

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-10 HDI KF PAD
HDI KF 10-3H**

Wellbore #1

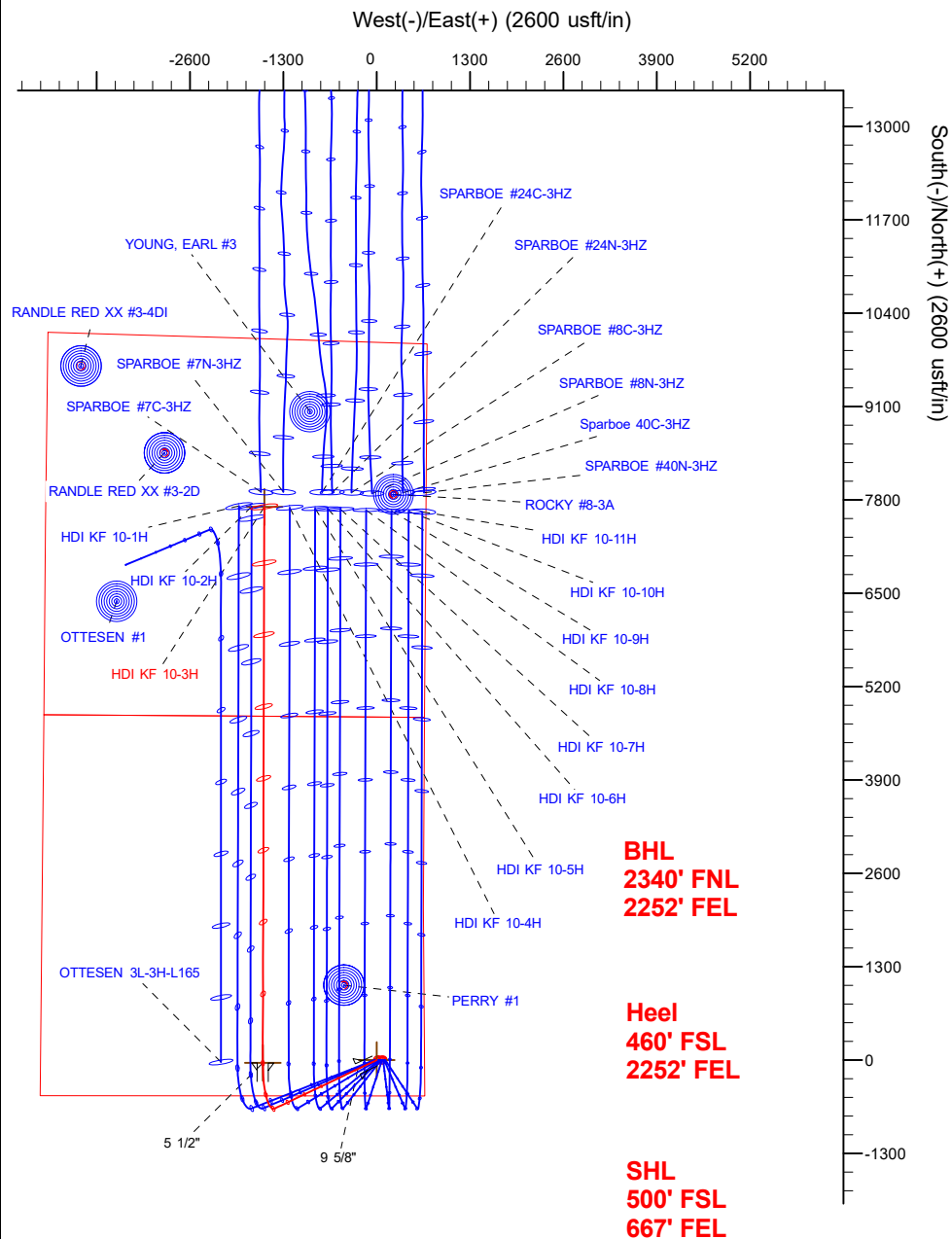
Plan: Design #1

Standard Planning Report

18 January, 2018

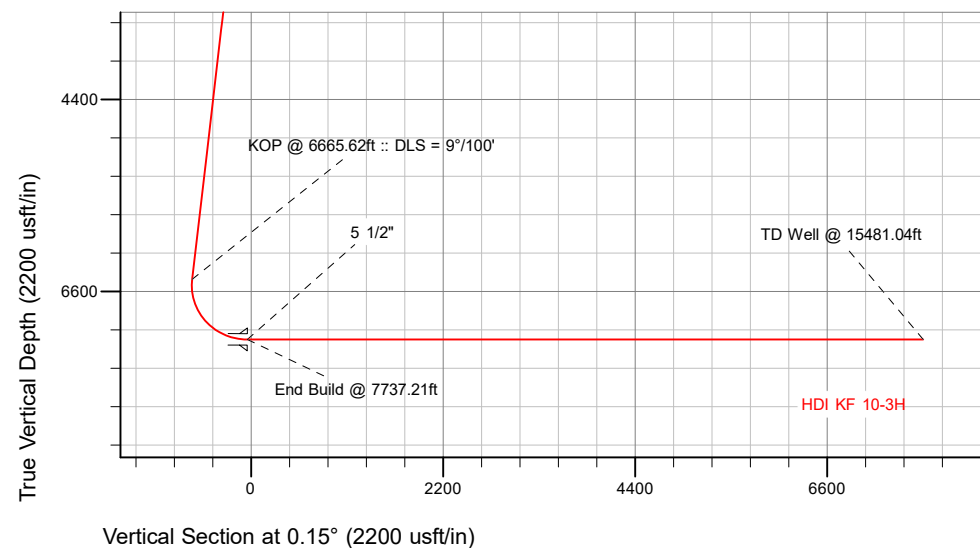
VERDAD RESOURCES


CASING DETAILS			
TVD	MD	Name	Size
1700.00	1733.81	9 5/8"	9-5/8
7150.00	7737.21	5 1/2"	5-1/2



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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	1304.04	15.08	244.60	995.32	-42.32	-89.12	2.00	244.60	-42.32	
4	6666.62	15.08	244.60	6461.98	-674.12	-1419.70	0.00	0.00	-677.84	
5	7737.21	90.00	0.15	7150.00	-41.08	-1585.28	9.00	114.78	-45.23	
6	15481.04	90.00	0.15	7150.00	7702.72	-1564.75	0.00	0.00	7698.60	HDI KF 10-3H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	
HDI KF 10-3H_SHL	0.00	0.00	0.00	40.060105	-104.642872
HDI KF 10-3H_BHL	7150.00	7702.72	-1564.75	40.081250	-104.648464



	WELL DETAILS: HDI KF 10-3H
	GL = 5012'
	RKB = 20" @ 5032.00usft (RIG)
	Plan: Design #1 (HDI KF 10-3H/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 10-3H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5032.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-3H	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 10-3H			
Well Position	+N/-S	-0.04 usft	Northing:	1,265,901.04 usft
	+E/-W	30.23 usft	Easting:	3,239,912.12 usft
Position Uncertainty	3.28 usft	Wellhead Elevation:		Ground Level: 5,012.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/17/2018	7.88	66.57	52,270.22693712

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	0.15

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	15,481.04	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	
1,004.00	15.08	244.60	995.32	-42.32	-89.12	2.00	2.00	0.00	244.60	
6,665.62	15.08	244.60	6,461.98	-674.12	-1,419.70	0.00	0.00	0.00	0.00	
7,737.21	90.00	0.15	7,150.00	-41.08	-1,585.28	9.00	6.99	10.78	114.78	
15,481.04	90.00	0.15	7,150.00	7,702.72	-1,564.75	0.00	0.00	0.00	0.00	HDI KF 10-3H_BHL

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-3H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5032.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-3H	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	244.60	300.00	-0.19	-0.39	-0.19	2.00	2.00	0.00
400.00	3.00	244.60	399.93	-1.68	-3.55	-1.69	2.00	2.00	0.00
500.00	5.00	244.60	499.68	-4.68	-9.85	-4.70	2.00	2.00	0.00
600.00	7.00	244.60	599.13	-9.16	-19.29	-9.21	2.00	2.00	0.00
700.00	9.00	244.60	698.15	-15.13	-31.86	-15.21	2.00	2.00	0.00
800.00	11.00	244.60	796.63	-22.58	-47.55	-22.70	2.00	2.00	0.00
900.00	13.00	244.60	894.44	-31.49	-66.33	-31.67	2.00	2.00	0.00
1,004.00	15.08	244.60	995.32	-42.32	-89.12	-42.55	2.00	2.00	0.00
End Nudge @ 1004.00ft									
1,100.00	15.08	244.60	1,088.02	-53.03	-111.68	-53.32	0.00	0.00	0.00
1,200.00	15.08	244.60	1,184.58	-64.19	-135.18	-64.54	0.00	0.00	0.00
1,300.00	15.08	244.60	1,281.13	-75.35	-158.68	-75.76	0.00	0.00	0.00
1,400.00	15.08	244.60	1,377.69	-86.51	-182.18	-86.98	0.00	0.00	0.00
1,500.00	15.08	244.60	1,474.24	-97.67	-205.69	-98.21	0.00	0.00	0.00
1,600.00	15.08	244.60	1,570.80	-108.83	-229.19	-109.43	0.00	0.00	0.00
1,700.00	15.08	244.60	1,667.36	-119.99	-252.69	-120.65	0.00	0.00	0.00
1,733.81	15.08	244.60	1,700.00	-123.76	-260.64	-124.44	0.00	0.00	0.00
9 5/8"									
1,800.00	15.08	244.60	1,763.91	-131.15	-276.19	-131.87	0.00	0.00	0.00
1,900.00	15.08	244.60	1,860.47	-142.30	-299.69	-143.09	0.00	0.00	0.00
2,000.00	15.08	244.60	1,957.03	-153.46	-323.20	-154.31	0.00	0.00	0.00
2,100.00	15.08	244.60	2,053.58	-164.62	-346.70	-165.53	0.00	0.00	0.00
2,200.00	15.08	244.60	2,150.14	-175.78	-370.20	-176.75	0.00	0.00	0.00
2,300.00	15.08	244.60	2,246.70	-186.94	-393.70	-187.97	0.00	0.00	0.00
2,400.00	15.08	244.60	2,343.25	-198.10	-417.20	-199.19	0.00	0.00	0.00
2,500.00	15.08	244.60	2,439.81	-209.26	-440.70	-210.41	0.00	0.00	0.00
2,600.00	15.08	244.60	2,536.36	-220.42	-464.21	-221.64	0.00	0.00	0.00
2,700.00	15.08	244.60	2,632.92	-231.58	-487.71	-232.86	0.00	0.00	0.00
2,800.00	15.08	244.60	2,729.48	-242.74	-511.21	-244.08	0.00	0.00	0.00
2,900.00	15.08	244.60	2,826.03	-253.90	-534.71	-255.30	0.00	0.00	0.00
3,000.00	15.08	244.60	2,922.59	-265.06	-558.21	-266.52	0.00	0.00	0.00
3,100.00	15.08	244.60	3,019.15	-276.22	-581.72	-277.74	0.00	0.00	0.00
3,200.00	15.08	244.60	3,115.70	-287.38	-605.22	-288.96	0.00	0.00	0.00
3,300.00	15.08	244.60	3,212.26	-298.54	-628.72	-300.18	0.00	0.00	0.00
3,400.00	15.08	244.60	3,308.82	-309.70	-652.22	-311.40	0.00	0.00	0.00
3,500.00	15.08	244.60	3,405.37	-320.86	-675.72	-322.62	0.00	0.00	0.00
3,600.00	15.08	244.60	3,501.93	-332.02	-699.22	-333.85	0.00	0.00	0.00
3,700.00	15.08	244.60	3,598.48	-343.18	-722.73	-345.07	0.00	0.00	0.00
3,800.00	15.08	244.60	3,695.04	-354.34	-746.23	-356.29	0.00	0.00	0.00
3,900.00	15.08	244.60	3,791.60	-365.49	-769.73	-367.51	0.00	0.00	0.00
4,000.00	15.08	244.60	3,888.15	-376.65	-793.23	-378.73	0.00	0.00	0.00
4,100.00	15.08	244.60	3,984.71	-387.81	-816.73	-389.95	0.00	0.00	0.00
4,200.00	15.08	244.60	4,081.27	-398.97	-840.24	-401.17	0.00	0.00	0.00
4,300.00	15.08	244.60	4,177.82	-410.13	-863.74	-412.39	0.00	0.00	0.00
4,400.00	15.08	244.60	4,274.38	-421.29	-887.24	-423.61	0.00	0.00	0.00
4,500.00	15.08	244.60	4,370.94	-432.45	-910.74	-434.83	0.00	0.00	0.00
4,600.00	15.08	244.60	4,467.49	-443.61	-934.24	-446.06	0.00	0.00	0.00
4,700.00	15.08	244.60	4,564.05	-454.77	-957.75	-457.28	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5032.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-3H	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)
4,800.00	15.08	244.60	4,660.60	-465.93	-981.25	-468.50	0.00	0.00	0.00
4,900.00	15.08	244.60	4,757.16	-477.09	-1,004.75	-479.72	0.00	0.00	0.00
5,000.00	15.08	244.60	4,853.72	-488.25	-1,028.25	-490.94	0.00	0.00	0.00
5,100.00	15.08	244.60	4,950.27	-499.41	-1,051.75	-502.16	0.00	0.00	0.00
5,200.00	15.08	244.60	5,046.83	-510.57	-1,075.25	-513.38	0.00	0.00	0.00
5,300.00	15.08	244.60	5,143.39	-521.73	-1,098.76	-524.60	0.00	0.00	0.00
5,400.00	15.08	244.60	5,239.94	-532.89	-1,122.26	-535.82	0.00	0.00	0.00
5,500.00	15.08	244.60	5,336.50	-544.05	-1,145.76	-547.04	0.00	0.00	0.00
5,600.00	15.08	244.60	5,433.05	-555.21	-1,169.26	-558.27	0.00	0.00	0.00
5,700.00	15.08	244.60	5,529.61	-566.37	-1,192.76	-569.49	0.00	0.00	0.00
5,800.00	15.08	244.60	5,626.17	-577.53	-1,216.27	-580.71	0.00	0.00	0.00
5,900.00	15.08	244.60	5,722.72	-588.68	-1,239.77	-591.93	0.00	0.00	0.00
6,000.00	15.08	244.60	5,819.28	-599.84	-1,263.27	-603.15	0.00	0.00	0.00
6,100.00	15.08	244.60	5,915.84	-611.00	-1,286.77	-614.37	0.00	0.00	0.00
6,200.00	15.08	244.60	6,012.39	-622.16	-1,310.27	-625.59	0.00	0.00	0.00
6,300.00	15.08	244.60	6,108.95	-633.32	-1,333.77	-636.81	0.00	0.00	0.00
6,400.00	15.08	244.60	6,205.51	-644.48	-1,357.28	-648.03	0.00	0.00	0.00
6,500.00	15.08	244.60	6,302.06	-655.64	-1,380.78	-659.25	0.00	0.00	0.00
6,600.00	15.08	244.60	6,398.62	-666.80	-1,404.28	-670.48	0.00	0.00	0.00
6,665.62	15.08	244.60	6,461.98	-674.12	-1,419.70	-677.84	0.00	0.00	0.00
KOP @ 6665.62ft :: DLS = 9°/100'									
6,700.00	14.06	256.24	6,495.26	-677.04	-1,427.80	-680.77	9.00	-2.97	33.85
6,750.00	13.71	275.01	6,543.82	-677.96	-1,439.61	-681.73	9.00	-0.70	37.55
6,800.00	14.77	292.88	6,592.31	-674.97	-1,451.39	-678.76	9.00	2.11	35.73
6,850.00	16.96	307.31	6,640.42	-668.07	-1,463.06	-671.89	9.00	4.40	28.87
6,900.00	19.93	318.05	6,687.86	-657.30	-1,474.57	-661.16	9.00	5.93	21.48
6,950.00	23.38	325.93	6,734.34	-642.74	-1,485.83	-646.63	9.00	6.89	15.75
7,000.00	27.12	331.81	6,779.56	-624.47	-1,496.77	-628.38	9.00	7.48	11.76
7,050.00	31.05	336.33	6,823.25	-602.61	-1,507.34	-606.55	9.00	7.86	9.04
7,100.00	35.10	339.92	6,865.15	-577.28	-1,517.45	-581.25	9.00	8.11	7.17
7,150.00	39.24	342.84	6,904.98	-548.66	-1,527.06	-552.65	9.00	8.28	5.84
7,200.00	43.44	345.28	6,942.52	-516.90	-1,536.10	-520.92	9.00	8.40	4.88
7,250.00	47.69	347.37	6,977.51	-482.22	-1,544.52	-486.26	9.00	8.49	4.18
7,300.00	51.97	349.19	7,009.76	-444.82	-1,552.26	-448.88	9.00	8.56	3.65
7,350.00	56.27	350.81	7,039.06	-404.93	-1,559.27	-409.01	9.00	8.61	3.24
7,400.00	60.60	352.28	7,065.23	-362.80	-1,565.52	-366.90	9.00	8.65	2.93
7,450.00	64.93	353.62	7,088.11	-318.69	-1,570.97	-322.80	9.00	8.68	2.69
7,500.00	69.28	354.88	7,107.55	-272.87	-1,575.57	-276.99	9.00	8.70	2.51
7,550.00	73.64	356.06	7,123.45	-225.63	-1,579.31	-229.76	9.00	8.72	2.37
7,600.00	78.01	357.19	7,135.69	-177.24	-1,582.16	-181.39	9.00	8.73	2.26
7,650.00	82.37	358.29	7,144.21	-128.03	-1,584.10	-132.17	9.00	8.74	2.19
7,700.00	86.75	359.36	7,148.94	-78.27	-1,585.12	-82.42	9.00	8.74	2.15
7,737.21	90.00	0.15	7,150.00	-41.09	-1,585.28	-45.24	9.00	8.75	2.13
End Build @ 7737.21ft - 5 1/2"									
7,800.00	90.00	0.15	7,150.00	21.70	-1,585.11	17.55	0.00	0.00	0.00
7,900.00	90.00	0.15	7,150.00	121.70	-1,584.85	117.55	0.00	0.00	0.00
8,000.00	90.00	0.15	7,150.00	221.70	-1,584.58	217.55	0.00	0.00	0.00
8,100.00	90.00	0.15	7,150.00	321.70	-1,584.32	317.55	0.00	0.00	0.00
8,200.00	90.00	0.15	7,150.00	421.70	-1,584.05	417.55	0.00	0.00	0.00
8,300.00	90.00	0.15	7,150.00	521.70	-1,583.79	517.55	0.00	0.00	0.00
8,400.00	90.00	0.15	7,150.00	621.70	-1,583.52	617.55	0.00	0.00	0.00
8,500.00	90.00	0.15	7,150.00	721.70	-1,583.26	717.55	0.00	0.00	0.00
8,600.00	90.00	0.15	7,150.00	821.70	-1,582.99	817.55	0.00	0.00	0.00
8,700.00	90.00	0.15	7,150.00	921.70	-1,582.73	917.55	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-3H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5032.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-3H	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)	
8,800.00	90.00	0.15	7,150.00	1,021.70	-1,582.46	1,017.55	0.00	0.00	0.00	
8,900.00	90.00	0.15	7,150.00	1,121.70	-1,582.20	1,117.55	0.00	0.00	0.00	
9,000.00	90.00	0.15	7,150.00	1,221.70	-1,581.93	1,217.55	0.00	0.00	0.00	
9,100.00	90.00	0.15	7,150.00	1,321.70	-1,581.67	1,317.55	0.00	0.00	0.00	
9,200.00	90.00	0.15	7,150.00	1,421.70	-1,581.40	1,417.55	0.00	0.00	0.00	
9,300.00	90.00	0.15	7,150.00	1,521.70	-1,581.14	1,517.55	0.00	0.00	0.00	
9,400.00	90.00	0.15	7,150.00	1,621.70	-1,580.87	1,617.55	0.00	0.00	0.00	
9,500.00	90.00	0.15	7,150.00	1,721.70	-1,580.61	1,717.55	0.00	0.00	0.00	
9,600.00	90.00	0.15	7,150.00	1,821.70	-1,580.34	1,817.55	0.00	0.00	0.00	
9,700.00	90.00	0.15	7,150.00	1,921.70	-1,580.08	1,917.55	0.00	0.00	0.00	
9,800.00	90.00	0.15	7,150.00	2,021.70	-1,579.81	2,017.55	0.00	0.00	0.00	
9,900.00	90.00	0.15	7,150.00	2,121.70	-1,579.55	2,117.55	0.00	0.00	0.00	
10,000.00	90.00	0.15	7,150.00	2,221.70	-1,579.28	2,217.55	0.00	0.00	0.00	
10,100.00	90.00	0.15	7,150.00	2,321.70	-1,579.02	2,317.55	0.00	0.00	0.00	
10,200.00	90.00	0.15	7,150.00	2,421.70	-1,578.75	2,417.55	0.00	0.00	0.00	
10,300.00	90.00	0.15	7,150.00	2,521.70	-1,578.49	2,517.55	0.00	0.00	0.00	
10,400.00	90.00	0.15	7,150.00	2,621.70	-1,578.22	2,617.55	0.00	0.00	0.00	
10,500.00	90.00	0.15	7,150.00	2,721.70	-1,577.96	2,717.55	0.00	0.00	0.00	
10,600.00	90.00	0.15	7,150.00	2,821.69	-1,577.69	2,817.55	0.00	0.00	0.00	
10,700.00	90.00	0.15	7,150.00	2,921.69	-1,577.43	2,917.55	0.00	0.00	0.00	
10,800.00	90.00	0.15	7,150.00	3,021.69	-1,577.16	3,017.55	0.00	0.00	0.00	
10,900.00	90.00	0.15	7,150.00	3,121.69	-1,576.90	3,117.55	0.00	0.00	0.00	
11,000.00	90.00	0.15	7,150.00	3,221.69	-1,576.63	3,217.55	0.00	0.00	0.00	
11,100.00	90.00	0.15	7,150.00	3,321.69	-1,576.36	3,317.55	0.00	0.00	0.00	
11,200.00	90.00	0.15	7,150.00	3,421.69	-1,576.10	3,417.55	0.00	0.00	0.00	
11,300.00	90.00	0.15	7,150.00	3,521.69	-1,575.83	3,517.55	0.00	0.00	0.00	
11,400.00	90.00	0.15	7,150.00	3,621.69	-1,575.57	3,617.55	0.00	0.00	0.00	
11,500.00	90.00	0.15	7,150.00	3,721.69	-1,575.30	3,717.55	0.00	0.00	0.00	
11,600.00	90.00	0.15	7,150.00	3,821.69	-1,575.04	3,817.55	0.00	0.00	0.00	
11,700.00	90.00	0.15	7,150.00	3,921.69	-1,574.77	3,917.55	0.00	0.00	0.00	
11,800.00	90.00	0.15	7,150.00	4,021.69	-1,574.51	4,017.55	0.00	0.00	0.00	
11,900.00	90.00	0.15	7,150.00	4,121.69	-1,574.24	4,117.55	0.00	0.00	0.00	
12,000.00	90.00	0.15	7,150.00	4,221.69	-1,573.98	4,217.55	0.00	0.00	0.00	
12,100.00	90.00	0.15	7,150.00	4,321.69	-1,573.71	4,317.55	0.00	0.00	0.00	
12,200.00	90.00	0.15	7,150.00	4,421.69	-1,573.45	4,417.55	0.00	0.00	0.00	
12,300.00	90.00	0.15	7,150.00	4,521.69	-1,573.18	4,517.55	0.00	0.00	0.00	
12,400.00	90.00	0.15	7,150.00	4,621.69	-1,572.92	4,617.55	0.00	0.00	0.00	
12,500.00	90.00	0.15	7,150.00	4,721.69	-1,572.65	4,717.55	0.00	0.00	0.00	
12,600.00	90.00	0.15	7,150.00	4,821.69	-1,572.39	4,817.55	0.00	0.00	0.00	
12,700.00	90.00	0.15	7,150.00	4,921.69	-1,572.12	4,917.55	0.00	0.00	0.00	
12,800.00	90.00	0.15	7,150.00	5,021.69	-1,571.86	5,017.55	0.00	0.00	0.00	
12,900.00	90.00	0.15	7,150.00	5,121.69	-1,571.59	5,117.55	0.00	0.00	0.00	
13,000.00	90.00	0.15	7,150.00	5,221.69	-1,571.33	5,217.55	0.00	0.00	0.00	
13,100.00	90.00	0.15	7,150.00	5,321.69	-1,571.06	5,317.55	0.00	0.00	0.00	
13,200.00	90.00	0.15	7,150.00	5,421.69	-1,570.80	5,417.55	0.00	0.00	0.00	
13,300.00	90.00	0.15	7,150.00	5,521.69	-1,570.53	5,517.55	0.00	0.00	0.00	
13,400.00	90.00	0.15	7,150.00	5,621.69	-1,570.27	5,617.55	0.00	0.00	0.00	
13,500.00	90.00	0.15	7,150.00	5,721.68	-1,570.00	5,717.55	0.00	0.00	0.00	
13,600.00	90.00	0.15	7,150.00	5,821.68	-1,569.74	5,817.55	0.00	0.00	0.00	
13,700.00	90.00	0.15	7,150.00	5,921.68	-1,569.47	5,917.55	0.00	0.00	0.00	
13,800.00	90.00	0.15	7,150.00	6,021.68	-1,569.21	6,017.55	0.00	0.00	0.00	
13,900.00	90.00	0.15	7,150.00	6,121.68	-1,568.94	6,117.55	0.00	0.00	0.00	
14,000.00	90.00	0.15	7,150.00	6,221.68	-1,568.68	6,217.55	0.00	0.00	0.00	
14,100.00	90.00	0.15	7,150.00	6,321.68	-1,568.41	6,317.55	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-3H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5032.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-3H	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)	
14,200.00	90.00	0.15	7,150.00	6,421.68	-1,568.15	6,417.55	0.00	0.00	0.00	
14,300.00	90.00	0.15	7,150.00	6,521.68	-1,567.88	6,517.55	0.00	0.00	0.00	
14,400.00	90.00	0.15	7,150.00	6,621.68	-1,567.62	6,617.55	0.00	0.00	0.00	
14,500.00	90.00	0.15	7,150.00	6,721.68	-1,567.35	6,717.55	0.00	0.00	0.00	
14,600.00	90.00	0.15	7,150.00	6,821.68	-1,567.09	6,817.55	0.00	0.00	0.00	
14,700.00	90.00	0.15	7,150.00	6,921.68	-1,566.82	6,917.55	0.00	0.00	0.00	
14,800.00	90.00	0.15	7,150.00	7,021.68	-1,566.56	7,017.55	0.00	0.00	0.00	
14,900.00	90.00	0.15	7,150.00	7,121.68	-1,566.29	7,117.55	0.00	0.00	0.00	
15,000.00	90.00	0.15	7,150.00	7,221.68	-1,566.03	7,217.55	0.00	0.00	0.00	
15,100.00	90.00	0.15	7,150.00	7,321.68	-1,565.76	7,317.55	0.00	0.00	0.00	
15,200.00	90.00	0.15	7,150.00	7,421.68	-1,565.50	7,417.55	0.00	0.00	0.00	
15,300.00	90.00	0.15	7,150.00	7,521.68	-1,565.23	7,517.55	0.00	0.00	0.00	
15,400.00	90.00	0.15	7,150.00	7,621.68	-1,564.97	7,617.55	0.00	0.00	0.00	
15,481.04	90.00	0.15	7,150.00	7,702.72	-1,564.75	7,698.60	0.00	0.00	0.00	
TD Well @ 15481.04ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,733.81	1,700.00	9 5/8"	9-5/8	13-1/2	
7,737.21	7,150.00	5 1/2"	5-1/2	8-1/2	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft	
1,004.00	995.32	-42.32	-89.12	End Nudge @ 1004.00ft	
6,665.62	6,461.98	-674.12	-1,419.70	KOP @ 6665.62ft :: DLS = 9°/100'	
7,737.21	7,150.00	-41.08	-1,585.28	End Build @ 7737.21ft	
15,481.04	7,150.00	7,702.72	-1,564.75	TD Well @ 15481.04ft	