

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**8N-60W-11 SONIC STAR 1101 PAD**

**SONIC STAR 1101-11H**

**Plan B**

**Plan: Design #1**

## **Standard Planning Report**

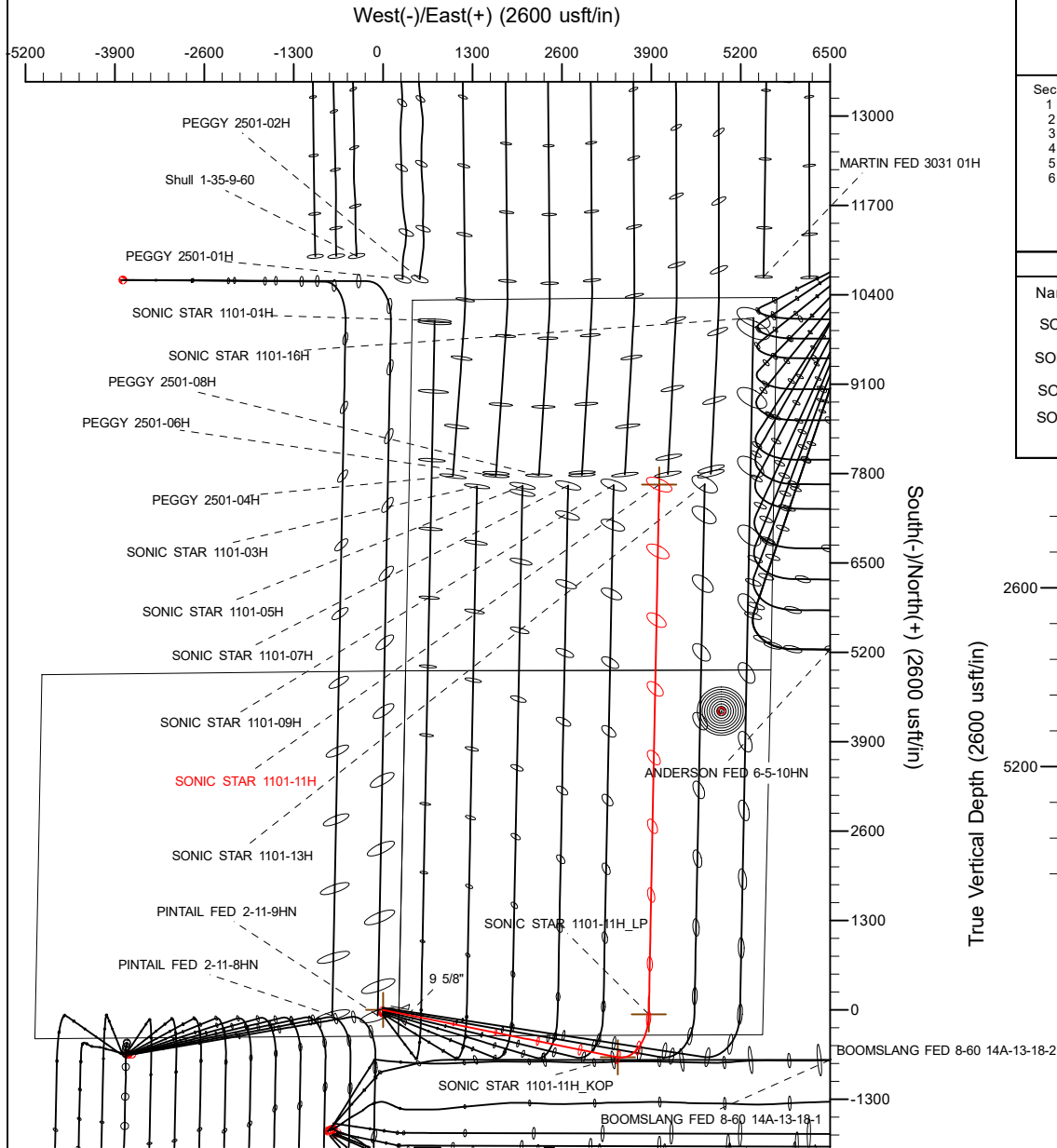
**09 November, 2020**

Project: WATTENBERG FIELD  
Site: 8N-60W-11 SONIC STAR 1101 PAD  
Well: SONIC STAR 1101-11H  
Wellbore: Plan B  
Design: Design #1

# VERDAD RESOURCES

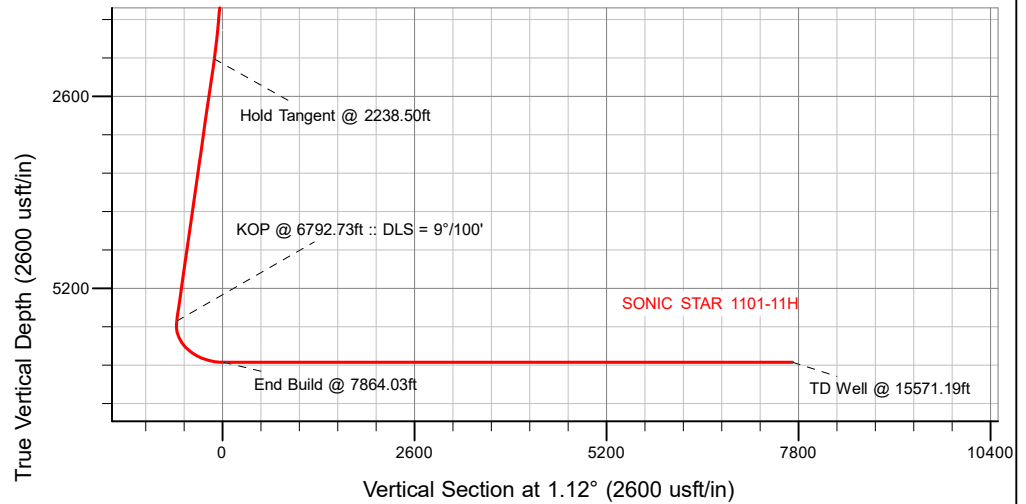
## CASING DETAILS

TVD	MD	Name	Size
1500.00	1538.19	9 5/8"	9-5/8



SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
3	2238.50	38.77	101.40	2093.92	-124.76	618.76	2.00	101.40	-112.65
4	6792.73	38.77	101.40	5644.70	-688.45	3414.33	0.00	0.00	-621.58
5	7864.03	90.00	1.12	6200.00	-64.50	3865.43	9.00	-98.05	11.06
6	15571.19	90.00	1.12	6200.00	7641.19	4015.86	0.00	0.00	7718.22

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
SONIC STAR 1101-11H_SHL	0.00	0.00	0.00	0.00	40.670876	-104.049104
SONIC STAR 1101-11H_KOP	6792.73	5644.70	-688.45	3414.33	40.668986	-104.036796
SONIC STAR 1101-11H_LP	7864.03	6200.00	-64.94	3865.60	40.670697	-104.035169
SONIC STAR 1101-11H_BHL	15571.19	6200.00	7641.19	4015.86	40.691849	-104.034623

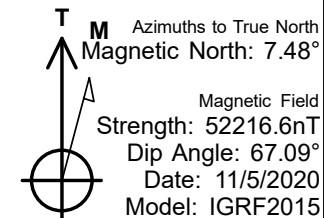


**SHL**  
378' FSL  
230' FEL

**KOP**  
321' FNL  
2108' FEL

**LP**  
300' FSL  
1661' FEL

**BHL**  
2715' FNL  
1667' FEL



## WELL DETAILS: SONIC STAR 1101-11H

GL = 4881'

RKB = 16' @ 4897.00usft (RIG)

Plan: Design #1 (SONIC STAR 1101-11H/Plan B)

Created By: SHERRYL ENERGY L.L.C. Date: 11/05/2020

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-11H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-11H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	Design #1		

<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-11 SONIC STAR 1101 PAD			
Site Position:		Northing:	1,490,400.68 usft	Latitude:	40.670506
From:	Lat/Long	Easting:	3,402,456.42 usft	Longitude:	-104.049114
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well		SONIC STAR 1101-11H				
Well Position	+N/-S	0.00 usft	Northing:	1,490,535.71 usft	Latitude:	40.670877
	+E/-W	0.00 usft	Easting:	3,402,456.84 usft	Longitude:	-104.049105
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,881.00 usft
Grid Convergence:		0.94 °				

<b>Wellbore</b>	Plan B				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/5/2020	7.48	67.09	52,216.61396357

<b>Design</b>	Design #1				
<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	1.12	

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/9/2020			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	1,500.00	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,500.00	15,571.19	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	

HP  
Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4897.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4897.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,238.50	38.77	101.40	2,093.92	-124.76	618.76	2.00	2.00	0.00	101.40	
6,792.73	38.77	101.40	5,644.70	-688.45	3,414.33	0.00	0.00	0.00	0.00	
7,864.03	90.00	1.12	6,200.00	-64.50	3,865.43	9.00	4.78	-9.36	-98.05	
15,571.19	90.00	1.12	6,200.00	7,641.19	4,015.86	0.00	0.00	0.00	0.00	SONIC STAR 1101-11

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-11H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-11H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 300.00ft									
400.00	2.00	101.40	399.98	-0.34	1.71	-0.31	2.00	2.00	0.00
500.00	4.00	101.40	499.84	-1.38	6.84	-1.25	2.00	2.00	0.00
600.00	6.00	101.40	599.45	-3.10	15.38	-2.80	2.00	2.00	0.00
700.00	8.00	101.40	698.70	-5.51	27.33	-4.98	2.00	2.00	0.00
800.00	10.00	101.40	797.47	-8.60	42.66	-7.77	2.00	2.00	0.00
900.00	12.00	101.40	895.62	-12.37	61.37	-11.17	2.00	2.00	0.00
1,000.00	14.00	101.40	993.06	-16.82	83.42	-15.19	2.00	2.00	0.00
1,100.00	16.00	101.40	1,089.64	-21.94	108.79	-19.80	2.00	2.00	0.00
1,200.00	18.00	101.40	1,185.27	-27.71	137.45	-25.02	2.00	2.00	0.00
1,300.00	20.00	101.40	1,279.82	-34.15	169.36	-30.83	2.00	2.00	0.00
1,400.00	22.00	101.40	1,373.17	-41.23	204.49	-37.23	2.00	2.00	0.00
1,500.00	24.00	101.40	1,465.21	-48.95	242.79	-44.20	2.00	2.00	0.00
1,538.19	24.76	101.40	1,500.00	-52.07	258.24	-47.01	2.00	2.00	0.00
9 5/8"									
1,600.00	26.00	101.40	1,555.84	-57.31	284.21	-51.74	2.00	2.00	0.00
1,700.00	28.00	101.40	1,644.94	-66.28	328.71	-59.84	2.00	2.00	0.00
1,800.00	30.00	101.40	1,732.39	-75.86	376.24	-68.49	2.00	2.00	0.00
1,900.00	32.00	101.40	1,818.11	-86.04	426.72	-77.68	2.00	2.00	0.00
2,000.00	34.00	101.40	1,901.97	-96.81	480.11	-87.40	2.00	2.00	0.00
2,100.00	36.00	101.40	1,983.88	-108.14	536.33	-97.64	2.00	2.00	0.00
2,200.00	38.00	101.40	2,063.74	-120.04	595.32	-108.38	2.00	2.00	0.00
2,238.50	38.77	101.40	2,093.92	-124.76	618.76	-112.65	2.00	2.00	0.00
Hold Tangent @ 2238.50ft									
2,300.00	38.77	101.40	2,141.87	-132.38	656.51	-119.52	0.00	0.00	0.00
2,400.00	38.77	101.40	2,219.83	-144.75	717.89	-130.69	0.00	0.00	0.00
2,500.00	38.77	101.40	2,297.80	-157.13	779.28	-141.87	0.00	0.00	0.00
2,600.00	38.77	101.40	2,375.77	-169.51	840.66	-153.04	0.00	0.00	0.00
2,700.00	38.77	101.40	2,453.73	-181.88	902.05	-164.22	0.00	0.00	0.00
2,800.00	38.77	101.40	2,531.70	-194.26	963.43	-175.39	0.00	0.00	0.00
2,900.00	38.77	101.40	2,609.67	-206.64	1,024.81	-186.57	0.00	0.00	0.00
3,000.00	38.77	101.40	2,687.63	-219.02	1,086.20	-197.74	0.00	0.00	0.00
3,100.00	38.77	101.40	2,765.60	-231.39	1,147.58	-208.92	0.00	0.00	0.00
3,200.00	38.77	101.40	2,843.57	-243.77	1,208.97	-220.09	0.00	0.00	0.00
3,300.00	38.77	101.40	2,921.53	-256.15	1,270.35	-231.27	0.00	0.00	0.00
3,400.00	38.77	101.40	2,999.50	-268.52	1,331.73	-242.44	0.00	0.00	0.00
3,500.00	38.77	101.40	3,077.47	-280.90	1,393.12	-253.62	0.00	0.00	0.00
3,600.00	38.77	101.40	3,155.43	-293.28	1,454.50	-264.79	0.00	0.00	0.00
3,700.00	38.77	101.40	3,233.40	-305.66	1,515.89	-275.97	0.00	0.00	0.00
3,800.00	38.77	101.40	3,311.37	-318.03	1,577.27	-287.14	0.00	0.00	0.00
3,900.00	38.77	101.40	3,389.33	-330.41	1,638.66	-298.32	0.00	0.00	0.00
4,000.00	38.77	101.40	3,467.30	-342.79	1,700.04	-309.49	0.00	0.00	0.00
4,100.00	38.77	101.40	3,545.27	-355.17	1,761.42	-320.67	0.00	0.00	0.00
4,200.00	38.77	101.40	3,623.23	-367.54	1,822.81	-331.84	0.00	0.00	0.00
4,300.00	38.77	101.40	3,701.20	-379.92	1,884.19	-343.02	0.00	0.00	0.00
4,400.00	38.77	101.40	3,779.17	-392.30	1,945.58	-354.19	0.00	0.00	0.00
4,500.00	38.77	101.40	3,857.13	-404.67	2,006.96	-365.37	0.00	0.00	0.00
4,600.00	38.77	101.40	3,935.10	-417.05	2,068.34	-376.54	0.00	0.00	0.00
4,700.00	38.77	101.40	4,013.07	-429.43	2,129.73	-387.72	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-11H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-11H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	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)
4,800.00	38.77	101.40	4,091.03	-441.81	2,191.11	-398.89	0.00	0.00	0.00
4,900.00	38.77	101.40	4,169.00	-454.18	2,252.50	-410.07	0.00	0.00	0.00
5,000.00	38.77	101.40	4,246.97	-466.56	2,313.88	-421.24	0.00	0.00	0.00
5,100.00	38.77	101.40	4,324.93	-478.94	2,375.27	-432.42	0.00	0.00	0.00
5,200.00	38.77	101.40	4,402.90	-491.31	2,436.65	-443.59	0.00	0.00	0.00
5,300.00	38.77	101.40	4,480.87	-503.69	2,498.03	-454.77	0.00	0.00	0.00
5,400.00	38.77	101.40	4,558.83	-516.07	2,559.42	-465.94	0.00	0.00	0.00
5,500.00	38.77	101.40	4,636.80	-528.45	2,620.80	-477.12	0.00	0.00	0.00
5,600.00	38.77	101.40	4,714.77	-540.82	2,682.19	-488.29	0.00	0.00	0.00
5,700.00	38.77	101.40	4,792.73	-553.20	2,743.57	-499.47	0.00	0.00	0.00
5,800.00	38.77	101.40	4,870.70	-565.58	2,804.95	-510.64	0.00	0.00	0.00
5,900.00	38.77	101.40	4,948.67	-577.96	2,866.34	-521.82	0.00	0.00	0.00
6,000.00	38.77	101.40	5,026.63	-590.33	2,927.72	-532.99	0.00	0.00	0.00
6,100.00	38.77	101.40	5,104.60	-602.71	2,989.11	-544.17	0.00	0.00	0.00
6,200.00	38.77	101.40	5,182.57	-615.09	3,050.49	-555.34	0.00	0.00	0.00
6,300.00	38.77	101.40	5,260.53	-627.46	3,111.88	-566.52	0.00	0.00	0.00
6,400.00	38.77	101.40	5,338.50	-639.84	3,173.26	-577.69	0.00	0.00	0.00
6,500.00	38.77	101.40	5,416.46	-652.22	3,234.64	-588.87	0.00	0.00	0.00
6,600.00	38.77	101.40	5,494.43	-664.60	3,296.03	-600.04	0.00	0.00	0.00
6,700.00	38.77	101.40	5,572.40	-676.97	3,357.41	-611.22	0.00	0.00	0.00
6,792.73	38.77	101.40	5,644.70	-688.45	3,414.33	-621.58	0.00	0.00	0.00
<b>KOP @ 6792.73ft :: DLS = 9°/100'</b>									
6,800.00	38.68	100.36	5,650.37	-689.31	3,418.80	-622.35	9.00	-1.20	-14.26
6,900.00	38.43	85.91	5,728.73	-692.72	3,480.67	-624.55	9.00	-0.25	-14.46
7,000.00	39.94	71.84	5,806.39	-680.47	3,542.29	-611.10	9.00	1.50	-14.07
7,100.00	43.00	59.04	5,881.45	-652.87	3,602.16	-582.33	9.00	3.07	-12.80
7,200.00	47.32	47.89	5,952.05	-610.58	3,658.79	-538.95	9.00	4.32	-11.15
7,300.00	52.58	38.32	6,016.46	-554.66	3,710.79	-482.03	9.00	5.25	-9.56
7,400.00	58.50	30.09	6,073.09	-486.49	3,756.88	-412.96	9.00	5.92	-8.24
7,500.00	64.88	22.87	6,120.54	-407.73	3,795.93	-333.45	9.00	6.38	-7.22
7,600.00	71.57	16.39	6,157.66	-320.33	3,826.97	-245.47	9.00	6.69	-6.48
7,700.00	78.47	10.40	6,183.51	-226.44	3,849.24	-151.16	9.00	6.90	-5.99
7,800.00	85.48	4.70	6,197.48	-128.38	3,862.19	-52.86	9.00	7.01	-5.70
7,864.03	90.00	1.12	6,200.00	-64.50	3,865.43	11.06	9.00	7.06	-5.59
<b>End Build @ 7864.03ft</b>									
7,900.00	90.00	1.12	6,200.00	-28.54	3,866.14	47.03	0.00	0.00	0.00
8,000.00	90.00	1.12	6,200.00	71.44	3,868.09	147.03	0.00	0.00	0.00
8,100.00	90.00	1.12	6,200.00	171.42	3,870.04	247.03	0.00	0.00	0.00
8,200.00	90.00	1.12	6,200.00	271.40	3,871.99	347.03	0.00	0.00	0.00
8,300.00	90.00	1.12	6,200.00	371.38	3,873.94	447.03	0.00	0.00	0.00
8,400.00	90.00	1.12	6,200.00	471.36	3,875.89	547.03	0.00	0.00	0.00
8,500.00	90.00	1.12	6,200.00	571.34	3,877.85	647.03	0.00	0.00	0.00
8,600.00	90.00	1.12	6,200.00	671.32	3,879.80	747.03	0.00	0.00	0.00
8,700.00	90.00	1.12	6,200.00	771.30	3,881.75	847.03	0.00	0.00	0.00
8,800.00	90.00	1.12	6,200.00	871.28	3,883.70	947.03	0.00	0.00	0.00
8,900.00	90.00	1.12	6,200.00	971.27	3,885.65	1,047.03	0.00	0.00	0.00
9,000.00	90.00	1.12	6,200.00	1,071.25	3,887.61	1,147.03	0.00	0.00	0.00
9,100.00	90.00	1.12	6,200.00	1,171.23	3,889.56	1,247.03	0.00	0.00	0.00
9,200.00	90.00	1.12	6,200.00	1,271.21	3,891.51	1,347.03	0.00	0.00	0.00
9,300.00	90.00	1.12	6,200.00	1,371.19	3,893.46	1,447.03	0.00	0.00	0.00
9,400.00	90.00	1.12	6,200.00	1,471.17	3,895.41	1,547.03	0.00	0.00	0.00
9,500.00	90.00	1.12	6,200.00	1,571.15	3,897.36	1,647.03	0.00	0.00	0.00
9,600.00	90.00	1.12	6,200.00	1,671.13	3,899.32	1,747.03	0.00	0.00	0.00
9,700.00	90.00	1.12	6,200.00	1,771.11	3,901.27	1,847.03	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-11H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-11H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	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)
9,800.00	90.00	1.12	6,200.00	1,871.09	3,903.22	1,947.03	0.00	0.00	0.00
9,900.00	90.00	1.12	6,200.00	1,971.07	3,905.17	2,047.03	0.00	0.00	0.00
10,000.00	90.00	1.12	6,200.00	2,071.06	3,907.12	2,147.03	0.00	0.00	0.00
10,100.00	90.00	1.12	6,200.00	2,171.04	3,909.07	2,247.03	0.00	0.00	0.00
10,200.00	90.00	1.12	6,200.00	2,271.02	3,911.03	2,347.03	0.00	0.00	0.00
10,300.00	90.00	1.12	6,200.00	2,371.00	3,912.98	2,447.03	0.00	0.00	0.00
10,400.00	90.00	1.12	6,200.00	2,470.98	3,914.93	2,547.03	0.00	0.00	0.00
10,500.00	90.00	1.12	6,200.00	2,570.96	3,916.88	2,647.03	0.00	0.00	0.00
10,600.00	90.00	1.12	6,200.00	2,670.94	3,918.83	2,747.03	0.00	0.00	0.00
10,700.00	90.00	1.12	6,200.00	2,770.92	3,920.78	2,847.03	0.00	0.00	0.00
10,800.00	90.00	1.12	6,200.00	2,870.90	3,922.74	2,947.03	0.00	0.00	0.00
10,900.00	90.00	1.12	6,200.00	2,970.88	3,924.69	3,047.03	0.00	0.00	0.00
11,000.00	90.00	1.12	6,200.00	3,070.87	3,926.64	3,147.03	0.00	0.00	0.00
11,100.00	90.00	1.12	6,200.00	3,170.85	3,928.59	3,247.03	0.00	0.00	0.00
11,200.00	90.00	1.12	6,200.00	3,270.83	3,930.54	3,347.03	0.00	0.00	0.00
11,300.00	90.00	1.12	6,200.00	3,370.81	3,932.49	3,447.03	0.00	0.00	0.00
11,400.00	90.00	1.12	6,200.00	3,470.79	3,934.45	3,547.03	0.00	0.00	0.00
11,500.00	90.00	1.12	6,200.00	3,570.77	3,936.40	3,647.03	0.00	0.00	0.00
11,600.00	90.00	1.12	6,200.00	3,670.75	3,938.35	3,747.03	0.00	0.00	0.00
11,700.00	90.00	1.12	6,200.00	3,770.73	3,940.30	3,847.03	0.00	0.00	0.00
11,800.00	90.00	1.12	6,200.00	3,870.71	3,942.25	3,947.03	0.00	0.00	0.00
11,900.00	90.00	1.12	6,200.00	3,970.69	3,944.21	4,047.03	0.00	0.00	0.00
12,000.00	90.00	1.12	6,200.00	4,070.67	3,946.16	4,147.03	0.00	0.00	0.00
12,100.00	90.00	1.12	6,200.00	4,170.66	3,948.11	4,247.03	0.00	0.00	0.00
12,200.00	90.00	1.12	6,200.00	4,270.64	3,950.06	4,347.03	0.00	0.00	0.00
12,300.00	90.00	1.12	6,200.00	4,370.62	3,952.01	4,447.03	0.00	0.00	0.00
12,400.00	90.00	1.12	6,200.00	4,470.60	3,953.96	4,547.03	0.00	0.00	0.00
12,500.00	90.00	1.12	6,200.00	4,570.58	3,955.92	4,647.03	0.00	0.00	0.00
12,600.00	90.00	1.12	6,200.00	4,670.56	3,957.87	4,747.03	0.00	0.00	0.00
12,700.00	90.00	1.12	6,200.00	4,770.54	3,959.82	4,847.03	0.00	0.00	0.00
12,800.00	90.00	1.12	6,200.00	4,870.52	3,961.77	4,947.03	0.00	0.00	0.00
12,900.00	90.00	1.12	6,200.00	4,970.50	3,963.72	5,047.03	0.00	0.00	0.00
13,000.00	90.00	1.12	6,200.00	5,070.48	3,965.67	5,147.03	0.00	0.00	0.00
13,100.00	90.00	1.12	6,200.00	5,170.47	3,967.63	5,247.03	0.00	0.00	0.00
13,200.00	90.00	1.12	6,200.00	5,270.45	3,969.58	5,347.03	0.00	0.00	0.00
13,300.00	90.00	1.12	6,200.00	5,370.43	3,971.53	5,447.03	0.00	0.00	0.00
13,400.00	90.00	1.12	6,200.00	5,470.41	3,973.48	5,547.03	0.00	0.00	0.00
13,500.00	90.00	1.12	6,200.00	5,570.39	3,975.43	5,647.03	0.00	0.00	0.00
13,600.00	90.00	1.12	6,200.00	5,670.37	3,977.38	5,747.03	0.00	0.00	0.00
13,700.00	90.00	1.12	6,200.00	5,770.35	3,979.34	5,847.03	0.00	0.00	0.00
13,800.00	90.00	1.12	6,200.00	5,870.33	3,981.29	5,947.03	0.00	0.00	0.00
13,900.00	90.00	1.12	6,200.00	5,970.31	3,983.24	6,047.03	0.00	0.00	0.00
14,000.00	90.00	1.12	6,200.00	6,070.29	3,985.19	6,147.03	0.00	0.00	0.00
14,100.00	90.00	1.12	6,200.00	6,170.27	3,987.14	6,247.03	0.00	0.00	0.00
14,200.00	90.00	1.12	6,200.00	6,270.26	3,989.09	6,347.03	0.00	0.00	0.00
14,300.00	90.00	1.12	6,200.00	6,370.24	3,991.05	6,447.03	0.00	0.00	0.00
14,400.00	90.00	1.12	6,200.00	6,470.22	3,993.00	6,547.03	0.00	0.00	0.00
14,500.00	90.00	1.12	6,200.00	6,570.20	3,994.95	6,647.03	0.00	0.00	0.00
14,600.00	90.00	1.12	6,200.00	6,670.18	3,996.90	6,747.03	0.00	0.00	0.00
14,700.00	90.00	1.12	6,200.00	6,770.16	3,998.85	6,847.03	0.00	0.00	0.00
14,800.00	90.00	1.12	6,200.00	6,870.14	4,000.80	6,947.03	0.00	0.00	0.00
14,900.00	90.00	1.12	6,200.00	6,970.12	4,002.76	7,047.03	0.00	0.00	0.00
15,000.00	90.00	1.12	6,200.00	7,070.10	4,004.71	7,147.03	0.00	0.00	0.00
15,100.00	90.00	1.12	6,200.00	7,170.08	4,006.66	7,247.03	0.00	0.00	0.00

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-11H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4897.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-11H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	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)	
15,200.00	90.00	1.12	6,200.00	7,270.07	4,008.61	7,347.03	0.00	0.00	0.00	
15,300.00	90.00	1.12	6,200.00	7,370.05	4,010.56	7,447.03	0.00	0.00	0.00	
15,400.00	90.00	1.12	6,200.00	7,470.03	4,012.52	7,547.03	0.00	0.00	0.00	
15,500.00	90.00	1.12	6,200.00	7,570.01	4,014.47	7,647.03	0.00	0.00	0.00	
15,571.19	90.00	1.12	6,200.00	7,641.19	4,015.86	7,718.22	0.00	0.00	0.00	
TD Well @ 15571.19ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,538.19	1,500.00	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)		
300.00	300.00	0.00	0.00	Begin Nudge @ 300.00ft	
2,238.50	2,093.92	-124.76	618.76	Hold Tangent @ 2238.50ft	
6,792.73	5,644.70	-688.45	3,414.33	KOP @ 6792.73ft :: DLS = 9°/100'	
7,864.03	6,200.00	-64.50	3,865.43	End Build @ 7864.03ft	
15,571.19	6,200.00	7,641.19	4,015.86	TD Well @ 15571.19ft	