00	4,499.43	-596.03	4,497.75	0.00	0.00	0.00	
12,200.00	90.00	0.16	7,250.00	4,599.43	-595.75	4,597.75	0.00	0.00	0.00	
12,300.00	90.00	0.16	7,250.00	4,699.43	-595.46	4,697.75	0.00	0.00	0.00	
12,400.00	90.00	0.16	7,250.00	4,799.43	-595.17	4,797.75	0.00	0.00	0.00	
12,500.00	90.00	0.16	7,250.00	4,899.43	-594.89	4,897.75	0.00	0.00	0.00	
12,600.00	90.00	0.16	7,250.00	4,999.43	-594.60	4,997.75	0.00	0.00	0.00	
12,700.00	90.00	0.16	7,250.00	5,099.43	-594.32	5,097.75	0.00	0.00	0.00	
12,800.00	90.00	0.16	7,250.00	5,199.43	-594.03	5,197.75	0.00	0.00	0.00	
12,900.00	90.00	0.16	7,250.00	5,299.43	-593.74	5,297.75	0.00	0.00	0.00	
13,000.00	90.00	0.16	7,250.00	5,399.43	-593.46	5,397.75	0.00	0.00	0.00	
13,100.00	90.00	0.16	7,250.00	5,499.43	-593.17	5,497.75	0.00	0.00	0.00	
13,200.00	90.00	0.16	7,250.00	5,599.43	-592.88	5,597.75	0.00	0.00	0.00	
13,300.00	90.00	0.16	7,250.00	5,699.43	-592.60	5,697.75	0.00	0.00	0.00	
13,400.00	90.00	0.16	7,250.00	5,799.43	-592.31	5,797.75	0.00	0.00	0.00	
13,500.00	90.00	0.16	7,250.00	5,899.43	-592.02	5,897.75	0.00	0.00	0.00	
13,600.00	90.00	0.16	7,250.00	5,999.43	-591.74	5,997.75	0.00	0.00	0.00	
13,700.00	90.00	0.16	7,250.00	6,099.43	-591.45	6,097.75	0.00	0.00	0.00	
13,800.00	90.00	0.16	7,250.00	6,199.43	-591.16	6,197.75	0.00	0.00	0.00	
13,900.00	90.00	0.16	7,250.00	6,299.43	-590.88	6,297.75	0.00	0.00	0.00	
14,000.00	90.00	0.16	7,250.00	6,399.43	-590.59	6,397.75	0.00	0.00	0.00	
14,100.00	90.00	0.16	7,250.00	6,499.43	-590.30	6,497.75	0.00	0.00	0.00	
14,200.00	90.00	0.16	7,250.00	6,599.43	-590.02	6,597.75	0.00	0.00	0.00	
14,300.00	90.00	0.16	7,250.00	6,699.43	-589.73	6,697.75	0.00	0.00	0.00	
14,400.00	90.00	0.16	7,250.00	6,799.42	-589.44	6,797.75	0.00	0.00	0.00	
14,500.00	90.00	0.16	7,250.00	6,899.42	-589.16	6,897.75	0.00	0.00	0.00	
14,600.00	90.00	0.16	7,250.00	6,999.42	-588.87	6,997.75	0.00	0.00	0.00	
14,700.00	90.00	0.16	7,250.00	7,099.42	-588.58	7,097.75	0.00	0.00	0.00	
14,800.00	90.00	0.16	7,250.00	7,199.42	-588.30	7,197.75	0.00	0.00	0.00	
14,900.00	90.00	0.16	7,250.00	7,299.42	-588.01	7,297.75	0.00	0.00	0.00	
15,000.00	90.00	0.16	7,250.00	7,399.42	-587.72	7,397.75	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-30-6H
<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-30-6H	<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	0.16	7,250.00	7,499.42	-587.44	7,497.75	0.00	0.00	0.00	
15,200.00	90.00	0.16	7,250.00	7,599.42	-587.15	7,597.75	0.00	0.00	0.00	
15,300.00	90.00	0.16	7,250.00	7,699.42	-586.86	7,697.75	0.00	0.00	0.00	
15,400.00	90.00	0.16	7,250.00	7,799.42	-586.58	7,797.75	0.00	0.00	0.00	
15,500.00	90.00	0.16	7,250.00	7,899.42	-586.29	7,897.75	0.00	0.00	0.00	
15,600.00	90.00	0.16	7,250.00	7,999.42	-586.00	7,997.75	0.00	0.00	0.00	
15,700.00	90.00	0.16	7,250.00	8,099.42	-585.72	8,097.75	0.00	0.00	0.00	
15,800.00	90.00	0.16	7,250.00	8,199.42	-585.43	8,197.75	0.00	0.00	0.00	
15,900.00	90.00	0.16	7,250.00	8,299.42	-585.15	8,297.75	0.00	0.00	0.00	
16,000.00	90.00	0.16	7,250.00	8,399.42	-584.86	8,397.75	0.00	0.00	0.00	
16,100.00	90.00	0.16	7,250.00	8,499.42	-584.57	8,497.75	0.00	0.00	0.00	
16,200.00	90.00	0.16	7,250.00	8,599.42	-584.29	8,597.75	0.00	0.00	0.00	
16,300.00	90.00	0.16	7,250.00	8,699.42	-584.00	8,697.75	0.00	0.00	0.00	
16,400.00	90.00	0.16	7,250.00	8,799.42	-583.71	8,797.75	0.00	0.00	0.00	
16,500.00	90.00	0.16	7,250.00	8,899.42	-583.43	8,897.75	0.00	0.00	0.00	
16,600.00	90.00	0.16	7,250.00	8,999.42	-583.14	8,997.75	0.00	0.00	0.00	
16,700.00	90.00	0.16	7,250.00	9,099.42	-582.85	9,097.75	0.00	0.00	0.00	
16,800.00	90.00	0.16	7,250.00	9,199.41	-582.57	9,197.75	0.00	0.00	0.00	
16,900.00	90.00	0.16	7,250.00	9,299.41	-582.28	9,297.75	0.00	0.00	0.00	
17,000.00	90.00	0.16	7,250.00	9,399.41	-581.99	9,397.75	0.00	0.00	0.00	
17,100.00	90.00	0.16	7,250.00	9,499.41	-581.71	9,497.75	0.00	0.00	0.00	
17,200.00	90.00	0.16	7,250.00	9,599.41	-581.42	9,597.75	0.00	0.00	0.00	
17,300.00	90.00	0.16	7,250.00	9,699.41	-581.13	9,697.75	0.00	0.00	0.00	
17,400.00	90.00	0.16	7,250.00	9,799.41	-580.85	9,797.75	0.00	0.00	0.00	
17,500.00	90.00	0.16	7,250.00	9,899.41	-580.56	9,897.75	0.00	0.00	0.00	
17,600.00	90.00	0.16	7,250.00	9,999.41	-580.27	9,997.75	0.00	0.00	0.00	
17,657.14	90.00	0.16	7,250.00	10,056.55	-580.11	10,054.90	0.00	0.00	0.00	
TD Well @ 17657.14ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,709.98	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
617.50	616.49	-16.93	-16.35	End Tangent @ 617.50ft
6,607.62	6,557.39	-568.18	-548.68	KOP @ 6607.62ft :: DLS = 9°/100'
7,666.45	7,250.00	65.90	-608.74	End Build @ 7666.45ft
17,657.14	7,250.00	10,056.55	-580.11	TD Well @ 17657.14ft