

VERDAD RESOURCES

WATTENBERG FIELD

1N-65W-31 COUNTY LINE 3130 PAD

COUNTY LINE 3130-04H

Wellbore #1

Plan: Design #1

Standard Planning Report

13 July, 2018

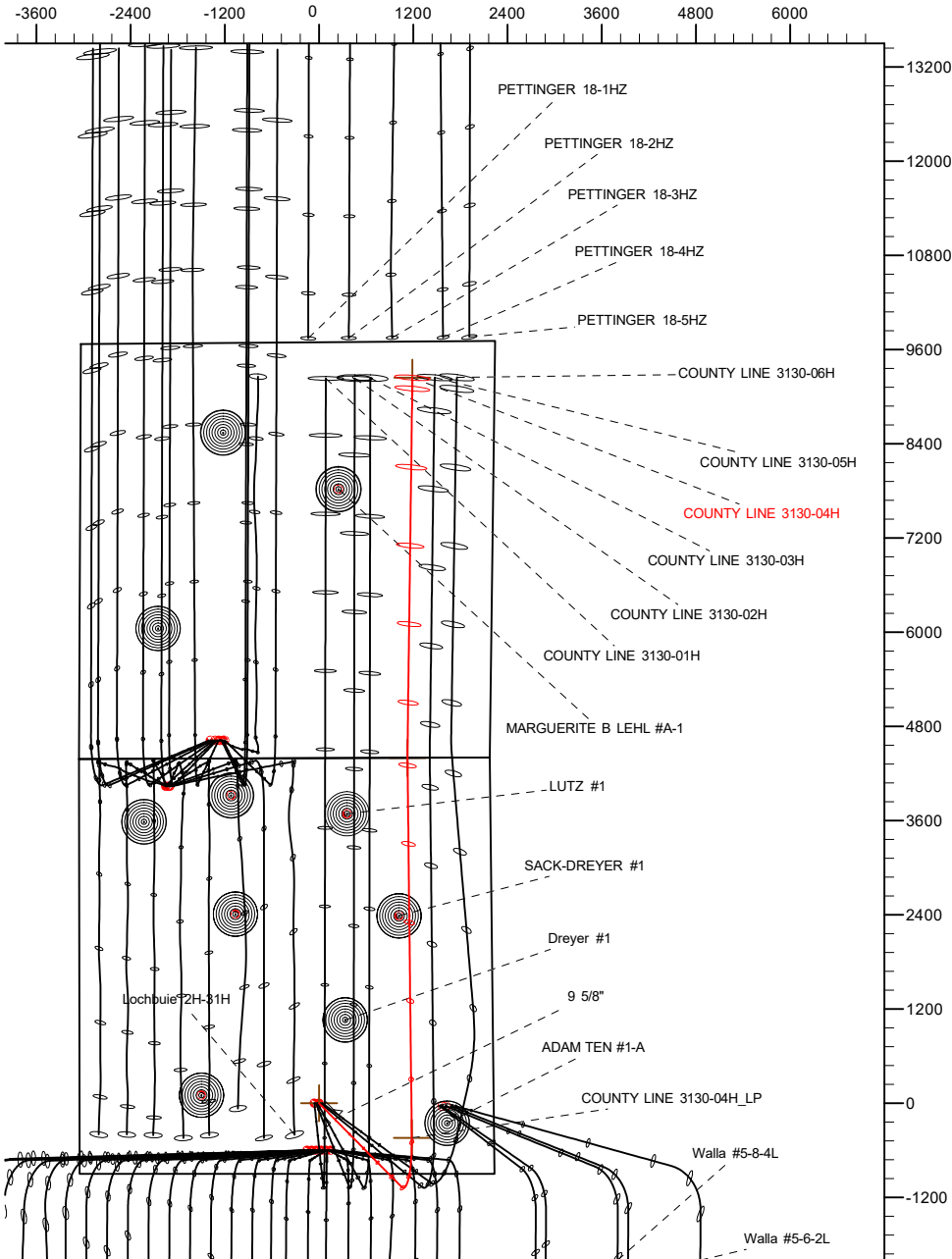
Project: WATTENBERG FIELD
Site: 1N-65W-31 COUNTY LINE 3130 PAD
Well: COUNTY LINE 3130-04H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1732.40	9 5/8"	9-5/8

West(-)/East(+) (2400 usft/in)

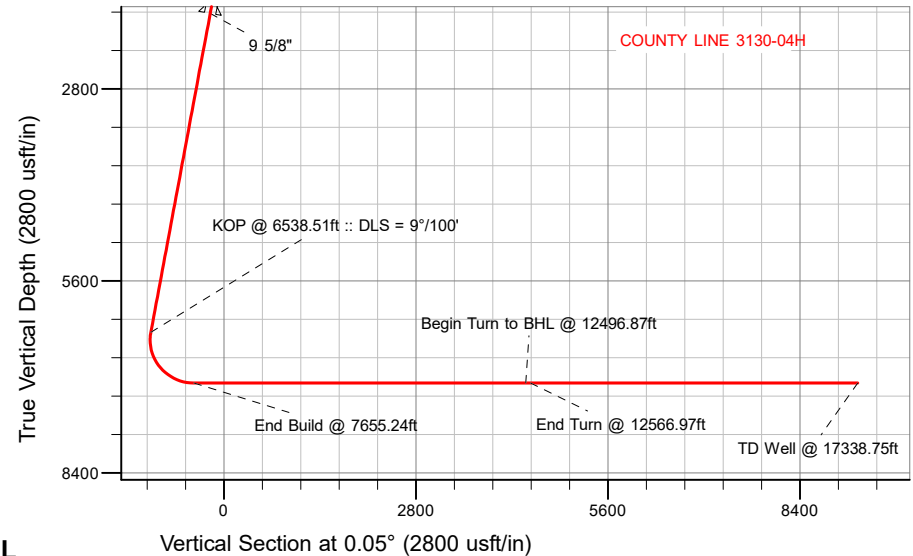


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
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	
983.50	14.67	135.40	975.51	-66.50	65.57	2.00	135.40	-66.44	
6538.51	14.67	135.40	6349.43	-1068.19	1053.37	0.00	0.00	-1067.27	
7655.24	90.00	359.35	7090.00	-440.75	1180.81	9.00	-135.10	-439.72	
12496.87	90.00	359.35	7090.00	4400.58	1125.86	0.00	0.00	4401.56	COUNTY LINE 3130-04H_Deflection
12566.97	90.00	0.75	7090.00	4470.67	1125.92	2.00	90.00	4471.65	
17338.75	90.00	0.75	7090.00	9242.04	1188.51	0.00	0.00	9243.08	COUNTY LINE 3130-04H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

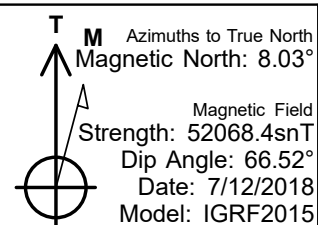
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
COUNTY LINE 3130-04H_SHL	0.00	0.00	0.00	40.002996	-104.705236
COUNTY LINE 3130-04H_BHL	7090.00	9242.04	1188.51	40.028367	-104.700991



SHL
901' FSL
2223' FEL

LP
460' FSL
1047' FEL

BHL
460' FNL
1047' FEL



WELL DETAILS: COUNTY LINE 3130-04H

GROUND LEVEL = 5027'

RKB = 20' @ 5047.00usft (RIG)

Plan: Design #1 (COUNTY LINE 3130-04H/Wellbore #1)

Date: 7/13/2018

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3130-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5047.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5047.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3130 PAD	North Reference:	True
Well:	COUNTY LINE 3130-04H	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-31 COUNTY LINE 3130 PAD			
Site Position:		Northing:	1,244,936.30 usft	Latitude: 40.002996
From:	Lat/Long	Easting:	3,222,683.37 usft	Longitude: -104.705093
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.51 °

Well	COUNTY LINE 3130-04H			
Well Position	+N/-S	-0.04 usft	Northing:	1,244,935.90 usft
	+E/-W	-40.00 usft	Easting:	3,222,643.37 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 5,027.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/12/2018	8.03	66.52	52,068.39862750

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	0.05

Plan Survey Tool Program	Date	7/13/2018		
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	17,338.75	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination

Hewlett-Packard
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Wellbore:	Wellbore #1		
Design:	Design #1		

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	
983.50	14.67	135.40	975.51	-66.50	65.57	2.00	2.00	0.00	135.40	
6,538.51	14.67	135.40	6,349.43	-1,068.19	1,053.37	0.00	0.00	0.00	0.00	
7,655.24	90.00	359.35	7,090.00	-440.75	1,180.81	9.00	6.75	-12.18	-135.10	
12,496.87	90.00	359.35	7,090.00	4,400.58	1,125.86	0.00	0.00	0.00	0.00	COUNTY LINE 3130-
12,566.97	90.00	0.75	7,090.00	4,470.67	1,125.92	2.00	0.00	2.00	90.00	
17,338.75	90.00	0.75	7,090.00	9,242.04	1,188.51	0.00	0.00	0.00	0.00	COUNTY LINE 3130-

Hewlett-Packard

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Well:	COUNTY LINE 3130-04H	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 Tangent @ 250.00ft									
300.00	1.00	135.40	300.00	-0.31	0.31	-0.31	2.00	2.00	0.00
400.00	3.00	135.40	399.93	-2.80	2.76	-2.79	2.00	2.00	0.00
500.00	5.00	135.40	499.68	-7.76	7.65	-7.76	2.00	2.00	0.00
600.00	7.00	135.40	599.13	-15.20	14.99	-15.19	2.00	2.00	0.00
700.00	9.00	135.40	698.15	-25.11	24.77	-25.09	2.00	2.00	0.00
800.00	11.00	135.40	796.63	-37.48	36.96	-37.44	2.00	2.00	0.00
900.00	13.00	135.40	894.44	-52.28	51.56	-52.24	2.00	2.00	0.00
983.50	14.67	135.40	975.51	-66.50	65.57	-66.44	2.00	2.00	0.00
End Tangent @ 983.50ft									
1,000.00	14.67	135.40	991.47	-69.47	68.51	-69.41	0.00	0.00	0.00
1,100.00	14.67	135.40	1,088.21	-87.50	86.29	-87.43	0.00	0.00	0.00
1,200.00	14.67	135.40	1,184.95	-105.54	104.07	-105.45	0.00	0.00	0.00
1,300.00	14.67	135.40	1,281.69	-123.57	121.86	-123.46	0.00	0.00	0.00
1,400.00	14.67	135.40	1,378.43	-141.60	139.64	-141.48	0.00	0.00	0.00
1,500.00	14.67	135.40	1,475.17	-159.63	157.42	-159.50	0.00	0.00	0.00
1,600.00	14.67	135.40	1,571.91	-177.66	175.20	-177.51	0.00	0.00	0.00
1,700.00	14.67	135.40	1,668.65	-195.70	192.98	-195.53	0.00	0.00	0.00
1,732.40	14.67	135.40	1,700.00	-201.54	198.75	-201.37	0.00	0.00	0.00
9 5/8"									
1,800.00	14.67	135.40	1,765.39	-213.73	210.77	-213.55	0.00	0.00	0.00
1,900.00	14.67	135.40	1,862.13	-231.76	228.55	-231.56	0.00	0.00	0.00
2,000.00	14.67	135.40	1,958.87	-249.79	246.33	-249.58	0.00	0.00	0.00
2,100.00	14.67	135.40	2,055.61	-267.83	264.11	-267.60	0.00	0.00	0.00
2,200.00	14.67	135.40	2,152.35	-285.86	281.89	-285.61	0.00	0.00	0.00
2,300.00	14.67	135.40	2,249.09	-303.89	299.68	-303.63	0.00	0.00	0.00
2,400.00	14.67	135.40	2,345.83	-321.92	317.46	-321.65	0.00	0.00	0.00
2,500.00	14.67	135.40	2,442.57	-339.95	335.24	-339.66	0.00	0.00	0.00
2,600.00	14.67	135.40	2,539.31	-357.99	353.02	-357.68	0.00	0.00	0.00
2,700.00	14.67	135.40	2,636.05	-376.02	370.80	-375.69	0.00	0.00	0.00
2,800.00	14.67	135.40	2,732.80	-394.05	388.59	-393.71	0.00	0.00	0.00
2,900.00	14.67	135.40	2,829.54	-412.08	406.37	-411.73	0.00	0.00	0.00
3,000.00	14.67	135.40	2,926.28	-430.12	424.15	-429.74	0.00	0.00	0.00
3,100.00	14.67	135.40	3,023.02	-448.15	441.93	-447.76	0.00	0.00	0.00
3,200.00	14.67	135.40	3,119.76	-466.18	459.72	-465.78	0.00	0.00	0.00
3,300.00	14.67	135.40	3,216.50	-484.21	477.50	-483.79	0.00	0.00	0.00
3,400.00	14.67	135.40	3,313.24	-502.24	495.28	-501.81	0.00	0.00	0.00
3,500.00	14.67	135.40	3,409.98	-520.28	513.06	-519.83	0.00	0.00	0.00
3,600.00	14.67	135.40	3,506.72	-538.31	530.84	-537.84	0.00	0.00	0.00
3,700.00	14.67	135.40	3,603.46	-556.34	548.63	-555.86	0.00	0.00	0.00
3,800.00	14.67	135.40	3,700.20	-574.37	566.41	-573.88	0.00	0.00	0.00
3,900.00	14.67	135.40	3,796.94	-592.40	584.19	-591.89	0.00	0.00	0.00
4,000.00	14.67	135.40	3,893.68	-610.44	601.97	-609.91	0.00	0.00	0.00
4,100.00	14.67	135.40	3,990.42	-628.47	619.75	-627.93	0.00	0.00	0.00
4,200.00	14.67	135.40	4,087.16	-646.50	637.54	-645.94	0.00	0.00	0.00
4,300.00	14.67	135.40	4,183.90	-664.53	655.32	-663.96	0.00	0.00	0.00
4,400.00	14.67	135.40	4,280.64	-682.57	673.10	-681.98	0.00	0.00	0.00
4,500.00	14.67	135.40	4,377.38	-700.60	690.88	-699.99	0.00	0.00	0.00
4,600.00	14.67	135.40	4,474.12	-718.63	708.67	-718.01	0.00	0.00	0.00

Hewlett-Packard

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5047.00usft (RIG)
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Well:	COUNTY LINE 3130-04H	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	14.67	135.40	4,570.86	-736.66	726.45	-736.03	0.00	0.00	0.00
4,800.00	14.67	135.40	4,667.60	-754.69	744.23	-754.04	0.00	0.00	0.00
4,900.00	14.67	135.40	4,764.34	-772.73	762.01	-772.06	0.00	0.00	0.00
5,000.00	14.67	135.40	4,861.08	-790.76	779.79	-790.08	0.00	0.00	0.00
5,100.00	14.67	135.40	4,957.82	-808.79	797.58	-808.09	0.00	0.00	0.00
5,200.00	14.67	135.40	5,054.56	-826.82	815.36	-826.11	0.00	0.00	0.00
5,300.00	14.67	135.40	5,151.30	-844.85	833.14	-844.13	0.00	0.00	0.00
5,400.00	14.67	135.40	5,248.04	-862.89	850.92	-862.14	0.00	0.00	0.00
5,500.00	14.67	135.40	5,344.78	-880.92	868.70	-880.16	0.00	0.00	0.00
5,600.00	14.67	135.40	5,441.52	-898.95	886.49	-898.18	0.00	0.00	0.00
5,700.00	14.67	135.40	5,538.26	-916.98	904.27	-916.19	0.00	0.00	0.00
5,800.00	14.67	135.40	5,635.00	-935.02	922.05	-934.21	0.00	0.00	0.00
5,900.00	14.67	135.40	5,731.74	-953.05	939.83	-952.23	0.00	0.00	0.00
6,000.00	14.67	135.40	5,828.48	-971.08	957.62	-970.24	0.00	0.00	0.00
6,100.00	14.67	135.40	5,925.22	-989.11	975.40	-988.26	0.00	0.00	0.00
6,200.00	14.67	135.40	6,021.96	-1,007.14	993.18	-1,006.28	0.00	0.00	0.00
6,300.00	14.67	135.40	6,118.70	-1,025.18	1,010.96	-1,024.29	0.00	0.00	0.00
6,400.00	14.67	135.40	6,215.44	-1,043.21	1,028.74	-1,042.31	0.00	0.00	0.00
6,500.00	14.67	135.40	6,312.18	-1,061.24	1,046.53	-1,060.33	0.00	0.00	0.00
6,538.51	14.67	135.40	6,349.43	-1,068.19	1,053.37	-1,067.27	0.00	0.00	0.00
KOP @ 6538.51ft :: DLS = 9°/100'									
6,600.00	11.42	115.30	6,409.36	-1,076.34	1,064.35	-1,075.41	9.00	-5.28	-32.69
6,700.00	11.05	67.85	6,507.64	-1,076.96	1,082.22	-1,076.01	9.00	-0.37	-47.45
6,800.00	16.55	37.04	6,604.84	-1,061.94	1,099.71	-1,060.98	9.00	5.50	-30.81
6,900.00	24.21	23.19	6,698.57	-1,031.66	1,116.40	-1,030.69	9.00	7.66	-13.85
7,000.00	32.53	15.90	6,786.51	-986.87	1,131.87	-985.88	9.00	8.32	-7.29
7,100.00	41.12	11.36	6,866.50	-928.65	1,145.74	-927.65	9.00	8.58	-4.54
7,200.00	49.83	8.17	6,936.57	-858.46	1,157.67	-857.45	9.00	8.71	-3.19
7,300.00	58.60	5.72	6,994.99	-778.01	1,167.38	-776.99	9.00	8.78	-2.46
7,400.00	67.42	3.68	7,040.33	-689.29	1,174.61	-688.26	9.00	8.82	-2.03
7,500.00	76.26	1.90	7,071.47	-594.48	1,179.19	-593.45	9.00	8.84	-1.79
7,600.00	85.11	0.24	7,087.65	-495.92	1,181.01	-494.89	9.00	8.85	-1.66
7,655.24	90.00	359.35	7,090.00	-440.75	1,180.81	-439.72	9.00	8.85	-1.61
End Build @ 7655.24ft									
7,700.00	90.00	359.35	7,090.00	-395.99	1,180.30	-394.96	0.00	0.00	0.00
7,800.00	90.00	359.35	7,090.00	-296.00	1,179.17	-294.97	0.00	0.00	0.00
7,900.00	90.00	359.35	7,090.00	-196.00	1,178.03	-194.97	0.00	0.00	0.00
8,000.00	90.00	359.35	7,090.00	-96.01	1,176.90	-94.98	0.00	0.00	0.00
8,100.00	90.00	359.35	7,090.00	3.98	1,175.76	5.01	0.00	0.00	0.00
8,200.00	90.00	359.35	7,090.00	103.98	1,174.63	105.00	0.00	0.00	0.00
8,300.00	90.00	359.35	7,090.00	203.97	1,173.49	205.00	0.00	0.00	0.00
8,400.00	90.00	359.35	7,090.00	303.97	1,172.36	304.99	0.00	0.00	0.00
8,500.00	90.00	359.35	7,090.00	403.96	1,171.22	404.98	0.00	0.00	0.00
8,600.00	90.00	359.35	7,090.00	503.95	1,170.09	504.97	0.00	0.00	0.00
8,700.00	90.00	359.35	7,090.00	603.95	1,168.95	604.97	0.00	0.00	0.00
8,800.00	90.00	359.35	7,090.00	703.94	1,167.82	704.96	0.00	0.00	0.00
8,900.00	90.00	359.35	7,090.00	803.93	1,166.68	804.95	0.00	0.00	0.00
9,000.00	90.00	359.35	7,090.00	903.93	1,165.55	904.94	0.00	0.00	0.00
9,100.00	90.00	359.35	7,090.00	1,003.92	1,164.41	1,004.94	0.00	0.00	0.00
9,200.00	90.00	359.35	7,090.00	1,103.91	1,163.28	1,104.93	0.00	0.00	0.00
9,300.00	90.00	359.35	7,090.00	1,203.91	1,162.14	1,204.92	0.00	0.00	0.00
9,400.00	90.00	359.35	7,090.00	1,303.90	1,161.01	1,304.91	0.00	0.00	0.00
9,500.00	90.00	359.35	7,090.00	1,403.89	1,159.87	1,404.91	0.00	0.00	0.00
9,600.00	90.00	359.35	7,090.00	1,503.89	1,158.74	1,504.90	0.00	0.00	0.00

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5047.00usft (RIG)
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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)	
9,700.00	90.00	359.35	7,090.00	1,603.88	1,157.60	1,604.89	0.00	0.00	0.00	
9,800.00	90.00	359.35	7,090.00	1,703.88	1,156.47	1,704.88	0.00	0.00	0.00	
9,900.00	90.00	359.35	7,090.00	1,803.87	1,155.33	1,804.88	0.00	0.00	0.00	
10,000.00	90.00	359.35	7,090.00	1,903.86	1,154.20	1,904.87	0.00	0.00	0.00	
10,100.00	90.00	359.35	7,090.00	2,003.86	1,153.06	2,004.86	0.00	0.00	0.00	
10,200.00	90.00	359.35	7,090.00	2,103.85	1,151.93	2,104.85	0.00	0.00	0.00	
10,300.00	90.00	359.35	7,090.00	2,203.84	1,150.79	2,204.85	0.00	0.00	0.00	
10,400.00	90.00	359.35	7,090.00	2,303.84	1,149.66	2,304.84	0.00	0.00	0.00	
10,500.00	90.00	359.35	7,090.00	2,403.83	1,148.52	2,404.83	0.00	0.00	0.00	
10,600.00	90.00	359.35	7,090.00	2,503.82	1,147.39	2,504.82	0.00	0.00	0.00	
10,700.00	90.00	359.35	7,090.00	2,603.82	1,146.25	2,604.82	0.00	0.00	0.00	
10,800.00	90.00	359.35	7,090.00	2,703.81	1,145.12	2,704.81	0.00	0.00	0.00	
10,900.00	90.00	359.35	7,090.00	2,803.80	1,143.98	2,804.80	0.00	0.00	0.00	
11,000.00	90.00	359.35	7,090.00	2,903.80	1,142.85	2,904.79	0.00	0.00	0.00	
11,100.00	90.00	359.35	7,090.00	3,003.79	1,141.71	3,004.79	0.00	0.00	0.00	
11,200.00	90.00	359.35	7,090.00	3,103.79	1,140.58	3,104.78	0.00	0.00	0.00	
11,300.00	90.00	359.35	7,090.00	3,203.78	1,139.44	3,204.77	0.00	0.00	0.00	
11,400.00	90.00	359.35	7,090.00	3,303.77	1,138.31	3,304.76	0.00	0.00	0.00	
11,500.00	90.00	359.35	7,090.00	3,403.77	1,137.17	3,404.76	0.00	0.00	0.00	
11,600.00	90.00	359.35	7,090.00	3,503.76	1,136.04	3,504.75	0.00	0.00	0.00	
11,700.00	90.00	359.35	7,090.00	3,603.75	1,134.90	3,604.74	0.00	0.00	0.00	
11,800.00	90.00	359.35	7,090.00	3,703.75	1,133.77	3,704.73	0.00	0.00	0.00	
11,900.00	90.00	359.35	7,090.00	3,803.74	1,132.63	3,804.73	0.00	0.00	0.00	
12,000.00	90.00	359.35	7,090.00	3,903.73	1,131.50	3,904.72	0.00	0.00	0.00	
12,100.00	90.00	359.35	7,090.00	4,003.73	1,130.36	4,004.71	0.00	0.00	0.00	
12,200.00	90.00	359.35	7,090.00	4,103.72	1,129.23	4,104.70	0.00	0.00	0.00	
12,300.00	90.00	359.35	7,090.00	4,203.71	1,128.09	4,204.70	0.00	0.00	0.00	
12,400.00	90.00	359.35	7,090.00	4,303.71	1,126.96	4,304.69	0.00	0.00	0.00	
12,496.87	90.00	359.35	7,090.00	4,400.58	1,125.86	4,401.56	0.00	0.00	0.00	
Begin Turn to BHL @ 12496.87ft										
12,500.00	90.00	359.41	7,090.00	4,403.70	1,125.82	4,404.68	2.00	0.00	2.00	
12,566.97	90.00	0.75	7,090.00	4,470.67	1,125.92	4,471.65	2.00	0.00	2.00	
End Turn @ 12566.97ft										
12,600.00	90.00	0.75	7,090.00	4,503.70	1,126.35	4,504.68	0.00	0.00	0.00	
12,700.00	90.00	0.75	7,090.00	4,603.69	1,127.66	4,604.67	0.00	0.00	0.00	
12,800.00	90.00	0.75	7,090.00	4,703.68	1,128.97	4,704.66	0.00	0.00	0.00	
12,900.00	90.00	0.75	7,090.00	4,803.67	1,130.29	4,804.66	0.00	0.00	0.00	
13,000.00	90.00	0.75	7,090.00	4,903.66	1,131.60	4,904.65	0.00	0.00	0.00	
13,100.00	90.00	0.75	7,090.00	5,003.65	1,132.91	5,004.64	0.00	0.00	0.00	
13,200.00	90.00	0.75	7,090.00	5,103.65	1,134.22	5,104.63	0.00	0.00	0.00	
13,300.00	90.00	0.75	7,090.00	5,203.64	1,135.53	5,204.63	0.00	0.00	0.00	
13,400.00	90.00	0.75	7,090.00	5,303.63	1,136.84	5,304.62	0.00	0.00	0.00	
13,500.00	90.00	0.75	7,090.00	5,403.62	1,138.16	5,404.61	0.00	0.00	0.00	
13,600.00	90.00	0.75	7,090.00	5,503.61	1,139.47	5,504.60	0.00	0.00	0.00	
13,700.00	90.00	0.75	7,090.00	5,603.60	1,140.78	5,604.60	0.00	0.00	0.00	
13,800.00	90.00	0.75	7,090.00	5,703.59	1,142.09	5,704.59	0.00	0.00	0.00	
13,900.00	90.00	0.75	7,090.00	5,803.59	1,143.40	5,804.58	0.00	0.00	0.00	
14,000.00	90.00	0.75	7,090.00	5,903.58	1,144.71	5,904.57	0.00	0.00	0.00	
14,100.00	90.00	0.75	7,090.00	6,003.57	1,146.03	6,004.57	0.00	0.00	0.00	
14,200.00	90.00	0.75	7,090.00	6,103.56	1,147.34	6,104.56	0.00	0.00	0.00	
14,300.00	90.00	0.75	7,090.00	6,203.55	1,148.65	6,204.55	0.00	0.00	0.00	
14,400.00	90.00	0.75	7,090.00	6,303.54	1,149.96	6,304.54	0.00	0.00	0.00	
14,500.00	90.00	0.75	7,090.00	6,403.53	1,151.27	6,404.54	0.00	0.00	0.00	
14,600.00	90.00	0.75	7,090.00	6,503.53	1,152.58	6,504.53	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well COUNTY LINE 3130-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 5047.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 5047.00usft (RIG)
Site:	1N-65W-31 COUNTY LINE 3130 PAD	North Reference:	True
Well:	COUNTY LINE 3130-04H	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)	
14,700.00	90.00	0.75	7,090.00	6,603.52	1,153.90	6,604.52	0.00	0.00	0.00	
14,800.00	90.00	0.75	7,090.00	6,703.51	1,155.21	6,704.51	0.00	0.00	0.00	
14,900.00	90.00	0.75	7,090.00	6,803.50	1,156.52	6,804.51	0.00	0.00	0.00	
15,000.00	90.00	0.75	7,090.00	6,903.49	1,157.83	6,904.50	0.00	0.00	0.00	
15,100.00	90.00	0.75	7,090.00	7,003.48	1,159.14	7,004.49	0.00	0.00	0.00	
15,200.00	90.00	0.75	7,090.00	7,103.47	1,160.45	7,104.48	0.00	0.00	0.00	
15,300.00	90.00	0.75	7,090.00	7,203.46	1,161.76	7,204.48	0.00	0.00	0.00	
15,400.00	90.00	0.75	7,090.00	7,303.46	1,163.08	7,304.47	0.00	0.00	0.00	
15,500.00	90.00	0.75	7,090.00	7,403.45	1,164.39	7,404.46	0.00	0.00	0.00	
15,600.00	90.00	0.75	7,090.00	7,503.44	1,165.70	7,504.45	0.00	0.00	0.00	
15,700.00	90.00	0.75	7,090.00	7,603.43	1,167.01	7,604.45	0.00	0.00	0.00	
15,800.00	90.00	0.75	7,090.00	7,703.42	1,168.32	7,704.44	0.00	0.00	0.00	
15,900.00	90.00	0.75	7,090.00	7,803.41	1,169.63	7,804.43	0.00	0.00	0.00	
16,000.00	90.00	0.75	7,090.00	7,903.40	1,170.95	7,904.42	0.00	0.00	0.00	
16,100.00	90.00	0.75	7,090.00	8,003.40	1,172.26	8,004.42	0.00	0.00	0.00	
16,200.00	90.00	0.75	7,090.00	8,103.39	1,173.57	8,104.41	0.00	0.00	0.00	
16,300.00	90.00	0.75	7,090.00	8,203.38	1,174.88	8,204.40	0.00	0.00	0.00	
16,400.00	90.00	0.75	7,090.00	8,303.37	1,176.19	8,304.39	0.00	0.00	0.00	
16,500.00	90.00	0.75	7,090.00	8,403.36	1,177.50	8,404.39	0.00	0.00	0.00	
16,600.00	90.00	0.75	7,090.00	8,503.35	1,178.82	8,504.38	0.00	0.00	0.00	
16,700.00	90.00	0.75	7,090.00	8,603.34	1,180.13	8,604.37	0.00	0.00	0.00	
16,800.00	90.00	0.75	7,090.00	8,703.34	1,181.44	8,704.36	0.00	0.00	0.00	
16,900.00	90.00	0.75	7,090.00	8,803.33	1,182.75	8,804.36	0.00	0.00	0.00	
17,000.00	90.00	0.75	7,090.00	8,903.32	1,184.06	8,904.35	0.00	0.00	0.00	
17,100.00	90.00	0.75	7,090.00	9,003.31	1,185.37	9,004.34	0.00	0.00	0.00	
17,200.00	90.00	0.75	7,090.00	9,103.30	1,186.69	9,104.33	0.00	0.00	0.00	
17,300.00	90.00	0.75	7,090.00	9,203.29	1,188.00	9,204.33	0.00	0.00	0.00	
17,338.75	90.00	0.75	7,090.00	9,242.04	1,188.51	9,243.08	0.00	0.00	0.00	
TD Well @ 17338.75ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,732.40	1,700.00	9 5/8"		9-5/8	13-1/2

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 Tangent @ 250.00ft	
983.50	975.51	-66.50	65.57	End Tangent @ 983.50ft	
6,538.51	6,349.43	-1,068.19	1,053.37	KOP @ 6538.51ft :: DLS = 9°/100'	
7,655.24	7,090.00	-440.75	1,180.81	End Build @ 7655.24ft	
12,496.87	7,090.00	4,400.58	1,125.86	Begin Turn to BHL @ 12496.87ft	
12,566.97	7,090.00	4,470.67	1,125.92	End Turn @ 12566.97ft	
17,338.75	7,090.00	9,242.04	1,188.51	TD Well @ 17338.75ft	