

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-10 HDI KF PAD
HDI KF 10-2H**

Wellbore #1

Plan: Design #1

Standard Planning Report

18 January, 2018

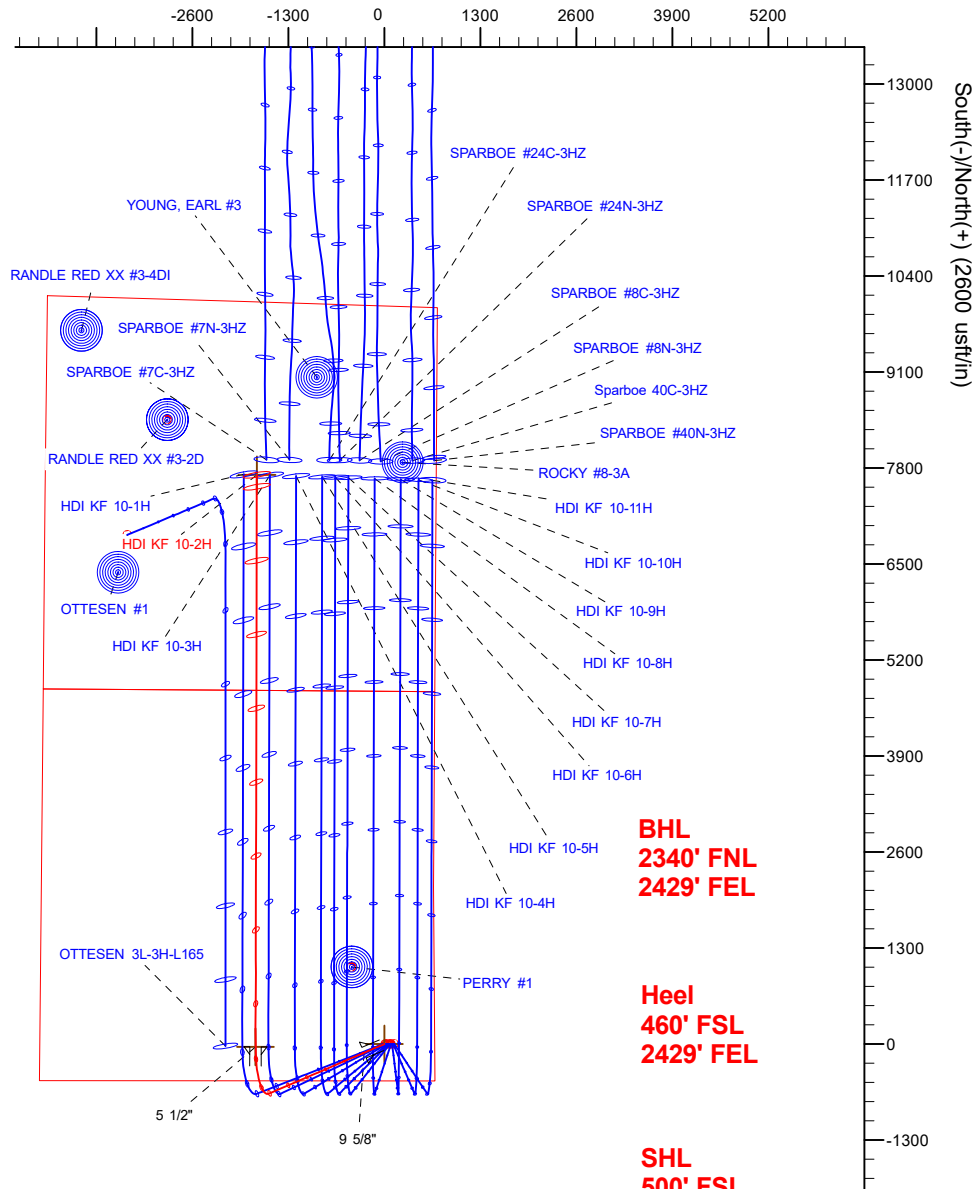
Project: WATTENBERG FIELD
Site: 1N-65W-10 HDI KF PAD
Well: HDI KF 10-2H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1736.80	9 5/8"	9-5/8
7295.00	7915.11	5 1/2"	5-1/2

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



BHL
2340' FNL
2429' FEL

Heel
460' FSL
2429' FEL

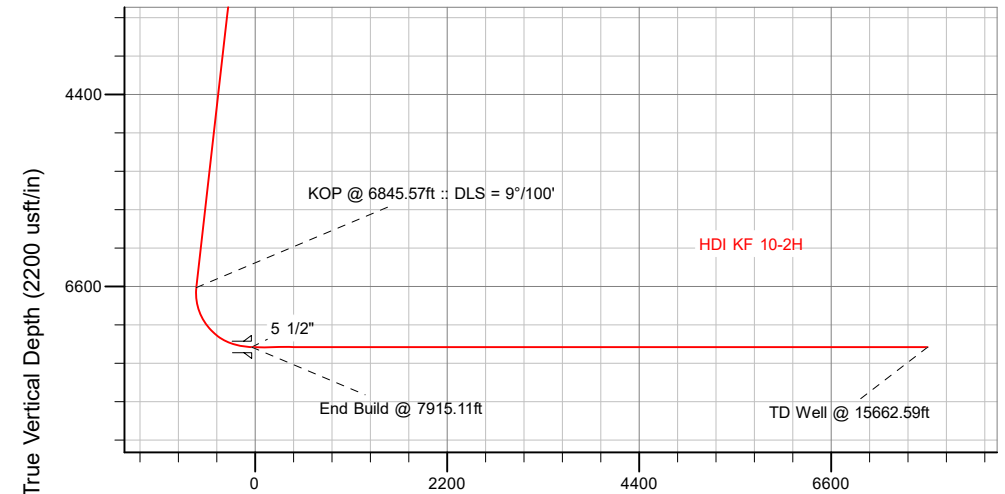
SHL
500' FSL
681' FEL

SECTION DETAILS

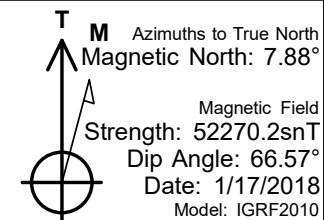
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1047.50	15.95	246.75	1037.24	-43.54	-101.33	2.00	246.75	-43.75	
4	6845.57	15.95	246.75	6612.09	-672.48	-1565.24	0.00	0.00	-675.76	
5	7915.11	90.00	0.12	7295.00	-39.27	-1743.05	9.00	112.56	-42.92	
6	15662.59	90.00	0.12	7295.00	7708.19	-1726.49	0.00	0.00	7704.55	HDI KF 10-2H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HDI KF 10-2H_SHL	0.00	0.00	0.00	40.060105	-104.642926
HDI KF 10-2H_BHL	7295.00	7708.19	-1726.49	40.081265	-104.649096



Vertical Section at 0.12° (2200 usft/in)



WELL DETAILS: HDI KF 10-2H

GL = 5012'

RKB = 20' @ 5032.00usft (RIG)

Plan: Design #1 (HDI KF 10-2H/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 10-2H
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 10-2H	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 10-2H			
Well Position	+N/-S	-0.03 usft	Northing:	1,265,900.90 usft
	+E/-W	15.11 usft	Easting:	3,239,897.01 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	52,270.22152403

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	0.12

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	15,662.59	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	
1,047.50	15.95	246.75	1,037.24	-43.54	-101.33	2.00	2.00	0.00	246.75	
6,845.57	15.95	246.75	6,612.09	-672.48	-1,565.24	0.00	0.00	0.00	0.00	
7,915.11	90.00	0.12	7,295.00	-39.27	-1,743.05	9.00	6.92	10.60	112.56	
15,662.59	90.00	0.12	7,295.00	7,708.19	-1,726.49	0.00	0.00	0.00	0.00	HDI KF 10-2H_BHL

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-2H
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 10-2H	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	246.75	300.00	-0.17	-0.40	-0.17	2.00	2.00	0.00
400.00	3.00	246.75	399.93	-1.55	-3.61	-1.56	2.00	2.00	0.00
500.00	5.00	246.75	499.68	-4.30	-10.02	-4.32	2.00	2.00	0.00
600.00	7.00	246.75	599.13	-8.43	-19.62	-8.47	2.00	2.00	0.00
700.00	9.00	246.75	698.15	-13.92	-32.41	-13.99	2.00	2.00	0.00
800.00	11.00	246.75	796.63	-20.78	-48.36	-20.88	2.00	2.00	0.00
900.00	13.00	246.75	894.44	-28.98	-67.46	-29.13	2.00	2.00	0.00
1,000.00	15.00	246.75	991.46	-38.53	-89.69	-38.72	2.00	2.00	0.00
1,047.50	15.95	246.75	1,037.24	-43.54	-101.33	-43.75	2.00	2.00	0.00
End Nudge @ 1047.50ft									
1,100.00	15.95	246.75	1,087.72	-49.23	-114.59	-49.47	0.00	0.00	0.00
1,200.00	15.95	246.75	1,183.87	-60.08	-139.84	-60.37	0.00	0.00	0.00
1,300.00	15.95	246.75	1,280.02	-70.93	-165.08	-71.27	0.00	0.00	0.00
1,400.00	15.95	246.75	1,376.17	-81.77	-190.33	-82.17	0.00	0.00	0.00
1,500.00	15.95	246.75	1,472.32	-92.62	-215.58	-93.07	0.00	0.00	0.00
1,600.00	15.95	246.75	1,568.47	-103.47	-240.83	-103.97	0.00	0.00	0.00
1,700.00	15.95	246.75	1,664.62	-114.32	-266.08	-114.87	0.00	0.00	0.00
1,736.80	15.95	246.75	1,700.00	-118.31	-275.37	-118.88	0.00	0.00	0.00
9 5/8"									
1,800.00	15.95	246.75	1,760.77	-125.16	-291.33	-125.77	0.00	0.00	0.00
1,900.00	15.95	246.75	1,856.92	-136.01	-316.57	-136.67	0.00	0.00	0.00
2,000.00	15.95	246.75	1,953.07	-146.86	-341.82	-147.57	0.00	0.00	0.00
2,100.00	15.95	246.75	2,049.22	-157.71	-367.07	-158.47	0.00	0.00	0.00
2,200.00	15.95	246.75	2,145.37	-168.55	-392.32	-169.37	0.00	0.00	0.00
2,300.00	15.95	246.75	2,241.52	-179.40	-417.57	-180.27	0.00	0.00	0.00
2,400.00	15.95	246.75	2,337.67	-190.25	-442.81	-191.18	0.00	0.00	0.00
2,500.00	15.95	246.75	2,433.82	-201.10	-468.06	-202.08	0.00	0.00	0.00
2,600.00	15.95	246.75	2,529.97	-211.94	-493.31	-212.98	0.00	0.00	0.00
2,700.00	15.95	246.75	2,626.12	-222.79	-518.56	-223.88	0.00	0.00	0.00
2,800.00	15.95	246.75	2,722.27	-233.64	-543.81	-234.78	0.00	0.00	0.00
2,900.00	15.95	246.75	2,818.42	-244.49	-569.06	-245.68	0.00	0.00	0.00
3,000.00	15.95	246.75	2,914.57	-255.33	-594.30	-256.58	0.00	0.00	0.00
3,100.00	15.95	246.75	3,010.72	-266.18	-619.55	-267.48	0.00	0.00	0.00
3,200.00	15.95	246.75	3,106.87	-277.03	-644.80	-278.38	0.00	0.00	0.00
3,300.00	15.95	246.75	3,203.02	-287.88	-670.05	-289.28	0.00	0.00	0.00
3,400.00	15.95	246.75	3,299.17	-298.72	-695.30	-300.18	0.00	0.00	0.00
3,500.00	15.95	246.75	3,395.32	-309.57	-720.55	-311.08	0.00	0.00	0.00
3,600.00	15.95	246.75	3,491.47	-320.42	-745.79	-321.98	0.00	0.00	0.00
3,700.00	15.95	246.75	3,587.62	-331.27	-771.04	-332.88	0.00	0.00	0.00
3,800.00	15.95	246.75	3,683.77	-342.11	-796.29	-343.78	0.00	0.00	0.00
3,900.00	15.95	246.75	3,779.92	-352.96	-821.54	-354.68	0.00	0.00	0.00
4,000.00	15.95	246.75	3,876.07	-363.81	-846.79	-365.58	0.00	0.00	0.00
4,100.00	15.95	246.75	3,972.22	-374.66	-872.03	-376.48	0.00	0.00	0.00
4,200.00	15.95	246.75	4,068.37	-385.50	-897.28	-387.38	0.00	0.00	0.00
4,300.00	15.95	246.75	4,164.52	-396.35	-922.53	-398.28	0.00	0.00	0.00
4,400.00	15.95	246.75	4,260.67	-407.20	-947.78	-409.18	0.00	0.00	0.00
4,500.00	15.95	246.75	4,356.82	-418.05	-973.03	-420.08	0.00	0.00	0.00
4,600.00	15.95	246.75	4,452.97	-428.89	-998.28	-430.98	0.00	0.00	0.00

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Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5032.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-2H	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	15.95	246.75	4,549.13	-439.74	-1,023.52	-441.88	0.00	0.00	0.00
4,800.00	15.95	246.75	4,645.28	-450.59	-1,048.77	-452.78	0.00	0.00	0.00
4,900.00	15.95	246.75	4,741.43	-461.44	-1,074.02	-463.68	0.00	0.00	0.00
5,000.00	15.95	246.75	4,837.58	-472.28	-1,099.27	-474.58	0.00	0.00	0.00
5,100.00	15.95	246.75	4,933.73	-483.13	-1,124.52	-485.48	0.00	0.00	0.00
5,200.00	15.95	246.75	5,029.88	-493.98	-1,149.77	-496.39	0.00	0.00	0.00
5,300.00	15.95	246.75	5,126.03	-504.83	-1,175.01	-507.29	0.00	0.00	0.00
5,400.00	15.95	246.75	5,222.18	-515.67	-1,200.26	-518.19	0.00	0.00	0.00
5,500.00	15.95	246.75	5,318.33	-526.52	-1,225.51	-529.09	0.00	0.00	0.00
5,600.00	15.95	246.75	5,414.48	-537.37	-1,250.76	-539.99	0.00	0.00	0.00
5,700.00	15.95	246.75	5,510.63	-548.22	-1,276.01	-550.89	0.00	0.00	0.00
5,800.00	15.95	246.75	5,606.78	-559.06	-1,301.25	-561.79	0.00	0.00	0.00
5,900.00	15.95	246.75	5,702.93	-569.91	-1,326.50	-572.69	0.00	0.00	0.00
6,000.00	15.95	246.75	5,799.08	-580.76	-1,351.75	-583.59	0.00	0.00	0.00
6,100.00	15.95	246.75	5,895.23	-591.61	-1,377.00	-594.49	0.00	0.00	0.00
6,200.00	15.95	246.75	5,991.38	-602.45	-1,402.25	-605.39	0.00	0.00	0.00
6,300.00	15.95	246.75	6,087.53	-613.30	-1,427.50	-616.29	0.00	0.00	0.00
6,400.00	15.95	246.75	6,183.68	-624.15	-1,452.74	-627.19	0.00	0.00	0.00
6,500.00	15.95	246.75	6,279.83	-635.00	-1,477.99	-638.09	0.00	0.00	0.00
6,600.00	15.95	246.75	6,375.98	-645.84	-1,503.24	-648.99	0.00	0.00	0.00
6,700.00	15.95	246.75	6,472.13	-656.69	-1,528.49	-659.89	0.00	0.00	0.00
6,800.00	15.95	246.75	6,568.28	-667.54	-1,553.74	-670.79	0.00	0.00	0.00
6,845.57	15.95	246.75	6,612.09	-672.48	-1,565.24	-675.76	0.00	0.00	0.00
KOP @ 6845.57ft :: DLS = 9°/100'									
6,850.00	15.80	248.10	6,616.36	-672.95	-1,566.36	-676.23	9.00	-3.36	30.52
6,900.00	14.76	264.78	6,664.61	-676.07	-1,579.03	-679.37	9.00	-2.08	33.35
6,950.00	15.02	282.32	6,712.96	-675.26	-1,591.71	-678.60	9.00	0.53	35.09
7,000.00	16.53	297.98	6,761.09	-670.54	-1,604.33	-673.90	9.00	3.01	31.32
7,050.00	18.98	310.41	6,808.73	-661.93	-1,616.81	-665.31	9.00	4.90	24.85
7,100.00	22.06	319.79	6,855.56	-649.48	-1,629.07	-652.89	9.00	6.17	18.76
7,150.00	25.56	326.85	6,901.31	-633.27	-1,641.03	-636.71	9.00	6.98	14.11
7,200.00	29.31	332.26	6,945.68	-613.40	-1,652.63	-616.86	9.00	7.50	10.82
7,250.00	33.23	336.51	6,988.42	-589.99	-1,663.80	-593.48	9.00	7.85	8.51
7,300.00	37.27	339.95	7,029.25	-563.19	-1,674.45	-566.70	9.00	8.08	6.88
7,350.00	41.39	342.80	7,067.92	-533.17	-1,684.53	-536.69	9.00	8.24	5.70
7,400.00	45.57	345.22	7,104.19	-500.09	-1,693.98	-503.64	9.00	8.36	4.83
7,450.00	49.80	347.31	7,137.85	-464.18	-1,702.73	-467.75	9.00	8.45	4.18
7,500.00	54.06	349.16	7,168.67	-425.66	-1,710.73	-429.24	9.00	8.52	3.69
7,550.00	58.34	350.81	7,196.48	-384.75	-1,717.94	-388.35	9.00	8.57	3.31
7,600.00	62.65	352.32	7,221.10	-341.71	-1,724.31	-345.32	9.00	8.61	3.02
7,650.00	66.97	353.72	7,242.38	-296.82	-1,729.80	-300.44	9.00	8.64	2.79
7,700.00	71.30	355.03	7,260.19	-250.33	-1,734.37	-253.96	9.00	8.66	2.62
7,750.00	75.64	356.27	7,274.41	-202.55	-1,738.00	-206.19	9.00	8.68	2.49
7,800.00	79.98	357.47	7,284.97	-153.76	-1,740.66	-157.41	9.00	8.69	2.39
7,850.00	84.33	358.63	7,291.79	-104.27	-1,742.35	-107.92	9.00	8.70	2.33
7,900.00	88.68	359.78	7,294.83	-54.38	-1,743.04	-58.03	9.00	8.70	2.29
7,915.11	90.00	0.12	7,295.00	-39.27	-1,743.05	-42.92	9.00	8.71	2.28
End Build @ 7915.11ft - 5 1/2"									
8,000.00	90.00	0.12	7,295.00	45.62	-1,742.87	41.97	0.00	0.00	0.00
8,100.00	90.00	0.12	7,295.00	145.62	-1,742.66	141.97	0.00	0.00	0.00
8,200.00	90.00	0.12	7,295.00	245.62	-1,742.44	241.97	0.00	0.00	0.00
8,300.00	90.00	0.12	7,295.00	345.62	-1,742.23	341.97	0.00	0.00	0.00
8,400.00	90.00	0.12	7,295.00	445.62	-1,742.01	441.97	0.00	0.00	0.00
8,500.00	90.00	0.12	7,295.00	545.62	-1,741.80	541.97	0.00	0.00	0.00

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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 10-2H	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	0.12	7,295.00	645.62	-1,741.59	641.97	0.00	0.00	0.00	
8,700.00	90.00	0.12	7,295.00	745.61	-1,741.37	741.97	0.00	0.00	0.00	
8,800.00	90.00	0.12	7,295.00	845.61	-1,741.16	841.97	0.00	0.00	0.00	
8,900.00	90.00	0.12	7,295.00	945.61	-1,740.95	941.97	0.00	0.00	0.00	
9,000.00	90.00	0.12	7,295.00	1,045.61	-1,740.73	1,041.97	0.00	0.00	0.00	
9,100.00	90.00	0.12	7,295.00	1,145.61	-1,740.52	1,141.97	0.00	0.00	0.00	
9,200.00	90.00	0.12	7,295.00	1,245.61	-1,740.30	1,241.97	0.00	0.00	0.00	
9,300.00	90.00	0.12	7,295.00	1,345.61	-1,740.09	1,341.97	0.00	0.00	0.00	
9,400.00	90.00	0.12	7,295.00	1,445.61	-1,739.88	1,441.97	0.00	0.00	0.00	
9,500.00	90.00	0.12	7,295.00	1,545.61	-1,739.66	1,541.97	0.00	0.00	0.00	
9,600.00	90.00	0.12	7,295.00	1,645.61	-1,739.45	1,641.97	0.00	0.00	0.00	
9,700.00	90.00	0.12	7,295.00	1,745.61	-1,739.24	1,741.97	0.00	0.00	0.00	
9,800.00	90.00	0.12	7,295.00	1,845.61	-1,739.02	1,841.97	0.00	0.00	0.00	
9,900.00	90.00	0.12	7,295.00	1,945.61	-1,738.81	1,941.97	0.00	0.00	0.00	
10,000.00	90.00	0.12	7,295.00	2,045.61	-1,738.59	2,041.97	0.00	0.00	0.00	
10,100.00	90.00	0.12	7,295.00	2,145.61	-1,738.38	2,141.97	0.00	0.00	0.00	
10,200.00	90.00	0.12	7,295.00	2,245.61	-1,738.17	2,241.97	0.00	0.00	0.00	
10,300.00	90.00	0.12	7,295.00	2,345.61	-1,737.95	2,341.97	0.00	0.00	0.00	
10,400.00	90.00	0.12	7,295.00	2,445.61	-1,737.74	2,441.97	0.00	0.00	0.00	
10,500.00	90.00	0.12	7,295.00	2,545.61	-1,737.52	2,541.97	0.00	0.00	0.00	
10,600.00	90.00	0.12	7,295.00	2,645.61	-1,737.31	2,641.97	0.00	0.00	0.00	
10,700.00	90.00	0.12	7,295.00	2,745.61	-1,737.10	2,741.97	0.00	0.00	0.00	
10,800.00	90.00	0.12	7,295.00	2,845.61	-1,736.88	2,841.97	0.00	0.00	0.00	
10,900.00	90.00	0.12	7,295.00	2,945.61	-1,736.67	2,941.97	0.00	0.00	0.00	
11,000.00	90.00	0.12	7,295.00	3,045.61	-1,736.46	3,041.97	0.00	0.00	0.00	
11,100.00	90.00	0.12	7,295.00	3,145.61	-1,736.24	3,141.97	0.00	0.00	0.00	
11,200.00	90.00	0.12	7,295.00	3,245.61	-1,736.03	3,241.97	0.00	0.00	0.00	
11,300.00	90.00	0.12	7,295.00	3,345.61	-1,735.81	3,341.97	0.00	0.00	0.00	
11,400.00	90.00	0.12	7,295.00	3,445.61	-1,735.60	3,441.97	0.00	0.00	0.00	
11,500.00	90.00	0.12	7,295.00	3,545.61	-1,735.39	3,541.97	0.00	0.00	0.00	
11,600.00	90.00	0.12	7,295.00	3,645.61	-1,735.17	3,641.97	0.00	0.00	0.00	
11,700.00	90.00	0.12	7,295.00	3,745.61	-1,734.96	3,741.97	0.00	0.00	0.00	
11,800.00	90.00	0.12	7,295.00	3,845.61	-1,734.75	3,841.97	0.00	0.00	0.00	
11,900.00	90.00	0.12	7,295.00	3,945.61	-1,734.53	3,941.97	0.00	0.00	0.00	
12,000.00	90.00	0.12	7,295.00	4,045.61	-1,734.32	4,041.97	0.00	0.00	0.00	
12,100.00	90.00	0.12	7,295.00	4,145.61	-1,734.10	4,141.97	0.00	0.00	0.00	
12,200.00	90.00	0.12	7,295.00	4,245.61	-1,733.89	4,241.97	0.00	0.00	0.00	
12,300.00	90.00	0.12	7,295.00	4,345.61	-1,733.68	4,341.97	0.00	0.00	0.00	
12,400.00	90.00	0.12	7,295.00	4,445.61	-1,733.46	4,441.97	0.00	0.00	0.00	
12,500.00	90.00	0.12	7,295.00	4,545.61	-1,733.25	4,541.97	0.00	0.00	0.00	
12,600.00	90.00	0.12	7,295.00	4,645.61	-1,733.04	4,641.97	0.00	0.00	0.00	
12,700.00	90.00	0.12	7,295.00	4,745.61	-1,732.82	4,741.97	0.00	0.00	0.00	
12,800.00	90.00	0.12	7,295.00	4,845.61	-1,732.61	4,841.97	0.00	0.00	0.00	
12,900.00	90.00	0.12	7,295.00	4,945.61	-1,732.39	4,941.97	0.00	0.00	0.00	
13,000.00	90.00	0.12	7,295.00	5,045.61	-1,732.18	5,041.97	0.00	0.00	0.00	
13,100.00	90.00	0.12	7,295.00	5,145.61	-1,731.97	5,141.97	0.00	0.00	0.00	
13,200.00	90.00	0.12	7,295.00	5,245.60	-1,731.75	5,241.97	0.00	0.00	0.00	
13,300.00	90.00	0.12	7,295.00	5,345.60	-1,731.54	5,341.97	0.00	0.00	0.00	
13,400.00	90.00	0.12	7,295.00	5,445.60	-1,731.33	5,441.97	0.00	0.00	0.00	
13,500.00	90.00	0.12	7,295.00	5,545.60	-1,731.11	5,541.97	0.00	0.00	0.00	
13,600.00	90.00	0.12	7,295.00	5,645.60	-1,730.90	5,641.97	0.00	0.00	0.00	
13,700.00	90.00	0.12	7,295.00	5,745.60	-1,730.68	5,741.97	0.00	0.00	0.00	
13,800.00	90.00	0.12	7,295.00	5,845.60	-1,730.47	5,841.97	0.00	0.00	0.00	
13,900.00	90.00	0.12	7,295.00	5,945.60	-1,730.26	5,941.97	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-2H
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 10-2H	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	0.12	7,295.00	6,045.60	-1,730.04	6,041.97	0.00	0.00	0.00
14,100.00	90.00	0.12	7,295.00	6,145.60	-1,729.83	6,141.97	0.00	0.00	0.00
14,200.00	90.00	0.12	7,295.00	6,245.60	-1,729.61	6,241.97	0.00	0.00	0.00
14,300.00	90.00	0.12	7,295.00	6,345.60	-1,729.40	6,341.97	0.00	0.00	0.00
14,400.00	90.00	0.12	7,295.00	6,445.60	-1,729.19	6,441.97	0.00	0.00	0.00
14,500.00	90.00	0.12	7,295.00	6,545.60	-1,728.97	6,541.97	0.00	0.00	0.00
14,600.00	90.00	0.12	7,295.00	6,645.60	-1,728.76	6,641.97	0.00	0.00	0.00
14,700.00	90.00	0.12	7,295.00	6,745.60	-1,728.55	6,741.97	0.00	0.00	0.00
14,800.00	90.00	0.12	7,295.00	6,845.60	-1,728.33	6,841.97	0.00	0.00	0.00
14,900.00	90.00	0.12	7,295.00	6,945.60	-1,728.12	6,941.97	0.00	0.00	0.00
15,000.00	90.00	0.12	7,295.00	7,045.60	-1,727.90	7,041.97	0.00	0.00	0.00
15,100.00	90.00	0.12	7,295.00	7,145.60	-1,727.69	7,141.97	0.00	0.00	0.00
15,200.00	90.00	0.12	7,295.00	7,245.60	-1,727.48	7,241.97	0.00	0.00	0.00
15,300.00	90.00	0.12	7,295.00	7,345.60	-1,727.26	7,341.97	0.00	0.00	0.00
15,400.00	90.00	0.12	7,295.00	7,445.60	-1,727.05	7,441.97	0.00	0.00	0.00
15,500.00	90.00	0.12	7,295.00	7,545.60	-1,726.84	7,541.97	0.00	0.00	0.00
15,600.00	90.00	0.12	7,295.00	7,645.60	-1,726.62	7,641.97	0.00	0.00	0.00
15,662.59	90.00	0.12	7,295.00	7,708.19	-1,726.49	7,704.55	0.00	0.00	0.00
TD Well @ 15662.59ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,736.80	1,700.00	9 5/8"	9-5/8	13-1/2	
7,915.11	7,295.00	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
1,047.50	1,037.24	-43.54	-101.33	End Nudge @ 1047.50ft
6,845.57	6,612.09	-672.48	-1,565.24	KOP @ 6845.57ft :: DLS = 9°/100'
7,915.11	7,295.00	-39.27	-1,743.05	End Build @ 7915.11ft
15,662.59	7,295.00	7,708.19	-1,726.49	TD Well @ 15662.59ft