

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-10 HDI KF PAD
HDI KF 10-8H**

Wellbore #1

Plan: Design #1

Standard Planning Report

18 January, 2018

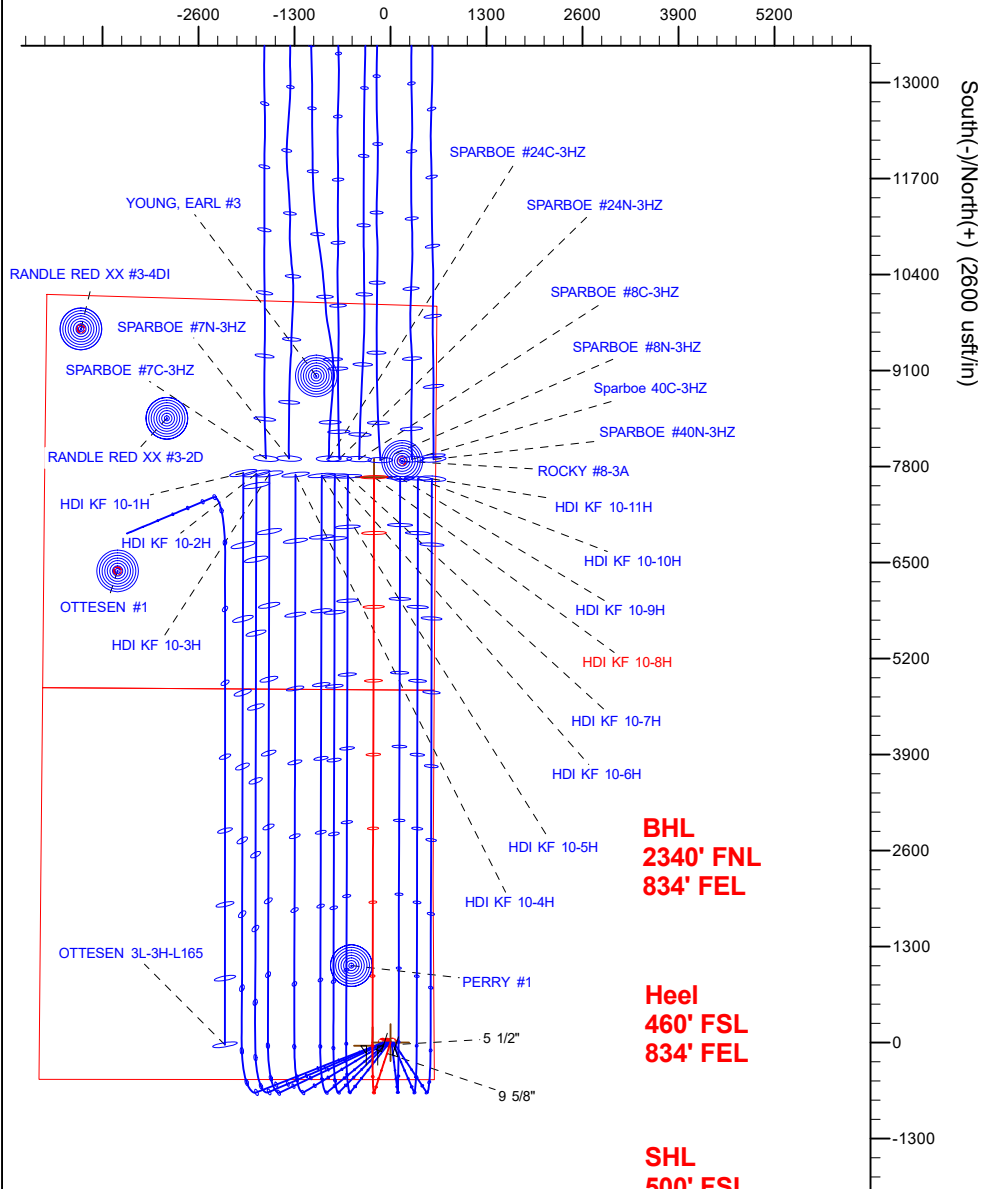
Project: WATTENBERG FIELD
Site: 1N-65W-10 HDI KF PAD
Well: HDI KF 10-8H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1708.50	9 5/8"	9-5/8
7150.00	7555.41	5 1/2"	5-1/2

West(-)/East(+) (2600 usft/in)



BHL
2340' FNL
834' FEL

Heel
460' FSL
834' FEL

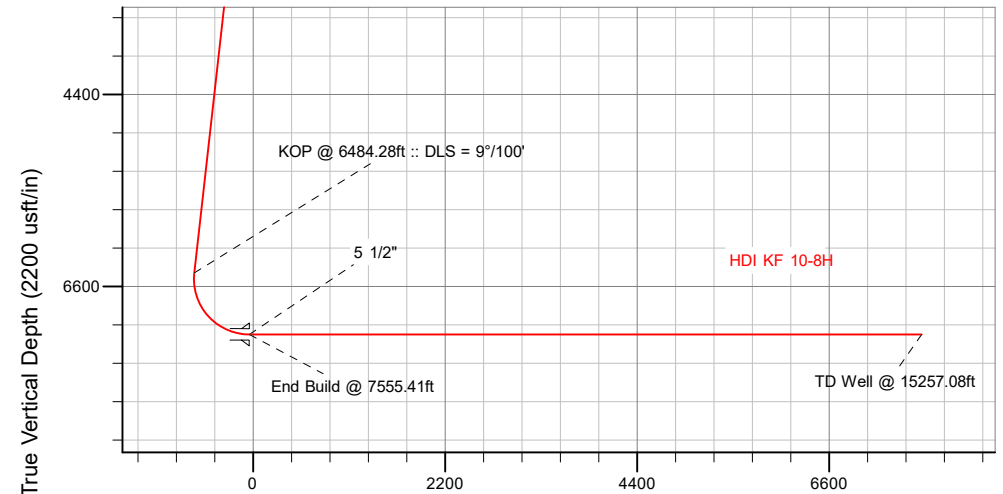
SHL
500' FSL
592' FEL

SECTION DETAILS

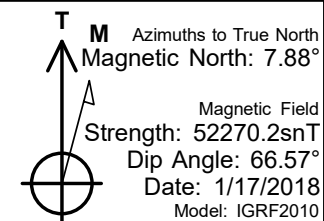
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	586.50	6.73	198.10	585.73	-18.76	-6.13	2.00	198.10	-18.78	
4	6484.28	6.73	198.10	6442.87	-675.73	-220.86	0.00	0.00	-676.38	
5	7555.41	90.00	0.17	7150.00	-43.00	-244.68	9.00	161.95	-43.73	
6	15257.08	90.00	0.17	7150.00	7658.63	-221.90	0.00	0.00	7657.94	HDI KF 10-8H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HDI KF 10-8H_SHL	0.00	0.00	0.00	40.060105	-104.642605
HDI KF 10-8H_BHL	7150.00	7658.63	-221.90	40.081129	-104.643398



Vertical Section at 0.17° (2200 usft/in)



WELL DETAILS: HDI KF 10-8H

GL = 5013'

RKB = 20' @ 5033.00usft (RIG)

Plan: Design #1 (HDI KF 10-8H/Wellbore #1)

Created By: _____ Date: 1/18/2018
Reviewed: _____ Date: _____

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-8H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5033.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5033.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-8H	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-10 HDI KF PAD			
Site Position:		Northing:	1,265,900.79 usft	Latitude:	40.060105
From:	Lat/Long	Easting:	3,239,881.89 usft	Longitude:	-104.642980
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	HDI KF 10-8H					
Well Position	+N/-S	-0.08 usft	Northing:	1,265,901.73 usft	Latitude:	40.060105
	+E/-W	104.97 usft	Easting:	3,239,986.85 usft	Longitude:	-104.642605
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,013.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/17/2018	7.88	66.57	52,270.24564773

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	0.17

Plan Survey Tool Program	Date	1/18/2018		
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	15,257.08	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	
586.50	6.73	198.10	585.73	-18.76	-6.13	2.00	2.00	0.00	198.10	
6,484.28	6.73	198.10	6,442.87	-675.73	-220.86	0.00	0.00	0.00	0.00	
7,555.41	90.00	0.17	7,150.00	-43.00	-244.68	9.00	7.77	15.13	161.95	
15,257.08	90.00	0.17	7,150.00	7,658.63	-221.90	0.00	0.00	0.00	0.00	HDI KF 10-8H_BHL

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Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5033.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-8H	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 @ 250.00ft									
300.00	1.00	198.10	300.00	-0.41	-0.14	-0.42	2.00	2.00	0.00
400.00	3.00	198.10	399.93	-3.73	-1.22	-3.74	2.00	2.00	0.00
500.00	5.00	198.10	499.68	-10.36	-3.39	-10.37	2.00	2.00	0.00
586.50	6.73	198.10	585.73	-18.76	-6.13	-18.78	2.00	2.00	0.00
End Nudge @ 586.50ft									
600.00	6.73	198.10	599.13	-20.27	-6.62	-20.29	0.00	0.00	0.00
700.00	6.73	198.10	698.44	-31.41	-10.27	-31.44	0.00	0.00	0.00
800.00	6.73	198.10	797.76	-42.55	-13.91	-42.59	0.00	0.00	0.00
900.00	6.73	198.10	897.07	-53.68	-17.55	-53.74	0.00	0.00	0.00
1,000.00	6.73	198.10	996.38	-64.82	-21.19	-64.89	0.00	0.00	0.00
1,100.00	6.73	198.10	1,095.69	-75.96	-24.83	-76.04	0.00	0.00	0.00
1,200.00	6.73	198.10	1,195.00	-87.10	-28.47	-87.19	0.00	0.00	0.00
1,300.00	6.73	198.10	1,294.31	-98.24	-32.11	-98.34	0.00	0.00	0.00
1,400.00	6.73	198.10	1,393.62	-109.38	-35.75	-109.49	0.00	0.00	0.00
1,500.00	6.73	198.10	1,492.93	-120.52	-39.39	-120.64	0.00	0.00	0.00
1,600.00	6.73	198.10	1,592.24	-131.66	-43.03	-131.79	0.00	0.00	0.00
1,700.00	6.73	198.10	1,691.55	-142.80	-46.67	-142.94	0.00	0.00	0.00
1,708.50	6.73	198.10	1,700.00	-143.75	-46.98	-143.88	0.00	0.00	0.00
9 5/8"									
1,800.00	6.73	198.10	1,790.87	-153.94	-50.31	-154.09	0.00	0.00	0.00
1,900.00	6.73	198.10	1,890.18	-165.08	-53.96	-165.24	0.00	0.00	0.00
2,000.00	6.73	198.10	1,989.49	-176.22	-57.60	-176.39	0.00	0.00	0.00
2,100.00	6.73	198.10	2,088.80	-187.35	-61.24	-187.54	0.00	0.00	0.00
2,200.00	6.73	198.10	2,188.11	-198.49	-64.88	-198.69	0.00	0.00	0.00
2,300.00	6.73	198.10	2,287.42	-209.63	-68.52	-209.84	0.00	0.00	0.00
2,400.00	6.73	198.10	2,386.73	-220.77	-72.16	-220.99	0.00	0.00	0.00
2,500.00	6.73	198.10	2,486.04	-231.91	-75.80	-232.14	0.00	0.00	0.00
2,600.00	6.73	198.10	2,585.35	-243.05	-79.44	-243.28	0.00	0.00	0.00
2,700.00	6.73	198.10	2,684.66	-254.19	-83.08	-254.43	0.00	0.00	0.00
2,800.00	6.73	198.10	2,783.97	-265.33	-86.72	-265.58	0.00	0.00	0.00
2,900.00	6.73	198.10	2,883.29	-276.47	-90.36	-276.73	0.00	0.00	0.00
3,000.00	6.73	198.10	2,982.60	-287.61	-94.00	-287.88	0.00	0.00	0.00
3,100.00	6.73	198.10	3,081.91	-298.75	-97.65	-299.03	0.00	0.00	0.00
3,200.00	6.73	198.10	3,181.22	-309.89	-101.29	-310.18	0.00	0.00	0.00
3,300.00	6.73	198.10	3,280.53	-321.02	-104.93	-321.33	0.00	0.00	0.00
3,400.00	6.73	198.10	3,379.84	-332.16	-108.57	-332.48	0.00	0.00	0.00
3,500.00	6.73	198.10	3,479.15	-343.30	-112.21	-343.63	0.00	0.00	0.00
3,600.00	6.73	198.10	3,578.46	-354.44	-115.85	-354.78	0.00	0.00	0.00
3,700.00	6.73	198.10	3,677.77	-365.58	-119.49	-365.93	0.00	0.00	0.00
3,800.00	6.73	198.10	3,777.08	-376.72	-123.13	-377.08	0.00	0.00	0.00
3,900.00	6.73	198.10	3,876.39	-387.86	-126.77	-388.23	0.00	0.00	0.00
4,000.00	6.73	198.10	3,975.71	-399.00	-130.41	-399.38	0.00	0.00	0.00
4,100.00	6.73	198.10	4,075.02	-410.14	-134.05	-410.53	0.00	0.00	0.00
4,200.00	6.73	198.10	4,174.33	-421.28	-137.69	-421.68	0.00	0.00	0.00
4,300.00	6.73	198.10	4,273.64	-432.42	-141.34	-432.83	0.00	0.00	0.00
4,400.00	6.73	198.10	4,372.95	-443.56	-144.98	-443.98	0.00	0.00	0.00
4,500.00	6.73	198.10	4,472.26	-454.69	-148.62	-455.13	0.00	0.00	0.00
4,600.00	6.73	198.10	4,571.57	-465.83	-152.26	-466.28	0.00	0.00	0.00

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Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5033.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-8H	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	6.73	198.10	4,670.88	-476.97	-155.90	-477.43	0.00	0.00	0.00
4,800.00	6.73	198.10	4,770.19	-488.11	-159.54	-488.58	0.00	0.00	0.00
4,900.00	6.73	198.10	4,869.50	-499.25	-163.18	-499.73	0.00	0.00	0.00
5,000.00	6.73	198.10	4,968.82	-510.39	-166.82	-510.88	0.00	0.00	0.00
5,100.00	6.73	198.10	5,068.13	-521.53	-170.46	-522.03	0.00	0.00	0.00
5,200.00	6.73	198.10	5,167.44	-532.67	-174.10	-533.18	0.00	0.00	0.00
5,300.00	6.73	198.10	5,266.75	-543.81	-177.74	-544.33	0.00	0.00	0.00
5,400.00	6.73	198.10	5,366.06	-554.95	-181.38	-555.48	0.00	0.00	0.00
5,500.00	6.73	198.10	5,465.37	-566.09	-185.03	-566.63	0.00	0.00	0.00
5,600.00	6.73	198.10	5,564.68	-577.23	-188.67	-577.78	0.00	0.00	0.00
5,700.00	6.73	198.10	5,663.99	-588.36	-192.31	-588.93	0.00	0.00	0.00
5,800.00	6.73	198.10	5,763.30	-599.50	-195.95	-600.08	0.00	0.00	0.00
5,900.00	6.73	198.10	5,862.61	-610.64	-199.59	-611.23	0.00	0.00	0.00
6,000.00	6.73	198.10	5,961.92	-621.78	-203.23	-622.38	0.00	0.00	0.00
6,100.00	6.73	198.10	6,061.24	-632.92	-206.87	-633.53	0.00	0.00	0.00
6,200.00	6.73	198.10	6,160.55	-644.06	-210.51	-644.68	0.00	0.00	0.00
6,300.00	6.73	198.10	6,259.86	-655.20	-214.15	-655.83	0.00	0.00	0.00
6,400.00	6.73	198.10	6,359.17	-666.34	-217.79	-666.98	0.00	0.00	0.00
6,484.28	6.73	198.10	6,442.87	-675.73	-220.86	-676.38	0.00	0.00	0.00
KOP @ 6484.28ft :: DLS = 9°/100'									
6,500.00	5.40	202.76	6,458.50	-677.28	-221.43	-677.94	9.00	-8.44	29.64
6,550.00	2.14	256.99	6,508.40	-679.67	-223.25	-680.33	9.00	-6.53	108.47
6,600.00	4.52	332.81	6,558.33	-678.12	-225.06	-678.79	9.00	4.77	151.63
6,650.00	8.76	346.54	6,607.98	-672.66	-226.85	-673.33	9.00	8.48	27.46
6,700.00	13.18	351.24	6,657.06	-663.32	-228.61	-664.00	9.00	8.83	9.41
6,750.00	17.63	353.61	6,705.25	-650.16	-230.32	-650.84	9.00	8.91	4.73
6,800.00	22.11	355.04	6,752.26	-633.25	-231.98	-633.94	9.00	8.95	2.86
6,850.00	26.59	356.01	6,797.80	-612.71	-233.57	-613.40	9.00	8.96	1.94
6,900.00	31.08	356.71	6,841.60	-588.65	-235.09	-589.34	9.00	8.97	1.41
6,950.00	35.57	357.26	6,883.36	-561.23	-236.53	-561.93	9.00	8.98	1.09
7,000.00	40.06	357.69	6,922.86	-530.61	-237.87	-531.31	9.00	8.98	0.87
7,050.00	44.55	358.05	6,959.83	-496.99	-239.11	-497.70	9.00	8.99	0.72
7,100.00	49.05	358.36	6,994.04	-460.57	-240.25	-461.28	9.00	8.99	0.62
7,150.00	53.54	358.63	7,025.30	-421.57	-241.27	-422.29	9.00	8.99	0.54
7,200.00	58.04	358.87	7,053.41	-380.25	-242.17	-380.96	9.00	8.99	0.48
7,250.00	62.53	359.09	7,078.19	-336.84	-242.94	-337.56	9.00	8.99	0.43
7,300.00	67.03	359.29	7,099.49	-291.62	-243.58	-292.34	9.00	8.99	0.40
7,350.00	71.53	359.47	7,117.17	-244.87	-244.08	-245.59	9.00	8.99	0.37
7,400.00	76.02	359.65	7,131.14	-196.88	-244.45	-197.60	9.00	8.99	0.35
7,450.00	80.52	359.82	7,141.30	-147.93	-244.67	-148.66	9.00	8.99	0.34
7,500.00	85.02	359.99	7,147.60	-98.34	-244.76	-99.07	9.00	8.99	0.33
7,550.00	89.51	0.15	7,149.98	-48.41	-244.69	-49.14	9.00	8.99	0.33
7,555.41	90.00	0.17	7,150.00	-43.00	-244.68	-43.73	9.00	8.99	0.33
End Build @ 7555.41ft - 5 1/2"									
7,600.00	90.00	0.17	7,150.00	1.59	-244.55	0.86	0.00	0.00	0.00
7,700.00	90.00	0.17	7,150.00	101.59	-244.25	100.86	0.00	0.00	0.00
7,800.00	90.00	0.17	7,150.00	201.59	-243.96	200.86	0.00	0.00	0.00
7,900.00	90.00	0.17	7,150.00	301.58	-243.66	300.86	0.00	0.00	0.00
8,000.00	90.00	0.17	7,150.00	401.58	-243.36	400.86	0.00	0.00	0.00
8,100.00	90.00	0.17	7,150.00	501.58	-243.07	500.86	0.00	0.00	0.00
8,200.00	90.00	0.17	7,150.00	601.58	-242.77	600.86	0.00	0.00	0.00
8,300.00	90.00	0.17	7,150.00	701.58	-242.48	700.86	0.00	0.00	0.00
8,400.00	90.00	0.17	7,150.00	801.58	-242.18	800.86	0.00	0.00	0.00
8,500.00	90.00	0.17	7,150.00	901.58	-241.89	900.86	0.00	0.00	0.00

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Well:	HDI KF 10-8H	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	0.17	7,150.00	1,001.58	-241.59	1,000.86	0.00	0.00	0.00	
8,700.00	90.00	0.17	7,150.00	1,101.58	-241.29	1,100.86	0.00	0.00	0.00	
8,800.00	90.00	0.17	7,150.00	1,201.58	-241.00	1,200.86	0.00	0.00	0.00	
8,900.00	90.00	0.17	7,150.00	1,301.58	-240.70	1,300.86	0.00	0.00	0.00	
9,000.00	90.00	0.17	7,150.00	1,401.58	-240.41	1,400.86	0.00	0.00	0.00	
9,100.00	90.00	0.17	7,150.00	1,501.58	-240.11	1,500.86	0.00	0.00	0.00	
9,200.00	90.00	0.17	7,150.00	1,601.58	-239.81	1,600.86	0.00	0.00	0.00	
9,300.00	90.00	0.17	7,150.00	1,701.58	-239.52	1,700.86	0.00	0.00	0.00	
9,400.00	90.00	0.17	7,150.00	1,801.58	-239.22	1,800.86	0.00	0.00	0.00	
9,500.00	90.00	0.17	7,150.00	1,901.58	-238.93	1,900.86	0.00	0.00	0.00	
9,600.00	90.00	0.17	7,150.00	2,001.58	-238.63	2,000.86	0.00	0.00	0.00	
9,700.00	90.00	0.17	7,150.00	2,101.58	-238.34	2,100.86	0.00	0.00	0.00	
9,800.00	90.00	0.17	7,150.00	2,201.58	-238.04	2,200.86	0.00	0.00	0.00	
9,900.00	90.00	0.17	7,150.00	2,301.58	-237.74	2,300.86	0.00	0.00	0.00	
10,000.00	90.00	0.17	7,150.00	2,401.58	-237.45	2,400.86	0.00	0.00	0.00	
10,100.00	90.00	0.17	7,150.00	2,501.58	-237.15	2,500.86	0.00	0.00	0.00	
10,200.00	90.00	0.17	7,150.00	2,601.57	-236.86	2,600.86	0.00	0.00	0.00	
10,300.00	90.00	0.17	7,150.00	2,701.57	-236.56	2,700.86	0.00	0.00	0.00	
10,400.00	90.00	0.17	7,150.00	2,801.57	-236.27	2,800.86	0.00	0.00	0.00	
10,500.00	90.00	0.17	7,150.00	2,901.57	-235.97	2,900.86	0.00	0.00	0.00	
10,600.00	90.00	0.17	7,150.00	3,001.57	-235.67	3,000.86	0.00	0.00	0.00	
10,700.00	90.00	0.17	7,150.00	3,101.57	-235.38	3,100.86	0.00	0.00	0.00	
10,800.00	90.00	0.17	7,150.00	3,201.57	-235.08	3,200.86	0.00	0.00	0.00	
10,900.00	90.00	0.17	7,150.00	3,301.57	-234.79	3,300.86	0.00	0.00	0.00	
11,000.00	90.00	0.17	7,150.00	3,401.57	-234.49	3,400.86	0.00	0.00	0.00	
11,100.00	90.00	0.17	7,150.00	3,501.57	-234.19	3,500.86	0.00	0.00	0.00	
11,200.00	90.00	0.17	7,150.00	3,601.57	-233.90	3,600.86	0.00	0.00	0.00	
11,300.00	90.00	0.17	7,150.00	3,701.57	-233.60	3,700.86	0.00	0.00	0.00	
11,400.00	90.00	0.17	7,150.00	3,801.57	-233.31	3,800.86	0.00	0.00	0.00	
11,500.00	90.00	0.17	7,150.00	3,901.57	-233.01	3,900.86	0.00	0.00	0.00	
11,600.00	90.00	0.17	7,150.00	4,001.57	-232.72	4,000.86	0.00	0.00	0.00	
11,700.00	90.00	0.17	7,150.00	4,101.57	-232.42	4,100.86	0.00	0.00	0.00	
11,800.00	90.00	0.17	7,150.00	4,201.57	-232.12	4,200.86	0.00	0.00	0.00	
11,900.00	90.00	0.17	7,150.00	4,301.57	-231.83	4,300.86	0.00	0.00	0.00	
12,000.00	90.00	0.17	7,150.00	4,401.57	-231.53	4,400.86	0.00	0.00	0.00	
12,100.00	90.00	0.17	7,150.00	4,501.57	-231.24	4,500.86	0.00	0.00	0.00	
12,200.00	90.00	0.17	7,150.00	4,601.57	-230.94	4,600.86	0.00	0.00	0.00	
12,300.00	90.00	0.17	7,150.00	4,701.57	-230.64	4,700.86	0.00	0.00	0.00	
12,400.00	90.00	0.17	7,150.00	4,801.57	-230.35	4,800.86	0.00	0.00	0.00	
12,500.00	90.00	0.17	7,150.00	4,901.56	-230.05	4,900.86	0.00	0.00	0.00	
12,600.00	90.00	0.17	7,150.00	5,001.56	-229.76	5,000.86	0.00	0.00	0.00	
12,700.00	90.00	0.17	7,150.00	5,101.56	-229.46	5,100.86	0.00	0.00	0.00	
12,800.00	90.00	0.17	7,150.00	5,201.56	-229.17	5,200.86	0.00	0.00	0.00	
12,900.00	90.00	0.17	7,150.00	5,301.56	-228.87	5,300.86	0.00	0.00	0.00	
13,000.00	90.00	0.17	7,150.00	5,401.56	-228.57	5,400.86	0.00	0.00	0.00	
13,100.00	90.00	0.17	7,150.00	5,501.56	-228.28	5,500.86	0.00	0.00	0.00	
13,200.00	90.00	0.17	7,150.00	5,601.56	-227.98	5,600.86	0.00	0.00	0.00	
13,300.00	90.00	0.17	7,150.00	5,701.56	-227.69	5,700.86	0.00	0.00	0.00	
13,400.00	90.00	0.17	7,150.00	5,801.56	-227.39	5,800.86	0.00	0.00	0.00	
13,500.00	90.00	0.17	7,150.00	5,901.56	-227.10	5,900.86	0.00	0.00	0.00	
13,600.00	90.00	0.17	7,150.00	6,001.56	-226.80	6,000.86	0.00	0.00	0.00	
13,700.00	90.00	0.17	7,150.00	6,101.56	-226.50	6,100.86	0.00	0.00	0.00	
13,800.00	90.00	0.17	7,150.00	6,201.56	-226.21	6,200.86	0.00	0.00	0.00	
13,900.00	90.00	0.17	7,150.00	6,301.56	-225.91	6,300.86	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-8H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5033.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5033.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-8H	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	0.17	7,150.00	6,401.56	-225.62	6,400.86	0.00	0.00	0.00	
14,100.00	90.00	0.17	7,150.00	6,501.56	-225.32	6,500.86	0.00	0.00	0.00	
14,200.00	90.00	0.17	7,150.00	6,601.56	-225.02	6,600.86	0.00	0.00	0.00	
14,300.00	90.00	0.17	7,150.00	6,701.56	-224.73	6,700.86	0.00	0.00	0.00	
14,400.00	90.00	0.17	7,150.00	6,801.56	-224.43	6,800.86	0.00	0.00	0.00	
14,500.00	90.00	0.17	7,150.00	6,901.56	-224.14	6,900.86	0.00	0.00	0.00	
14,600.00	90.00	0.17	7,150.00	7,001.56	-223.84	7,000.86	0.00	0.00	0.00	
14,700.00	90.00	0.17	7,150.00	7,101.56	-223.55	7,100.86	0.00	0.00	0.00	
14,800.00	90.00	0.17	7,150.00	7,201.55	-223.25	7,200.86	0.00	0.00	0.00	
14,900.00	90.00	0.17	7,150.00	7,301.55	-222.95	7,300.86	0.00	0.00	0.00	
15,000.00	90.00	0.17	7,150.00	7,401.55	-222.66	7,400.86	0.00	0.00	0.00	
15,100.00	90.00	0.17	7,150.00	7,501.55	-222.36	7,500.86	0.00	0.00	0.00	
15,200.00	90.00	0.17	7,150.00	7,601.55	-222.07	7,600.86	0.00	0.00	0.00	
15,257.08	90.00	0.17	7,150.00	7,658.63	-221.90	7,657.94	0.00	0.00	0.00	
TD Well @ 15257.08ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,708.50	1,700.00	9 5/8"		9-5/8	13-1/2
7,555.41	7,150.00	5 1/2"		5-1/2	8-1/2

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 Nudge @ 250.00ft	
586.50	585.73	-18.76	-6.13	End Nudge @ 586.50ft	
6,484.28	6,442.87	-675.73	-220.86	KOP @ 6484.28ft :: DLS = 9°/100'	
7,555.41	7,150.00	-43.00	-244.68	End Build @ 7555.41ft	
15,257.08	7,150.00	7,658.63	-221.90	TD Well @ 15257.08ft	