

VERDAD RESOURCES

WATTENBERG FIELD

8N-60W-14 SCHNEIDER 1414 PAD

SCHNEIDER 1414-06H

Wellbore #1

Plan: Design #2

Standard Planning Report

13 June, 2018

Project: WATTENBERG FIELD
Site: 8N-60W-14 SCHNEIDER 1414 PAD
Well: SCHNEIDER 1414-06H
Wellbore: Wellbore #1
Design: Design #2

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1736.80	9 5/8"	9-5/8

SHL
241' FNL
1353' FWL

LP
300' FNL
2500' FEL

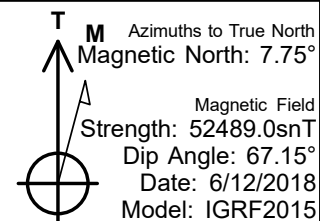
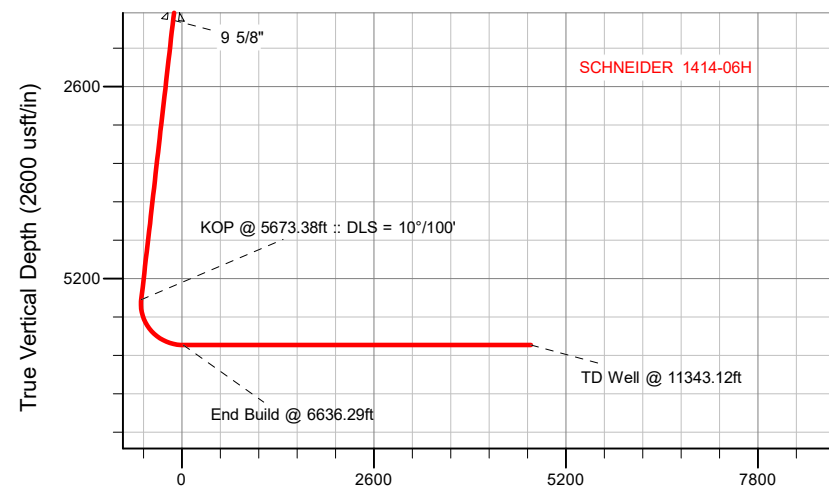
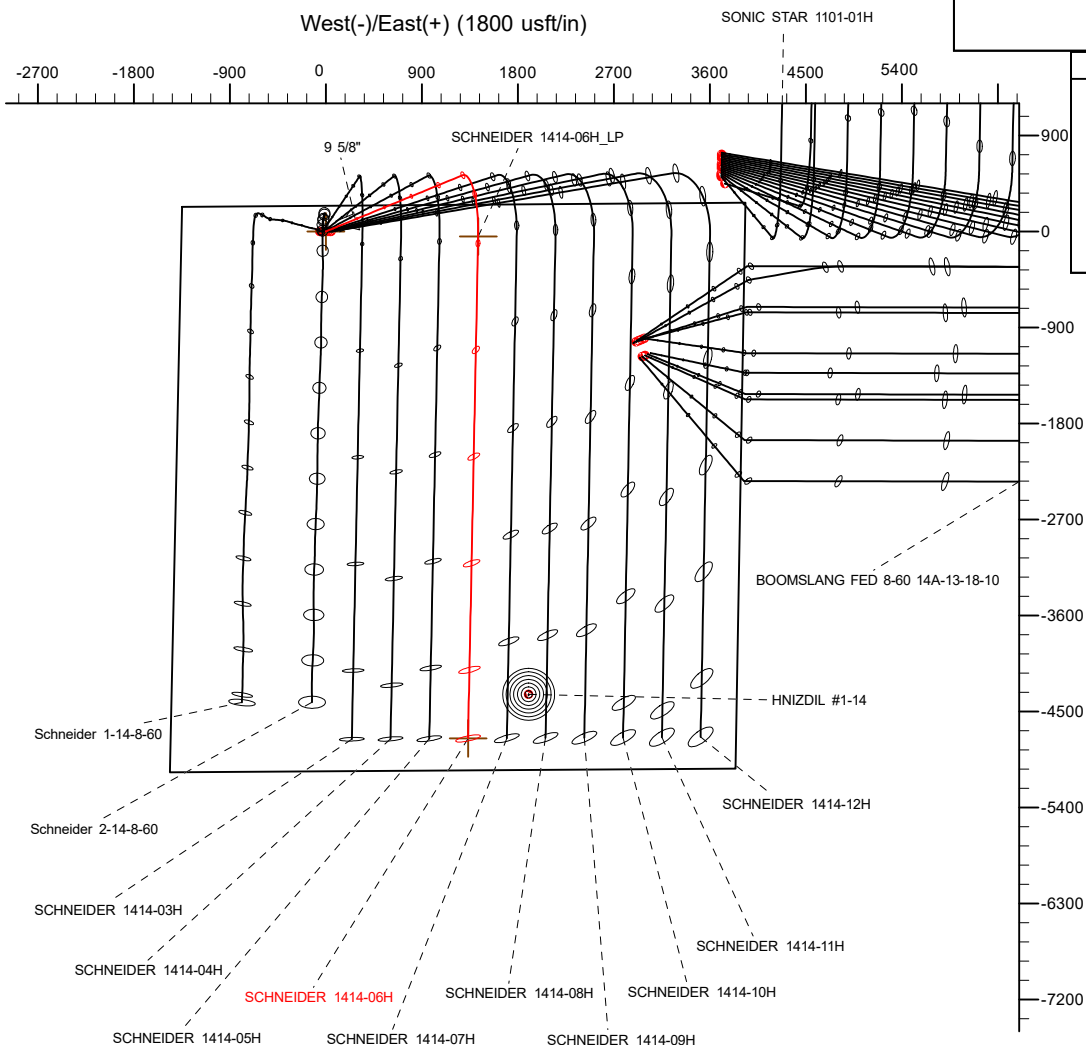
BHL
300' FSL
2513' FEL

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	1047.50	15.95	67.65	1037.24	41.94	102.00	2.00	67.65	-43.98	
4	5673.38	15.95	67.65	5485.03	525.32	1277.69	0.00	0.00	-550.86	
5	6636.29	90.00	181.15	6100.00	-47.31	1427.40	10.00	112.69	18.65	
6	11343.12	90.00	181.15	6100.00	-4753.19	1332.85	0.00	0.00	4725.48	SCHNEIDER 1414-06H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
SCHNEIDER 1414-06H_SHL	0.00	0.00	0.00	40.669101	-104.062481
SCHNEIDER 1414-06H_BHL	6100.00	-4753.19	1332.85	40.656054	-104.057677



WELL DETAILS: SCHNEIDER 1414-06H

GL = 4943'

RKB = 20' @ 4963.00usft (RIG)

Plan: Design #2 (SCHNEIDER 1414-06H/Wellbore #1)

Date: 6/13/2018

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SCHNEIDER 1414-06H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site:	8N-60W-14 SCHNEIDER 1414 PAD	North Reference:	True
Well:	SCHNEIDER 1414-06H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	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 1414-06H			
Well Position	+N/-S	-0.30 usft	Northing:	1,489,828.37 usft
	+E/-W	30.02 usft	Easting:	3,398,757.30 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 4,943.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/12/2018	7.75	67.15	52,489.03956565

Design	Design #2			
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	181.15

Plan Survey Tool Program	Date	6/13/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,700.00	Design #2 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	11,343.12	Design #2 (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	67.65	1,037.24	41.94	102.00	2.00	2.00	0.00	67.65	
5,673.38	15.95	67.65	5,485.03	525.32	1,277.69	0.00	0.00	0.00	0.00	
6,636.29	90.00	181.15	6,100.00	-47.31	1,427.40	10.00	7.69	11.79	112.69	
11,343.12	90.00	181.15	6,100.00	-4,753.19	1,332.85	0.00	0.00	0.00	0.00	SCHNEIDER 1414-06H

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site:	8N-60W-14 SCHNEIDER 1414 PAD	North Reference:	True
Well:	SCHNEIDER 1414-06H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	67.65	300.00	0.17	0.40	-0.17	2.00	2.00	0.00
400.00	3.00	67.65	399.93	1.49	3.63	-1.57	2.00	2.00	0.00
500.00	5.00	67.65	499.68	4.15	10.08	-4.35	2.00	2.00	0.00
600.00	7.00	67.65	599.13	8.12	19.75	-8.51	2.00	2.00	0.00
700.00	9.00	67.65	698.15	13.41	32.62	-14.06	2.00	2.00	0.00
800.00	11.00	67.65	796.63	20.01	48.68	-20.99	2.00	2.00	0.00
900.00	13.00	67.65	894.44	27.92	67.91	-29.28	2.00	2.00	0.00
1,000.00	15.00	67.65	991.46	37.12	90.28	-38.92	2.00	2.00	0.00
1,047.50	15.95	67.65	1,037.24	41.94	102.00	-43.98	2.00	2.00	0.00
End Tangent @ 1047.50ft									
1,100.00	15.95	67.65	1,087.72	47.42	115.35	-49.73	0.00	0.00	0.00
1,200.00	15.95	67.65	1,183.87	57.87	140.76	-60.69	0.00	0.00	0.00
1,300.00	15.95	67.65	1,280.02	68.32	166.18	-71.65	0.00	0.00	0.00
1,400.00	15.95	67.65	1,376.17	78.77	191.59	-82.60	0.00	0.00	0.00
1,500.00	15.95	67.65	1,472.32	89.22	217.01	-93.56	0.00	0.00	0.00
1,600.00	15.95	67.65	1,568.47	99.67	242.42	-104.52	0.00	0.00	0.00
1,700.00	15.95	67.65	1,664.62	110.12	267.84	-115.48	0.00	0.00	0.00
1,736.80	15.95	67.65	1,700.00	113.97	277.19	-119.51	0.00	0.00	0.00
9 5/8"									
1,800.00	15.95	67.65	1,760.77	120.57	293.26	-126.43	0.00	0.00	0.00
1,900.00	15.95	67.65	1,856.92	131.02	318.67	-137.39	0.00	0.00	0.00
2,000.00	15.95	67.65	1,953.07	141.47	344.09	-148.35	0.00	0.00	0.00
2,100.00	15.95	67.65	2,049.22	151.92	369.50	-159.31	0.00	0.00	0.00
2,200.00	15.95	67.65	2,145.37	162.37	394.92	-170.26	0.00	0.00	0.00
2,300.00	15.95	67.65	2,241.52	172.82	420.33	-181.22	0.00	0.00	0.00
2,400.00	15.95	67.65	2,337.67	183.27	445.75	-192.18	0.00	0.00	0.00
2,500.00	15.95	67.65	2,433.82	193.72	471.16	-203.14	0.00	0.00	0.00
2,600.00	15.95	67.65	2,529.97	204.17	496.58	-214.09	0.00	0.00	0.00
2,700.00	15.95	67.65	2,626.12	214.62	522.00	-225.05	0.00	0.00	0.00
2,800.00	15.95	67.65	2,722.27	225.07	547.41	-236.01	0.00	0.00	0.00
2,900.00	15.95	67.65	2,818.42	235.52	572.83	-246.97	0.00	0.00	0.00
3,000.00	15.95	67.65	2,914.57	245.97	598.24	-257.92	0.00	0.00	0.00
3,100.00	15.95	67.65	3,010.72	256.42	623.66	-268.88	0.00	0.00	0.00
3,200.00	15.95	67.65	3,106.87	266.87	649.07	-279.84	0.00	0.00	0.00
3,300.00	15.95	67.65	3,203.02	277.32	674.49	-290.80	0.00	0.00	0.00
3,400.00	15.95	67.65	3,299.17	287.77	699.90	-301.75	0.00	0.00	0.00
3,500.00	15.95	67.65	3,395.32	298.21	725.32	-312.71	0.00	0.00	0.00
3,600.00	15.95	67.65	3,491.47	308.66	750.73	-323.67	0.00	0.00	0.00
3,700.00	15.95	67.65	3,587.62	319.11	776.15	-334.63	0.00	0.00	0.00
3,800.00	15.95	67.65	3,683.77	329.56	801.57	-345.58	0.00	0.00	0.00
3,900.00	15.95	67.65	3,779.92	340.01	826.98	-356.54	0.00	0.00	0.00
4,000.00	15.95	67.65	3,876.07	350.46	852.40	-367.50	0.00	0.00	0.00
4,100.00	15.95	67.65	3,972.22	360.91	877.81	-378.46	0.00	0.00	0.00
4,200.00	15.95	67.65	4,068.37	371.36	903.23	-389.41	0.00	0.00	0.00
4,300.00	15.95	67.65	4,164.52	381.81	928.64	-400.37	0.00	0.00	0.00
4,400.00	15.95	67.65	4,260.67	392.26	954.06	-411.33	0.00	0.00	0.00
4,500.00	15.95	67.65	4,356.82	402.71	979.47	-422.29	0.00	0.00	0.00
4,600.00	15.95	67.65	4,452.97	413.16	1,004.89	-433.24	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site:	8N-60W-14 SCHNEIDER 1414 PAD	North Reference:	True
Well:	SCHNEIDER 1414-06H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	15.95	67.65	4,549.13	423.61	1,030.31	-444.20	0.00	0.00	0.00	
4,800.00	15.95	67.65	4,645.28	434.06	1,055.72	-455.16	0.00	0.00	0.00	
4,900.00	15.95	67.65	4,741.43	444.51	1,081.14	-466.12	0.00	0.00	0.00	
5,000.00	15.95	67.65	4,837.58	454.96	1,106.55	-477.08	0.00	0.00	0.00	
5,100.00	15.95	67.65	4,933.73	465.41	1,131.97	-488.03	0.00	0.00	0.00	
5,200.00	15.95	67.65	5,029.88	475.86	1,157.38	-498.99	0.00	0.00	0.00	
5,300.00	15.95	67.65	5,126.03	486.31	1,182.80	-509.95	0.00	0.00	0.00	
5,400.00	15.95	67.65	5,222.18	496.76	1,208.21	-520.91	0.00	0.00	0.00	
5,500.00	15.95	67.65	5,318.33	507.21	1,233.63	-531.86	0.00	0.00	0.00	
5,600.00	15.95	67.65	5,414.48	517.66	1,259.04	-542.82	0.00	0.00	0.00	
5,673.38	15.95	67.65	5,485.03	525.32	1,277.69	-550.86	0.00	0.00	0.00	
KOP @ 5673.38ft :: DLS = 10°/100'										
5,700.00	15.12	77.11	5,510.68	527.49	1,284.46	-553.16	10.00	-3.12	35.52	
5,800.00	15.98	114.92	5,607.27	524.59	1,309.72	-550.77	10.00	0.86	37.81	
5,900.00	21.86	140.36	5,701.98	504.41	1,334.15	-531.08	10.00	5.88	25.44	
6,000.00	29.93	154.07	5,791.95	467.55	1,356.99	-494.69	10.00	8.07	13.71	
6,100.00	38.84	162.16	5,874.43	415.13	1,377.56	-442.69	10.00	8.91	8.09	
6,200.00	48.13	167.56	5,946.93	348.75	1,395.23	-376.69	10.00	9.29	5.41	
6,300.00	57.61	171.58	6,007.25	270.43	1,409.47	-298.66	10.00	9.48	4.01	
6,400.00	67.19	174.82	6,053.54	182.54	1,419.84	-211.00	10.00	9.58	3.24	
6,500.00	76.82	177.63	6,084.40	87.76	1,426.03	-116.36	10.00	9.64	2.81	
6,600.00	86.49	180.23	6,098.89	-11.04	1,427.84	-17.62	10.00	9.67	2.60	
6,636.29	90.00	181.15	6,100.00	-47.31	1,427.40	18.65	10.00	9.67	2.54	
End Build @ 6636.29ft										
6,700.00	90.00	181.15	6,100.00	-111.00	1,426.12	82.36	0.00	0.00	0.00	
6,800.00	90.00	181.15	6,100.00	-210.98	1,424.11	182.36	0.00	0.00	0.00	
6,900.00	90.00	181.15	6,100.00	-310.96	1,422.11	282.36	0.00	0.00	0.00	
7,000.00	90.00	181.15	6,100.00	-410.94	1,420.10	382.36	0.00	0.00	0.00	
7,100.00	90.00	181.15	6,100.00	-510.92	1,418.09	482.36	0.00	0.00	0.00	
7,200.00	90.00	181.15	6,100.00	-610.90	1,416.08	582.36	0.00	0.00	0.00	
7,300.00	90.00	181.15	6,100.00	-710.88	1,414.07	682.36	0.00	0.00	0.00	
7,400.00	90.00	181.15	6,100.00	-810.86	1,412.06	782.36	0.00	0.00	0.00	
7,500.00	90.00	181.15	6,100.00	-910.84	1,410.05	882.36	0.00	0.00	0.00	
7,600.00	90.00	181.15	6,100.00	-1,010.82	1,408.04	982.36	0.00	0.00	0.00	
7,700.00	90.00	181.15	6,100.00	-1,110.80	1,406.04	1,082.36	0.00	0.00	0.00	
7,800.00	90.00	181.15	6,100.00	-1,210.78	1,404.03	1,182.36	0.00	0.00	0.00	
7,900.00	90.00	181.15	6,100.00	-1,310.76	1,402.02	1,282.36	0.00	0.00	0.00	
8,000.00	90.00	181.15	6,100.00	-1,410.74	1,400.01	1,382.36	0.00	0.00	0.00	
8,100.00	90.00	181.15	6,100.00	-1,510.72	1,398.00	1,482.36	0.00	0.00	0.00	
8,200.00	90.00	181.15	6,100.00	-1,610.70	1,395.99	1,582.36	0.00	0.00	0.00	
8,300.00	90.00	181.15	6,100.00	-1,710.68	1,393.98	1,682.36	0.00	0.00	0.00	
8,400.00	90.00	181.15	6,100.00	-1,810.66	1,391.97	1,782.36	0.00	0.00	0.00	
8,500.00	90.00	181.15	6,100.00	-1,910.64	1,389.97	1,882.36	0.00	0.00	0.00	
8,600.00	90.00	181.15	6,100.00	-2,010.62	1,387.96	1,982.36	0.00	0.00	0.00	
8,700.00	90.00	181.15	6,100.00	-2,110.60	1,385.95	2,082.36	0.00	0.00	0.00	
8,800.00	90.00	181.15	6,100.00	-2,210.58	1,383.94	2,182.36	0.00	0.00	0.00	
8,900.00	90.00	181.15	6,100.00	-2,310.56	1,381.93	2,282.36	0.00	0.00	0.00	
9,000.00	90.00	181.15	6,100.00	-2,410.54	1,379.92	2,382.36	0.00	0.00	0.00	
9,100.00	90.00	181.15	6,100.00	-2,510.52	1,377.91	2,482.36	0.00	0.00	0.00	
9,200.00	90.00	181.15	6,100.00	-2,610.50	1,375.90	2,582.36	0.00	0.00	0.00	
9,300.00	90.00	181.15	6,100.00	-2,710.48	1,373.90	2,682.36	0.00	0.00	0.00	
9,400.00	90.00	181.15	6,100.00	-2,810.46	1,371.89	2,782.36	0.00	0.00	0.00	
9,500.00	90.00	181.15	6,100.00	-2,910.44	1,369.88	2,882.36	0.00	0.00	0.00	
9,600.00	90.00	181.15	6,100.00	-3,010.42	1,367.87	2,982.36	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site:	8N-60W-14 SCHNEIDER 1414 PAD	North Reference:	True
Well:	SCHNEIDER 1414-06H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	181.15	6,100.00	-3,110.40	1,365.86	3,082.36	0.00	0.00	0.00	
9,800.00	90.00	181.15	6,100.00	-3,210.38	1,363.85	3,182.36	0.00	0.00	0.00	
9,900.00	90.00	181.15	6,100.00	-3,310.36	1,361.84	3,282.36	0.00	0.00	0.00	
10,000.00	90.00	181.15	6,100.00	-3,410.34	1,359.83	3,382.36	0.00	0.00	0.00	
10,100.00	90.00	181.15	6,100.00	-3,510.32	1,357.83	3,482.36	0.00	0.00	0.00	
10,200.00	90.00	181.15	6,100.00	-3,610.30	1,355.82	3,582.36	0.00	0.00	0.00	
10,300.00	90.00	181.15	6,100.00	-3,710.28	1,353.81	3,682.36	0.00	0.00	0.00	
10,400.00	90.00	181.15	6,100.00	-3,810.26	1,351.80	3,782.36	0.00	0.00	0.00	
10,500.00	90.00	181.15	6,100.00	-3,910.24	1,349.79	3,882.36	0.00	0.00	0.00	
10,600.00	90.00	181.15	6,100.00	-4,010.22	1,347.78	3,982.36	0.00	0.00	0.00	
10,700.00	90.00	181.15	6,100.00	-4,110.20	1,345.77	4,082.36	0.00	0.00	0.00	
10,800.00	90.00	181.15	6,100.00	-4,210.18	1,343.76	4,182.36	0.00	0.00	0.00	
10,900.00	90.00	181.15	6,100.00	-4,310.16	1,341.76	4,282.36	0.00	0.00	0.00	
11,000.00	90.00	181.15	6,100.00	-4,410.13	1,339.75	4,382.36	0.00	0.00	0.00	
11,100.00	90.00	181.15	6,100.00	-4,510.11	1,337.74	4,482.36	0.00	0.00	0.00	
11,200.00	90.00	181.15	6,100.00	-4,610.09	1,335.73	4,582.36	0.00	0.00	0.00	
11,300.00	90.00	181.15	6,100.00	-4,710.07	1,333.72	4,682.36	0.00	0.00	0.00	
11,343.12	90.00	181.15	6,100.00	-4,753.19	1,332.85	4,725.48	0.00	0.00	0.00	
TD Well @ 11343.12ft										

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	

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 Tangent @ 250.00ft	
1,047.50	1,037.24	41.94	102.00	End Tangent @ 1047.50ft	
5,673.38	5,485.03	525.32	1,277.69	KOP @ 5673.38ft :: DLS = 10°/100'	
6,636.29	6,100.00	-47.31	1,427.40	End Build @ 6636.29ft	
11,343.12	6,100.00	-4,753.19	1,332.85	TD Well @ 11343.12ft	