

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 BERG 1930 PAD

BERG 1930-02H

Wellbore #1

Plan: Design #1

Standard Planning Report

22 May, 2019

Project: WATTENBERG FIELD
Site: 1N-64W-19 BERG 1930 PAD
Well: BERG 1930-02H
Wellbore: Wellbore #1
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1761.17	9 5/8"	9-5/8

SHL
1911' FSL
1785' FWL

LP
2180' FSL
878' FEL

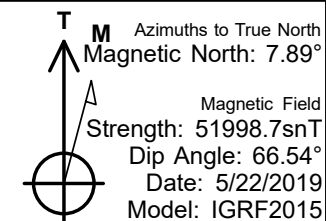
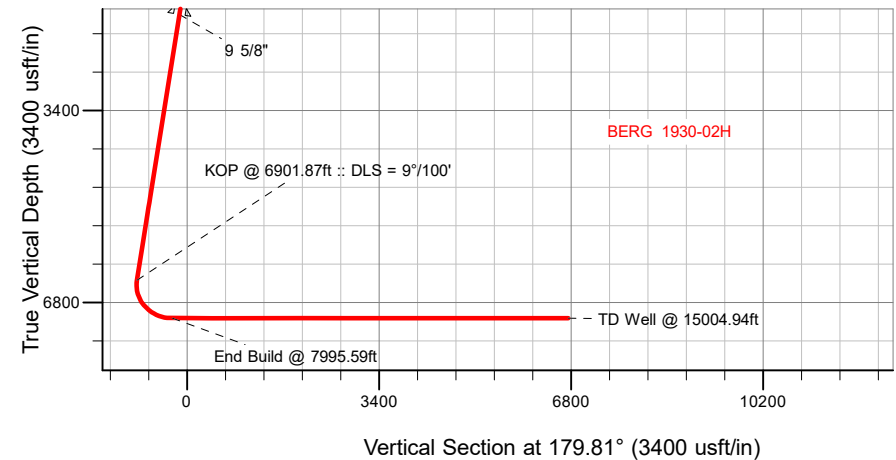
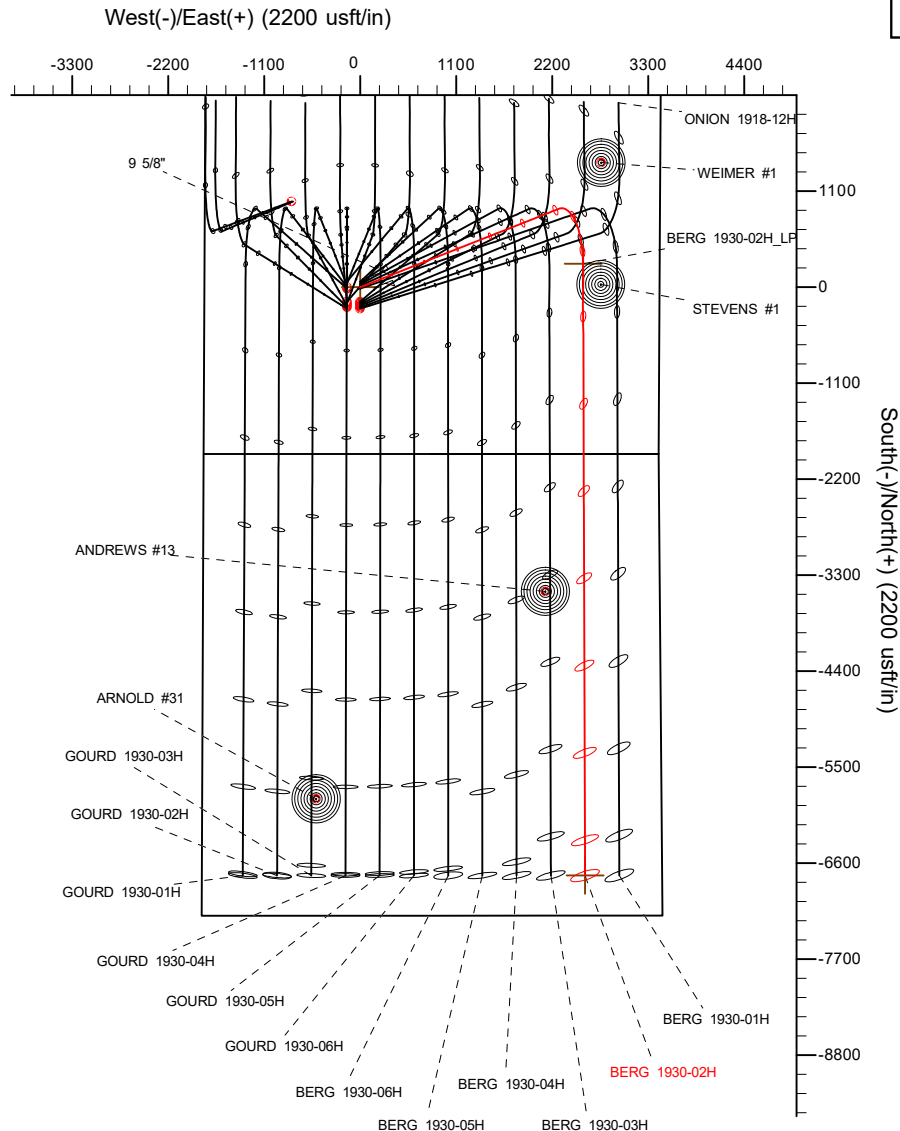
BHL
460' FSL
883' FEL

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	
1438.50	23.77	68.47	1404.70	89.18	226.06	2.00	68.47	-88.43	
6901.87	23.77	68.47	6404.62	897.33	2274.51	0.00	0.00	-889.78	
7995.59	90.00	179.81	7080.00	268.51	2553.64	9.00	109.68	-260.04	
15004.94	90.00	179.81	7080.00	-6740.80	2576.66	0.00	0.00	6749.31	BERG 1930-02H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BERG 1930-02H_SHL	0.00	0.00	0.00	40.034801	-104.596437
BERG 1930-02H_BHL	7080.00	-6740.80	2576.66	40.016296	-104.587238



WELL DETAILS: BERG 1930-02H

GL = 5011'

RKB = 24' @ 5035.00usft (RIG)

Plan: Design #1 (BERG 1930-02H/Wellbore #1)

Date: 5/22/2019

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well BERG 1930-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 BERG 1930 PAD	North Reference:	True
Well:	BERG 1930-02H	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-64W-19 BERG 1930 PAD			
Site Position:		Northing:	1,256,877.00 usft	Latitude: 40.034977
From:	Lat/Long	Easting:	3,253,002.47 usft	Longitude: -104.596436
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.58 °

Well	BERG 1930-02H			
Well Position	+N/-S	-64.01 usft	Northing:	1,256,812.99 usft
	+E/-W	-0.31 usft	Easting:	3,253,002.81 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 5,011.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/22/2019	7.89	66.54	51,998.68003300

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	179.81

Plan Survey Tool Program	Date	5/22/2019		
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	15,004.94	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	
1,438.50	23.77	68.47	1,404.70	89.18	226.06	2.00	2.00	0.00	68.47	
6,901.87	23.77	68.47	6,404.62	897.33	2,274.51	0.00	0.00	0.00	0.00	
7,995.59	90.00	179.81	7,080.00	268.51	2,553.64	9.00	6.06	10.18	109.68	
15,004.94	90.00	179.81	7,080.00	-6,740.80	2,576.66	0.00	0.00	0.00	0.00	BERG 1930-02H_BHI

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well BERG 1930-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 BERG 1930 PAD	North Reference:	True
Well:	BERG 1930-02H	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	68.47	300.00	0.16	0.41	-0.16	2.00	2.00	0.00
400.00	3.00	68.47	399.93	1.44	3.65	-1.43	2.00	2.00	0.00
500.00	5.00	68.47	499.68	4.00	10.14	-3.97	2.00	2.00	0.00
600.00	7.00	68.47	599.13	7.84	19.86	-7.77	2.00	2.00	0.00
700.00	9.00	68.47	698.15	12.94	32.81	-12.83	2.00	2.00	0.00
800.00	11.00	68.47	796.63	19.32	48.96	-19.15	2.00	2.00	0.00
900.00	13.00	68.47	894.44	26.95	68.30	-26.72	2.00	2.00	0.00
1,000.00	15.00	68.47	991.46	35.82	90.80	-35.52	2.00	2.00	0.00
1,100.00	17.00	68.47	1,087.58	45.94	116.44	-45.55	2.00	2.00	0.00
1,200.00	19.00	68.47	1,182.68	57.28	145.19	-56.80	2.00	2.00	0.00
1,300.00	21.00	68.47	1,276.65	69.83	177.00	-69.24	2.00	2.00	0.00
1,400.00	23.00	68.47	1,369.36	83.58	211.85	-82.87	2.00	2.00	0.00
1,438.50	23.77	68.47	1,404.70	89.18	226.06	-88.43	2.00	2.00	0.00
Hold Tangent @ 1438.50ft									
1,500.00	23.77	68.47	1,460.98	98.28	249.12	-97.46	0.00	0.00	0.00
1,600.00	23.77	68.47	1,552.50	113.07	286.61	-112.12	0.00	0.00	0.00
1,700.00	23.77	68.47	1,644.02	127.87	324.11	-126.79	0.00	0.00	0.00
1,761.17	23.77	68.47	1,700.00	136.91	347.04	-135.76	0.00	0.00	0.00
9 5/8"									
1,800.00	23.77	68.47	1,735.53	142.66	361.60	-141.46	0.00	0.00	0.00
1,900.00	23.77	68.47	1,827.05	157.45	399.10	-156.13	0.00	0.00	0.00
2,000.00	23.77	68.47	1,918.57	172.24	436.59	-170.79	0.00	0.00	0.00
2,100.00	23.77	68.47	2,010.09	187.03	474.09	-185.46	0.00	0.00	0.00
2,200.00	23.77	68.47	2,101.60	201.83	511.58	-200.13	0.00	0.00	0.00
2,300.00	23.77	68.47	2,193.12	216.62	549.07	-214.80	0.00	0.00	0.00
2,400.00	23.77	68.47	2,284.64	231.41	586.57	-229.46	0.00	0.00	0.00
2,500.00	23.77	68.47	2,376.15	246.20	624.06	-244.13	0.00	0.00	0.00
2,600.00	23.77	68.47	2,467.67	260.99	661.56	-258.80	0.00	0.00	0.00
2,700.00	23.77	68.47	2,559.19	275.79	699.05	-273.47	0.00	0.00	0.00
2,800.00	23.77	68.47	2,650.70	290.58	736.55	-288.13	0.00	0.00	0.00
2,900.00	23.77	68.47	2,742.22	305.37	774.04	-302.80	0.00	0.00	0.00
3,000.00	23.77	68.47	2,833.74	320.16	811.53	-317.47	0.00	0.00	0.00
3,100.00	23.77	68.47	2,925.26	334.95	849.03	-332.14	0.00	0.00	0.00
3,200.00	23.77	68.47	3,016.77	349.75	886.52	-346.81	0.00	0.00	0.00
3,300.00	23.77	68.47	3,108.29	364.54	924.02	-361.47	0.00	0.00	0.00
3,400.00	23.77	68.47	3,199.81	379.33	961.51	-376.14	0.00	0.00	0.00
3,500.00	23.77	68.47	3,291.32	394.12	999.01	-390.81	0.00	0.00	0.00
3,600.00	23.77	68.47	3,382.84	408.91	1,036.50	-405.48	0.00	0.00	0.00
3,700.00	23.77	68.47	3,474.36	423.71	1,073.99	-420.14	0.00	0.00	0.00
3,800.00	23.77	68.47	3,565.88	438.50	1,111.49	-434.81	0.00	0.00	0.00
3,900.00	23.77	68.47	3,657.39	453.29	1,148.98	-449.48	0.00	0.00	0.00
4,000.00	23.77	68.47	3,748.91	468.08	1,186.48	-464.15	0.00	0.00	0.00
4,100.00	23.77	68.47	3,840.43	482.88	1,223.97	-478.81	0.00	0.00	0.00
4,200.00	23.77	68.47	3,931.94	497.67	1,261.46	-493.48	0.00	0.00	0.00
4,300.00	23.77	68.47	4,023.46	512.46	1,298.96	-508.15	0.00	0.00	0.00
4,400.00	23.77	68.47	4,114.98	527.25	1,336.45	-522.82	0.00	0.00	0.00
4,500.00	23.77	68.47	4,206.50	542.04	1,373.95	-537.48	0.00	0.00	0.00
4,600.00	23.77	68.47	4,298.01	556.84	1,411.44	-552.15	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well BERG 1930-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 BERG 1930 PAD	North Reference:	True
Well:	BERG 1930-02H	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	23.77	68.47	4,389.53	571.63	1,448.94	-566.82	0.00	0.00	0.00
4,800.00	23.77	68.47	4,481.05	586.42	1,486.43	-581.49	0.00	0.00	0.00
4,900.00	23.77	68.47	4,572.56	601.21	1,523.92	-596.15	0.00	0.00	0.00
5,000.00	23.77	68.47	4,664.08	616.00	1,561.42	-610.82	0.00	0.00	0.00
5,100.00	23.77	68.47	4,755.60	630.80	1,598.91	-625.49	0.00	0.00	0.00
5,200.00	23.77	68.47	4,847.11	645.59	1,636.41	-640.16	0.00	0.00	0.00
5,300.00	23.77	68.47	4,938.63	660.38	1,673.90	-654.83	0.00	0.00	0.00
5,400.00	23.77	68.47	5,030.15	675.17	1,711.40	-669.49	0.00	0.00	0.00
5,500.00	23.77	68.47	5,121.67	689.96	1,748.89	-684.16	0.00	0.00	0.00
5,600.00	23.77	68.47	5,213.18	704.76	1,786.38	-698.83	0.00	0.00	0.00
5,700.00	23.77	68.47	5,304.70	719.55	1,823.88	-713.50	0.00	0.00	0.00
5,800.00	23.77	68.47	5,396.22	734.34	1,861.37	-728.16	0.00	0.00	0.00
5,900.00	23.77	68.47	5,487.73	749.13	1,898.87	-742.83	0.00	0.00	0.00
6,000.00	23.77	68.47	5,579.25	763.92	1,936.36	-757.50	0.00	0.00	0.00
6,100.00	23.77	68.47	5,670.77	778.72	1,973.86	-772.17	0.00	0.00	0.00
6,200.00	23.77	68.47	5,762.29	793.51	2,011.35	-786.83	0.00	0.00	0.00
6,300.00	23.77	68.47	5,853.80	808.30	2,048.84	-801.50	0.00	0.00	0.00
6,400.00	23.77	68.47	5,945.32	823.09	2,086.34	-816.17	0.00	0.00	0.00
6,500.00	23.77	68.47	6,036.84	837.88	2,123.83	-830.84	0.00	0.00	0.00
6,600.00	23.77	68.47	6,128.35	852.68	2,161.33	-845.50	0.00	0.00	0.00
6,700.00	23.77	68.47	6,219.87	867.47	2,198.82	-860.17	0.00	0.00	0.00
6,800.00	23.77	68.47	6,311.39	882.26	2,236.32	-874.84	0.00	0.00	0.00
6,900.00	23.77	68.47	6,402.91	897.05	2,273.81	-889.51	0.00	0.00	0.00
6,901.87	23.77	68.47	6,404.62	897.33	2,274.51	-889.78	0.00	0.00	0.00
KOP @ 6901.87ft :: DLS = 9°/100'									
7,000.00	22.31	90.86	6,495.09	904.32	2,311.60	-896.65	9.00	-1.49	22.81
7,100.00	24.11	113.37	6,587.18	895.92	2,349.41	-888.12	9.00	1.80	22.51
7,200.00	28.61	131.04	6,676.89	872.05	2,386.29	-864.13	9.00	4.50	17.67
7,300.00	34.77	143.60	6,762.04	833.30	2,421.34	-825.26	9.00	6.16	12.56
7,400.00	41.87	152.57	6,840.50	780.62	2,453.71	-772.48	9.00	7.09	8.97
7,500.00	49.48	159.29	6,910.36	715.31	2,482.58	-707.07	9.00	7.62	6.72
7,600.00	57.41	164.61	6,969.90	638.98	2,507.25	-630.66	9.00	7.93	5.32
7,700.00	65.52	169.05	7,017.64	553.51	2,527.12	-545.13	9.00	8.11	4.44
7,800.00	73.75	172.95	7,052.42	461.00	2,541.69	-452.57	9.00	8.23	3.90
7,900.00	82.04	176.53	7,073.37	363.73	2,550.61	-355.27	9.00	8.29	3.58
7,995.59	90.00	179.81	7,080.00	268.51	2,553.64	-260.04	9.00	8.32	3.44
End Build @ 7995.59ft									
8,000.00	90.00	179.81	7,080.00	264.10	2,553.65	-255.63	0.00	0.00	0.00
8,100.00	90.00	179.81	7,080.00	164.10	2,553.98	-155.63	0.00	0.00	0.00
8,200.00	90.00	179.81	7,080.00	64.10	2,554.31	-55.63	0.00	0.00	0.00
8,300.00	90.00	179.81	7,080.00	-35.90	2,554.64	44.37	0.00	0.00	0.00
8,400.00	90.00	179.81	7,080.00	-135.90	2,554.97	144.37	0.00	0.00	0.00
8,500.00	90.00	179.81	7,080.00	-235.89	2,555.29	244.37	0.00	0.00	0.00
8,600.00	90.00	179.81	7,080.00	-335.89	2,555.62	344.37	0.00	0.00	0.00
8,700.00	90.00	179.81	7,080.00	-435.89	2,555.95	444.37	0.00	0.00	0.00
8,800.00	90.00	179.81	7,080.00	-535.89	2,556.28	544.37	0.00	0.00	0.00
8,900.00	90.00	179.81	7,080.00	-635.89	2,556.61	644.37	0.00	0.00	0.00
9,000.00	90.00	179.81	7,080.00	-735.89	2,556.94	744.37	0.00	0.00	0.00
9,100.00	90.00	179.81	7,080.00	-835.89	2,557.26	844.37	0.00	0.00	0.00
9,200.00	90.00	179.81	7,080.00	-935.89	2,557.59	944.37	0.00	0.00	0.00
9,300.00	90.00	179.81	7,080.00	-1,035.89	2,557.92	1,044.37	0.00	0.00	0.00
9,400.00	90.00	179.81	7,080.00	-1,135.89	2,558.25	1,144.37	0.00	0.00	0.00
9,500.00	90.00	179.81	7,080.00	-1,235.89	2,558.58	1,244.37	0.00	0.00	0.00
9,600.00	90.00	179.81	7,080.00	-1,335.89	2,558.91	1,344.37	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well BERG 1930-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 BERG 1930 PAD	North Reference:	True
Well:	BERG 1930-02H	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)
9,700.00	90.00	179.81	7,080.00	-1,435.89	2,559.23	1,444.37	0.00	0.00	0.00
9,800.00	90.00	179.81	7,080.00	-1,535.89	2,559.56	1,544.37	0.00	0.00	0.00
9,900.00	90.00	179.81	7,080.00	-1,635.89	2,559.89	1,644.37	0.00	0.00	0.00
10,000.00	90.00	179.81	7,080.00	-1,735.89	2,560.22	1,744.37	0.00	0.00	0.00
10,100.00	90.00	179.81	7,080.00	-1,835.89	2,560.55	1,844.37	0.00	0.00	0.00
10,200.00	90.00	179.81	7,080.00	-1,935.89	2,560.88	1,944.37	0.00	0.00	0.00
10,300.00	90.00	179.81	7,080.00	-2,035.89	2,561.21	2,044.37	0.00	0.00	0.00
10,400.00	90.00	179.81	7,080.00	-2,135.88	2,561.53	2,144.37	0.00	0.00	0.00
10,500.00	90.00	179.81	7,080.00	-2,235.88	2,561.86	2,244.37	0.00	0.00	0.00
10,600.00	90.00	179.81	7,080.00	-2,335.88	2,562.19	2,344.37	0.00	0.00	0.00
10,700.00	90.00	179.81	7,080.00	-2,435.88	2,562.52	2,444.37	0.00	0.00	0.00
10,800.00	90.00	179.81	7,080.00	-2,535.88	2,562.85	2,544.37	0.00	0.00	0.00
10,900.00	90.00	179.81	7,080.00	-2,635.88	2,563.18	2,644.37	0.00	0.00	0.00
11,000.00	90.00	179.81	7,080.00	-2,735.88	2,563.50	2,744.37	0.00	0.00	0.00
11,100.00	90.00	179.81	7,080.00	-2,835.88	2,563.83	2,844.37	0.00	0.00	0.00
11,200.00	90.00	179.81	7,080.00	-2,935.88	2,564.16	2,944.37	0.00	0.00	0.00
11,300.00	90.00	179.81	7,080.00	-3,035.88	2,564.49	3,044.37	0.00	0.00	0.00
11,400.00	90.00	179.81	7,080.00	-3,135.88	2,564.82	3,144.37	0.00	0.00	0.00
11,500.00	90.00	179.81	7,080.00	-3,235.88	2,565.15	3,244.37	0.00	0.00	0.00
11,600.00	90.00	179.81	7,080.00	-3,335.88	2,565.47	3,344.37	0.00	0.00	0.00
11,700.00	90.00	179.81	7,080.00	-3,435.88	2,565.80	3,444.37	0.00	0.00	0.00
11,800.00	90.00	179.81	7,080.00	-3,535.88	2,566.13	3,544.37	0.00	0.00	0.00
11,900.00	90.00	179.81	7,080.00	-3,635.88	2,566.46	3,644.37	0.00	0.00	0.00
12,000.00	90.00	179.81	7,080.00	-3,735.88	2,566.79	3,744.37	0.00	0.00	0.00
12,100.00	90.00	179.81	7,080.00	-3,835.88	2,567.12	3,844.37	0.00	0.00	0.00
12,200.00	90.00	179.81	7,080.00	-3,935.87	2,567.45	3,944.37	0.00	0.00	0.00
12,300.00	90.00	179.81	7,080.00	-4,035.87	2,567.77	4,044.37	0.00	0.00	0.00
12,400.00	90.00	179.81	7,080.00	-4,135.87	2,568.10	4,144.37	0.00	0.00	0.00
12,500.00	90.00	179.81	7,080.00	-4,235.87	2,568.43	4,244.37	0.00	0.00	0.00
12,600.00	90.00	179.81	7,080.00	-4,335.87	2,568.76	4,344.37	0.00	0.00	0.00
12,700.00	90.00	179.81	7,080.00	-4,435.87	2,569.09	4,444.37	0.00	0.00	0.00
12,800.00	90.00	179.81	7,080.00	-4,535.87	2,569.42	4,544.37	0.00	0.00	0.00
12,900.00	90.00	179.81	7,080.00	-4,635.87	2,569.74	4,644.37	0.00	0.00	0.00
13,000.00	90.00	179.81	7,080.00	-4,735.87	2,570.07	4,744.37	0.00	0.00	0.00
13,100.00	90.00	179.81	7,080.00	-4,835.87	2,570.40	4,844.37	0.00	0.00	0.00
13,200.00	90.00	179.81	7,080.00	-4,935.87	2,570.73	4,944.37	0.00	0.00	0.00
13,300.00	90.00	179.81	7,080.00	-5,035.87	2,571.06	5,044.37	0.00	0.00	0.00
13,400.00	90.00	179.81	7,080.00	-5,135.87	2,571.39	5,144.37	0.00	0.00	0.00
13,500.00	90.00	179.81	7,080.00	-5,235.87	2,571.71	5,244.37	0.00	0.00	0.00
13,600.00	90.00	179.81	7,080.00	-5,335.87	2,572.04	5,344.37	0.00	0.00	0.00
13,700.00	90.00	179.81	7,080.00	-5,435.87	2,572.37	5,444.37	0.00	0.00	0.00
13,800.00	90.00	179.81	7,080.00	-5,535.87	2,572.70	5,544.37	0.00	0.00	0.00
13,900.00	90.00	179.81	7,080.00	-5,635.87	2,573.03	5,644.37	0.00	0.00	0.00
14,000.00	90.00	179.81	7,080.00	-5,735.87	2,573.36	5,744.37	0.00	0.00	0.00
14,100.00	90.00	179.81	7,080.00	-5,835.86	2,573.69	5,844.37	0.00	0.00	0.00
14,200.00	90.00	179.81	7,080.00	-5,935.86	2,574.01	5,944.37	0.00	0.00	0.00
14,300.00	90.00	179.81	7,080.00	-6,035.86	2,574.34	6,044.37	0.00	0.00	0.00
14,400.00	90.00	179.81	7,080.00	-6,135.86	2,574.67	6,144.37	0.00	0.00	0.00
14,500.00	90.00	179.81	7,080.00	-6,235.86	2,575.00	6,244.37	0.00	0.00	0.00
14,600.00	90.00	179.81	7,080.00	-6,335.86	2,575.33	6,344.37	0.00	0.00	0.00
14,700.00	90.00	179.81	7,080.00	-6,435.86	2,575.66	6,444.37	0.00	0.00	0.00
14,800.00	90.00	179.81	7,080.00	-6,535.86	2,575.98	6,544.37	0.00	0.00	0.00
14,900.00	90.00	179.81	7,080.00	-6,635.86	2,576.31	6,644.37	0.00	0.00	0.00
15,000.00	90.00	179.81	7,080.00	-6,735.86	2,576.64	6,744.37	0.00	0.00	0.00

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well BERG 1930-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site:	1N-64W-19 BERG 1930 PAD	North Reference:	True
Well:	BERG 1930-02H	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)
15,004.94	90.00	179.81	7,080.00	-6,740.80	2,576.66	6,749.31	0.00	0.00	0.00
TD Well @ 15004.94ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,761.17	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 Nudge @ 250.00ft
1,438.50	1,404.70	89.18	226.06	Hold Tangent @ 1438.50ft
6,901.87	6,404.62	897.33	2,274.51	KOP @ 6901.87ft :: DLS = 9°/100'
7,995.59	7,080.00	268.51	2,553.64	End Build @ 7995.59ft
15,004.94	7,080.00	-6,740.80	2,576.66	TD Well @ 15004.94ft