

VERDAD RESOURCES

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

Wellbore #1

Plan: Design #1

Standard Planning Report

18 January, 2018

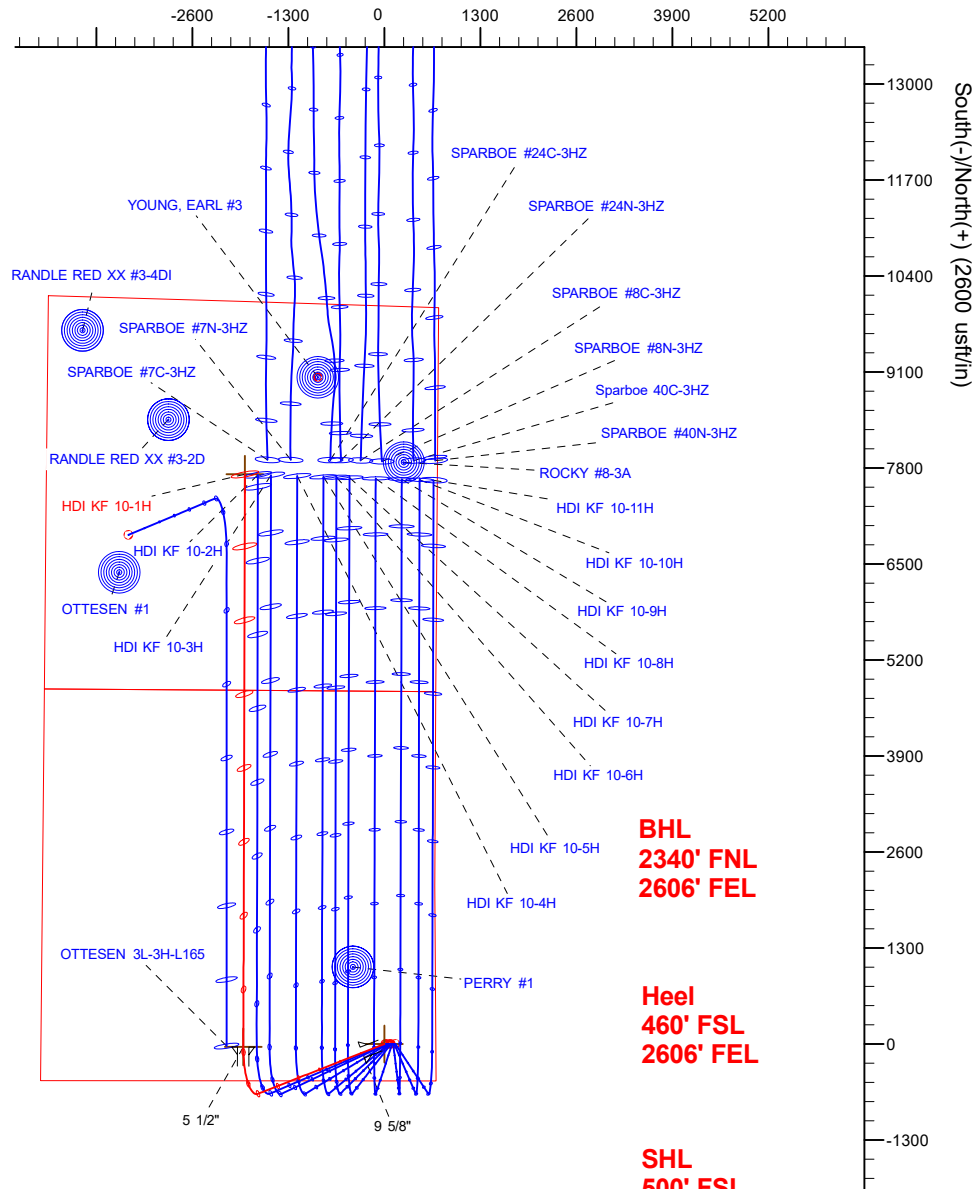
Project: WATTENBERG FIELD
Site: 1N-65W-10 HDI KF PAD
Well: HDI KF 10-1H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1742.61	9 5/8"	9-5/8
7150.00	7820.90	5 1/2"	5-1/2

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



BHL
2340' FNL
2606' FEL

Heel
460' FSL
2606' FEL

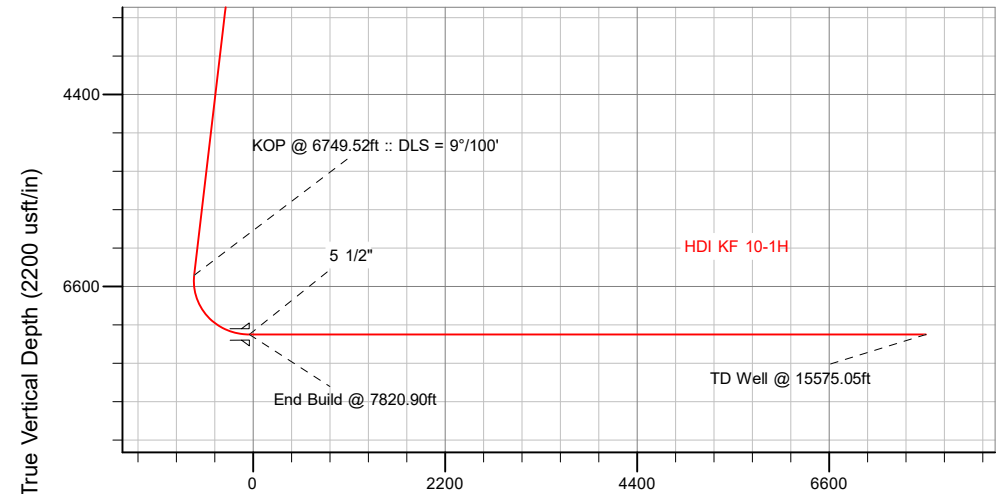
SHL
500' FSL
697' FEL

SECTION DETAILS

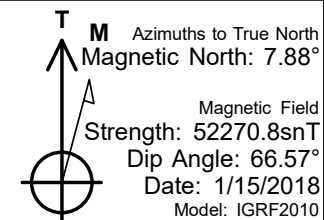
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1132.50	17.65	248.50	1118.61	-49.42	-125.47	2.00	248.50	-49.75	
4	6749.52	17.65	248.50	6471.22	-673.61	-1710.06	0.00	0.00	-678.08	
5	7820.90	90.00	0.15	7150.00	-40.45	-1909.09	9.00	110.72	-45.45	
6	15575.05	90.00	0.15	7150.00	7713.68	-1888.22	0.00	0.00	7708.71	HDI KF 10-1H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HDI KF 10-1H_SHL	0.00	0.00	0.00	40.060105	-104.642980
HDI KF 10-1H_BHL	7150.00	7713.68	-1888.22	40.081280	-104.649728



Vertical Section at 0.15° (2200 usft/in)



WELL DETAILS: HDI KF 10-1H

GL = 5012'

RKB = 20' @ 5032.00usft (RIG)

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

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

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-1H
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 10-1H	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 10-1H			
Well Position	+N/-S	-0.05 usft	Northing:	1,265,900.74 usft
	+E/-W	0.00 usft	Easting:	3,239,881.89 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	1/15/2018	7.88	66.57	52,270.79127963

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	15,575.05	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	
1,132.50	17.65	248.50	1,118.61	-49.42	-125.47	2.00	2.00	0.00	248.50	
6,749.52	17.65	248.50	6,471.22	-673.61	-1,710.06	0.00	0.00	0.00	0.00	
7,820.90	90.00	0.15	7,150.00	-40.45	-1,909.09	9.00	6.75	10.42	110.72	
15,575.05	90.00	0.15	7,150.00	7,713.68	-1,888.22	0.00	0.00	0.00	0.00	HDI KF 10-1H_BHL

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-1H
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 10-1H	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	248.50	300.00	-0.16	-0.41	-0.16	2.00	2.00	0.00
400.00	3.00	248.50	399.93	-1.44	-3.65	-1.45	2.00	2.00	0.00
500.00	5.00	248.50	499.68	-4.00	-10.14	-4.02	2.00	2.00	0.00
600.00	7.00	248.50	599.13	-7.83	-19.87	-7.88	2.00	2.00	0.00
700.00	9.00	248.50	698.15	-12.93	-32.82	-13.01	2.00	2.00	0.00
800.00	11.00	248.50	796.63	-19.29	-48.97	-19.42	2.00	2.00	0.00
900.00	13.00	248.50	894.44	-26.91	-68.32	-27.09	2.00	2.00	0.00
1,000.00	15.00	248.50	991.46	-35.78	-90.82	-36.01	2.00	2.00	0.00
1,100.00	17.00	248.50	1,087.58	-45.88	-116.47	-46.18	2.00	2.00	0.00
1,132.50	17.65	248.50	1,118.61	-49.42	-125.47	-49.75	2.00	2.00	0.00
End Nudge @ 1132.50ft									
1,200.00	17.65	248.50	1,182.93	-56.93	-144.51	-57.30	0.00	0.00	0.00
1,300.00	17.65	248.50	1,278.22	-68.04	-172.72	-68.49	0.00	0.00	0.00
1,400.00	17.65	248.50	1,373.52	-79.15	-200.94	-79.68	0.00	0.00	0.00
1,500.00	17.65	248.50	1,468.81	-90.26	-229.15	-90.86	0.00	0.00	0.00
1,600.00	17.65	248.50	1,564.10	-101.38	-257.36	-102.05	0.00	0.00	0.00
1,700.00	17.65	248.50	1,659.39	-112.49	-285.57	-113.23	0.00	0.00	0.00
1,742.61	17.65	248.50	1,700.00	-117.22	-297.59	-118.00	0.00	0.00	0.00
9 5/8"									
1,800.00	17.65	248.50	1,754.69	-123.60	-313.78	-124.42	0.00	0.00	0.00
1,900.00	17.65	248.50	1,849.98	-134.71	-341.99	-135.61	0.00	0.00	0.00
2,000.00	17.65	248.50	1,945.27	-145.82	-370.20	-146.79	0.00	0.00	0.00
2,100.00	17.65	248.50	2,040.56	-156.94	-398.41	-157.98	0.00	0.00	0.00
2,200.00	17.65	248.50	2,135.86	-168.05	-426.62	-169.17	0.00	0.00	0.00
2,300.00	17.65	248.50	2,231.15	-179.16	-454.83	-180.35	0.00	0.00	0.00
2,400.00	17.65	248.50	2,326.44	-190.27	-483.04	-191.54	0.00	0.00	0.00
2,500.00	17.65	248.50	2,421.74	-201.39	-511.25	-202.72	0.00	0.00	0.00
2,600.00	17.65	248.50	2,517.03	-212.50	-539.46	-213.91	0.00	0.00	0.00
2,700.00	17.65	248.50	2,612.32	-223.61	-567.67	-225.10	0.00	0.00	0.00
2,800.00	17.65	248.50	2,707.61	-234.72	-595.88	-236.28	0.00	0.00	0.00
2,900.00	17.65	248.50	2,802.91	-245.84	-624.09	-247.47	0.00	0.00	0.00
3,000.00	17.65	248.50	2,898.20	-256.95	-652.30	-258.66	0.00	0.00	0.00
3,100.00	17.65	248.50	2,993.49	-268.06	-680.51	-269.84	0.00	0.00	0.00
3,200.00	17.65	248.50	3,088.78	-279.17	-708.72	-281.03	0.00	0.00	0.00
3,300.00	17.65	248.50	3,184.08	-290.29	-736.93	-292.21	0.00	0.00	0.00
3,400.00	17.65	248.50	3,279.37	-301.40	-765.14	-303.40	0.00	0.00	0.00
3,500.00	17.65	248.50	3,374.66	-312.51	-793.35	-314.59	0.00	0.00	0.00
3,600.00	17.65	248.50	3,469.95	-323.62	-821.56	-325.77	0.00	0.00	0.00
3,700.00	17.65	248.50	3,565.25	-334.74	-849.77	-336.96	0.00	0.00	0.00
3,800.00	17.65	248.50	3,660.54	-345.85	-877.98	-348.14	0.00	0.00	0.00
3,900.00	17.65	248.50	3,755.83	-356.96	-906.20	-359.33	0.00	0.00	0.00
4,000.00	17.65	248.50	3,851.13	-368.07	-934.41	-370.52	0.00	0.00	0.00
4,100.00	17.65	248.50	3,946.42	-379.18	-962.62	-381.70	0.00	0.00	0.00
4,200.00	17.65	248.50	4,041.71	-390.30	-990.83	-392.89	0.00	0.00	0.00
4,300.00	17.65	248.50	4,137.00	-401.41	-1,019.04	-404.08	0.00	0.00	0.00
4,400.00	17.65	248.50	4,232.30	-412.52	-1,047.25	-415.26	0.00	0.00	0.00
4,500.00	17.65	248.50	4,327.59	-423.63	-1,075.46	-426.45	0.00	0.00	0.00
4,600.00	17.65	248.50	4,422.88	-434.75	-1,103.67	-437.63	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-1H
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 10-1H	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	17.65	248.50	4,518.17	-445.86	-1,131.88	-448.82	0.00	0.00	0.00
4,800.00	17.65	248.50	4,613.47	-456.97	-1,160.09	-460.01	0.00	0.00	0.00
4,900.00	17.65	248.50	4,708.76	-468.08	-1,188.30	-471.19	0.00	0.00	0.00
5,000.00	17.65	248.50	4,804.05	-479.20	-1,216.51	-482.38	0.00	0.00	0.00
5,100.00	17.65	248.50	4,899.34	-490.31	-1,244.72	-493.57	0.00	0.00	0.00
5,200.00	17.65	248.50	4,994.64	-501.42	-1,272.93	-504.75	0.00	0.00	0.00
5,300.00	17.65	248.50	5,089.93	-512.53	-1,301.14	-515.94	0.00	0.00	0.00
5,400.00	17.65	248.50	5,185.22	-523.65	-1,329.35	-527.12	0.00	0.00	0.00
5,500.00	17.65	248.50	5,280.51	-534.76	-1,357.56	-538.31	0.00	0.00	0.00
5,600.00	17.65	248.50	5,375.81	-545.87	-1,385.77	-549.50	0.00	0.00	0.00
5,700.00	17.65	248.50	5,471.10	-556.98	-1,413.98	-560.68	0.00	0.00	0.00
5,800.00	17.65	248.50	5,566.39	-568.09	-1,442.19	-571.87	0.00	0.00	0.00
5,900.00	17.65	248.50	5,661.69	-579.21	-1,470.40	-583.05	0.00	0.00	0.00
6,000.00	17.65	248.50	5,756.98	-590.32	-1,498.61	-594.24	0.00	0.00	0.00
6,100.00	17.65	248.50	5,852.27	-601.43	-1,526.82	-605.43	0.00	0.00	0.00
6,200.00	17.65	248.50	5,947.56	-612.54	-1,555.03	-616.61	0.00	0.00	0.00
6,300.00	17.65	248.50	6,042.86	-623.66	-1,583.25	-627.80	0.00	0.00	0.00
6,400.00	17.65	248.50	6,138.15	-634.77	-1,611.46	-638.99	0.00	0.00	0.00
6,500.00	17.65	248.50	6,233.44	-645.88	-1,639.67	-650.17	0.00	0.00	0.00
6,600.00	17.65	248.50	6,328.73	-656.99	-1,667.88	-661.36	0.00	0.00	0.00
6,700.00	17.65	248.50	6,424.03	-668.11	-1,696.09	-672.54	0.00	0.00	0.00
6,749.52	17.65	248.50	6,471.22	-673.61	-1,710.06	-678.08	0.00	0.00	0.00
KOP @ 6749.52ft :: DLS = 9°/100'									
6,800.00	16.58	263.55	6,519.48	-677.22	-1,724.34	-681.74	9.00	-2.12	29.81
6,850.00	16.68	279.32	6,567.42	-676.86	-1,738.51	-681.41	9.00	0.19	31.54
6,900.00	17.91	293.92	6,615.18	-672.58	-1,752.63	-677.17	9.00	2.46	29.21
6,950.00	20.07	306.10	6,662.48	-664.41	-1,766.59	-669.03	9.00	4.32	24.35
7,000.00	22.89	315.70	6,709.01	-652.39	-1,780.32	-657.05	9.00	5.65	19.19
7,050.00	26.17	323.15	6,754.51	-636.60	-1,793.73	-641.29	9.00	6.55	14.91
7,100.00	29.74	328.99	6,798.67	-617.14	-1,806.74	-621.87	9.00	7.15	11.67
7,150.00	33.53	333.64	6,841.24	-594.12	-1,819.27	-598.88	9.00	7.56	9.32
7,200.00	37.45	337.44	6,881.95	-567.70	-1,831.24	-572.49	9.00	7.85	7.60
7,250.00	41.48	340.61	6,920.55	-538.03	-1,842.57	-542.85	9.00	8.05	6.33
7,300.00	45.58	343.31	6,956.80	-505.29	-1,853.20	-510.14	9.00	8.20	5.39
7,350.00	49.73	345.65	6,990.47	-469.69	-1,863.07	-474.57	9.00	8.31	4.68
7,400.00	53.93	347.71	7,021.37	-431.45	-1,872.10	-436.35	9.00	8.39	4.14
7,450.00	58.16	349.57	7,049.29	-390.79	-1,880.25	-395.72	9.00	8.46	3.71
7,500.00	62.41	351.26	7,074.08	-347.99	-1,887.46	-352.93	9.00	8.51	3.39
7,550.00	66.68	352.83	7,095.56	-303.29	-1,893.70	-308.24	9.00	8.54	3.13
7,600.00	70.97	354.30	7,113.62	-256.97	-1,898.91	-261.94	9.00	8.57	2.94
7,650.00	75.27	355.69	7,128.14	-209.32	-1,903.08	-214.30	9.00	8.60	2.79
7,700.00	79.57	357.03	7,139.03	-160.63	-1,906.17	-165.62	9.00	8.61	2.68
7,750.00	83.88	358.34	7,146.22	-111.20	-1,908.16	-116.20	9.00	8.62	2.61
7,800.00	88.20	359.62	7,149.67	-61.34	-1,909.05	-66.34	9.00	8.63	2.57
7,820.90	90.00	0.15	7,150.00	-40.44	-1,909.09	-45.44	9.00	8.63	2.55
End Build @ 7820.90ft - 5 1/2"									
7,900.00	90.00	0.15	7,150.00	38.66	-1,908.88	33.66	0.00	0.00	0.00
8,000.00	90.00	0.15	7,150.00	138.65	-1,908.61	133.66	0.00	0.00	0.00
8,100.00	90.00	0.15	7,150.00	238.65	-1,908.34	233.66	0.00	0.00	0.00
8,200.00	90.00	0.15	7,150.00	338.65	-1,908.07	333.66	0.00	0.00	0.00
8,300.00	90.00	0.15	7,150.00	438.65	-1,907.80	433.66	0.00	0.00	0.00
8,400.00	90.00	0.15	7,150.00	538.65	-1,907.53	533.66	0.00	0.00	0.00
8,500.00	90.00	0.15	7,150.00	638.65	-1,907.26	633.66	0.00	0.00	0.00
8,600.00	90.00	0.15	7,150.00	738.65	-1,906.99	733.66	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-1H
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 10-1H	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)	
8,700.00	90.00	0.15	7,150.00	838.65	-1,906.72	833.66	0.00	0.00	0.00	
8,800.00	90.00	0.15	7,150.00	938.65	-1,906.45	933.66	0.00	0.00	0.00	
8,900.00	90.00	0.15	7,150.00	1,038.65	-1,906.18	1,033.66	0.00	0.00	0.00	
9,000.00	90.00	0.15	7,150.00	1,138.65	-1,905.92	1,133.66	0.00	0.00	0.00	
9,100.00	90.00	0.15	7,150.00	1,238.65	-1,905.65	1,233.66	0.00	0.00	0.00	
9,200.00	90.00	0.15	7,150.00	1,338.65	-1,905.38	1,333.66	0.00	0.00	0.00	
9,300.00	90.00	0.15	7,150.00	1,438.65	-1,905.11	1,433.66	0.00	0.00	0.00	
9,400.00	90.00	0.15	7,150.00	1,538.65	-1,904.84	1,533.66	0.00	0.00	0.00	
9,500.00	90.00	0.15	7,150.00	1,638.65	-1,904.57	1,633.66	0.00	0.00	0.00	
9,600.00	90.00	0.15	7,150.00	1,738.65	-1,904.30	1,733.66	0.00	0.00	0.00	
9,700.00	90.00	0.15	7,150.00	1,838.65	-1,904.03	1,833.66	0.00	0.00	0.00	
9,800.00	90.00	0.15	7,150.00	1,938.65	-1,903.76	1,933.66	0.00	0.00	0.00	
9,900.00	90.00	0.15	7,150.00	2,038.65	-1,903.49	2,033.66	0.00	0.00	0.00	
10,000.00	90.00	0.15	7,150.00	2,138.65	-1,903.22	2,133.66	0.00	0.00	0.00	
10,100.00	90.00	0.15	7,150.00	2,238.65	-1,902.96	2,233.66	0.00	0.00	0.00	
10,200.00	90.00	0.15	7,150.00	2,338.65	-1,902.69	2,333.66	0.00	0.00	0.00	
10,300.00	90.00	0.15	7,150.00	2,438.65	-1,902.42	2,433.66	0.00	0.00	0.00	
10,400.00	90.00	0.15	7,150.00	2,538.65	-1,902.15	2,533.66	0.00	0.00	0.00	
10,500.00	90.00	0.15	7,150.00	2,638.65	-1,901.88	2,633.66	0.00	0.00	0.00	
10,600.00	90.00	0.15	7,150.00	2,738.65	-1,901.61	2,733.66	0.00	0.00	0.00	
10,700.00	90.00	0.15	7,150.00	2,838.64	-1,901.34	2,833.66	0.00	0.00	0.00	
10,800.00	90.00	0.15	7,150.00	2,938.64	-1,901.07	2,933.66	0.00	0.00	0.00	
10,900.00	90.00	0.15	7,150.00	3,038.64	-1,900.80	3,033.66	0.00	0.00	0.00	
11,000.00	90.00	0.15	7,150.00	3,138.64	-1,900.53	3,133.66	0.00	0.00	0.00	
11,100.00	90.00	0.15	7,150.00	3,238.64	-1,900.26	3,233.66	0.00	0.00	0.00	
11,200.00	90.00	0.15	7,150.00	3,338.64	-1,900.00	3,333.66	0.00	0.00	0.00	
11,300.00	90.00	0.15	7,150.00	3,438.64	-1,899.73	3,433.66	0.00	0.00	0.00	
11,400.00	90.00	0.15	7,150.00	3,538.64	-1,899.46	3,533.66	0.00	0.00	0.00	
11,500.00	90.00	0.15	7,150.00	3,638.64	-1,899.19	3,633.66	0.00	0.00	0.00	
11,600.00	90.00	0.15	7,150.00	3,738.64	-1,898.92	3,733.66	0.00	0.00	0.00	
11,700.00	90.00	0.15	7,150.00	3,838.64	-1,898.65	3,833.66	0.00	0.00	0.00	
11,800.00	90.00	0.15	7,150.00	3,938.64	-1,898.38	3,933.66	0.00	0.00	0.00	
11,900.00	90.00	0.15	7,150.00	4,038.64	-1,898.11	4,033.66	0.00	0.00	0.00	
12,000.00	90.00	0.15	7,150.00	4,138.64	-1,897.84	4,133.66	0.00	0.00	0.00	
12,100.00	90.00	0.15	7,150.00	4,238.64	-1,897.57	4,233.66	0.00	0.00	0.00	
12,200.00	90.00	0.15	7,150.00	4,338.64	-1,897.30	4,333.66	0.00	0.00	0.00	
12,300.00	90.00	0.15	7,150.00	4,438.64	-1,897.04	4,433.66	0.00	0.00	0.00	
12,400.00	90.00	0.15	7,150.00	4,538.64	-1,896.77	4,533.66	0.00	0.00	0.00	
12,500.00	90.00	0.15	7,150.00	4,638.64	-1,896.50	4,633.66	0.00	0.00	0.00	
12,600.00	90.00	0.15	7,150.00	4,738.64	-1,896.23	4,733.66	0.00	0.00	0.00	
12,700.00	90.00	0.15	7,150.00	4,838.64	-1,895.96	4,833.66	0.00	0.00	0.00	
12,800.00	90.00	0.15	7,150.00	4,938.64	-1,895.69	4,933.66	0.00	0.00	0.00	
12,900.00	90.00	0.15	7,150.00	5,038.64	-1,895.42	5,033.66	0.00	0.00	0.00	
13,000.00	90.00	0.15	7,150.00	5,138.64	-1,895.15	5,133.66	0.00	0.00	0.00	
13,100.00	90.00	0.15	7,150.00	5,238.64	-1,894.88	5,233.66	0.00	0.00	0.00	
13,200.00	90.00	0.15	7,150.00	5,338.64	-1,894.61	5,333.66	0.00	0.00	0.00	
13,300.00	90.00	0.15	7,150.00	5,438.64	-1,894.34	5,433.66	0.00	0.00	0.00	
13,400.00	90.00	0.15	7,150.00	5,538.64	-1,894.08	5,533.66	0.00	0.00	0.00	
13,500.00	90.00	0.15	7,150.00	5,638.63	-1,893.81	5,633.66	0.00	0.00	0.00	
13,600.00	90.00	0.15	7,150.00	5,738.63	-1,893.54	5,733.66	0.00	0.00	0.00	
13,700.00	90.00	0.15	7,150.00	5,838.63	-1,893.27	5,833.66	0.00	0.00	0.00	
13,800.00	90.00	0.15	7,150.00	5,938.63	-1,893.00	5,933.66	0.00	0.00	0.00	
13,900.00	90.00	0.15	7,150.00	6,038.63	-1,892.73	6,033.66	0.00	0.00	0.00	
14,000.00	90.00	0.15	7,150.00	6,138.63	-1,892.46	6,133.66	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-1H
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 10-1H	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)
14,100.00	90.00	0.15	7,150.00	6,238.63	-1,892.19	6,233.66	0.00	0.00	0.00
14,200.00	90.00	0.15	7,150.00	6,338.63	-1,891.92	6,333.66	0.00	0.00	0.00
14,300.00	90.00	0.15	7,150.00	6,438.63	-1,891.65	6,433.66	0.00	0.00	0.00
14,400.00	90.00	0.15	7,150.00	6,538.63	-1,891.39	6,533.66	0.00	0.00	0.00
14,500.00	90.00	0.15	7,150.00	6,638.63	-1,891.12	6,633.66	0.00	0.00	0.00
14,600.00	90.00	0.15	7,150.00	6,738.63	-1,890.85	6,733.66	0.00	0.00	0.00
14,700.00	90.00	0.15	7,150.00	6,838.63	-1,890.58	6,833.66	0.00	0.00	0.00
14,800.00	90.00	0.15	7,150.00	6,938.63	-1,890.31	6,933.66	0.00	0.00	0.00
14,900.00	90.00	0.15	7,150.00	7,038.63	-1,890.04	7,033.66	0.00	0.00	0.00
15,000.00	90.00	0.15	7,150.00	7,138.63	-1,889.77	7,133.66	0.00	0.00	0.00
15,100.00	90.00	0.15	7,150.00	7,238.63	-1,889.50	7,233.66	0.00	0.00	0.00
15,200.00	90.00	0.15	7,150.00	7,338.63	-1,889.23	7,333.66	0.00	0.00	0.00
15,300.00	90.00	0.15	7,150.00	7,438.63	-1,888.96	7,433.66	0.00	0.00	0.00
15,400.00	90.00	0.15	7,150.00	7,538.63	-1,888.69	7,533.66	0.00	0.00	0.00
15,500.00	90.00	0.15	7,150.00	7,638.63	-1,888.43	7,633.66	0.00	0.00	0.00
15,575.05	90.00	0.15	7,150.00	7,713.68	-1,888.22	7,708.71	0.00	0.00	0.00
TD Well @ 15575.05ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,742.61	1,700.00	9 5/8"	9-5/8	13-1/2
7,820.90	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
1,132.50	1,118.61	-49.42	-125.47	End Nudge @ 1132.50ft
6,749.52	6,471.22	-673.61	-1,710.06	KOP @ 6749.52ft :: DLS = 9°/100'
7,820.90	7,150.00	-40.45	-1,909.09	End Build @ 7820.90ft
15,575.05	7,150.00	7,713.68	-1,888.22	TD Well @ 15575.05ft