

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-10 HDI KF PAD
HDI KF 10-7H**

Wellbore #1

Plan: Design #1

Standard Planning Report

18 January, 2018

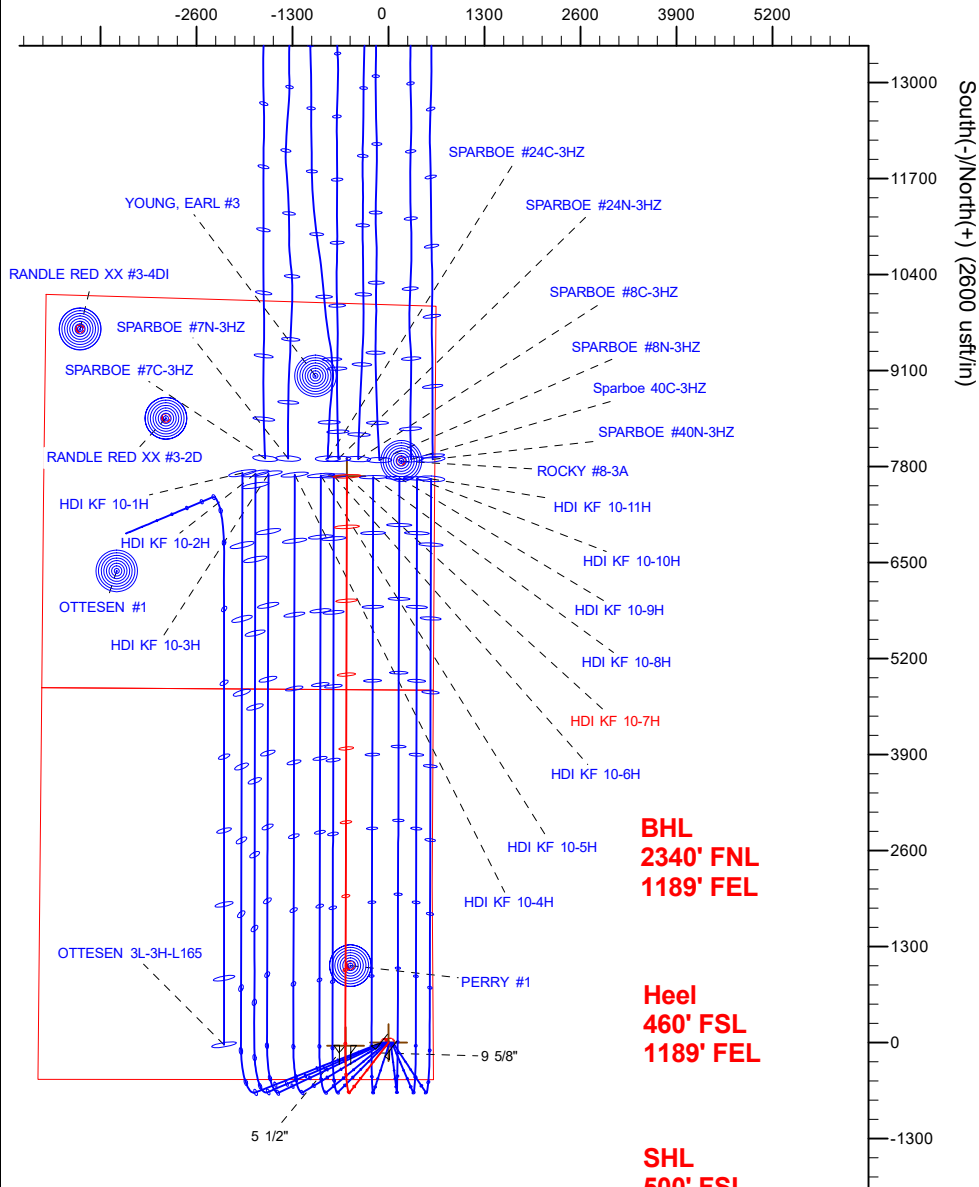
Project: WATTENBERG FIELD
Site: 1N-65W-10 HDI KF PAD
Well: HDI KF 10-7H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1711.89	9 5/8"	9-5/8
7150.00	7575.91	5 1/2"	5-1/2

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



BHL
2340' FNL
1189' FEL

Heel
460' FSL
1189' FEL

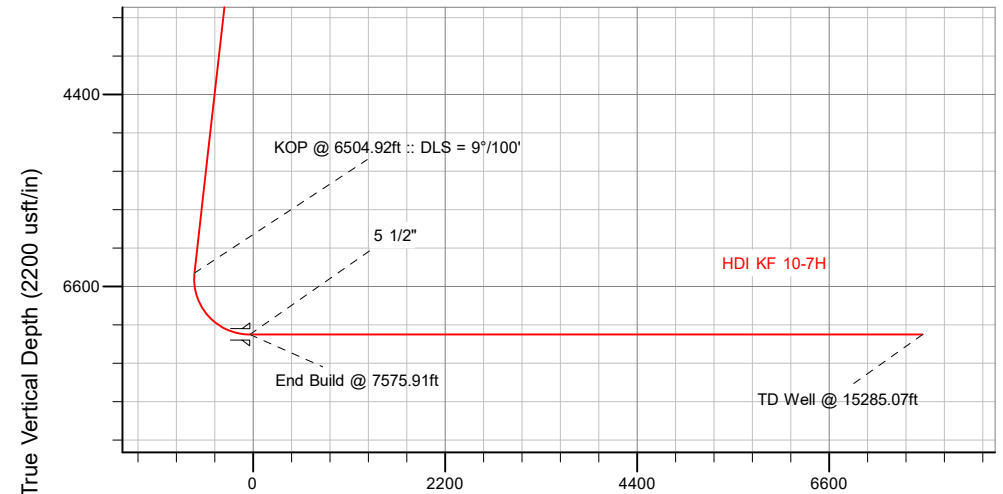
SHL
500' FSL
607' FEL

SECTION DETAILS

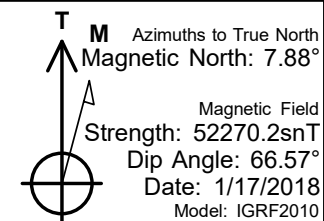
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	655.00	8.10	218.00	653.65	-22.52	-17.60	2.00	218.00	-22.57	
4	6504.92	8.10	218.00	6445.21	-672.05	-525.06	0.00	0.00	-673.60	
5	7575.91	90.00	0.17	7150.00	-39.21	-584.73	9.00	141.89	-40.94	
6	15285.07	90.00	0.17	7150.00	7669.92	-562.16	0.00	0.00	7668.22	HDI KF 10-7H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HDI KF 10-7H_SHL	0.00	0.00	0.00	40.060105	-104.642658
HDI KF 10-7H_BHL	7150.00	7669.92	-562.16	40.081160	-104.644667



Vertical Section at 0.17° (2200 usft/in)



WELL DETAILS: HDI KF 10-7H

GL = 5013'

RKB = 20' @ 5033.00usft (RIG)

Plan: Design #1 (HDI KF 10-7H/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 10-7H
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 10-7H	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 10-7H			
Well Position	+N/-S	-0.07 usft	Northing:	1,265,901.59 usft
	+E/-W	90.13 usft	Easting:	3,239,972.02 usft
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	52,270.24033520

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	15,285.07	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	
655.00	8.10	218.00	653.65	-22.52	-17.60	2.00	2.00	0.00	218.00	
6,504.92	8.10	218.00	6,445.21	-672.05	-525.06	0.00	0.00	0.00	0.00	
7,575.91	90.00	0.17	7,150.00	-39.21	-584.73	9.00	7.65	13.27	141.89	
15,285.07	90.00	0.17	7,150.00	7,669.92	-562.16	0.00	0.00	0.00	0.00	HDI KF 10-7H_BHL

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Planning Report

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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 10-7H	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	218.00	300.00	-0.34	-0.27	-0.34	2.00	2.00	0.00
400.00	3.00	218.00	399.93	-3.09	-2.42	-3.10	2.00	2.00	0.00
500.00	5.00	218.00	499.68	-8.59	-6.71	-8.61	2.00	2.00	0.00
600.00	7.00	218.00	599.13	-16.83	-13.15	-16.87	2.00	2.00	0.00
655.00	8.10	218.00	653.65	-22.52	-17.60	-22.57	2.00	2.00	0.00
End Nudge @ 655.00ft									
700.00	8.10	218.00	698.20	-27.52	-21.50	-27.58	0.00	0.00	0.00
800.00	8.10	218.00	797.21	-38.62	-30.17	-38.71	0.00	0.00	0.00
900.00	8.10	218.00	896.21	-49.72	-38.85	-49.84	0.00	0.00	0.00
1,000.00	8.10	218.00	995.21	-60.83	-47.52	-60.97	0.00	0.00	0.00
1,100.00	8.10	218.00	1,094.21	-71.93	-56.20	-72.10	0.00	0.00	0.00
1,200.00	8.10	218.00	1,193.22	-83.03	-64.87	-83.23	0.00	0.00	0.00
1,300.00	8.10	218.00	1,292.22	-94.14	-73.55	-94.35	0.00	0.00	0.00
1,400.00	8.10	218.00	1,391.22	-105.24	-82.22	-105.48	0.00	0.00	0.00
1,500.00	8.10	218.00	1,490.22	-116.34	-90.90	-116.61	0.00	0.00	0.00
1,600.00	8.10	218.00	1,589.22	-127.45	-99.57	-127.74	0.00	0.00	0.00
1,700.00	8.10	218.00	1,688.23	-138.55	-108.25	-138.87	0.00	0.00	0.00
1,711.89	8.10	218.00	1,700.00	-139.87	-109.28	-140.19	0.00	0.00	0.00
9 5/8"									
1,800.00	8.10	218.00	1,787.23	-149.65	-116.92	-150.00	0.00	0.00	0.00
1,900.00	8.10	218.00	1,886.23	-160.76	-125.60	-161.13	0.00	0.00	0.00
2,000.00	8.10	218.00	1,985.23	-171.86	-134.27	-172.26	0.00	0.00	0.00
2,100.00	8.10	218.00	2,084.24	-182.96	-142.95	-183.39	0.00	0.00	0.00
2,200.00	8.10	218.00	2,183.24	-194.07	-151.62	-194.51	0.00	0.00	0.00
2,300.00	8.10	218.00	2,282.24	-205.17	-160.30	-205.64	0.00	0.00	0.00
2,400.00	8.10	218.00	2,381.24	-216.27	-168.97	-216.77	0.00	0.00	0.00
2,500.00	8.10	218.00	2,480.25	-227.37	-177.64	-227.90	0.00	0.00	0.00
2,600.00	8.10	218.00	2,579.25	-238.48	-186.32	-239.03	0.00	0.00	0.00
2,700.00	8.10	218.00	2,678.25	-249.58	-194.99	-250.16	0.00	0.00	0.00
2,800.00	8.10	218.00	2,777.25	-260.68	-203.67	-261.29	0.00	0.00	0.00
2,900.00	8.10	218.00	2,876.26	-271.79	-212.34	-272.42	0.00	0.00	0.00
3,000.00	8.10	218.00	2,975.26	-282.89	-221.02	-283.55	0.00	0.00	0.00
3,100.00	8.10	218.00	3,074.26	-293.99	-229.69	-294.67	0.00	0.00	0.00
3,200.00	8.10	218.00	3,173.26	-305.10	-238.37	-305.80	0.00	0.00	0.00
3,300.00	8.10	218.00	3,272.26	-316.20	-247.04	-316.93	0.00	0.00	0.00
3,400.00	8.10	218.00	3,371.27	-327.30	-255.72	-328.06	0.00	0.00	0.00
3,500.00	8.10	218.00	3,470.27	-338.41	-264.39	-339.19	0.00	0.00	0.00
3,600.00	8.10	218.00	3,569.27	-349.51	-273.07	-350.32	0.00	0.00	0.00
3,700.00	8.10	218.00	3,668.27	-360.61	-281.74	-361.45	0.00	0.00	0.00
3,800.00	8.10	218.00	3,767.28	-371.72	-290.42	-372.58	0.00	0.00	0.00
3,900.00	8.10	218.00	3,866.28	-382.82	-299.09	-383.71	0.00	0.00	0.00
4,000.00	8.10	218.00	3,965.28	-393.92	-307.77	-394.83	0.00	0.00	0.00
4,100.00	8.10	218.00	4,064.28	-405.03	-316.44	-405.96	0.00	0.00	0.00
4,200.00	8.10	218.00	4,163.29	-416.13	-325.12	-417.09	0.00	0.00	0.00
4,300.00	8.10	218.00	4,262.29	-427.23	-333.79	-428.22	0.00	0.00	0.00
4,400.00	8.10	218.00	4,361.29	-438.34	-342.46	-439.35	0.00	0.00	0.00
4,500.00	8.10	218.00	4,460.29	-449.44	-351.14	-450.48	0.00	0.00	0.00
4,600.00	8.10	218.00	4,559.30	-460.54	-359.81	-461.61	0.00	0.00	0.00

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Planning Report

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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 10-7H	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	8.10	218.00	4,658.30	-471.64	-368.49	-472.74	0.00	0.00	0.00
4,800.00	8.10	218.00	4,757.30	-482.75	-377.16	-483.86	0.00	0.00	0.00
4,900.00	8.10	218.00	4,856.30	-493.85	-385.84	-494.99	0.00	0.00	0.00
5,000.00	8.10	218.00	4,955.31	-504.95	-394.51	-506.12	0.00	0.00	0.00
5,100.00	8.10	218.00	5,054.31	-516.06	-403.19	-517.25	0.00	0.00	0.00
5,200.00	8.10	218.00	5,153.31	-527.16	-411.86	-528.38	0.00	0.00	0.00
5,300.00	8.10	218.00	5,252.31	-538.26	-420.54	-539.51	0.00	0.00	0.00
5,400.00	8.10	218.00	5,351.31	-549.37	-429.21	-550.64	0.00	0.00	0.00
5,500.00	8.10	218.00	5,450.32	-560.47	-437.89	-561.77	0.00	0.00	0.00
5,600.00	8.10	218.00	5,549.32	-571.57	-446.56	-572.90	0.00	0.00	0.00
5,700.00	8.10	218.00	5,648.32	-582.68	-455.24	-584.02	0.00	0.00	0.00
5,800.00	8.10	218.00	5,747.32	-593.78	-463.91	-595.15	0.00	0.00	0.00
5,900.00	8.10	218.00	5,846.33	-604.88	-472.59	-606.28	0.00	0.00	0.00
6,000.00	8.10	218.00	5,945.33	-615.99	-481.26	-617.41	0.00	0.00	0.00
6,100.00	8.10	218.00	6,044.33	-627.09	-489.94	-628.54	0.00	0.00	0.00
6,200.00	8.10	218.00	6,143.33	-638.19	-498.61	-639.67	0.00	0.00	0.00
6,300.00	8.10	218.00	6,242.34	-649.30	-507.29	-650.80	0.00	0.00	0.00
6,400.00	8.10	218.00	6,341.34	-660.40	-515.96	-661.93	0.00	0.00	0.00
6,504.92	8.10	218.00	6,445.21	-672.05	-525.06	-673.60	0.00	0.00	0.00
KOP @ 6504.92ft :: DLS = 9°/100'									
6,550.00	5.51	245.07	6,489.98	-675.46	-528.98	-677.03	9.00	-5.75	60.05
6,600.00	5.44	293.69	6,539.78	-675.52	-533.33	-677.10	9.00	-0.13	97.24
6,650.00	8.32	323.52	6,589.43	-671.66	-537.65	-673.25	9.00	5.76	59.66
6,700.00	12.22	336.39	6,638.62	-663.90	-541.92	-665.50	9.00	7.80	25.74
6,750.00	16.42	342.94	6,687.06	-652.29	-546.12	-653.90	9.00	8.41	13.09
6,800.00	20.75	346.85	6,734.45	-636.90	-550.21	-638.53	9.00	8.65	7.81
6,850.00	25.14	349.45	6,780.48	-617.82	-554.17	-619.46	9.00	8.77	5.20
6,900.00	29.55	351.31	6,824.88	-595.18	-557.98	-596.83	9.00	8.84	3.73
6,950.00	33.99	352.73	6,867.38	-569.11	-561.61	-570.78	9.00	8.88	2.84
7,000.00	38.44	353.85	6,907.71	-539.78	-565.05	-541.45	9.00	8.90	2.25
7,050.00	42.90	354.78	6,945.62	-507.36	-568.26	-509.04	9.00	8.92	1.85
7,100.00	47.37	355.56	6,980.88	-472.05	-571.24	-473.75	9.00	8.93	1.56
7,150.00	51.84	356.23	7,013.28	-434.08	-573.95	-435.78	9.00	8.94	1.35
7,200.00	56.31	356.83	7,042.61	-393.68	-576.39	-395.39	9.00	8.95	1.20
7,250.00	60.79	357.37	7,068.69	-351.09	-578.55	-352.80	9.00	8.95	1.08
7,300.00	65.27	357.86	7,091.36	-306.58	-580.40	-308.30	9.00	8.96	0.99
7,350.00	69.75	358.32	7,110.48	-260.42	-581.93	-262.14	9.00	8.96	0.92
7,400.00	74.23	358.76	7,125.94	-212.89	-583.14	-214.62	9.00	8.96	0.87
7,450.00	78.71	359.17	7,137.63	-164.30	-584.02	-166.03	9.00	8.96	0.83
7,500.00	83.19	359.57	7,145.49	-114.94	-584.56	-116.67	9.00	8.97	0.80
7,550.00	87.68	359.96	7,149.47	-65.11	-584.76	-66.85	9.00	8.97	0.79
7,575.91	90.00	0.17	7,150.00	-39.21	-584.73	-40.94	9.00	8.97	0.78
End Build @ 7575.91ft - 5 1/2"									
7,600.00	90.00	0.17	7,150.00	-15.12	-584.66	-16.85	0.00	0.00	0.00
7,700.00	90.00	0.17	7,150.00	84.88	-584.37	83.15	0.00	0.00	0.00
7,800.00	90.00	0.17	7,150.00	184.88	-584.08	183.15	0.00	0.00	0.00
7,900.00	90.00	0.17	7,150.00	284.88	-583.78	283.15	0.00	0.00	0.00
8,000.00	90.00	0.17	7,150.00	384.88	-583.49	383.15	0.00	0.00	0.00
8,100.00	90.00	0.17	7,150.00	484.88	-583.20	483.15	0.00	0.00	0.00
8,200.00	90.00	0.17	7,150.00	584.88	-582.90	583.15	0.00	0.00	0.00
8,300.00	90.00	0.17	7,150.00	684.88	-582.61	683.15	0.00	0.00	0.00
8,400.00	90.00	0.17	7,150.00	784.88	-582.32	783.15	0.00	0.00	0.00
8,500.00	90.00	0.17	7,150.00	884.88	-582.03	883.15	0.00	0.00	0.00
8,600.00	90.00	0.17	7,150.00	984.88	-581.73	983.15	0.00	0.00	0.00

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5033.00usft (RIG)
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Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-7H	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	0.17	7,150.00	1,084.88	-581.44	1,083.15	0.00	0.00	0.00
8,800.00	90.00	0.17	7,150.00	1,184.88	-581.15	1,183.15	0.00	0.00	0.00
8,900.00	90.00	0.17	7,150.00	1,284.88	-580.85	1,283.15	0.00	0.00	0.00
9,000.00	90.00	0.17	7,150.00	1,384.88	-580.56	1,383.15	0.00	0.00	0.00
9,100.00	90.00	0.17	7,150.00	1,484.87	-580.27	1,483.15	0.00	0.00	0.00
9,200.00	90.00	0.17	7,150.00	1,584.87	-579.98	1,583.15	0.00	0.00	0.00
9,300.00	90.00	0.17	7,150.00	1,684.87	-579.68	1,683.15	0.00	0.00	0.00
9,400.00	90.00	0.17	7,150.00	1,784.87	-579.39	1,783.15	0.00	0.00	0.00
9,500.00	90.00	0.17	7,150.00	1,884.87	-579.10	1,883.15	0.00	0.00	0.00
9,600.00	90.00	0.17	7,150.00	1,984.87	-578.80	1,983.15	0.00	0.00	0.00
9,700.00	90.00	0.17	7,150.00	2,084.87	-578.51	2,083.15	0.00	0.00	0.00
9,800.00	90.00	0.17	7,150.00	2,184.87	-578.22	2,183.15	0.00	0.00	0.00
9,900.00	90.00	0.17	7,150.00	2,284.87	-577.93	2,283.15	0.00	0.00	0.00
10,000.00	90.00	0.17	7,150.00	2,384.87	-577.63	2,383.15	0.00	0.00	0.00
10,100.00	90.00	0.17	7,150.00	2,484.87	-577.34	2,483.15	0.00	0.00	0.00
10,200.00	90.00	0.17	7,150.00	2,584.87	-577.05	2,583.15	0.00	0.00	0.00
10,300.00	90.00	0.17	7,150.00	2,684.87	-576.76	2,683.15	0.00	0.00	0.00
10,400.00	90.00	0.17	7,150.00	2,784.87	-576.46	2,783.15	0.00	0.00	0.00
10,500.00	90.00	0.17	7,150.00	2,884.87	-576.17	2,883.15	0.00	0.00	0.00
10,600.00	90.00	0.17	7,150.00	2,984.87	-575.88	2,983.15	0.00	0.00	0.00
10,700.00	90.00	0.17	7,150.00	3,084.87	-575.58	3,083.15	0.00	0.00	0.00
10,800.00	90.00	0.17	7,150.00	3,184.87	-575.29	3,183.15	0.00	0.00	0.00
10,900.00	90.00	0.17	7,150.00	3,284.87	-575.00	3,283.15	0.00	0.00	0.00
11,000.00	90.00	0.17	7,150.00	3,384.87	-574.71	3,383.15	0.00	0.00	0.00
11,100.00	90.00	0.17	7,150.00	3,484.87	-574.41	3,483.15	0.00	0.00	0.00
11,200.00	90.00	0.17	7,150.00	3,584.87	-574.12	3,583.15	0.00	0.00	0.00
11,300.00	90.00	0.17	7,150.00	3,684.87	-573.83	3,683.15	0.00	0.00	0.00
11,400.00	90.00	0.17	7,150.00	3,784.87	-573.53	3,783.15	0.00	0.00	0.00
11,500.00	90.00	0.17	7,150.00	3,884.86	-573.24	3,883.15	0.00	0.00	0.00
11,600.00	90.00	0.17	7,150.00	3,984.86	-572.95	3,983.15	0.00	0.00	0.00
11,700.00	90.00	0.17	7,150.00	4,084.86	-572.66	4,083.15	0.00	0.00	0.00
11,800.00	90.00	0.17	7,150.00	4,184.86	-572.36	4,183.15	0.00	0.00	0.00
11,900.00	90.00	0.17	7,150.00	4,284.86	-572.07	4,283.15	0.00	0.00	0.00
12,000.00	90.00	0.17	7,150.00	4,384.86	-571.78	4,383.15	0.00	0.00	0.00
12,100.00	90.00	0.17	7,150.00	4,484.86	-571.48	4,483.15	0.00	0.00	0.00
12,200.00	90.00	0.17	7,150.00	4,584.86	-571.19	4,583.15	0.00	0.00	0.00
12,300.00	90.00	0.17	7,150.00	4,684.86	-570.90	4,683.15	0.00	0.00	0.00
12,400.00	90.00	0.17	7,150.00	4,784.86	-570.61	4,783.15	0.00	0.00	0.00
12,500.00	90.00	0.17	7,150.00	4,884.86	-570.31	4,883.15	0.00	0.00	0.00
12,600.00	90.00	0.17	7,150.00	4,984.86	-570.02	4,983.15	0.00	0.00	0.00
12,700.00	90.00	0.17	7,150.00	5,084.86	-569.73	5,083.15	0.00	0.00	0.00
12,800.00	90.00	0.17	7,150.00	5,184.86	-569.44	5,183.15	0.00	0.00	0.00
12,900.00	90.00	0.17	7,150.00	5,284.86	-569.14	5,283.15	0.00	0.00	0.00
13,000.00	90.00	0.17	7,150.00	5,384.86	-568.85	5,383.15	0.00	0.00	0.00
13,100.00	90.00	0.17	7,150.00	5,484.86	-568.56	5,483.15	0.00	0.00	0.00
13,200.00	90.00	0.17	7,150.00	5,584.86	-568.26	5,583.15	0.00	0.00	0.00
13,300.00	90.00	0.17	7,150.00	5,684.86	-567.97	5,683.15	0.00	0.00	0.00
13,400.00	90.00	0.17	7,150.00	5,784.86	-567.68	5,783.15	0.00	0.00	0.00
13,500.00	90.00	0.17	7,150.00	5,884.86	-567.39	5,883.15	0.00	0.00	0.00
13,600.00	90.00	0.17	7,150.00	5,984.86	-567.09	5,983.15	0.00	0.00	0.00
13,700.00	90.00	0.17	7,150.00	6,084.86	-566.80	6,083.15	0.00	0.00	0.00
13,800.00	90.00	0.17	7,150.00	6,184.85	-566.51	6,183.15	0.00	0.00	0.00
13,900.00	90.00	0.17	7,150.00	6,284.85	-566.21	6,283.15	0.00	0.00	0.00
14,000.00	90.00	0.17	7,150.00	6,384.85	-565.92	6,383.15	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-7H
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 10-7H	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	0.17	7,150.00	6,484.85	-565.63	6,483.15	0.00	0.00	0.00	
14,200.00	90.00	0.17	7,150.00	6,584.85	-565.34	6,583.15	0.00	0.00	0.00	
14,300.00	90.00	0.17	7,150.00	6,684.85	-565.04	6,683.15	0.00	0.00	0.00	
14,400.00	90.00	0.17	7,150.00	6,784.85	-564.75	6,783.15	0.00	0.00	0.00	
14,500.00	90.00	0.17	7,150.00	6,884.85	-564.46	6,883.15	0.00	0.00	0.00	
14,600.00	90.00	0.17	7,150.00	6,984.85	-564.16	6,983.15	0.00	0.00	0.00	
14,700.00	90.00	0.17	7,150.00	7,084.85	-563.87	7,083.15	0.00	0.00	0.00	
14,800.00	90.00	0.17	7,150.00	7,184.85	-563.58	7,183.15	0.00	0.00	0.00	
14,900.00	90.00	0.17	7,150.00	7,284.85	-563.29	7,283.15	0.00	0.00	0.00	
15,000.00	90.00	0.17	7,150.00	7,384.85	-562.99	7,383.15	0.00	0.00	0.00	
15,100.00	90.00	0.17	7,150.00	7,484.85	-562.70	7,483.15	0.00	0.00	0.00	
15,200.00	90.00	0.17	7,150.00	7,584.85	-562.41	7,583.15	0.00	0.00	0.00	
15,285.07	90.00	0.17	7,150.00	7,669.92	-562.16	7,668.22	0.00	0.00	0.00	
TD Well @ 15285.07ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,711.89	1,700.00	9 5/8"	9-5/8	13-1/2	
7,575.91	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	
655.00	653.65	-22.52	-17.60	End Nudge @ 655.00ft	
6,504.92	6,445.21	-672.05	-525.06	KOP @ 6504.92ft :: DLS = 9°/100'	
7,575.91	7,150.00	-39.21	-584.73	End Build @ 7575.91ft	
15,285.07	7,150.00	7,669.92	-562.16	TD Well @ 15285.07ft	