

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
8N-60W-11 SONIC STAR 1101 PAD  
SONIC STAR 1101-09H**

**Plan B**

**Plan: Design #1**

## **Standard Planning Report**

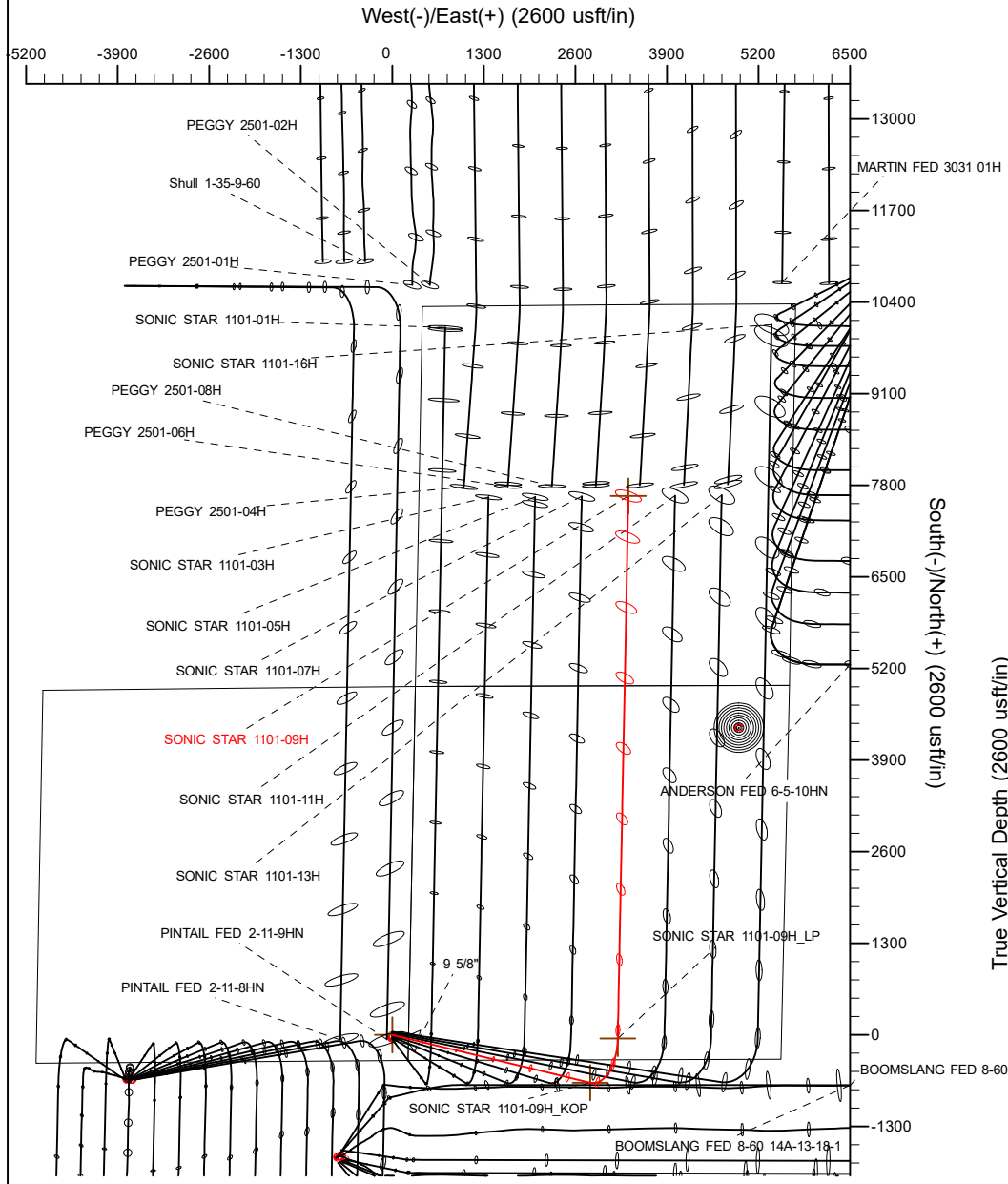
**09 November, 2020**

Project: WATTENBERG FIELD  
 Site: 8N-60W-11 SONIC STAR 1101 PAD  
 Well: SONIC STAR 1101-09H  
 Wellbore: Plan B  
 Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1540.26	9 5/8"	9-5/8

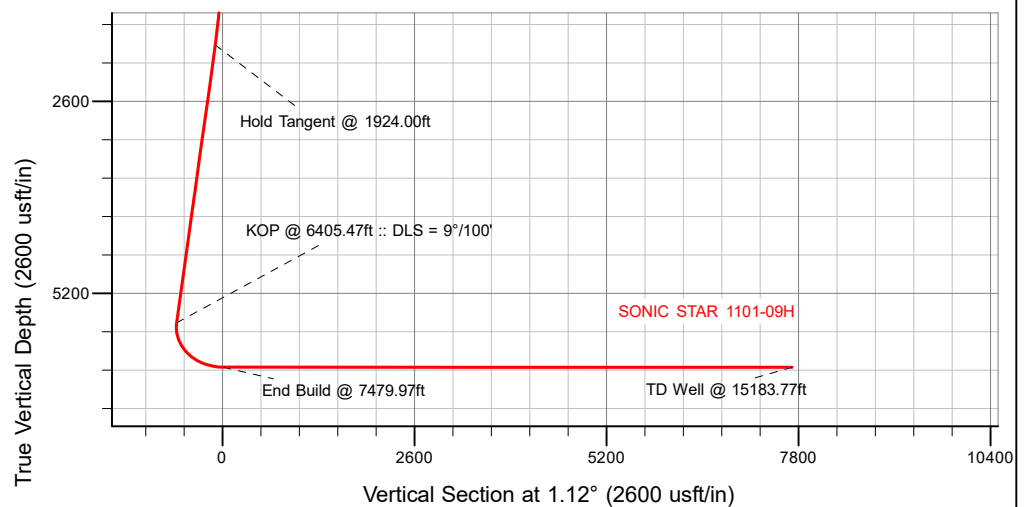


### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	
3	1924.00	32.88	103.54	1835.24	-107.44	446.16	2.00	103.54	-98.70	
4	6405.47	32.88	103.54	5598.82	-677.04	2811.45	0.00	0.00	-621.96	
5	7479.97	90.00	1.12	6200.00	-52.32	3203.26	9.00	-100.48	10.30	
6	15183.77	90.00	1.12	6200.00	7650.01	3353.83	0.00	0.00	7714.10	SONIC STAR 1101-09H_BHL

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
SONIC STAR 1101-09H_SHL	0.00	0.00	0.00	0.00	40.670835	-104.049105
SONIC STAR 1101-09H_KOP	6405.47	5598.82	-677.04	2811.45	40.668977	-104.038971
SONIC STAR 1101-09H_LP	7479.97	6200.00	-52.25	3203.48	40.670691	-104.037557
SONIC STAR 1101-09H_BHL	15183.77	6200.00	7650.01	3353.83	40.691833	-104.037011



<b>SHL</b> 363' FSL 230' FEL	<b>KOP</b> 323' FNL 2588' FWL	<b>LP</b> 300' FSL 2323' FEL	<b>BHL</b> 2715' FNL 2329' FEL
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**T**  
**M** Azimuths to True North  
 Magnetic North: 7.48°

Magnetic Field  
 Strength: 52216.6nT  
 Dip Angle: 67.09°  
 Date: 11/5/2020  
 Model: IGRF2015

WELL DETAILS: SONIC STAR 1101-09H
GL = 4881'
RKB = 16' @ 4897.00usft (RIG)
Plan: Design #1 (SONIC STAR 1101-09H/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 1101-09H
<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 1101-09H	<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		

<b>Site</b>	8N-60W-11 SONIC STAR 1101 PAD				
<b>Site Position:</b>		<b>Northing:</b>	1,490,400.68 usft	<b>Latitude:</b>	40.670506
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,402,456.42 usft	<b>Longitude:</b>	-104.049114
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	SONIC STAR 1101-09H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,490,520.74 usft	<b>Latitude:</b>	40.670835
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,402,456.81 usft	<b>Longitude:</b>	-104.049106
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	4,881.00 usft
<b>Grid Convergence:</b>		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	52,216.59291296

<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	15,183.77	Design #1 (Plan B)	ISCWSA MWD Fixed:v2:standard declination	

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-09H
<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 1101-09H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	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	
280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,924.00	32.88	103.54	1,835.24	-107.44	446.16	2.00	2.00	0.00	103.54	
6,405.47	32.88	103.54	5,598.82	-677.04	2,811.45	0.00	0.00	0.00	0.00	
7,479.97	90.00	1.12	6,200.00	-52.32	3,203.26	9.00	5.32	-9.53	-100.48	
15,183.77	90.00	1.12	6,200.00	7,650.01	3,353.83	0.00	0.00	0.00	0.00	SONIC STAR 1101-09

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-09H
<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 1101-09H	<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
280.00	0.00	0.00	280.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 280.00ft</b>									
300.00	0.40	103.54	300.00	-0.02	0.07	-0.02	2.00	2.00	0.00
400.00	2.40	103.54	399.96	-0.59	2.44	-0.54	2.00	2.00	0.00
500.00	4.40	103.54	499.78	-1.98	8.21	-1.82	2.00	2.00	0.00
600.00	6.40	103.54	599.33	-4.18	17.36	-3.84	2.00	2.00	0.00
700.00	8.40	103.54	698.50	-7.20	29.88	-6.61	2.00	2.00	0.00
800.00	10.40	103.54	797.15	-11.02	45.76	-10.12	2.00	2.00	0.00
900.00	12.40	103.54	895.17	-15.65	64.97	-14.37	2.00	2.00	0.00
1,000.00	14.40	103.54	992.44	-21.07	87.50	-19.36	2.00	2.00	0.00
1,100.00	16.40	103.54	1,088.85	-27.29	113.32	-25.07	2.00	2.00	0.00
1,200.00	18.40	103.54	1,184.27	-34.29	142.39	-31.50	2.00	2.00	0.00
1,300.00	20.40	103.54	1,278.59	-42.07	174.68	-38.64	2.00	2.00	0.00
1,400.00	22.40	103.54	1,371.69	-50.61	210.15	-46.49	2.00	2.00	0.00
1,500.00	24.40	103.54	1,463.46	-59.91	248.76	-55.03	2.00	2.00	0.00
1,540.26	25.21	103.54	1,500.00	-63.86	265.18	-58.66	2.00	2.00	0.00
<b>9 5/8"</b>									
1,600.00	26.40	103.54	1,553.79	-69.95	290.46	-64.26	2.00	2.00	0.00
1,700.00	28.40	103.54	1,642.56	-80.72	335.20	-74.15	2.00	2.00	0.00
1,800.00	30.40	103.54	1,729.68	-92.21	382.92	-84.71	2.00	2.00	0.00
1,900.00	32.40	103.54	1,815.03	-104.41	433.57	-95.92	2.00	2.00	0.00
1,924.00	32.88	103.54	1,835.24	-107.44	446.16	-98.70	2.00	2.00	0.00
<b>Hold Tangent @ 1924.00ft</b>									
2,000.00	32.88	103.54	1,899.07	-117.10	486.27	-107.57	0.00	0.00	0.00
2,100.00	32.88	103.54	1,983.05	-129.81	539.05	-119.25	0.00	0.00	0.00
2,200.00	32.88	103.54	2,067.03	-142.52	591.83	-130.93	0.00	0.00	0.00
2,300.00	32.88	103.54	2,151.01	-155.23	644.61	-142.60	0.00	0.00	0.00
2,400.00	32.88	103.54	2,234.99	-167.94	697.39	-154.28	0.00	0.00	0.00
2,500.00	32.88	103.54	2,318.97	-180.65	750.17	-165.96	0.00	0.00	0.00
2,600.00	32.88	103.54	2,402.95	-193.36	802.95	-177.63	0.00	0.00	0.00
2,700.00	32.88	103.54	2,486.93	-206.07	855.72	-189.31	0.00	0.00	0.00
2,800.00	32.88	103.54	2,570.91	-218.78	908.50	-200.98	0.00	0.00	0.00
2,900.00	32.88	103.54	2,654.89	-231.49	961.28	-212.66	0.00	0.00	0.00
3,000.00	32.88	103.54	2,738.88	-244.20	1,014.06	-224.34	0.00	0.00	0.00
3,100.00	32.88	103.54	2,822.86	-256.91	1,066.84	-236.01	0.00	0.00	0.00
3,200.00	32.88	103.54	2,906.84	-269.62	1,119.62	-247.69	0.00	0.00	0.00
3,300.00	32.88	103.54	2,990.82	-282.33	1,172.40	-259.36	0.00	0.00	0.00
3,400.00	32.88	103.54	3,074.80	-295.04	1,225.18	-271.04	0.00	0.00	0.00
3,500.00	32.88	103.54	3,158.78	-307.75	1,277.96	-282.72	0.00	0.00	0.00
3,600.00	32.88	103.54	3,242.76	-320.46	1,330.74	-294.39	0.00	0.00	0.00
3,700.00	32.88	103.54	3,326.74	-333.17	1,383.52	-306.07	0.00	0.00	0.00
3,800.00	32.88	103.54	3,410.72	-345.89	1,436.30	-317.74	0.00	0.00	0.00
3,900.00	32.88	103.54	3,494.70	-358.60	1,489.08	-329.42	0.00	0.00	0.00
4,000.00	32.88	103.54	3,578.68	-371.31	1,541.86	-341.10	0.00	0.00	0.00
4,100.00	32.88	103.54	3,662.67	-384.02	1,594.63	-352.77	0.00	0.00	0.00
4,200.00	32.88	103.54	3,746.65	-396.73	1,647.41	-364.45	0.00	0.00	0.00
4,300.00	32.88	103.54	3,830.63	-409.44	1,700.19	-376.12	0.00	0.00	0.00
4,400.00	32.88	103.54	3,914.61	-422.15	1,752.97	-387.80	0.00	0.00	0.00
4,500.00	32.88	103.54	3,998.59	-434.86	1,805.75	-399.48	0.00	0.00	0.00
4,600.00	32.88	103.54	4,082.57	-447.57	1,858.53	-411.15	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 1101-09H
<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 1101-09H	<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)
4,700.00	32.88	103.54	4,166.55	-460.28	1,911.31	-422.83	0.00	0.00	0.00
4,800.00	32.88	103.54	4,250.53	-472.99	1,964.09	-434.51	0.00	0.00	0.00
4,900.00	32.88	103.54	4,334.51	-485.70	2,016.87	-446.18	0.00	0.00	0.00
5,000.00	32.88	103.54	4,418.49	-498.41	2,069.65	-457.86	0.00	0.00	0.00
5,100.00	32.88	103.54	4,502.48	-511.12	2,122.43	-469.53	0.00	0.00	0.00
5,200.00	32.88	103.54	4,586.46	-523.83	2,175.21	-481.21	0.00	0.00	0.00
5,300.00	32.88	103.54	4,670.44	-536.54	2,227.99	-492.89	0.00	0.00	0.00
5,400.00	32.88	103.54	4,754.42	-549.25	2,280.77	-504.56	0.00	0.00	0.00
5,500.00	32.88	103.54	4,838.40	-561.96	2,333.54	-516.24	0.00	0.00	0.00
5,600.00	32.88	103.54	4,922.38	-574.67	2,386.32	-527.91	0.00	0.00	0.00
5,700.00	32.88	103.54	5,006.36	-587.38	2,439.10	-539.59	0.00	0.00	0.00
5,800.00	32.88	103.54	5,090.34	-600.09	2,491.88	-551.27	0.00	0.00	0.00
5,900.00	32.88	103.54	5,174.32	-612.80	2,544.66	-562.94	0.00	0.00	0.00
6,000.00	32.88	103.54	5,258.30	-625.51	2,597.44	-574.62	0.00	0.00	0.00
6,100.00	32.88	103.54	5,342.28	-638.22	2,650.22	-586.29	0.00	0.00	0.00
6,200.00	32.88	103.54	5,426.27	-650.93	2,703.00	-597.97	0.00	0.00	0.00
6,300.00	32.88	103.54	5,510.25	-663.64	2,755.78	-609.65	0.00	0.00	0.00
6,400.00	32.88	103.54	5,594.23	-676.35	2,808.56	-621.32	0.00	0.00	0.00
6,405.47	32.88	103.54	5,598.82	-677.04	2,811.45	-621.96	0.00	0.00	0.00
<b>KOP @ 6405.47ft :: DLS = 9°/100'</b>									
6,500.00	32.31	87.75	5,678.61	-682.07	2,861.73	-626.00	9.00	-0.60	-16.71
6,600.00	33.84	71.45	5,762.57	-672.14	2,914.94	-615.03	9.00	1.53	-16.29
6,700.00	37.29	57.12	5,844.05	-646.79	2,966.88	-588.67	9.00	3.45	-14.33
6,800.00	42.18	45.27	5,921.04	-606.63	3,016.28	-547.56	9.00	4.90	-11.85
6,900.00	48.08	35.65	5,991.64	-552.66	3,061.91	-492.71	9.00	5.89	-9.62
7,000.00	54.63	27.74	6,054.11	-486.21	3,102.66	-425.47	9.00	6.55	-7.91
7,100.00	61.62	21.06	6,106.92	-408.91	3,137.52	-347.51	9.00	6.99	-6.68
7,200.00	68.90	15.22	6,148.77	-322.67	3,165.63	-260.73	9.00	7.28	-5.84
7,300.00	76.36	9.93	6,178.63	-229.61	3,186.30	-167.28	9.00	7.46	-5.28
7,400.00	83.92	4.98	6,195.76	-132.01	3,199.02	-69.46	9.00	7.56	-4.96
7,479.97	90.00	1.12	6,200.00	-52.32	3,203.26	10.30	9.00	7.60	-4.82
<b>End Build @ 7479.97ft</b>									
7,500.00	90.00	1.12	6,200.00	-32.29	3,203.65	30.33	0.00	0.00	0.00
7,600.00	90.00	1.12	6,200.00	67.69	3,205.60	130.33	0.00	0.00	0.00
7,700.00	90.00	1.12	6,200.00	167.67	3,207.56	230.33	0.00	0.00	0.00
7,800.00	90.00	1.12	6,200.00	267.65	3,209.51	330.33	0.00	0.00	0.00
7,900.00	90.00	1.12	6,200.00	367.63	3,211.47	430.33	0.00	0.00	0.00
8,000.00	90.00	1.12	6,200.00	467.61	3,213.42	530.33	0.00	0.00	0.00
8,100.00	90.00	1.12	6,200.00	567.59	3,215.38	630.33	0.00	0.00	0.00
8,200.00	90.00	1.12	6,200.00	667.57	3,217.33	730.33	0.00	0.00	0.00
8,300.00	90.00	1.12	6,200.00	767.55	3,219.28	830.33	0.00	0.00	0.00
8,400.00	90.00	1.12	6,200.00	867.53	3,221.24	930.33	0.00	0.00	0.00
8,500.00	90.00	1.12	6,200.00	967.51	3,223.19	1,030.33	0.00	0.00	0.00
8,600.00	90.00	1.12	6,200.00	1,067.50	3,225.15	1,130.33	0.00	0.00	0.00
8,700.00	90.00	1.12	6,200.00	1,167.48	3,227.10	1,230.33	0.00	0.00	0.00
8,800.00	90.00	1.12	6,200.00	1,267.46	3,229.06	1,330.33	0.00	0.00	0.00
8,900.00	90.00	1.12	6,200.00	1,367.44	3,231.01	1,430.33	0.00	0.00	0.00
9,000.00	90.00	1.12	6,200.00	1,467.42	3,232.97	1,530.33	0.00	0.00	0.00
9,100.00	90.00	1.12	6,200.00	1,567.40	3,234.92	1,630.33	0.00	0.00	0.00
9,200.00	90.00	1.12	6,200.00	1,667.38	3,236.88	1,730.33	0.00	0.00	0.00
9,300.00	90.00	1.12	6,200.00	1,767.36	3,238.83	1,830.33	0.00	0.00	0.00
9,400.00	90.00	1.12	6,200.00	1,867.34	3,240.78	1,930.33	0.00	0.00	0.00
9,500.00	90.00	1.12	6,200.00	1,967.32	3,242.74	2,030.33	0.00	0.00	0.00
9,600.00	90.00	1.12	6,200.00	2,067.30	3,244.69	2,130.33	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 1101-09H
<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 1101-09H	<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)
9,700.00	90.00	1.12	6,200.00	2,167.29	3,246.65	2,230.33	0.00	0.00	0.00
9,800.00	90.00	1.12	6,200.00	2,267.27	3,248.60	2,330.33	0.00	0.00	0.00
9,900.00	90.00	1.12	6,200.00	2,367.25	3,250.56	2,430.33	0.00	0.00	0.00
10,000.00	90.00	1.12	6,200.00	2,467.23	3,252.51	2,530.33	0.00	0.00	0.00
10,100.00	90.00	1.12	6,200.00	2,567.21	3,254.47	2,630.33	0.00	0.00	0.00
10,200.00	90.00	1.12	6,200.00	2,667.19	3,256.42	2,730.33	0.00	0.00	0.00
10,300.00	90.00	1.12	6,200.00	2,767.17	3,258.38	2,830.33	0.00	0.00	0.00
10,400.00	90.00	1.12	6,200.00	2,867.15	3,260.33	2,930.33	0.00	0.00	0.00
10,500.00	90.00	1.12	6,200.00	2,967.13	3,262.29	3,030.33	0.00	0.00	0.00
10,600.00	90.00	1.12	6,200.00	3,067.11	3,264.24	3,130.33	0.00	0.00	0.00
10,700.00	90.00	1.12	6,200.00	3,167.09	3,266.19	3,230.33	0.00	0.00	0.00
10,800.00	90.00	1.12	6,200.00	3,267.08	3,268.15	3,330.33	0.00	0.00	0.00
10,900.00	90.00	1.12	6,200.00	3,367.06	3,270.10	3,430.33	0.00	0.00	0.00
11,000.00	90.00	1.12	6,200.00	3,467.04	3,272.06	3,530.33	0.00	0.00	0.00
11,100.00	90.00	1.12	6,200.00	3,567.02	3,274.01	3,630.33	0.00	0.00	0.00
11,200.00	90.00	1.12	6,200.00	3,667.00	3,275.97	3,730.33	0.00	0.00	0.00
11,300.00	90.00	1.12	6,200.00	3,766.98	3,277.92	3,830.33	0.00	0.00	0.00
11,400.00	90.00	1.12	6,200.00	3,866.96	3,279.88	3,930.33	0.00	0.00	0.00
11,500.00	90.00	1.12	6,200.00	3,966.94	3,281.83	4,030.33	0.00	0.00	0.00
11,600.00	90.00	1.12	6,200.00	4,066.92	3,283.79	4,130.33	0.00	0.00	0.00
11,700.00	90.00	1.12	6,200.00	4,166.90	3,285.74	4,230.33	0.00	0.00	0.00
11,800.00	90.00	1.12	6,200.00	4,266.88	3,287.69	4,330.33	0.00	0.00	0.00
11,900.00	90.00	1.12	6,200.00	4,366.87	3,289.65	4,430.33	0.00	0.00	0.00
12,000.00	90.00	1.12	6,200.00	4,466.85	3,291.60	4,530.33	0.00	0.00	0.00
12,100.00	90.00	1.12	6,200.00	4,566.83	3,293.56	4,630.33	0.00	0.00	0.00
12,200.00	90.00	1.12	6,200.00	4,666.81	3,295.51	4,730.33	0.00	0.00	0.00
12,300.00	90.00	1.12	6,200.00	4,766.79	3,297.47	4,830.33	0.00	0.00	0.00
12,400.00	90.00	1.12	6,200.00	4,866.77	3,299.42	4,930.33	0.00	0.00	0.00
12,500.00	90.00	1.12	6,200.00	4,966.75	3,301.38	5,030.33	0.00	0.00	0.00
12,600.00	90.00	1.12	6,200.00	5,066.73	3,303.33	5,130.33	0.00	0.00	0.00
12,700.00	90.00	1.12	6,200.00	5,166.71	3,305.29	5,230.33	0.00	0.00	0.00
12,800.00	90.00	1.12	6,200.00	5,266.69	3,307.24	5,330.33	0.00	0.00	0.00
12,900.00	90.00	1.12	6,200.00	5,366.67	3,309.19	5,430.33	0.00	0.00	0.00
13,000.00	90.00	1.12	6,200.00	5,466.65	3,311.15	5,530.33	0.00	0.00	0.00
13,100.00	90.00	1.12	6,200.00	5,566.64	3,313.10	5,630.33	0.00	0.00	0.00
13,200.00	90.00	1.12	6,200.00	5,666.62	3,315.06	5,730.33	0.00	0.00	0.00
13,300.00	90.00	1.12	6,200.00	5,766.60	3,317.01	5,830.33	0.00	0.00	0.00
13,400.00	90.00	1.12	6,200.00	5,866.58	3,318.97	5,930.33	0.00	0.00	0.00
13,500.00	90.00	1.12	6,200.00	5,966.56	3,320.92	6,030.33	0.00	0.00	0.00
13,600.00	90.00	1.12	6,200.00	6,066.54	3,322.88	6,130.33	0.00	0.00	0.00
13,700.00	90.00	1.12	6,200.00	6,166.52	3,324.83	6,230.33	0.00	0.00	0.00
13,800.00	90.00	1.12	6,200.00	6,266.50	3,326.79	6,330.33	0.00	0.00	0.00
13,900.00	90.00	1.12	6,200.00	6,366.48	3,328.74	6,430.33	0.00	0.00	0.00
14,000.00	90.00	1.12	6,200.00	6,466.46	3,330.69	6,530.33	0.00	0.00	0.00
14,100.00	90.00	1.12	6,200.00	6,566.44	3,332.65	6,630.33	0.00	0.00	0.00
14,200.00	90.00	1.12	6,200.00	6,666.43	3,334.60	6,730.33	0.00	0.00	0.00
14,300.00	90.00	1.12	6,200.00	6,766.41	3,336.56	6,830.33	0.00	0.00	0.00
14,400.00	90.00	1.12	6,200.00	6,866.39	3,338.51	6,930.33	0.00	0.00	0.00
14,500.00	90.00	1.12	6,200.00	6,966.37	3,340.47	7,030.33	0.00	0.00	0.00
14,600.00	90.00	1.12	6,200.00	7,066.35	3,342.42	7,130.33	0.00	0.00	0.00
14,700.00	90.00	1.12	6,200.00	7,166.33	3,344.38	7,230.33	0.00	0.00	0.00
14,800.00	90.00	1.12	6,200.00	7,266.31	3,346.33	7,330.33	0.00	0.00	0.00
14,900.00	90.00	1.12	6,200.00	7,366.29	3,348.29	7,430.33	0.00	0.00	0.00
15,000.00	90.00	1.12	6,200.00	7,466.27	3,350.24	7,530.33	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 1101-09H
<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 1101-09H	<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)
15,100.00	90.00	1.12	6,200.00	7,566.25	3,352.19	7,630.33	0.00	0.00	0.00
15,183.77	90.00	1.12	6,200.00	7,650.01	3,353.83	7,714.10	0.00	0.00	0.00
TD Well @ 15183.77ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,540.26	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)	
280.00	280.00	0.00	0.00	Begin Nudge @ 280.00ft
1,924.00	1,835.24	-107.44	446.16	Hold Tangent @ 1924.00ft
6,405.47	5,598.82	-677.04	2,811.45	KOP @ 6405.47ft :: DLS = 9°/100'
7,479.97	6,200.00	-52.32	3,203.26	End Build @ 7479.97ft
15,183.77	6,200.00	7,650.01	3,353.83	TD Well @ 15183.77ft