

VERDAD RESOURCES

WATTENBERG FIELD

1N-65W-30 JOHNSON PAD

JOHNSON 01N-65W-30-2S

Wellbore #1

Plan: Design #1

Standard Planning Report

05 February, 2018

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

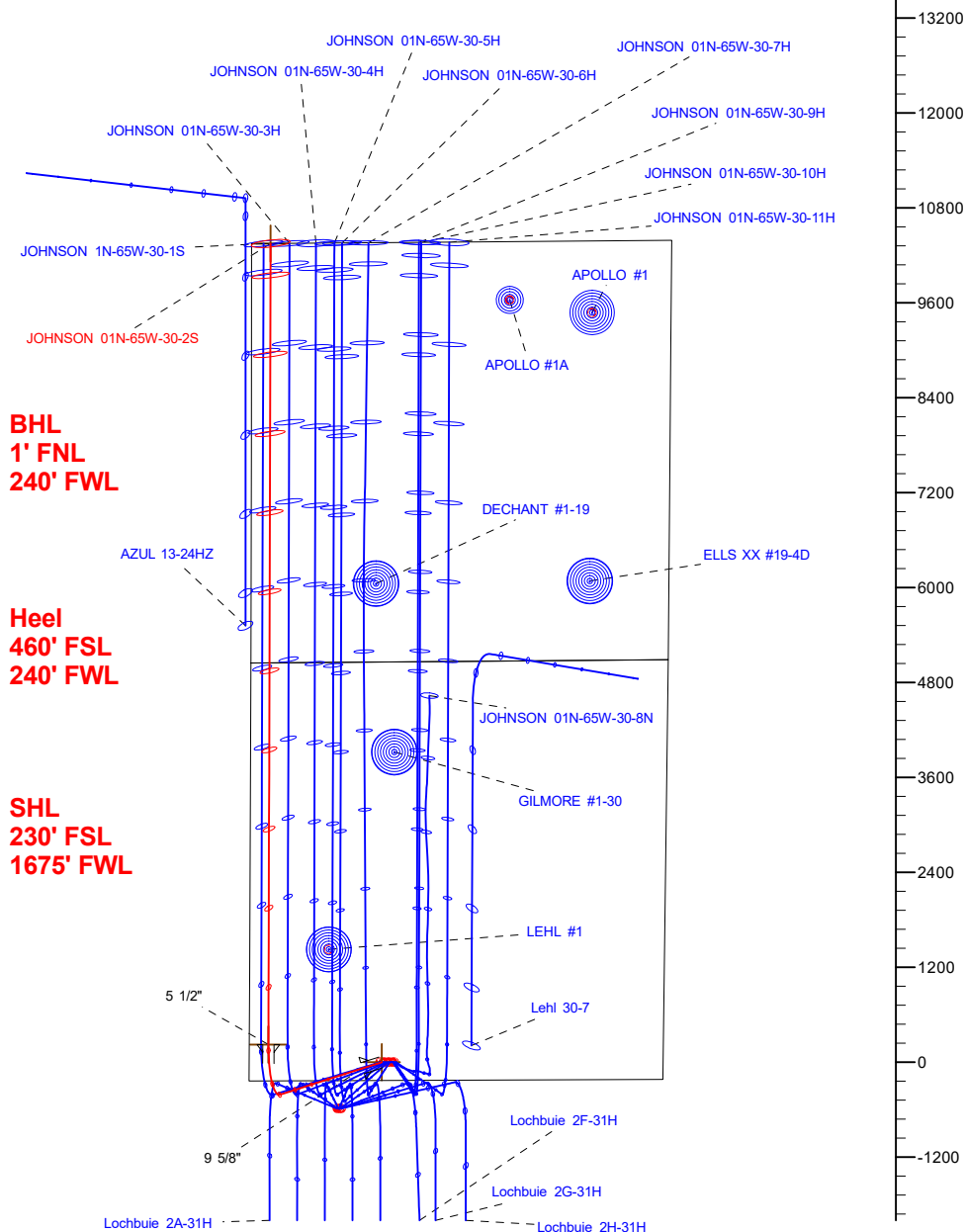
VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1725.76	9 5/8"	9-5/8
7250.00	7776.82	5 1/2"	5-1/2

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

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

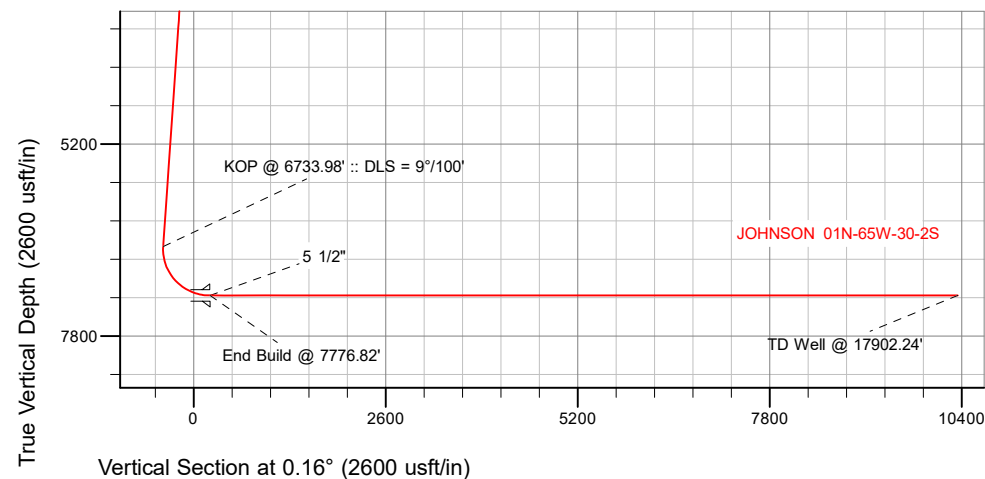


SECTION DETAILS

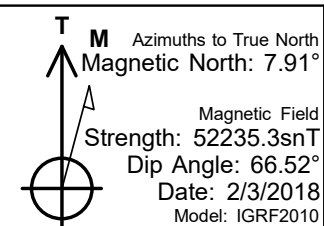
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	885.00	12.70	252.35	879.81	-21.25	-66.79	2.00	252.35	-21.44	
4	6733.98	12.70	252.35	6585.70	-411.13	-1292.13	0.00	0.00	-414.74	
5	7776.82	90.00	0.16	7250.00	224.44	-1432.91	9.00	107.40	220.44	
6	17902.24	90.00	0.16	7250.00	10349.83	-1404.90	0.00	0.00	10345.87	JOHNSON 01N-65W-30-2S_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JOHNSON 01N-65W-30-2S_SHL	0.00	0.00	0.00	40.015684	-104.710169
JOHNSON 01N-65W-30-2S_BHL	7250.00	10349.83	-1404.90	40.044096	-104.715187



Vertical Section at 0.16° (2600 usft/in)



WELL DETAILS: JOHNSON 01N-65W-30-2S

GL = 5000'

RKB = 20' @ 5020.00usft (RIG)

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

Created By: _____ Date: 2/5/2018
Reviewed: _____ Date: _____

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well JOHNSON 01N-65W-30-2S
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
Site:	1N-65W-30 JOHNSON PAD	North Reference:	True
Well:	JOHNSON 01N-65W-30-2S	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		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-30-2S					
Well Position	+N/-S	1.45 usft	Northing:	1,249,545.31 usft	Latitude:	40.015684
	+E/-W	-120.16 usft	Easting:	3,221,220.18 usft	Longitude:	-104.710169
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,000.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/3/2018	7.91	66.52	52,235.30474609

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	0.16

Plan Survey Tool Program	Date	2/5/2018		
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	17,902.24	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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
885.00	12.70	252.35	879.81	-21.25	-66.79	2.00	2.00	0.00	252.35	
6,733.98	12.70	252.35	6,585.70	-411.13	-1,292.13	0.00	0.00	0.00	0.00	
7,776.82	90.00	0.16	7,250.00	224.44	-1,432.91	9.00	7.41	10.34	107.40	
17,902.24	90.00	0.16	7,250.00	10,349.83	-1,404.90	0.00	0.00	0.00	0.00	JOHNSON 01N-65W-

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
Site:	1N-65W-30 JOHNSON PAD	North Reference:	True
Well:	JOHNSON 01N-65W-30-2S	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
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	252.35	300.00	-0.13	-0.42	-0.13	2.00	2.00	0.00
400.00	3.00	252.35	399.93	-1.19	-3.74	-1.20	2.00	2.00	0.00
500.00	5.00	252.35	499.68	-3.31	-10.39	-3.33	2.00	2.00	0.00
600.00	7.00	252.35	599.13	-6.47	-20.35	-6.53	2.00	2.00	0.00
700.00	9.00	252.35	698.15	-10.69	-33.61	-10.79	2.00	2.00	0.00
800.00	11.00	252.35	796.63	-15.96	-50.16	-16.10	2.00	2.00	0.00
885.00	12.70	252.35	879.81	-21.25	-66.79	-21.44	2.00	2.00	0.00
End Nudge @ 885.00'									
900.00	12.70	252.35	894.45	-22.25	-69.93	-22.45	0.00	0.00	0.00
1,000.00	12.70	252.35	992.00	-28.92	-90.88	-29.17	0.00	0.00	0.00
1,100.00	12.70	252.35	1,089.55	-35.58	-111.83	-35.89	0.00	0.00	0.00
1,200.00	12.70	252.35	1,187.11	-42.25	-132.78	-42.62	0.00	0.00	0.00
1,300.00	12.70	252.35	1,284.66	-48.91	-153.73	-49.34	0.00	0.00	0.00
1,400.00	12.70	252.35	1,382.21	-55.58	-174.68	-56.07	0.00	0.00	0.00
1,500.00	12.70	252.35	1,479.77	-62.25	-195.63	-62.79	0.00	0.00	0.00
1,600.00	12.70	252.35	1,577.32	-68.91	-216.58	-69.52	0.00	0.00	0.00
1,700.00	12.70	252.35	1,674.87	-75.58	-237.53	-76.24	0.00	0.00	0.00
1,725.76	12.70	252.35	1,700.00	-77.29	-242.93	-77.97	0.00	0.00	0.00
9 5/8"									
1,800.00	12.70	252.35	1,772.43	-82.24	-258.48	-82.96	0.00	0.00	0.00
1,900.00	12.70	252.35	1,869.98	-88.91	-279.43	-89.69	0.00	0.00	0.00
2,000.00	12.70	252.35	1,967.53	-95.57	-300.38	-96.41	0.00	0.00	0.00
2,100.00	12.70	252.35	2,065.09	-102.24	-321.33	-103.14	0.00	0.00	0.00
2,200.00	12.70	252.35	2,162.64	-108.91	-342.28	-109.86	0.00	0.00	0.00
2,300.00	12.70	252.35	2,260.19	-115.57	-363.23	-116.59	0.00	0.00	0.00
2,400.00	12.70	252.35	2,357.75	-122.24	-384.18	-123.31	0.00	0.00	0.00
2,500.00	12.70	252.35	2,455.30	-128.90	-405.13	-130.03	0.00	0.00	0.00
2,600.00	12.70	252.35	2,552.85	-135.57	-426.08	-136.76	0.00	0.00	0.00
2,700.00	12.70	252.35	2,650.41	-142.23	-447.03	-143.48	0.00	0.00	0.00
2,800.00	12.70	252.35	2,747.96	-148.90	-467.98	-150.21	0.00	0.00	0.00
2,900.00	12.70	252.35	2,845.52	-155.57	-488.93	-156.93	0.00	0.00	0.00
3,000.00	12.70	252.35	2,943.07	-162.23	-509.88	-163.66	0.00	0.00	0.00
3,100.00	12.70	252.35	3,040.62	-168.90	-530.83	-170.38	0.00	0.00	0.00
3,200.00	12.70	252.35	3,138.18	-175.56	-551.78	-177.10	0.00	0.00	0.00
3,300.00	12.70	252.35	3,235.73	-182.23	-572.72	-183.83	0.00	0.00	0.00
3,400.00	12.70	252.35	3,333.28	-188.90	-593.67	-190.55	0.00	0.00	0.00
3,500.00	12.70	252.35	3,430.84	-195.56	-614.62	-197.28	0.00	0.00	0.00
3,600.00	12.70	252.35	3,528.39	-202.23	-635.57	-204.00	0.00	0.00	0.00
3,700.00	12.70	252.35	3,625.94	-208.89	-656.52	-210.72	0.00	0.00	0.00
3,800.00	12.70	252.35	3,723.50	-215.56	-677.47	-217.45	0.00	0.00	0.00
3,900.00	12.70	252.35	3,821.05	-222.22	-698.42	-224.17	0.00	0.00	0.00
4,000.00	12.70	252.35	3,918.60	-228.89	-719.37	-230.90	0.00	0.00	0.00
4,100.00	12.70	252.35	4,016.16	-235.56	-740.32	-237.62	0.00	0.00	0.00
4,200.00	12.70	252.35	4,113.71	-242.22	-761.27	-244.35	0.00	0.00	0.00
4,300.00	12.70	252.35	4,211.26	-248.89	-782.22	-251.07	0.00	0.00	0.00
4,400.00	12.70	252.35	4,308.82	-255.55	-803.17	-257.79	0.00	0.00	0.00
4,500.00	12.70	252.35	4,406.37	-262.22	-824.12	-264.52	0.00	0.00	0.00
4,600.00	12.70	252.35	4,503.92	-268.88	-845.07	-271.24	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
Site:	1N-65W-30 JOHNSON PAD	North Reference:	True
Well:	JOHNSON 01N-65W-30-2S	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)
4,700.00	12.70	252.35	4,601.48	-275.55	-866.02	-277.97	0.00	0.00	0.00
4,800.00	12.70	252.35	4,699.03	-282.22	-886.97	-284.69	0.00	0.00	0.00
4,900.00	12.70	252.35	4,796.58	-288.88	-907.92	-291.42	0.00	0.00	0.00
5,000.00	12.70	252.35	4,894.14	-295.55	-928.87	-298.14	0.00	0.00	0.00
5,100.00	12.70	252.35	4,991.69	-302.21	-949.82	-304.86	0.00	0.00	0.00
5,200.00	12.70	252.35	5,089.24	-308.88	-970.77	-311.59	0.00	0.00	0.00
5,300.00	12.70	252.35	5,186.80	-315.54	-991.72	-318.31	0.00	0.00	0.00
5,400.00	12.70	252.35	5,284.35	-322.21	-1,012.67	-325.04	0.00	0.00	0.00
5,500.00	12.70	252.35	5,381.91	-328.88	-1,033.62	-331.76	0.00	0.00	0.00
5,600.00	12.70	252.35	5,479.46	-335.54	-1,054.57	-338.49	0.00	0.00	0.00
5,700.00	12.70	252.35	5,577.01	-342.21	-1,075.52	-345.21	0.00	0.00	0.00
5,800.00	12.70	252.35	5,674.57	-348.87	-1,096.47	-351.93	0.00	0.00	0.00
5,900.00	12.70	252.35	5,772.12	-355.54	-1,117.42	-358.66	0.00	0.00	0.00
6,000.00	12.70	252.35	5,869.67	-362.21	-1,138.37	-365.38	0.00	0.00	0.00
6,100.00	12.70	252.35	5,967.23	-368.87	-1,159.32	-372.11	0.00	0.00	0.00
6,200.00	12.70	252.35	6,064.78	-375.54	-1,180.27	-378.83	0.00	0.00	0.00
6,300.00	12.70	252.35	6,162.33	-382.20	-1,201.22	-385.56	0.00	0.00	0.00
6,400.00	12.70	252.35	6,259.89	-388.87	-1,222.17	-392.28	0.00	0.00	0.00
6,500.00	12.70	252.35	6,357.44	-395.53	-1,243.12	-399.00	0.00	0.00	0.00
6,600.00	12.70	252.35	6,454.99	-402.20	-1,264.07	-405.73	0.00	0.00	0.00
6,700.00	12.70	252.35	6,552.55	-408.87	-1,285.02	-412.45	0.00	0.00	0.00
6,733.98	12.70	252.35	6,585.70	-411.13	-1,292.13	-414.74	0.00	0.00	0.00
KOP @ 6733.98' :: DLS = 9°/100'									
6,750.00	12.34	258.80	6,601.33	-412.00	-1,295.49	-415.61	9.00	-2.22	40.25
6,800.00	12.29	280.01	6,650.21	-412.11	-1,305.98	-415.76	9.00	-0.12	42.42
6,850.00	13.76	298.99	6,698.94	-408.30	-1,316.43	-411.98	9.00	2.95	37.95
6,900.00	16.36	313.20	6,747.24	-400.59	-1,326.77	-404.30	9.00	5.20	28.44
6,950.00	19.65	323.21	6,794.80	-389.04	-1,336.94	-392.77	9.00	6.57	20.02
7,000.00	23.32	330.32	6,841.32	-373.70	-1,346.88	-377.46	9.00	7.36	14.21
7,050.00	27.24	335.53	6,886.53	-354.67	-1,356.53	-358.46	9.00	7.83	10.42
7,100.00	31.30	339.50	6,930.14	-332.08	-1,365.82	-335.89	9.00	8.12	7.94
7,150.00	35.46	342.63	6,971.89	-306.06	-1,374.71	-309.90	9.00	8.32	6.26
7,200.00	39.69	345.17	7,011.51	-276.77	-1,383.13	-280.63	9.00	8.45	5.09
7,250.00	43.96	347.30	7,048.76	-244.39	-1,391.03	-248.28	9.00	8.54	4.26
7,300.00	48.26	349.12	7,083.42	-209.13	-1,398.37	-213.03	9.00	8.61	3.64
7,350.00	52.59	350.71	7,115.27	-171.19	-1,405.10	-175.11	9.00	8.66	3.18
7,400.00	56.94	352.13	7,144.11	-130.82	-1,411.17	-134.76	9.00	8.70	2.83
7,450.00	61.30	353.41	7,169.76	-88.26	-1,416.56	-92.21	9.00	8.73	2.57
7,500.00	65.68	354.59	7,192.08	-43.77	-1,421.22	-47.74	9.00	8.75	2.36
7,550.00	70.06	355.69	7,210.91	2.37	-1,425.14	-1.61	9.00	8.77	2.20
7,600.00	74.45	356.74	7,226.15	49.87	-1,428.28	45.89	9.00	8.78	2.08
7,650.00	78.84	357.73	7,237.69	98.45	-1,430.62	94.46	9.00	8.79	2.00
7,700.00	83.24	358.70	7,245.47	147.81	-1,432.15	143.81	9.00	8.79	1.94
7,750.00	87.64	359.65	7,249.45	197.63	-1,432.87	193.63	9.00	8.80	1.90
7,776.82	90.00	0.16	7,250.00	224.44	-1,432.91	220.44	9.00	8.80	1.89
End Build @ 7776.82' - 5 1/2"									
7,800.00	90.00	0.16	7,250.00	247.62	-1,432.85	243.62	0.00	0.00	0.00
7,900.00	90.00	0.16	7,250.00	347.62	-1,432.57	343.62	0.00	0.00	0.00
8,000.00	90.00	0.16	7,250.00	447.62	-1,432.29	443.62	0.00	0.00	0.00
8,100.00	90.00	0.16	7,250.00	547.62	-1,432.02	543.62	0.00	0.00	0.00
8,200.00	90.00	0.16	7,250.00	647.62	-1,431.74	643.62	0.00	0.00	0.00
8,300.00	90.00	0.16	7,250.00	747.62	-1,431.46	743.62	0.00	0.00	0.00
8,400.00	90.00	0.16	7,250.00	847.62	-1,431.19	843.62	0.00	0.00	0.00
8,500.00	90.00	0.16	7,250.00	947.62	-1,430.91	943.62	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
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Well:	JOHNSON 01N-65W-30-2S	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)	
8,600.00	90.00	0.16	7,250.00	1,047.62	-1,430.63	1,043.62	0.00	0.00	0.00	
8,700.00	90.00	0.16	7,250.00	1,147.62	-1,430.36	1,143.62	0.00	0.00	0.00	
8,800.00	90.00	0.16	7,250.00	1,247.62	-1,430.08	1,243.62	0.00	0.00	0.00	
8,900.00	90.00	0.16	7,250.00	1,347.62	-1,429.80	1,343.62	0.00	0.00	0.00	
9,000.00	90.00	0.16	7,250.00	1,447.62	-1,429.53	1,443.62	0.00	0.00	0.00	
9,100.00	90.00	0.16	7,250.00	1,547.62	-1,429.25	1,543.62	0.00	0.00	0.00	
9,200.00	90.00	0.16	7,250.00	1,647.62	-1,428.97	1,643.62	0.00	0.00	0.00	
9,300.00	90.00	0.16	7,250.00	1,747.62	-1,428.70	1,743.62	0.00	0.00	0.00	
9,400.00	90.00	0.16	7,250.00	1,847.62	-1,428.42	1,843.62	0.00	0.00	0.00	
9,500.00	90.00	0.16	7,250.00	1,947.62	-1,428.14	1,943.62	0.00	0.00	0.00	
9,600.00	90.00	0.16	7,250.00	2,047.62	-1,427.87	2,043.62	0.00	0.00	0.00	
9,700.00	90.00	0.16	7,250.00	2,147.62	-1,427.59	2,143.62	0.00	0.00	0.00	
9,800.00	90.00	0.16	7,250.00	2,247.62	-1,427.31	2,243.62	0.00	0.00	0.00	
9,900.00	90.00	0.16	7,250.00	2,347.62	-1,427.04	2,343.62	0.00	0.00	0.00	
10,000.00	90.00	0.16	7,250.00	2,447.62	-1,426.76	2,443.62	0.00	0.00	0.00	
10,100.00	90.00	0.16	7,250.00	2,547.61	-1,426.48	2,543.62	0.00	0.00	0.00	
10,200.00	90.00	0.16	7,250.00	2,647.61	-1,426.21	2,643.62	0.00	0.00	0.00	
10,300.00	90.00	0.16	7,250.00	2,747.61	-1,425.93	2,743.62	0.00	0.00	0.00	
10,400.00	90.00	0.16	7,250.00	2,847.61	-1,425.65	2,843.62	0.00	0.00	0.00	
10,500.00	90.00	0.16	7,250.00	2,947.61	-1,425.38	2,943.62	0.00	0.00	0.00	
10,600.00	90.00	0.16	7,250.00	3,047.61	-1,425.10	3,043.62	0.00	0.00	0.00	
10,700.00	90.00	0.16	7,250.00	3,147.61	-1,424.82	3,143.62	0.00	0.00	0.00	
10,800.00	90.00	0.16	7,250.00	3,247.61	-1,424.55	3,243.62	0.00	0.00	0.00	
10,900.00	90.00	0.16	7,250.00	3,347.61	-1,424.27	3,343.62	0.00	0.00	0.00	
11,000.00	90.00	0.16	7,250.00	3,447.61	-1,423.99	3,443.62	0.00	0.00	0.00	
11,100.00	90.00	0.16	7,250.00	3,547.61	-1,423.72	3,543.62	0.00	0.00	0.00	
11,200.00	90.00	0.16	7,250.00	3,647.61	-1,423.44	3,643.62	0.00	0.00	0.00	
11,300.00	90.00	0.16	7,250.00	3,747.61	-1,423.17	3,743.62	0.00	0.00	0.00	
11,400.00	90.00	0.16	7,250.00	3,847.61	-1,422.89	3,843.62	0.00	0.00	0.00	
11,500.00	90.00	0.16	7,250.00	3,947.61	-1,422.61	3,943.62	0.00	0.00	0.00	
11,600.00	90.00	0.16	7,250.00	4,047.61	-1,422.34	4,043.62	0.00	0.00	0.00	
11,700.00	90.00	0.16	7,250.00	4,147.61	-1,422.06	4,143.62	0.00	0.00	0.00	
11,800.00	90.00	0.16	7,250.00	4,247.61	-1,421.78	4,243.62	0.00	0.00	0.00	
11,900.00	90.00	0.16	7,250.00	4,347.61	-1,421.51	4,343.62	0.00	0.00	0.00	
12,000.00	90.00	0.16	7,250.00	4,447.61	-1,421.23	4,443.62	0.00	0.00	0.00	
12,100.00	90.00	0.16	7,250.00	4,547.61	-1,420.95	4,543.62	0.00	0.00	0.00	
12,200.00	90.00	0.16	7,250.00	4,647.61	-1,420.68	4,643.62	0.00	0.00	0.00	
12,300.00	90.00	0.16	7,250.00	4,747.61	-1,420.40	4,743.62	0.00	0.00	0.00	
12,400.00	90.00	0.16	7,250.00	4,847.61	-1,420.12	4,843.62	0.00	0.00	0.00	
12,500.00	90.00	0.16	7,250.00	4,947.61	-1,419.85	4,943.62	0.00	0.00	0.00	
12,600.00	90.00	0.16	7,250.00	5,047.61	-1,419.57	5,043.62	0.00	0.00	0.00	
12,700.00	90.00	0.16	7,250.00	5,147.60	-1,419.29	5,143.62	0.00	0.00	0.00	
12,800.00	90.00	0.16	7,250.00	5,247.60	-1,419.02	5,243.62	0.00	0.00	0.00	
12,900.00	90.00	0.16	7,250.00	5,347.60	-1,418.74	5,343.62	0.00	0.00	0.00	
13,000.00	90.00	0.16	7,250.00	5,447.60	-1,418.46	5,443.62	0.00	0.00	0.00	
13,100.00	90.00	0.16	7,250.00	5,547.60	-1,418.19	5,543.62	0.00	0.00	0.00	
13,200.00	90.00	0.16	7,250.00	5,647.60	-1,417.91	5,643.62	0.00	0.00	0.00	
13,300.00	90.00	0.16	7,250.00	5,747.60	-1,417.63	5,743.62	0.00	0.00	0.00	
13,400.00	90.00	0.16	7,250.00	5,847.60	-1,417.36	5,843.62	0.00	0.00	0.00	
13,500.00	90.00	0.16	7,250.00	5,947.60	-1,417.08	5,943.62	0.00	0.00	0.00	
13,600.00	90.00	0.16	7,250.00	6,047.60	-1,416.80	6,043.62	0.00	0.00	0.00	
13,700.00	90.00	0.16	7,250.00	6,147.60	-1,416.53	6,143.62	0.00	0.00	0.00	
13,800.00	90.00	0.16	7,250.00	6,247.60	-1,416.25	6,243.62	0.00	0.00	0.00	
13,900.00	90.00	0.16	7,250.00	6,347.60	-1,415.97	6,343.62	0.00	0.00	0.00	

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well JOHNSON 01N-65W-30-2S
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
Site:	1N-65W-30 JOHNSON PAD	North Reference:	True
Well:	JOHNSON 01N-65W-30-2S	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)	
14,000.00	90.00	0.16	7,250.00	6,447.60	-1,415.70	6,443.62	0.00	0.00	0.00	
14,100.00	90.00	0.16	7,250.00	6,547.60	-1,415.42	6,543.62	0.00	0.00	0.00	
14,200.00	90.00	0.16	7,250.00	6,647.60	-1,415.14	6,643.62	0.00	0.00	0.00	
14,300.00	90.00	0.16	7,250.00	6,747.60	-1,414.87	6,743.62	0.00	0.00	0.00	
14,400.00	90.00	0.16	7,250.00	6,847.60	-1,414.59	6,843.62	0.00	0.00	0.00	
14,500.00	90.00	0.16	7,250.00	6,947.60	-1,414.31	6,943.62	0.00	0.00	0.00	
14,600.00	90.00	0.16	7,250.00	7,047.60	-1,414.04	7,043.62	0.00	0.00	0.00	
14,700.00	90.00	0.16	7,250.00	7,147.60	-1,413.76	7,143.62	0.00	0.00	0.00	
14,800.00	90.00	0.16	7,250.00	7,247.60	-1,413.48	7,243.62	0.00	0.00	0.00	
14,900.00	90.00	0.16	7,250.00	7,347.60	-1,413.21	7,343.62	0.00	0.00	0.00	
15,000.00	90.00	0.16	7,250.00	7,447.60	-1,412.93	7,443.62	0.00	0.00	0.00	
15,100.00	90.00	0.16	7,250.00	7,547.60	-1,412.65	7,543.62	0.00	0.00	0.00	
15,200.00	90.00	0.16	7,250.00	7,647.60	-1,412.38	7,643.62	0.00	0.00	0.00	
15,300.00	90.00	0.16	7,250.00	7,747.60	-1,412.10	7,743.62	0.00	0.00	0.00	
15,400.00	90.00	0.16	7,250.00	7,847.59	-1,411.82	7,843.62	0.00	0.00	0.00	
15,500.00	90.00	0.16	7,250.00	7,947.59	-1,411.55	7,943.62	0.00	0.00	0.00	
15,600.00	90.00	0.16	7,250.00	8,047.59	-1,411.27	8,043.62	0.00	0.00	0.00	
15,700.00	90.00	0.16	7,250.00	8,147.59	-1,410.99	8,143.62	0.00	0.00	0.00	
15,800.00	90.00	0.16	7,250.00	8,247.59	-1,410.72	8,243.62	0.00	0.00	0.00	
15,900.00	90.00	0.16	7,250.00	8,347.59	-1,410.44	8,343.62	0.00	0.00	0.00	
16,000.00	90.00	0.16	7,250.00	8,447.59	-1,410.16	8,443.62	0.00	0.00	0.00	
16,100.00	90.00	0.16	7,250.00	8,547.59	-1,409.89	8,543.62	0.00	0.00	0.00	
16,200.00	90.00	0.16	7,250.00	8,647.59	-1,409.61	8,643.62	0.00	0.00	0.00	
16,300.00	90.00	0.16	7,250.00	8,747.59	-1,409.33	8,743.62	0.00	0.00	0.00	
16,400.00	90.00	0.16	7,250.00	8,847.59	-1,409.06	8,843.62	0.00	0.00	0.00	
16,500.00	90.00	0.16	7,250.00	8,947.59	-1,408.78	8,943.62	0.00	0.00	0.00	
16,600.00	90.00	0.16	7,250.00	9,047.59	-1,408.50	9,043.62	0.00	0.00	0.00	
16,700.00	90.00	0.16	7,250.00	9,147.59	-1,408.23	9,143.62	0.00	0.00	0.00	
16,800.00	90.00	0.16	7,250.00	9,247.59	-1,407.95	9,243.62	0.00	0.00	0.00	
16,900.00	90.00	0.16	7,250.00	9,347.59	-1,407.67	9,343.62	0.00	0.00	0.00	
17,000.00	90.00	0.16	7,250.00	9,447.59	-1,407.40	9,443.62	0.00	0.00	0.00	
17,100.00	90.00	0.16	7,250.00	9,547.59	-1,407.12	9,543.62	0.00	0.00	0.00	
17,200.00	90.00	0.16	7,250.00	9,647.59	-1,406.84	9,643.62	0.00	0.00	0.00	
17,300.00	90.00	0.16	7,250.00	9,747.59	-1,406.57	9,743.62	0.00	0.00	0.00	
17,400.00	90.00	0.16	7,250.00	9,847.59	-1,406.29	9,843.62	0.00	0.00	0.00	
17,500.00	90.00	0.16	7,250.00	9,947.59	-1,406.01	9,943.62	0.00	0.00	0.00	
17,600.00	90.00	0.16	7,250.00	10,047.59	-1,405.74	10,043.62	0.00	0.00	0.00	
17,700.00	90.00	0.16	7,250.00	10,147.59	-1,405.46	10,143.62	0.00	0.00	0.00	
17,800.00	90.00	0.16	7,250.00	10,247.59	-1,405.18	10,243.62	0.00	0.00	0.00	
17,902.24	90.00	0.16	7,250.00	10,349.83	-1,404.90	10,345.87	0.00	0.00	0.00	
TD Well @ 17902.24'										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,725.76	1,700.00	9 5/8"	9-5/8	13-1/2	
7,776.82	7,250.00	5 1/2"	5-1/2	8-1/2	

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well JOHNSON 01N-65W-30-2S
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5020.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5020.00usft (RIG)
Site:	1N-65W-30 JOHNSON PAD	North Reference:	True
Well:	JOHNSON 01N-65W-30-2S	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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'	
885.00	879.81	-21.25	-66.79	End Nudge @ 885.00'	
6,733.98	6,585.70	-411.13	-1,292.13	KOP @ 6733.98' :: DLS = 9°/100'	
7,776.82	7,250.00	224.44	-1,432.91	End Build @ 7776.82'	
17,902.24	7,250.00	10,349.83	-1,404.90	TD Well @ 17902.24'	