

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
8N-60W-14 SCHNEIDER 1414 PAD  
SCHNEIDER 1414-05H**

**Wellbore #1**

**Plan: Design #2**

## **Standard Planning Report**

**13 June, 2018**

Project: WATTENBERG FIELD  
Site: 8N-60W-14 SCHNEIDER 1414 PAD  
Well: SCHNEIDER 1414-05H  
Wellbore: Wellbore #1  
Design: Design #2

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1700.00	1725.43	9 5/8"	9-5/8

SHL  
241' FNL  
1343' FWL

LP  
300' FNL  
2421' FWL

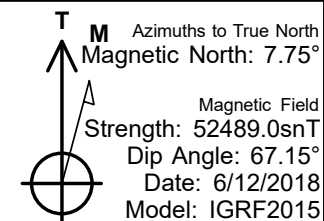
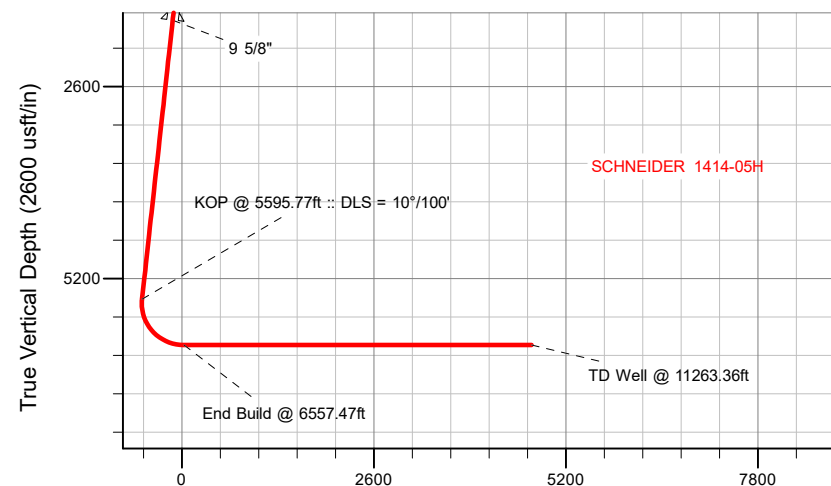
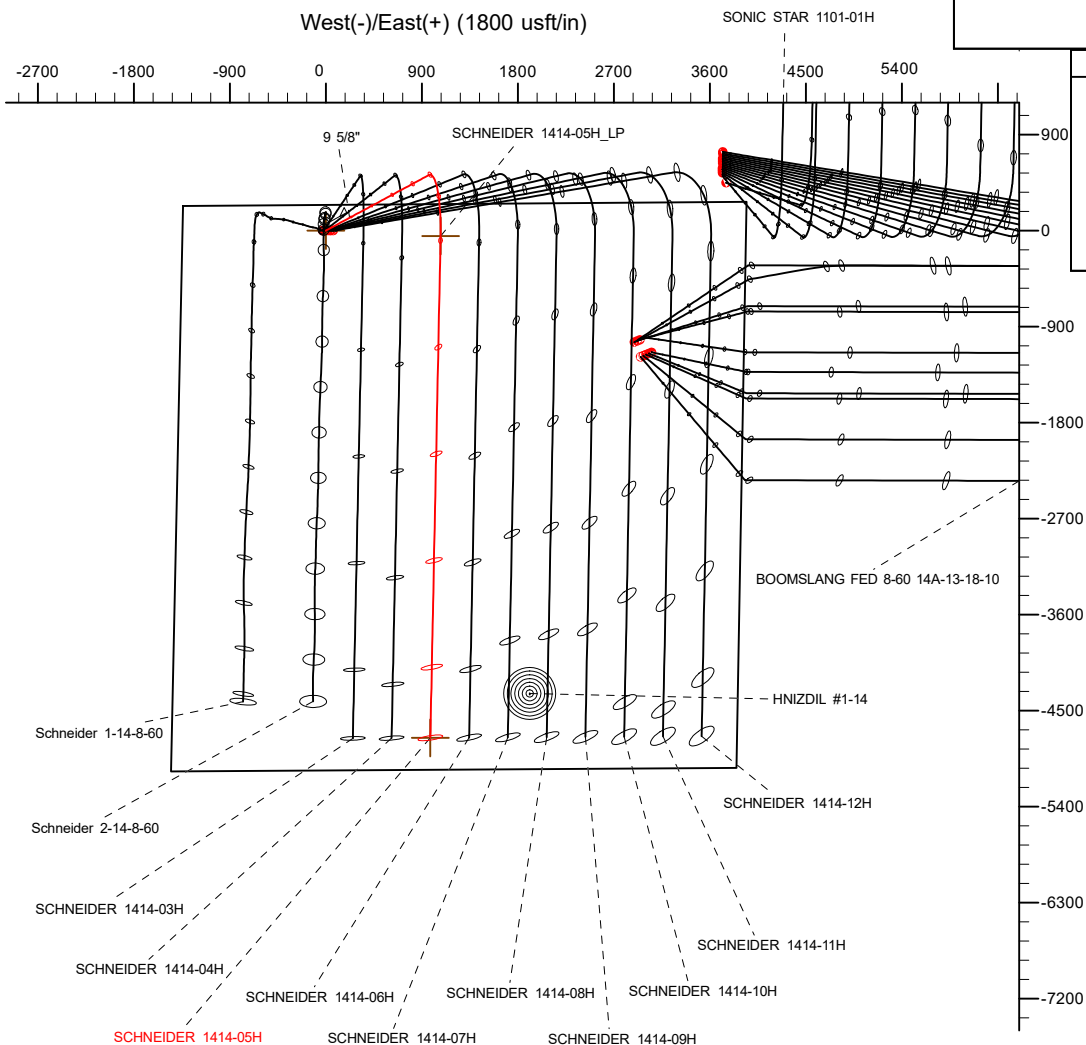
BHL  
300' FSL  
2424' FWL

## 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	880.00	12.60	61.65	874.93	32.76	60.72	2.00	61.65	-33.99	
4	5595.77	12.60	61.65	5477.13	521.25	966.05	0.00	0.00	-540.87	
5	6557.47	90.00	181.17	6100.00	-50.74	1075.55	10.00	118.92	28.77	
6	11263.36	90.00	181.17	6100.00	-4755.65	979.48	0.00	0.00	4734.65	SCHNEIDER 1414-05H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
SCHNEIDER 1414-05H_SHL	0.00	0.00	0.00	40.669101	-104.062517
SCHNEIDER 1414-05H_BHL	6100.00	-4755.65	979.48	40.656047	-104.058987



## WELL DETAILS: SCHNEIDER 1414-05H

GL = 4943'  
RKB = 20' @ 4963.00usft (RIG)

Plan: Design #2 (SCHNEIDER 1414-05H/Wellbore #1)

Date: 6/13/2018

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SCHNEIDER 1414-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

<b>Project</b>	WATTENBERG FIELD		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		8N-60W-14 SCHNEIDER 1414 PAD			
Site Position:		Northing:	1,489,828.18 usft	Latitude:	40.669102
From:	Lat/Long	Easting:	3,398,727.28 usft	Longitude:	-104.062589
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.93 °

Well	SCHNEIDER 1414-05H					
Well Position	+N/-S	-0.19 usft	Northing:	1,489,828.32 usft	Latitude:	40.669101
	+E/-W	20.00 usft	Easting:	3,398,747.28 usft	Longitude:	-104.062517
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,943.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	6/12/2018	7.75	67.15	52,489.03613624

<b>Design</b>	Design #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	181.17

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/13/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,700.00	Design #2 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	11,263.36	Design #2 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
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	
880.00	12.60	61.65	874.93	32.76	60.72	2.00	2.00	0.00	61.65	
5,595.77	12.60	61.65	5,477.13	521.25	966.05	0.00	0.00	0.00	0.00	
6,557.47	90.00	181.17	6,100.00	-50.74	1,075.55	10.00	8.05	12.43	118.92	
11,263.36	90.00	181.17	6,100.00	-4,755.65	979.48	0.00	0.00	0.00	0.00	SCHNEIDER 1414-05

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## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SCHNEIDER 1414-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	61.65	300.00	0.21	0.38	-0.21	2.00	2.00	0.00
400.00	3.00	61.65	399.93	1.86	3.46	-1.93	2.00	2.00	0.00
500.00	5.00	61.65	499.68	5.18	9.59	-5.37	2.00	2.00	0.00
600.00	7.00	61.65	599.13	10.14	18.79	-10.52	2.00	2.00	0.00
700.00	9.00	61.65	698.15	16.75	31.04	-17.38	2.00	2.00	0.00
800.00	11.00	61.65	796.63	24.99	46.32	-25.93	2.00	2.00	0.00
880.00	12.60	61.65	874.93	32.76	60.72	-33.99	2.00	2.00	0.00
End Tangent @ 880.00ft									
900.00	12.60	61.65	894.45	34.83	64.56	-36.14	0.00	0.00	0.00
1,000.00	12.60	61.65	992.04	45.19	83.76	-46.89	0.00	0.00	0.00
1,100.00	12.60	61.65	1,089.64	55.55	102.95	-57.64	0.00	0.00	0.00
1,200.00	12.60	61.65	1,187.23	65.91	122.15	-68.39	0.00	0.00	0.00
1,300.00	12.60	61.65	1,284.82	76.27	141.35	-79.14	0.00	0.00	0.00
1,400.00	12.60	61.65	1,382.41	86.63	160.55	-89.89	0.00	0.00	0.00
1,500.00	12.60	61.65	1,480.00	96.99	179.75	-100.64	0.00	0.00	0.00
1,600.00	12.60	61.65	1,577.59	107.34	198.94	-111.38	0.00	0.00	0.00
1,700.00	12.60	61.65	1,675.19	117.70	218.14	-122.13	0.00	0.00	0.00
1,725.43	12.60	61.65	1,700.00	120.34	223.02	-124.87	0.00	0.00	0.00
9 5/8"									
1,800.00	12.60	61.65	1,772.78	128.06	237.34	-132.88	0.00	0.00	0.00
1,900.00	12.60	61.65	1,870.37	138.42	256.54	-143.63	0.00	0.00	0.00
2,000.00	12.60	61.65	1,967.96	148.78	275.74	-154.38	0.00	0.00	0.00
2,100.00	12.60	61.65	2,065.55	159.14	294.93	-165.13	0.00	0.00	0.00
2,200.00	12.60	61.65	2,163.14	169.50	314.13	-175.88	0.00	0.00	0.00
2,300.00	12.60	61.65	2,260.74	179.86	333.33	-186.62	0.00	0.00	0.00
2,400.00	12.60	61.65	2,358.33	190.21	352.53	-197.37	0.00	0.00	0.00
2,500.00	12.60	61.65	2,455.92	200.57	371.73	-208.12	0.00	0.00	0.00
2,600.00	12.60	61.65	2,553.51	210.93	390.92	-218.87	0.00	0.00	0.00
2,700.00	12.60	61.65	2,651.10	221.29	410.12	-229.62	0.00	0.00	0.00
2,800.00	12.60	61.65	2,748.69	231.65	429.32	-240.37	0.00	0.00	0.00
2,900.00	12.60	61.65	2,846.29	242.01	448.52	-251.11	0.00	0.00	0.00
3,000.00	12.60	61.65	2,943.88	252.37	467.72	-261.86	0.00	0.00	0.00
3,100.00	12.60	61.65	3,041.47	262.72	486.91	-272.61	0.00	0.00	0.00
3,200.00	12.60	61.65	3,139.06	273.08	506.11	-283.36	0.00	0.00	0.00
3,300.00	12.60	61.65	3,236.65	283.44	525.31	-294.11	0.00	0.00	0.00
3,400.00	12.60	61.65	3,334.24	293.80	544.51	-304.86	0.00	0.00	0.00
3,500.00	12.60	61.65	3,431.84	304.16	563.71	-315.61	0.00	0.00	0.00
3,600.00	12.60	61.65	3,529.43	314.52	582.90	-326.35	0.00	0.00	0.00
3,700.00	12.60	61.65	3,627.02	324.88	602.10	-337.10	0.00	0.00	0.00
3,800.00	12.60	61.65	3,724.61	335.24	621.30	-347.85	0.00	0.00	0.00
3,900.00	12.60	61.65	3,822.20	345.59	640.50	-358.60	0.00	0.00	0.00
4,000.00	12.60	61.65	3,919.79	355.95	659.70	-369.35	0.00	0.00	0.00
4,100.00	12.60	61.65	4,017.39	366.31	678.89	-380.10	0.00	0.00	0.00
4,200.00	12.60	61.65	4,114.98	376.67	698.09	-390.85	0.00	0.00	0.00
4,300.00	12.60	61.65	4,212.57	387.03	717.29	-401.59	0.00	0.00	0.00
4,400.00	12.60	61.65	4,310.16	397.39	736.49	-412.34	0.00	0.00	0.00
4,500.00	12.60	61.65	4,407.75	407.75	755.69	-423.09	0.00	0.00	0.00
4,600.00	12.60	61.65	4,505.34	418.10	774.88	-433.84	0.00	0.00	0.00

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## Planning Report

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<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SCHNEIDER 1414-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	12.60	61.65	4,602.94	428.46	794.08	-444.59	0.00	0.00	0.00
4,800.00	12.60	61.65	4,700.53	438.82	813.28	-455.34	0.00	0.00	0.00
4,900.00	12.60	61.65	4,798.12	449.18	832.48	-466.09	0.00	0.00	0.00
5,000.00	12.60	61.65	4,895.71	459.54	851.68	-476.83	0.00	0.00	0.00
5,100.00	12.60	61.65	4,993.30	469.90	870.87	-487.58	0.00	0.00	0.00
5,200.00	12.60	61.65	5,090.89	480.26	890.07	-498.33	0.00	0.00	0.00
5,300.00	12.60	61.65	5,188.49	490.62	909.27	-509.08	0.00	0.00	0.00
5,400.00	12.60	61.65	5,286.08	500.97	928.47	-519.83	0.00	0.00	0.00
5,500.00	12.60	61.65	5,383.67	511.33	947.67	-530.58	0.00	0.00	0.00
5,595.77	12.60	61.65	5,477.13	521.25	966.05	-540.87	0.00	0.00	0.00
KOP @ 5595.77ft :: DLS = 10°/100'									
5,600.00	12.40	63.37	5,481.26	521.68	966.86	-541.31	10.00	-4.71	40.76
5,700.00	11.79	112.45	5,579.29	522.59	985.95	-542.61	10.00	-0.61	49.07
5,800.00	17.94	144.24	5,676.05	506.15	1,004.44	-526.55	10.00	6.15	31.79
5,900.00	26.50	158.20	5,768.60	472.86	1,021.77	-493.62	10.00	8.56	13.96
6,000.00	35.77	165.51	5,854.14	423.72	1,037.41	-444.82	10.00	9.28	7.30
6,100.00	45.32	170.08	5,930.05	360.24	1,050.88	-381.62	10.00	9.55	4.57
6,200.00	55.01	173.34	5,994.04	284.34	1,061.78	-305.96	10.00	9.68	3.26
6,300.00	64.76	175.91	6,044.16	198.32	1,069.77	-220.13	10.00	9.75	2.56
6,400.00	74.55	178.09	6,078.89	104.81	1,074.62	-126.73	10.00	9.79	2.18
6,500.00	84.36	180.07	6,097.17	6.64	1,076.17	-28.61	10.00	9.81	1.98
6,557.47	90.00	181.17	6,100.00	-50.74	1,075.55	28.77	10.00	9.82	1.92
End Build @ 6557.47ft									
6,600.00	90.00	181.17	6,100.00	-93.26	1,074.68	71.29	0.00	0.00	0.00
6,700.00	90.00	181.17	6,100.00	-193.24	1,072.64	171.29	0.00	0.00	0.00
6,800.00	90.00	181.17	6,100.00	-293.22	1,070.60	271.29	0.00	0.00	0.00
6,900.00	90.00	181.17	6,100.00	-393.20	1,068.56	371.29	0.00	0.00	0.00
7,000.00	90.00	181.17	6,100.00	-493.17	1,066.52	471.29	0.00	0.00	0.00
7,100.00	90.00	181.17	6,100.00	-593.15	1,064.48	571.29	0.00	0.00	0.00
7,200.00	90.00	181.17	6,100.00	-693.13	1,062.43	671.29	0.00	0.00	0.00
7,300.00	90.00	181.17	6,100.00	-793.11	1,060.39	771.29	0.00	0.00	0.00
7,400.00	90.00	181.17	6,100.00	-893.09	1,058.35	871.29	0.00	0.00	0.00
7,500.00	90.00	181.17	6,100.00	-993.07	1,056.31	971.29	0.00	0.00	0.00
7,600.00	90.00	181.17	6,100.00	-1,093.05	1,054.27	1,071.29	0.00	0.00	0.00
7,700.00	90.00	181.17	6,100.00	-1,193.03	1,052.23	1,171.29	0.00	0.00	0.00
7,800.00	90.00	181.17	6,100.00	-1,293.01	1,050.19	1,271.29	0.00	0.00	0.00
7,900.00	90.00	181.17	6,100.00	-1,392.99	1,048.14	1,371.29	0.00	0.00	0.00
8,000.00	90.00	181.17	6,100.00	-1,492.97	1,046.10	1,471.29	0.00	0.00	0.00
8,100.00	90.00	181.17	6,100.00	-1,592.95	1,044.06	1,571.29	0.00	0.00	0.00
8,200.00	90.00	181.17	6,100.00	-1,692.92	1,042.02	1,671.29	0.00	0.00	0.00
8,300.00	90.00	181.17	6,100.00	-1,792.90	1,039.98	1,771.29	0.00	0.00	0.00
8,400.00	90.00	181.17	6,100.00	-1,892.88	1,037.94	1,871.29	0.00	0.00	0.00
8,500.00	90.00	181.17	6,100.00	-1,992.86	1,035.90	1,971.29	0.00	0.00	0.00
8,600.00	90.00	181.17	6,100.00	-2,092.84	1,033.85	2,071.29	0.00	0.00	0.00
8,700.00	90.00	181.17	6,100.00	-2,192.82	1,031.81	2,171.29	0.00	0.00	0.00
8,800.00	90.00	181.17	6,100.00	-2,292.80	1,029.77	2,271.29	0.00	0.00	0.00
8,900.00	90.00	181.17	6,100.00	-2,392.78	1,027.73	2,371.29	0.00	0.00	0.00
9,000.00	90.00	181.17	6,100.00	-2,492.76	1,025.69	2,471.29	0.00	0.00	0.00
9,100.00	90.00	181.17	6,100.00	-2,592.74	1,023.65	2,571.29	0.00	0.00	0.00
9,200.00	90.00	181.17	6,100.00	-2,692.72	1,021.61	2,671.29	0.00	0.00	0.00
9,300.00	90.00	181.17	6,100.00	-2,792.70	1,019.56	2,771.29	0.00	0.00	0.00
9,400.00	90.00	181.17	6,100.00	-2,892.67	1,017.52	2,871.29	0.00	0.00	0.00
9,500.00	90.00	181.17	6,100.00	-2,992.65	1,015.48	2,971.29	0.00	0.00	0.00
9,600.00	90.00	181.17	6,100.00	-3,092.63	1,013.44	3,071.29	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SCHNEIDER 1414-05H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

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	181.17	6,100.00	-3,192.61	1,011.40	3,171.29	0.00	0.00	0.00	
9,800.00	90.00	181.17	6,100.00	-3,292.59	1,009.36	3,271.29	0.00	0.00	0.00	
9,900.00	90.00	181.17	6,100.00	-3,392.57	1,007.32	3,371.29	0.00	0.00	0.00	
10,000.00	90.00	181.17	6,100.00	-3,492.55	1,005.27	3,471.29	0.00	0.00	0.00	
10,100.00	90.00	181.17	6,100.00	-3,592.53	1,003.23	3,571.29	0.00	0.00	0.00	
10,200.00	90.00	181.17	6,100.00	-3,692.51	1,001.19	3,671.29	0.00	0.00	0.00	
10,300.00	90.00	181.17	6,100.00	-3,792.49	999.15	3,771.29	0.00	0.00	0.00	
10,400.00	90.00	181.17	6,100.00	-3,892.47	997.11	3,871.29	0.00	0.00	0.00	
10,500.00	90.00	181.17	6,100.00	-3,992.45	995.07	3,971.29	0.00	0.00	0.00	
10,600.00	90.00	181.17	6,100.00	-4,092.42	993.03	4,071.29	0.00	0.00	0.00	
10,700.00	90.00	181.17	6,100.00	-4,192.40	990.98	4,171.29	0.00	0.00	0.00	
10,800.00	90.00	181.17	6,100.00	-4,292.38	988.94	4,271.29	0.00	0.00	0.00	
10,900.00	90.00	181.17	6,100.00	-4,392.36	986.90	4,371.29	0.00	0.00	0.00	
11,000.00	90.00	181.17	6,100.00	-4,492.34	984.86	4,471.29	0.00	0.00	0.00	
11,100.00	90.00	181.17	6,100.00	-4,592.32	982.82	4,571.29	0.00	0.00	0.00	
11,200.00	90.00	181.17	6,100.00	-4,692.30	980.78	4,671.29	0.00	0.00	0.00	
11,263.36	90.00	181.17	6,100.00	-4,755.65	979.48	4,734.65	0.00	0.00	0.00	
TD Well @ 11263.36ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,725.43	1,700.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
250.00	250.00	+N/-S (usft)	+E/-W (usft)	Begin Tangent @ 250.00ft	
880.00	874.93	32.76	60.72	End Tangent @ 880.00ft	
5,595.77	5,477.13	521.25	966.05	KOP @ 5595.77ft :: DLS = 10°/100'	
6,557.47	6,100.00	-50.74	1,075.55	End Build @ 6557.47ft	
11,263.36	6,100.00	-4,755.65	979.48	TD Well @ 11263.36ft	