

VERDAD RESOURCES

**WATTENBERG FIELD
1N-65W-10 HDI KF PAD
HDI KF 10-9H**

Wellbore #1

Plan: Design #1

Standard Planning Report

18 January, 2018

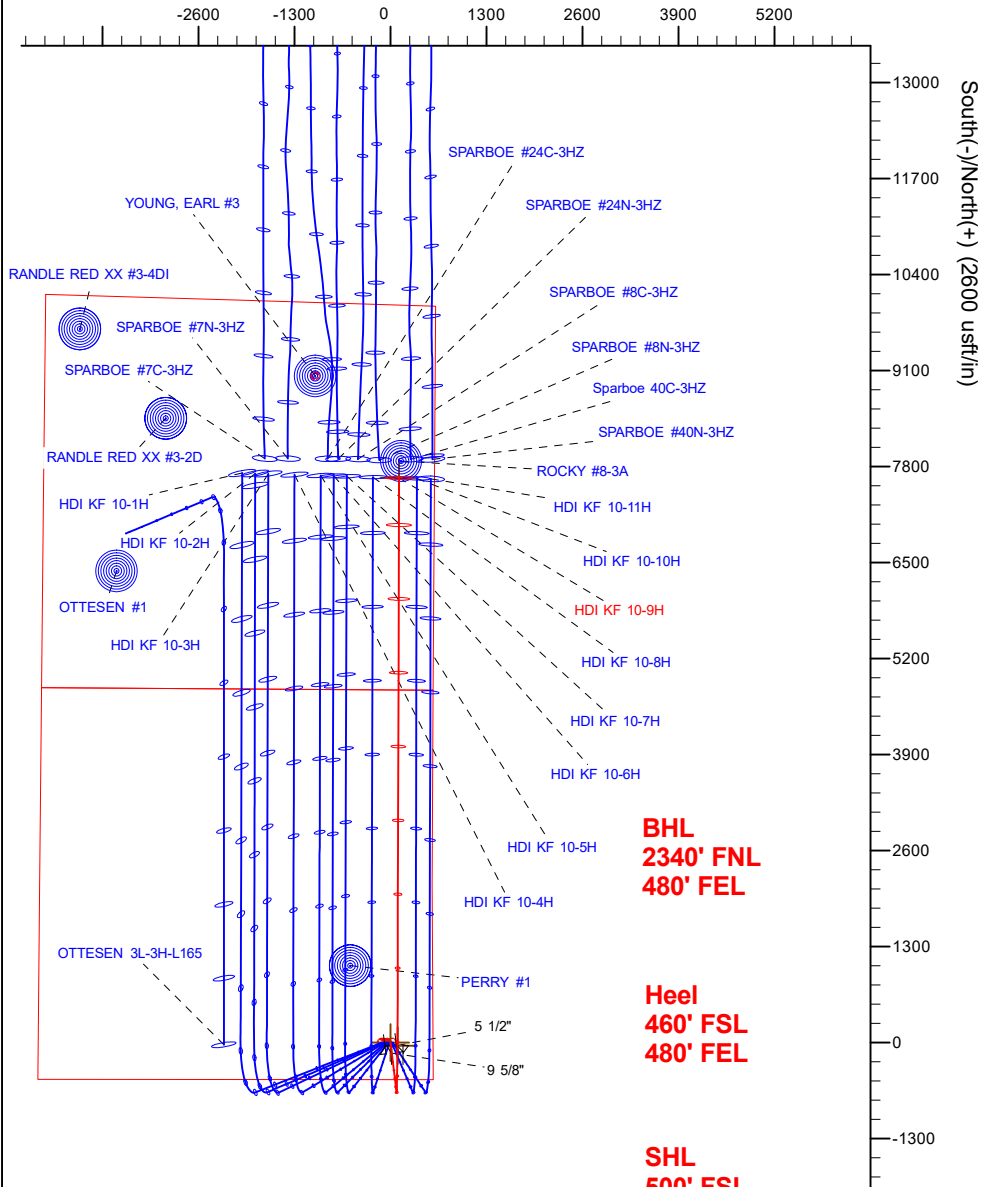
Project: WATTENBERG FIELD
Site: 1N-65W-10 HDI KF PAD
Well: HDI KF 10-9H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1707.76	9 5/8"	9-5/8
7150.00	7551.09	5 1/2"	5-1/2

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



BHL
2340' FNL
480' FEL

Heel
460' FSL
480' FEL

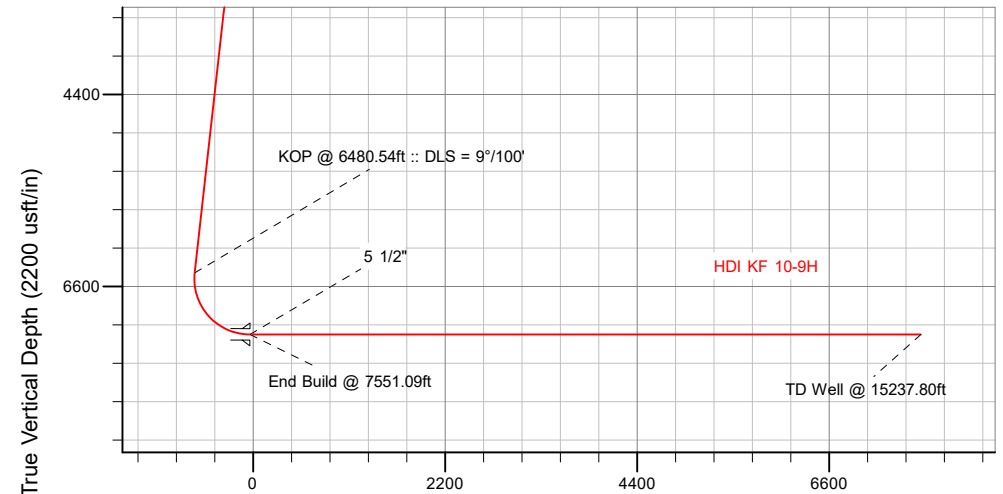
SHL
500' FSL
577' FEL

SECTION DETAILS

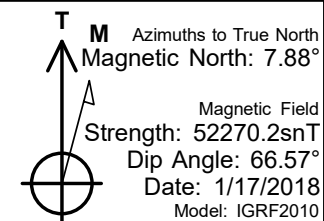
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	570.00	6.40	173.00	569.33	-17.72	2.18	2.00	173.00	-17.71	
4	6480.54	8.40	173.00	6443.04	-671.85	82.47	0.00	0.00	-671.40	
5	7551.09	90.00	0.17	7150.00	-38.97	94.21	9.00	-172.79	-38.69	
6	15237.80	90.00	0.17	7150.00	7647.71	116.69	0.00	0.00	7648.02	HDI KF 10-9H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HDI KF 10-9H_SHL	0.00	0.00	0.00	40.060105	-104.642551
HDI KF 10-9H_BHL	7150.00	7647.71	116.69	40.081099	-104.642134



Vertical Section at 0.17° (2200 usft/in)



WELL DETAILS: HDI KF 10-9H

GL = 5014'

RKB = 20' @ 5034.00usft (RIG)

Plan: Design #1 (HDI KF 10-9H/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 10-9H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5034.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5034.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-9H	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 10-9H					
Well Position	+N/-S	-0.08 usft	Northing:	1,265,901.86 usft	Latitude:	40.060105
	+E/-W	120.08 usft	Easting:	3,240,001.97 usft	Longitude:	-104.642551
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,014.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/17/2018	7.88	66.57	52,270.24299544

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	15,237.80	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	
570.00	6.40	173.00	569.33	-17.72	2.18	2.00	2.00	0.00	173.00	
6,480.54	6.40	173.00	6,443.04	-671.65	82.47	0.00	0.00	0.00	0.00	
7,551.09	90.00	0.17	7,150.00	-38.97	94.21	9.00	7.81	-16.14	-172.79	
15,237.80	90.00	0.17	7,150.00	7,647.71	116.69	0.00	0.00	0.00	0.00	HDI KF 10-9H_BHL

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5034.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5034.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-9H	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	173.00	300.00	-0.43	0.05	-0.43	2.00	2.00	0.00
400.00	3.00	173.00	399.93	-3.90	0.48	-3.90	2.00	2.00	0.00
500.00	5.00	173.00	499.68	-10.82	1.33	-10.82	2.00	2.00	0.00
570.00	6.40	173.00	569.33	-17.72	2.18	-17.71	2.00	2.00	0.00
End Nudge @ 570.00ft									
600.00	6.40	173.00	599.15	-21.04	2.58	-21.03	0.00	0.00	0.00
700.00	6.40	173.00	698.52	-32.10	3.94	-32.09	0.00	0.00	0.00
800.00	6.40	173.00	797.90	-43.17	5.30	-43.15	0.00	0.00	0.00
900.00	6.40	173.00	897.28	-54.23	6.66	-54.21	0.00	0.00	0.00
1,000.00	6.40	173.00	996.66	-65.29	8.02	-65.27	0.00	0.00	0.00
1,100.00	6.40	173.00	1,096.03	-76.36	9.38	-76.33	0.00	0.00	0.00
1,200.00	6.40	173.00	1,195.41	-87.42	10.73	-87.39	0.00	0.00	0.00
1,300.00	6.40	173.00	1,294.79	-98.49	12.09	-98.45	0.00	0.00	0.00
1,400.00	6.40	173.00	1,394.16	-109.55	13.45	-109.51	0.00	0.00	0.00
1,500.00	6.40	173.00	1,493.54	-120.61	14.81	-120.57	0.00	0.00	0.00
1,600.00	6.40	173.00	1,592.92	-131.68	16.17	-131.63	0.00	0.00	0.00
1,700.00	6.40	173.00	1,692.29	-142.74	17.53	-142.69	0.00	0.00	0.00
1,707.76	6.40	173.00	1,700.00	-143.60	17.63	-143.55	0.00	0.00	0.00
9 5/8"									
1,800.00	6.40	173.00	1,791.67	-153.81	18.88	-153.75	0.00	0.00	0.00
1,900.00	6.40	173.00	1,891.05	-164.87	20.24	-164.81	0.00	0.00	0.00
2,000.00	6.40	173.00	1,990.42	-175.93	21.60	-175.87	0.00	0.00	0.00
2,100.00	6.40	173.00	2,089.80	-187.00	22.96	-186.93	0.00	0.00	0.00
2,200.00	6.40	173.00	2,189.18	-198.06	24.32	-197.99	0.00	0.00	0.00
2,300.00	6.40	173.00	2,288.55	-209.12	25.68	-209.05	0.00	0.00	0.00
2,400.00	6.40	173.00	2,387.93	-220.19	27.04	-220.11	0.00	0.00	0.00
2,500.00	6.40	173.00	2,487.31	-231.25	28.39	-231.17	0.00	0.00	0.00
2,600.00	6.40	173.00	2,586.68	-242.32	29.75	-242.23	0.00	0.00	0.00
2,700.00	6.40	173.00	2,686.06	-253.38	31.11	-253.29	0.00	0.00	0.00
2,800.00	6.40	173.00	2,785.44	-264.44	32.47	-264.35	0.00	0.00	0.00
2,900.00	6.40	173.00	2,884.81	-275.51	33.83	-275.41	0.00	0.00	0.00
3,000.00	6.40	173.00	2,984.19	-286.57	35.19	-286.47	0.00	0.00	0.00
3,100.00	6.40	173.00	3,083.57	-297.63	36.54	-297.53	0.00	0.00	0.00
3,200.00	6.40	173.00	3,182.94	-308.70	37.90	-308.58	0.00	0.00	0.00
3,300.00	6.40	173.00	3,282.32	-319.76	39.26	-319.64	0.00	0.00	0.00
3,400.00	6.40	173.00	3,381.70	-330.83	40.62	-330.70	0.00	0.00	0.00
3,500.00	6.40	173.00	3,481.08	-341.89	41.98	-341.76	0.00	0.00	0.00
3,600.00	6.40	173.00	3,580.45	-352.95	43.34	-352.82	0.00	0.00	0.00
3,700.00	6.40	173.00	3,679.83	-364.02	44.70	-363.88	0.00	0.00	0.00
3,800.00	6.40	173.00	3,779.21	-375.08	46.05	-374.94	0.00	0.00	0.00
3,900.00	6.40	173.00	3,878.58	-386.15	47.41	-386.00	0.00	0.00	0.00
4,000.00	6.40	173.00	3,977.96	-397.21	48.77	-397.06	0.00	0.00	0.00
4,100.00	6.40	173.00	4,077.34	-408.27	50.13	-408.12	0.00	0.00	0.00
4,200.00	6.40	173.00	4,176.71	-419.34	51.49	-419.18	0.00	0.00	0.00
4,300.00	6.40	173.00	4,276.09	-430.40	52.85	-430.24	0.00	0.00	0.00
4,400.00	6.40	173.00	4,375.47	-441.46	54.20	-441.30	0.00	0.00	0.00
4,500.00	6.40	173.00	4,474.84	-452.53	55.56	-452.36	0.00	0.00	0.00
4,600.00	6.40	173.00	4,574.22	-463.59	56.92	-463.42	0.00	0.00	0.00

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Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5034.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-9H	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	6.40	173.00	4,673.60	-474.66	58.28	-474.48	0.00	0.00	0.00
4,800.00	6.40	173.00	4,772.97	-485.72	59.64	-485.54	0.00	0.00	0.00
4,900.00	6.40	173.00	4,872.35	-496.78	61.00	-496.60	0.00	0.00	0.00
5,000.00	6.40	173.00	4,971.73	-507.85	62.36	-507.66	0.00	0.00	0.00
5,100.00	6.40	173.00	5,071.10	-518.91	63.71	-518.72	0.00	0.00	0.00
5,200.00	6.40	173.00	5,170.48	-529.97	65.07	-529.78	0.00	0.00	0.00
5,300.00	6.40	173.00	5,269.86	-541.04	66.43	-540.84	0.00	0.00	0.00
5,400.00	6.40	173.00	5,369.23	-552.10	67.79	-551.90	0.00	0.00	0.00
5,500.00	6.40	173.00	5,468.61	-563.17	69.15	-562.96	0.00	0.00	0.00
5,600.00	6.40	173.00	5,567.99	-574.23	70.51	-574.02	0.00	0.00	0.00
5,700.00	6.40	173.00	5,667.36	-585.29	71.87	-585.08	0.00	0.00	0.00
5,800.00	6.40	173.00	5,766.74	-596.36	73.22	-596.14	0.00	0.00	0.00
5,900.00	6.40	173.00	5,866.12	-607.42	74.58	-607.20	0.00	0.00	0.00
6,000.00	6.40	173.00	5,965.49	-618.49	75.94	-618.26	0.00	0.00	0.00
6,100.00	6.40	173.00	6,064.87	-629.55	77.30	-629.32	0.00	0.00	0.00
6,200.00	6.40	173.00	6,164.25	-640.61	78.66	-640.38	0.00	0.00	0.00
6,300.00	6.40	173.00	6,263.63	-651.68	80.02	-651.44	0.00	0.00	0.00
6,400.00	6.40	173.00	6,363.00	-662.74	81.37	-662.50	0.00	0.00	0.00
6,480.54	6.40	173.00	6,443.04	-671.65	82.47	-671.40	0.00	0.00	0.00
KOP @ 6480.54ft :: DLS = 9°/100'									
6,500.00	4.67	170.30	6,462.41	-673.51	82.73	-673.26	9.00	-8.90	-13.89
6,550.00	0.81	97.16	6,512.35	-675.56	83.43	-675.31	9.00	-7.72	-146.27
6,600.00	4.47	10.47	6,562.30	-673.68	84.13	-673.43	9.00	7.33	-173.38
6,650.00	8.94	5.27	6,611.94	-667.90	84.84	-667.64	9.00	8.93	-10.40
6,700.00	13.43	3.53	6,660.98	-658.23	85.56	-657.97	9.00	8.98	-3.49
6,750.00	17.92	2.65	6,709.11	-644.75	86.27	-644.49	9.00	8.99	-1.76
6,800.00	22.42	2.11	6,756.03	-627.53	86.98	-627.27	9.00	8.99	-1.07
6,850.00	26.91	1.75	6,801.46	-606.68	87.67	-606.42	9.00	8.99	-0.73
6,900.00	31.41	1.48	6,845.11	-582.33	88.36	-582.07	9.00	9.00	-0.53
6,950.00	35.91	1.27	6,886.72	-554.63	89.02	-554.37	9.00	9.00	-0.41
7,000.00	40.41	1.11	6,926.02	-523.76	89.66	-523.49	9.00	9.00	-0.33
7,050.00	44.91	0.97	6,962.78	-489.89	90.27	-489.62	9.00	9.00	-0.27
7,100.00	49.41	0.85	6,996.77	-453.24	90.86	-452.97	9.00	9.00	-0.23
7,150.00	53.91	0.75	7,027.78	-414.04	91.41	-413.77	9.00	9.00	-0.21
7,200.00	58.41	0.66	7,055.62	-372.53	91.92	-372.25	9.00	9.00	-0.18
7,250.00	62.90	0.58	7,080.12	-328.96	92.39	-328.68	9.00	9.00	-0.17
7,300.00	67.40	0.50	7,101.13	-283.60	92.81	-283.32	9.00	9.00	-0.15
7,350.00	71.90	0.43	7,118.51	-236.73	93.19	-236.45	9.00	9.00	-0.14
7,400.00	76.40	0.36	7,132.16	-188.65	93.52	-188.37	9.00	9.00	-0.14
7,450.00	80.90	0.30	7,141.99	-139.64	93.81	-139.36	9.00	9.00	-0.13
7,500.00	85.40	0.23	7,147.95	-90.01	94.03	-89.73	9.00	9.00	-0.13
7,551.09	90.00	0.17	7,150.00	-38.97	94.21	-38.69	9.00	9.00	-0.13
End Build @ 7551.09ft - 5 1/2"									
7,600.00	90.00	0.17	7,150.00	9.94	94.36	10.22	0.00	0.00	0.00
7,700.00	90.00	0.17	7,150.00	109.94	94.65	110.22	0.00	0.00	0.00
7,800.00	90.00	0.17	7,150.00	209.94	94.94	210.22	0.00	0.00	0.00
7,900.00	90.00	0.17	7,150.00	309.94	95.23	310.22	0.00	0.00	0.00
8,000.00	90.00	0.17	7,150.00	409.94	95.52	410.22	0.00	0.00	0.00
8,100.00	90.00	0.17	7,150.00	509.94	95.82	510.22	0.00	0.00	0.00
8,200.00	90.00	0.17	7,150.00	609.94	96.11	610.22	0.00	0.00	0.00
8,300.00	90.00	0.17	7,150.00	709.94	96.40	710.22	0.00	0.00	0.00
8,400.00	90.00	0.17	7,150.00	809.93	96.69	810.22	0.00	0.00	0.00
8,500.00	90.00	0.17	7,150.00	909.93	96.99	910.22	0.00	0.00	0.00
8,600.00	90.00	0.17	7,150.00	1,009.93	97.28	1,010.22	0.00	0.00	0.00

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5034.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5034.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-9H	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	1,109.93	97.57	1,110.22	0.00	0.00	0.00	
8,800.00	90.00	0.17	7,150.00	1,209.93	97.86	1,210.22	0.00	0.00	0.00	
8,900.00	90.00	0.17	7,150.00	1,309.93	98.16	1,310.22	0.00	0.00	0.00	
9,000.00	90.00	0.17	7,150.00	1,409.93	98.45	1,410.22	0.00	0.00	0.00	
9,100.00	90.00	0.17	7,150.00	1,509.93	98.74	1,510.22	0.00	0.00	0.00	
9,200.00	90.00	0.17	7,150.00	1,609.93	99.03	1,610.22	0.00	0.00	0.00	
9,300.00	90.00	0.17	7,150.00	1,709.93	99.33	1,710.22	0.00	0.00	0.00	
9,400.00	90.00	0.17	7,150.00	1,809.93	99.62	1,810.22	0.00	0.00	0.00	
9,500.00	90.00	0.17	7,150.00	1,909.93	99.91	1,910.22	0.00	0.00	0.00	
9,600.00	90.00	0.17	7,150.00	2,009.93	100.20	2,010.22	0.00	0.00	0.00	
9,700.00	90.00	0.17	7,150.00	2,109.93	100.49	2,110.22	0.00	0.00	0.00	
9,800.00	90.00	0.17	7,150.00	2,209.93	100.79	2,210.22	0.00	0.00	0.00	
9,900.00	90.00	0.17	7,150.00	2,309.93	101.08	2,310.22	0.00	0.00	0.00	
10,000.00	90.00	0.17	7,150.00	2,409.93	101.37	2,410.22	0.00	0.00	0.00	
10,100.00	90.00	0.17	7,150.00	2,509.93	101.66	2,510.22	0.00	0.00	0.00	
10,200.00	90.00	0.17	7,150.00	2,609.93	101.96	2,610.22	0.00	0.00	0.00	
10,300.00	90.00	0.17	7,150.00	2,709.93	102.25	2,710.22	0.00	0.00	0.00	
10,400.00	90.00	0.17	7,150.00	2,809.93	102.54	2,810.22	0.00	0.00	0.00	
10,500.00	90.00	0.17	7,150.00	2,909.93	102.83	2,910.22	0.00	0.00	0.00	
10,600.00	90.00	0.17	7,150.00	3,009.93	103.13	3,010.22	0.00	0.00	0.00	
10,700.00	90.00	0.17	7,150.00	3,109.92	103.42	3,110.22	0.00	0.00	0.00	
10,800.00	90.00	0.17	7,150.00	3,209.92	103.71	3,210.22	0.00	0.00	0.00	
10,900.00	90.00	0.17	7,150.00	3,309.92	104.00	3,310.22	0.00	0.00	0.00	
11,000.00	90.00	0.17	7,150.00	3,409.92	104.30	3,410.22	0.00	0.00	0.00	
11,100.00	90.00	0.17	7,150.00	3,509.92	104.59	3,510.22	0.00	0.00	0.00	
11,200.00	90.00	0.17	7,150.00	3,609.92	104.88	3,610.22	0.00	0.00	0.00	
11,300.00	90.00	0.17	7,150.00	3,709.92	105.17	3,710.22	0.00	0.00	0.00	
11,400.00	90.00	0.17	7,150.00	3,809.92	105.46	3,810.22	0.00	0.00	0.00	
11,500.00	90.00	0.17	7,150.00	3,909.92	105.76	3,910.22	0.00	0.00	0.00	
11,600.00	90.00	0.17	7,150.00	4,009.92	106.05	4,010.22	0.00	0.00	0.00	
11,700.00	90.00	0.17	7,150.00	4,109.92	106.34	4,110.22	0.00	0.00	0.00	
11,800.00	90.00	0.17	7,150.00	4,209.92	106.63	4,210.22	0.00	0.00	0.00	
11,900.00	90.00	0.17	7,150.00	4,309.92	106.93	4,310.22	0.00	0.00	0.00	
12,000.00	90.00	0.17	7,150.00	4,409.92	107.22	4,410.22	0.00	0.00	0.00	
12,100.00	90.00	0.17	7,150.00	4,509.92	107.51	4,510.22	0.00	0.00	0.00	
12,200.00	90.00	0.17	7,150.00	4,609.92	107.80	4,610.22	0.00	0.00	0.00	
12,300.00	90.00	0.17	7,150.00	4,709.92	108.10	4,710.22	0.00	0.00	0.00	
12,400.00	90.00	0.17	7,150.00	4,809.92	108.39	4,810.22	0.00	0.00	0.00	
12,500.00	90.00	0.17	7,150.00	4,909.92	108.68	4,910.22	0.00	0.00	0.00	
12,600.00	90.00	0.17	7,150.00	5,009.92	108.97	5,010.22	0.00	0.00	0.00	
12,700.00	90.00	0.17	7,150.00	5,109.92	109.27	5,110.22	0.00	0.00	0.00	
12,800.00	90.00	0.17	7,150.00	5,209.92	109.56	5,210.22	0.00	0.00	0.00	
12,900.00	90.00	0.17	7,150.00	5,309.92	109.85	5,310.22	0.00	0.00	0.00	
13,000.00	90.00	0.17	7,150.00	5,409.92	110.14	5,410.22	0.00	0.00	0.00	
13,100.00	90.00	0.17	7,150.00	5,509.91	110.44	5,510.22	0.00	0.00	0.00	
13,200.00	90.00	0.17	7,150.00	5,609.91	110.73	5,610.22	0.00	0.00	0.00	
13,300.00	90.00	0.17	7,150.00	5,709.91	111.02	5,710.22	0.00	0.00	0.00	
13,400.00	90.00	0.17	7,150.00	5,809.91	111.31	5,810.22	0.00	0.00	0.00	
13,500.00	90.00	0.17	7,150.00	5,909.91	111.60	5,910.22	0.00	0.00	0.00	
13,600.00	90.00	0.17	7,150.00	6,009.91	111.90	6,010.22	0.00	0.00	0.00	
13,700.00	90.00	0.17	7,150.00	6,109.91	112.19	6,110.22	0.00	0.00	0.00	
13,800.00	90.00	0.17	7,150.00	6,209.91	112.48	6,210.22	0.00	0.00	0.00	
13,900.00	90.00	0.17	7,150.00	6,309.91	112.77	6,310.22	0.00	0.00	0.00	
14,000.00	90.00	0.17	7,150.00	6,409.91	113.07	6,410.22	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HDI KF 10-9H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5034.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5034.00usft (RIG)
Site:	1N-65W-10 HDI KF PAD	North Reference:	True
Well:	HDI KF 10-9H	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	6,509.91	113.36	6,510.22	0.00	0.00	0.00	
14,200.00	90.00	0.17	7,150.00	6,609.91	113.65	6,610.22	0.00	0.00	0.00	
14,300.00	90.00	0.17	7,150.00	6,709.91	113.94	6,710.22	0.00	0.00	0.00	
14,400.00	90.00	0.17	7,150.00	6,809.91	114.24	6,810.22	0.00	0.00	0.00	
14,500.00	90.00	0.17	7,150.00	6,909.91	114.53	6,910.22	0.00	0.00	0.00	
14,600.00	90.00	0.17	7,150.00	7,009.91	114.82	7,010.22	0.00	0.00	0.00	
14,700.00	90.00	0.17	7,150.00	7,109.91	115.11	7,110.22	0.00	0.00	0.00	
14,800.00	90.00	0.17	7,150.00	7,209.91	115.41	7,210.22	0.00	0.00	0.00	
14,900.00	90.00	0.17	7,150.00	7,309.91	115.70	7,310.22	0.00	0.00	0.00	
15,000.00	90.00	0.17	7,150.00	7,409.91	115.99	7,410.22	0.00	0.00	0.00	
15,100.00	90.00	0.17	7,150.00	7,509.91	116.28	7,510.22	0.00	0.00	0.00	
15,200.00	90.00	0.17	7,150.00	7,609.91	116.57	7,610.22	0.00	0.00	0.00	
15,237.80	90.00	0.17	7,150.00	7,647.71	116.69	7,648.02	0.00	0.00	0.00	
TD Well @ 15237.80ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,707.76	1,700.00	9 5/8"	9-5/8	13-1/2	
7,551.09	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	
570.00	569.33	-17.72	2.18	End Nudge @ 570.00ft	
6,480.54	6,443.04	-671.65	82.47	KOP @ 6480.54ft :: DLS = 9°/100'	
7,551.09	7,150.00	-38.97	94.21	End Build @ 7551.09ft	
15,237.80	7,150.00	7,647.71	116.69	TD Well @ 15237.80ft	