

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**SONIC STAR 1101-16H**

**Plan B**

**Plan: Design #1**

## **Standard Planning Report**

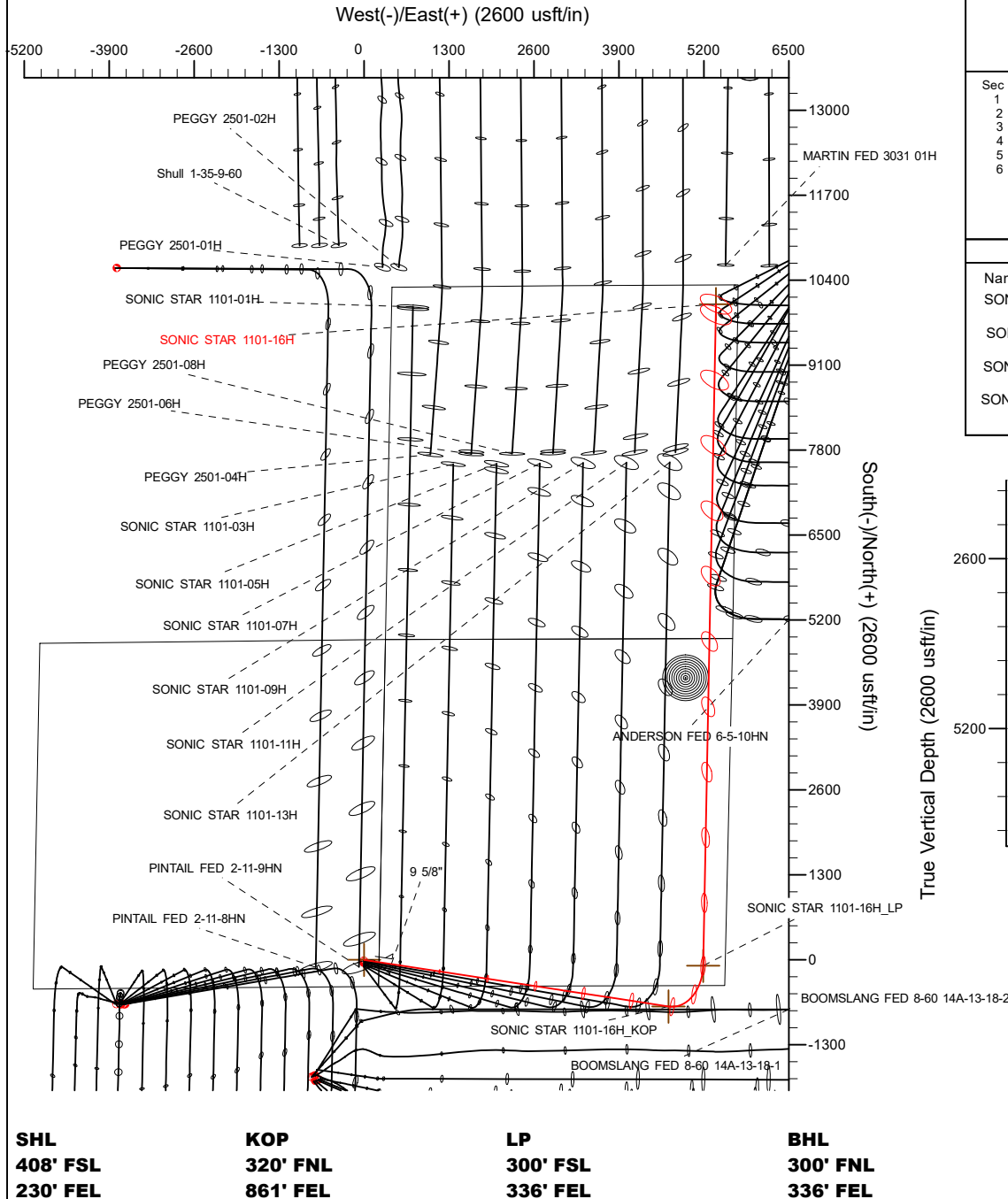
**09 November, 2020**

Project: WATTENBERG FIELD  
Site: 8N-60W-11 SONIC STAR 1101 PAD  
Well: SONIC STAR 1101-16H  
Wellbore: Plan B  
Design: Design #1

# VERDAD RESOURCES

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1549.34	9 5/8"	9-5/8

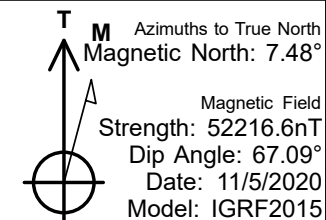
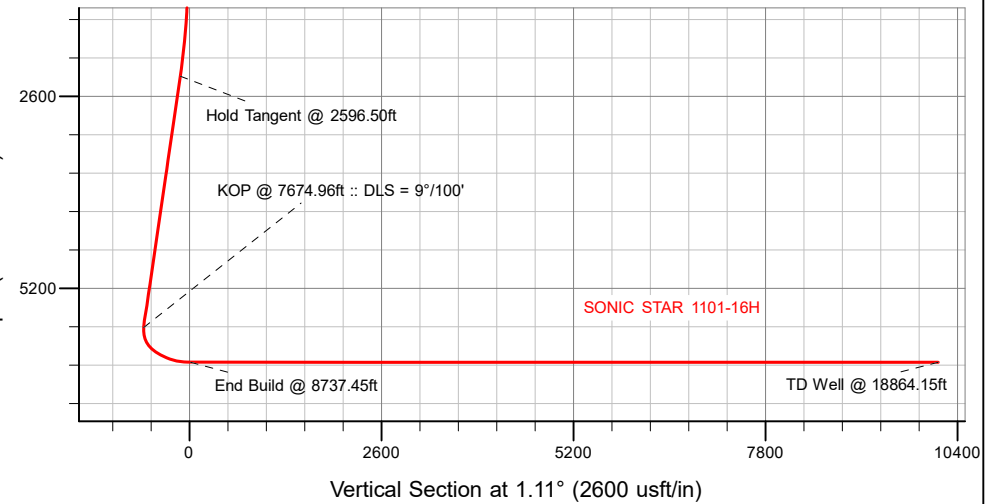


## SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	2596.50	47.93	98.70	2326.61	-142.98	934.40	2.00	98.70	-124.85	
4	7674.96	47.93	98.70	5729.37	-713.22	4660.90	0.00	0.00	-622.79	
5	8737.45	90.00	1.11	6200.00	-89.83	5189.95	9.00	-95.10	10.72	
6	18864.15	90.00	1.11	6200.00	10034.96	5386.88	0.00	0.00	10137.43	SONIC STAR 1101-16H_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
SONIC STAR 1101-16H_SHL	0.00	0.00	0.00	0.00	40.670959	-104.049102
SONIC STAR 1101-16H_KOP	7674.96	5729.37	-713.22	4660.90	40.669000	-104.032301
SONIC STAR 1101-16H_LP	8737.45	6200.00	-90.42	5189.79	40.670709	-104.030394
SONIC STAR 1101-16H_BHL	18864.15	6200.00	10034.96	5386.88	40.698501	-104.029675



## WELL DETAILS: SONIC STAR 1101-16H

GL = 4882'

RKB = 16' @ 4898.00usft (RIG)

Plan: Design #1 (SONIC STAR 1101-16H/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 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<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 1101-16H				
Well Position	+N/-S	0.00 usft	Northing:	1,490,565.74 usft	Latitude:	40.670959
	+E/-W	0.00 usft	Easting:	3,402,456.94 usft	Longitude:	-104.049103
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,882.00 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	52,216.64814074

<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	1.11	

<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	18,864.15	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	

HP  
Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-16H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4898.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4898.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-16H	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,596.50	47.93	98.70	2,326.61	-142.98	934.40	2.00	2.00	0.00	98.70	
7,674.96	47.93	98.70	5,729.37	-713.22	4,660.90	0.00	0.00	0.00	0.00	
8,737.45	90.00	1.11	6,200.00	-89.83	5,189.95	9.00	3.96	-9.18	-95.10	
18,864.15	90.00	1.11	6,200.00	10,034.96	5,386.88	0.00	0.00	0.00	0.00	SONIC STAR 1101-16H

# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<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
Begin Nudge @ 200.00ft									
300.00	2.00	98.70	299.98	-0.26	1.73	-0.23	2.00	2.00	0.00
400.00	4.00	98.70	399.84	-1.06	6.90	-0.92	2.00	2.00	0.00
500.00	6.00	98.70	499.45	-2.37	15.51	-2.07	2.00	2.00	0.00
600.00	8.00	98.70	598.70	-4.22	27.56	-3.68	2.00	2.00	0.00
700.00	10.00	98.70	697.47	-6.58	43.02	-5.75	2.00	2.00	0.00
800.00	12.00	98.70	795.62	-9.47	61.88	-8.27	2.00	2.00	0.00
900.00	14.00	98.70	893.06	-12.87	84.12	-11.24	2.00	2.00	0.00
1,000.00	16.00	98.70	989.64	-16.79	109.70	-14.66	2.00	2.00	0.00
1,100.00	18.00	98.70	1,085.27	-21.21	138.60	-18.52	2.00	2.00	0.00
1,200.00	20.00	98.70	1,179.82	-26.13	170.78	-22.82	2.00	2.00	0.00
1,300.00	22.00	98.70	1,273.17	-31.55	206.20	-27.55	2.00	2.00	0.00
1,400.00	24.00	98.70	1,365.21	-37.46	244.82	-32.71	2.00	2.00	0.00
1,500.00	26.00	98.70	1,455.84	-43.86	286.60	-38.30	2.00	2.00	0.00
1,549.34	26.99	98.70	1,500.00	-47.18	308.36	-41.20	2.00	2.00	0.00
9 5/8"									
1,600.00	28.00	98.70	1,544.94	-50.72	331.47	-44.29	2.00	2.00	0.00
1,700.00	30.00	98.70	1,632.39	-58.06	379.39	-50.69	2.00	2.00	0.00
1,800.00	32.00	98.70	1,718.11	-65.85	430.30	-57.50	2.00	2.00	0.00
1,900.00	34.00	98.70	1,801.97	-74.08	484.14	-64.69	2.00	2.00	0.00
2,000.00	36.00	98.70	1,883.88	-82.76	540.83	-72.27	2.00	2.00	0.00
2,100.00	38.00	98.70	1,963.74	-91.86	600.32	-80.21	2.00	2.00	0.00
2,200.00	40.00	98.70	2,041.45	-101.38	662.52	-88.53	2.00	2.00	0.00
2,300.00	42.00	98.70	2,116.92	-111.30	727.37	-97.19	2.00	2.00	0.00
2,400.00	44.00	98.70	2,190.05	-121.62	794.78	-106.20	2.00	2.00	0.00
2,500.00	46.00	98.70	2,260.76	-132.31	864.67	-115.54	2.00	2.00	0.00
2,596.50	47.93	98.70	2,326.61	-142.98	934.40	-124.85	2.00	2.00	0.00
Hold Tangent @ 2596.50ft									
2,600.00	47.93	98.70	2,328.95	-143.38	936.96	-125.20	0.00	0.00	0.00
2,700.00	47.93	98.70	2,395.96	-154.60	1,010.34	-135.00	0.00	0.00	0.00
2,800.00	47.93	98.70	2,462.96	-165.83	1,083.72	-144.81	0.00	0.00	0.00
2,900.00	47.93	98.70	2,529.97	-177.06	1,157.10	-154.61	0.00	0.00	0.00
3,000.00	47.93	98.70	2,596.97	-188.29	1,230.48	-164.42	0.00	0.00	0.00
3,100.00	47.93	98.70	2,663.97	-199.52	1,303.86	-174.22	0.00	0.00	0.00
3,200.00	47.93	98.70	2,730.98	-210.75	1,377.23	-184.03	0.00	0.00	0.00
3,300.00	47.93	98.70	2,797.98	-221.97	1,450.61	-193.83	0.00	0.00	0.00
3,400.00	47.93	98.70	2,864.99	-233.20	1,523.99	-203.64	0.00	0.00	0.00
3,500.00	47.93	98.70	2,931.99	-244.43	1,597.37	-213.44	0.00	0.00	0.00
3,600.00	47.93	98.70	2,998.99	-255.66	1,670.75	-223.25	0.00	0.00	0.00
3,700.00	47.93	98.70	3,066.00	-266.89	1,744.13	-233.05	0.00	0.00	0.00
3,800.00	47.93	98.70	3,133.00	-278.12	1,817.51	-242.86	0.00	0.00	0.00
3,900.00	47.93	98.70	3,200.00	-289.35	1,890.88	-252.66	0.00	0.00	0.00
4,000.00	47.93	98.70	3,267.01	-300.57	1,964.26	-262.47	0.00	0.00	0.00
4,100.00	47.93	98.70	3,334.01	-311.80	2,037.64	-272.27	0.00	0.00	0.00
4,200.00	47.93	98.70	3,401.02	-323.03	2,111.02	-282.08	0.00	0.00	0.00
4,300.00	47.93	98.70	3,468.02	-334.26	2,184.40	-291.88	0.00	0.00	0.00
4,400.00	47.93	98.70	3,535.02	-345.49	2,257.78	-301.69	0.00	0.00	0.00
4,500.00	47.93	98.70	3,602.03	-356.72	2,331.16	-311.49	0.00	0.00	0.00
4,600.00	47.93	98.70	3,669.03	-367.95	2,404.53	-321.30	0.00	0.00	0.00
4,700.00	47.93	98.70	3,736.03	-379.17	2,477.91	-331.10	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 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<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	47.93	98.70	3,803.04	-390.40	2,551.29	-340.91	0.00	0.00	0.00
4,900.00	47.93	98.70	3,870.04	-401.63	2,624.67	-350.71	0.00	0.00	0.00
5,000.00	47.93	98.70	3,937.05	-412.86	2,698.05	-360.52	0.00	0.00	0.00
5,100.00	47.93	98.70	4,004.05	-424.09	2,771.43	-370.32	0.00	0.00	0.00
5,200.00	47.93	98.70	4,071.05	-435.32	2,844.81	-380.13	0.00	0.00	0.00
5,300.00	47.93	98.70	4,138.06	-446.54	2,918.18	-389.93	0.00	0.00	0.00
5,400.00	47.93	98.70	4,205.06	-457.77	2,991.56	-399.74	0.00	0.00	0.00
5,500.00	47.93	98.70	4,272.07	-469.00	3,064.94	-409.54	0.00	0.00	0.00
5,600.00	47.93	98.70	4,339.07	-480.23	3,138.32	-419.34	0.00	0.00	0.00
5,700.00	47.93	98.70	4,406.07	-491.46	3,211.70	-429.15	0.00	0.00	0.00
5,800.00	47.93	98.70	4,473.08	-502.69	3,285.08	-438.95	0.00	0.00	0.00
5,900.00	47.93	98.70	4,540.08	-513.92	3,358.46	-448.76	0.00	0.00	0.00
6,000.00	47.93	98.70	4,607.08	-525.14	3,431.83	-458.56	0.00	0.00	0.00
6,100.00	47.93	98.70	4,674.09	-536.37	3,505.21	-468.37	0.00	0.00	0.00
6,200.00	47.93	98.70	4,741.09	-547.60	3,578.59	-478.17	0.00	0.00	0.00
6,300.00	47.93	98.70	4,808.10	-558.83	3,651.97	-487.98	0.00	0.00	0.00
6,400.00	47.93	98.70	4,875.10	-570.06	3,725.35	-497.78	0.00	0.00	0.00
6,500.00	47.93	98.70	4,942.10	-581.29	3,798.73	-507.59	0.00	0.00	0.00
6,600.00	47.93	98.70	5,009.11	-592.52	3,872.11	-517.39	0.00	0.00	0.00
6,700.00	47.93	98.70	5,076.11	-603.74	3,945.48	-527.20	0.00	0.00	0.00
6,800.00	47.93	98.70	5,143.11	-614.97	4,018.86	-537.00	0.00	0.00	0.00
6,900.00	47.93	98.70	5,210.12	-626.20	4,092.24	-546.81	0.00	0.00	0.00
7,000.00	47.93	98.70	5,277.12	-637.43	4,165.62	-556.61	0.00	0.00	0.00
7,100.00	47.93	98.70	5,344.13	-648.66	4,239.00	-566.42	0.00	0.00	0.00
7,200.00	47.93	98.70	5,411.13	-659.89	4,312.38	-576.22	0.00	0.00	0.00
7,300.00	47.93	98.70	5,478.13	-671.11	4,385.76	-586.03	0.00	0.00	0.00
7,400.00	47.93	98.70	5,545.14	-682.34	4,459.13	-595.83	0.00	0.00	0.00
7,500.00	47.93	98.70	5,612.14	-693.57	4,532.51	-605.64	0.00	0.00	0.00
7,600.00	47.93	98.70	5,679.14	-704.80	4,605.89	-615.44	0.00	0.00	0.00
7,674.96	47.93	98.70	5,729.37	-713.22	4,660.90	-622.79	0.00	0.00	0.00
KOP @ 7674.96ft :: DLS = 9°/100'									
7,700.00	47.77	95.67	5,746.18	-715.54	4,679.31	-624.76	9.00	-0.64	-12.11
7,800.00	47.93	83.52	5,813.42	-715.01	4,753.18	-622.79	9.00	0.16	-12.15
7,900.00	49.35	71.67	5,879.63	-698.85	4,826.22	-605.23	9.00	1.42	-11.85
8,000.00	51.92	60.50	5,943.18	-667.48	4,896.63	-572.50	9.00	2.57	-11.17
8,100.00	55.46	50.22	6,002.49	-621.66	4,962.67	-525.40	9.00	3.54	-10.28
8,200.00	59.79	40.87	6,056.11	-562.51	5,022.72	-465.11	9.00	4.33	-9.35
8,300.00	64.72	32.36	6,102.73	-491.50	5,075.30	-393.09	9.00	4.93	-8.51
8,400.00	70.10	24.54	6,141.18	-410.38	5,119.12	-311.14	9.00	5.38	-7.82
8,500.00	75.80	17.25	6,170.53	-321.14	5,153.09	-221.25	9.00	5.70	-7.29
8,600.00	81.71	10.33	6,190.05	-225.97	5,176.38	-125.65	9.00	5.91	-6.93
8,700.00	87.73	3.61	6,199.26	-127.23	5,188.41	-26.70	9.00	6.02	-6.72
8,737.45	90.00	1.11	6,200.00	-89.83	5,189.95	10.72	9.00	6.06	-6.66
End Build @ 8737.45ft									
8,800.00	90.00	1.11	6,200.00	-27.29	5,191.17	73.28	0.00	0.00	0.00
8,900.00	90.00	1.11	6,200.00	72.69	5,193.12	173.28	0.00	0.00	0.00
9,000.00	90.00	1.11	6,200.00	172.67	5,195.06	273.28	0.00	0.00	0.00
9,100.00	90.00	1.11	6,200.00	272.65	5,197.00	373.28	0.00	0.00	0.00
9,200.00	90.00	1.11	6,200.00	372.64	5,198.95	473.28	0.00	0.00	0.00
9,300.00	90.00	1.11	6,200.00	472.62	5,200.89	573.28	0.00	0.00	0.00
9,400.00	90.00	1.11	6,200.00	572.60	5,202.84	673.28	0.00	0.00	0.00
9,500.00	90.00	1.11	6,200.00	672.58	5,204.78	773.28	0.00	0.00	0.00
9,600.00	90.00	1.11	6,200.00	772.56	5,206.73	873.28	0.00	0.00	0.00
9,700.00	90.00	1.11	6,200.00	872.54	5,208.67	973.28	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 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<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	1.11	6,200.00	972.52	5,210.62	1,073.28	0.00	0.00	0.00
9,900.00	90.00	1.11	6,200.00	1,072.50	5,212.56	1,173.28	0.00	0.00	0.00
10,000.00	90.00	1.11	6,200.00	1,172.48	5,214.51	1,273.28	0.00	0.00	0.00
10,100.00	90.00	1.11	6,200.00	1,272.47	5,216.45	1,373.28	0.00	0.00	0.00
10,200.00	90.00	1.11	6,200.00	1,372.45	5,218.40	1,473.28	0.00	0.00	0.00
10,300.00	90.00	1.11	6,200.00	1,472.43	5,220.34	1,573.28	0.00	0.00	0.00
10,400.00	90.00	1.11	6,200.00	1,572.41	5,222.28	1,673.28	0.00	0.00	0.00
10,500.00	90.00	1.11	6,200.00	1,672.39	5,224.23	1,773.28	0.00	0.00	0.00
10,600.00	90.00	1.11	6,200.00	1,772.37	5,226.17	1,873.28	0.00	0.00	0.00
10,700.00	90.00	1.11	6,200.00	1,872.35	5,228.12	1,973.28	0.00	0.00	0.00
10,800.00	90.00	1.11	6,200.00	1,972.33	5,230.06	2,073.28	0.00	0.00	0.00
10,900.00	90.00	1.11	6,200.00	2,072.31	5,232.01	2,173.28	0.00	0.00	0.00
11,000.00	90.00	1.11	6,200.00	2,172.29	5,233.95	2,273.28	0.00	0.00	0.00
11,100.00	90.00	1.11	6,200.00	2,272.28	5,235.90	2,373.28	0.00	0.00	0.00
11,200.00	90.00	1.11	6,200.00	2,372.26	5,237.84	2,473.28	0.00	0.00	0.00
11,300.00	90.00	1.11	6,200.00	2,472.24	5,239.79	2,573.28	0.00	0.00	0.00
11,400.00	90.00	1.11	6,200.00	2,572.22	5,241.73	2,673.28	0.00	0.00	0.00
11,500.00	90.00	1.11	6,200.00	2,672.20	5,243.68	2,773.28	0.00	0.00	0.00
11,600.00	90.00	1.11	6,200.00	2,772.18	5,245.62	2,873.28	0.00	0.00	0.00
11,700.00	90.00	1.11	6,200.00	2,872.16	5,247.56	2,973.28	0.00	0.00	0.00
11,800.00	90.00	1.11	6,200.00	2,972.14	5,249.51	3,073.28	0.00	0.00	0.00
11,900.00	90.00	1.11	6,200.00	3,072.12	5,251.45	3,173.28	0.00	0.00	0.00
12,000.00	90.00	1.11	6,200.00	3,172.11	5,253.40	3,273.28	0.00	0.00	0.00
12,100.00	90.00	1.11	6,200.00	3,272.09	5,255.34	3,373.28	0.00	0.00	0.00
12,200.00	90.00	1.11	6,200.00	3,372.07	5,257.29	3,473.28	0.00	0.00	0.00
12,300.00	90.00	1.11	6,200.00	3,472.05	5,259.23	3,573.28	0.00	0.00	0.00
12,400.00	90.00	1.11	6,200.00	3,572.03	5,261.18	3,673.28	0.00	0.00	0.00
12,500.00	90.00	1.11	6,200.00	3,672.01	5,263.12	3,773.28	0.00	0.00	0.00
12,600.00	90.00	1.11	6,200.00	3,771.99	5,265.07	3,873.28	0.00	0.00	0.00
12,700.00	90.00	1.11	6,200.00	3,871.97	5,267.01	3,973.28	0.00	0.00	0.00
12,800.00	90.00	1.11	6,200.00	3,971.95	5,268.96	4,073.28	0.00	0.00	0.00
12,900.00	90.00	1.11	6,200.00	4,071.94	5,270.90	4,173.28	0.00	0.00	0.00
13,000.00	90.00	1.11	6,200.00	4,171.92	5,272.84	4,273.28	0.00	0.00	0.00
13,100.00	90.00	1.11	6,200.00	4,271.90	5,274.79	4,373.28	0.00	0.00	0.00
13,200.00	90.00	1.11	6,200.00	4,371.88	5,276.73	4,473.28	0.00	0.00	0.00
13,300.00	90.00	1.11	6,200.00	4,471.86	5,278.68	4,573.28	0.00	0.00	0.00
13,400.00	90.00	1.11	6,200.00	4,571.84	5,280.62	4,673.28	0.00	0.00	0.00
13,500.00	90.00	1.11	6,200.00	4,671.82	5,282.57	4,773.28	0.00	0.00	0.00
13,600.00	90.00	1.11	6,200.00	4,771.80	5,284.51	4,873.28	0.00	0.00	0.00
13,700.00	90.00	1.11	6,200.00	4,871.78	5,286.46	4,973.28	0.00	0.00	0.00
13,800.00	90.00	1.11	6,200.00	4,971.77	5,288.40	5,073.28	0.00	0.00	0.00
13,900.00	90.00	1.11	6,200.00	5,071.75	5,290.35	5,173.28	0.00	0.00	0.00
14,000.00	90.00	1.11	6,200.00	5,171.73	5,292.29	5,273.28	0.00	0.00	0.00
14,100.00	90.00	1.11	6,200.00	5,271.71	5,294.24	5,373.28	0.00	0.00	0.00
14,200.00	90.00	1.11	6,200.00	5,371.69	5,296.18	5,473.28	0.00	0.00	0.00
14,300.00	90.00	1.11	6,200.00	5,471.67	5,298.12	5,573.28	0.00	0.00	0.00
14,400.00	90.00	1.11	6,200.00	5,571.65	5,300.07	5,673.28	0.00	0.00	0.00
14,500.00	90.00	1.11	6,200.00	5,671.63	5,302.01	5,773.28	0.00	0.00	0.00
14,600.00	90.00	1.11	6,200.00	5,771.61	5,303.96	5,873.28	0.00	0.00	0.00
14,700.00	90.00	1.11	6,200.00	5,871.60	5,305.90	5,973.28	0.00	0.00	0.00
14,800.00	90.00	1.11	6,200.00	5,971.58	5,307.85	6,073.28	0.00	0.00	0.00
14,900.00	90.00	1.11	6,200.00	6,071.56	5,309.79	6,173.28	0.00	0.00	0.00
15,000.00	90.00	1.11	6,200.00	6,171.54	5,311.74	6,273.28	0.00	0.00	0.00
15,100.00	90.00	1.11	6,200.00	6,271.52	5,313.68	6,373.28	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 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<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	1.11	6,200.00	6,371.50	5,315.63	6,473.28	0.00	0.00	0.00	
15,300.00	90.00	1.11	6,200.00	6,471.48	5,317.57	6,573.28	0.00	0.00	0.00	
15,400.00	90.00	1.11	6,200.00	6,571.46	5,319.52	6,673.28	0.00	0.00	0.00	
15,500.00	90.00	1.11	6,200.00	6,671.44	5,321.46	6,773.28	0.00	0.00	0.00	
15,600.00	90.00	1.11	6,200.00	6,771.43	5,323.40	6,873.28	0.00	0.00	0.00	
15,700.00	90.00	1.11	6,200.00	6,871.41	5,325.35	6,973.28	0.00	0.00	0.00	
15,800.00	90.00	1.11	6,200.00	6,971.39	5,327.29	7,073.28	0.00	0.00	0.00	
15,900.00	90.00	1.11	6,200.00	7,071.37	5,329.24	7,173.28	0.00	0.00	0.00	
16,000.00	90.00	1.11	6,200.00	7,171.35	5,331.18	7,273.28	0.00	0.00	0.00	
16,100.00	90.00	1.11	6,200.00	7,271.33	5,333.13	7,373.28	0.00	0.00	0.00	
16,200.00	90.00	1.11	6,200.00	7,371.31	5,335.07	7,473.28	0.00	0.00	0.00	
16,300.00	90.00	1.11	6,200.00	7,471.29	5,337.02	7,573.28	0.00	0.00	0.00	
16,400.00	90.00	1.11	6,200.00	7,571.27	5,338.96	7,673.28	0.00	0.00	0.00	
16,500.00	90.00	1.11	6,200.00	7,671.26	5,340.91	7,773.28	0.00	0.00	0.00	
16,600.00	90.00	1.11	6,200.00	7,771.24	5,342.85	7,873.28	0.00	0.00	0.00	
16,700.00	90.00	1.11	6,200.00	7,871.22	5,344.80	7,973.28	0.00	0.00	0.00	
16,800.00	90.00	1.11	6,200.00	7,971.20	5,346.74	8,073.28	0.00	0.00	0.00	
16,900.00	90.00	1.11	6,200.00	8,071.18	5,348.68	8,173.28	0.00	0.00	0.00	
17,000.00	90.00	1.11	6,200.00	8,171.16	5,350.63	8,273.28	0.00	0.00	0.00	
17,100.00	90.00	1.11	6,200.00	8,271.14	5,352.57	8,373.28	0.00	0.00	0.00	
17,200.00	90.00	1.11	6,200.00	8,371.12	5,354.52	8,473.28	0.00	0.00	0.00	
17,300.00	90.00	1.11	6,200.00	8,471.10	5,356.46	8,573.28	0.00	0.00	0.00	
17,400.00	90.00	1.11	6,200.00	8,571.08	5,358.41	8,673.28	0.00	0.00	0.00	
17,500.00	90.00	1.11	6,200.00	8,671.07	5,360.35	8,773.28	0.00	0.00	0.00	
17,600.00	90.00	1.11	6,200.00	8,771.05	5,362.30	8,873.28	0.00	0.00	0.00	
17,700.00	90.00	1.11	6,200.00	8,871.03	5,364.24	8,973.28	0.00	0.00	0.00	
17,800.00	90.00	1.11	6,200.00	8,971.01	5,366.19	9,073.28	0.00	0.00	0.00	
17,900.00	90.00	1.11	6,200.00	9,070.99	5,368.13	9,173.28	0.00	0.00	0.00	
18,000.00	90.00	1.11	6,200.00	9,170.97	5,370.08	9,273.28	0.00	0.00	0.00	
18,100.00	90.00	1.11	6,200.00	9,270.95	5,372.02	9,373.28	0.00	0.00	0.00	
18,200.00	90.00	1.11	6,200.00	9,370.93	5,373.96	9,473.28	0.00	0.00	0.00	
18,300.00	90.00	1.11	6,200.00	9,470.91	5,375.91	9,573.28	0.00	0.00	0.00	
18,400.00	90.00	1.11	6,200.00	9,570.90	5,377.85	9,673.28	0.00	0.00	0.00	
18,500.00	90.00	1.11	6,200.00	9,670.88	5,379.80	9,773.28	0.00	0.00	0.00	
18,600.00	90.00	1.11	6,200.00	9,770.86	5,381.74	9,873.28	0.00	0.00	0.00	
18,700.00	90.00	1.11	6,200.00	9,870.84	5,383.69	9,973.28	0.00	0.00	0.00	
18,800.00	90.00	1.11	6,200.00	9,970.82	5,385.63	10,073.28	0.00	0.00	0.00	
18,864.15	90.00	1.11	6,200.00	10,034.96	5,386.88	10,137.43	0.00	0.00	0.00	
TD Well @ 18864.15ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,549.34	1,500.00	9 5/8"	9-5/8	13-1/2	



# HP

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SONIC STAR 1101-16H
<b>Company:</b>	VERDAD RESOURCES	<b>TVD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Project:</b>	WATTENBERG FIELD	<b>MD Reference:</b>	RKB = 16' @ 4898.00usft (RIG)
<b>Site:</b>	8N-60W-11 SONIC STAR 1101 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SONIC STAR 1101-16H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	Design #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft
2,596.50	2,326.61	-142.98	934.40	Hold Tangent @ 2596.50ft
7,674.96	5,729.37	-713.22	4,660.90	KOP @ 7674.96ft :: DLS = 9°/100'
8,737.45	6,200.00	-89.83	5,189.95	End Build @ 8737.45ft
18,864.15	6,200.00	10,034.96	5,386.88	TD Well @ 18864.15ft