

VERDAD RESOURCES

WATTENBERG FIELD

8N-60W-11 SONIC STAR 1101 PAD

SONIC STAR 1101-07H

Plan B

Plan: Design #1

Standard Planning Report

09 November, 2020

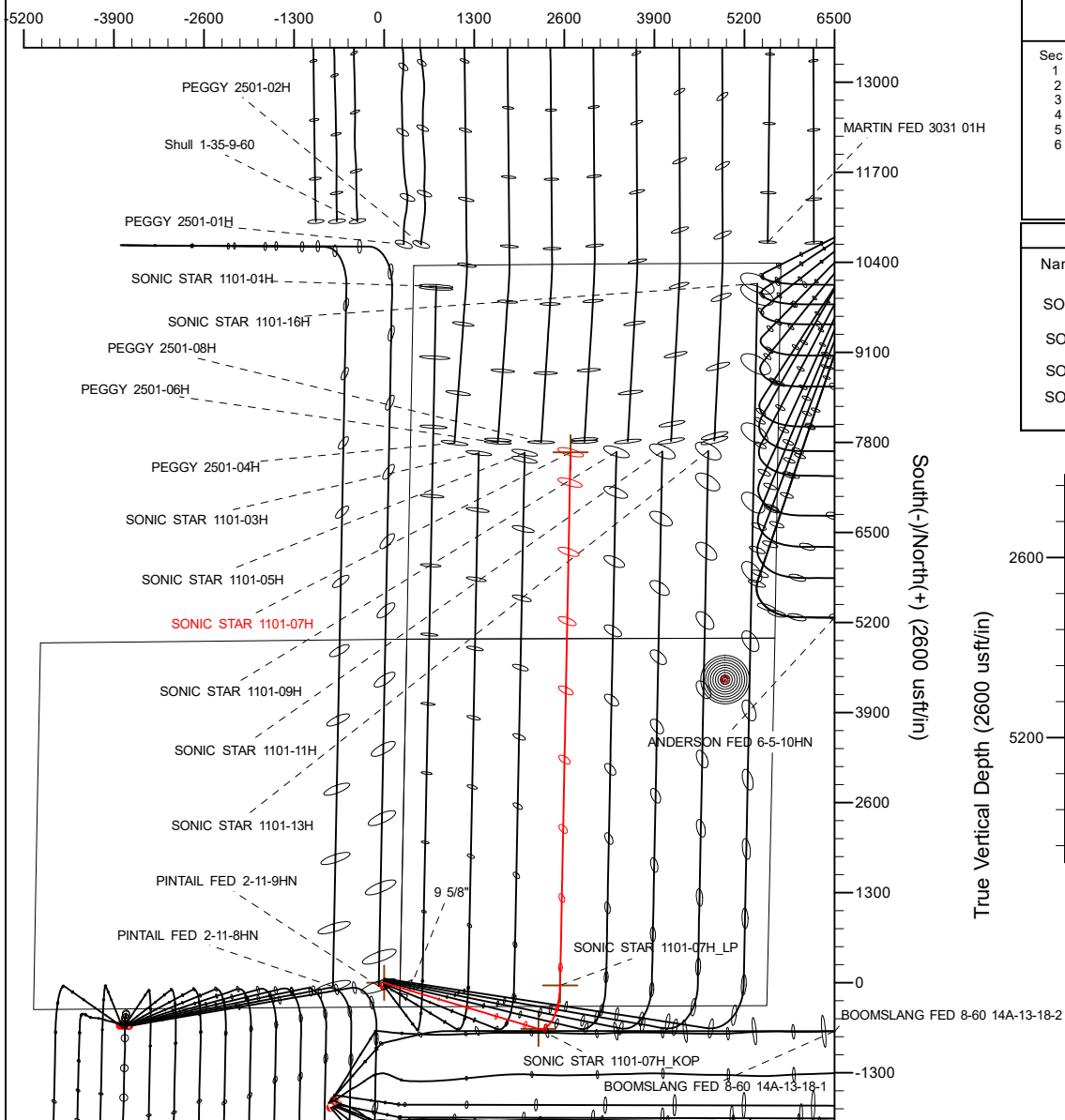
Project: WATTENBERG FIELD
Site: 8N-60W-11 SONIC STAR 1101 PAD
Well: SONIC STAR 1101-07H
Wellbore: Plan B
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1500.00	1542.40	9 5/8"	9-5/8

West(-)/East(+) (2600 usft/in)



SHL
348' FSL
230' FEL

KOP
325' FNL
2007' FWL

LP
300' FSL
2312' FWL

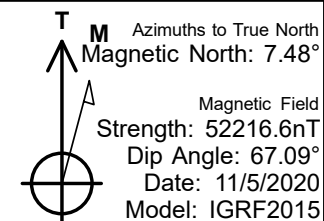
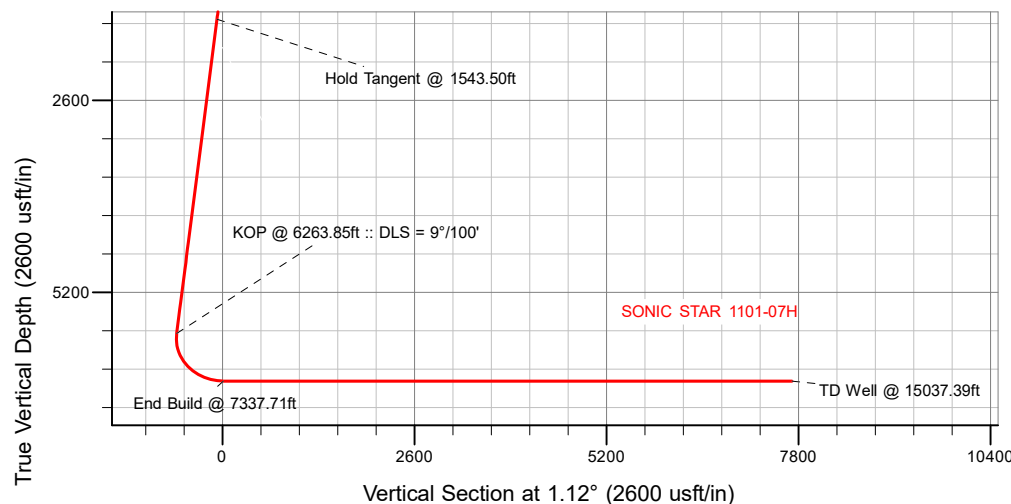
BHL
2715' FNL
2314' FWL

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	260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	
3	1543.50	25.67	106.62	1500.99	-80.87	270.93	2.00	106.62	-75.56	
4	6263.85	25.67	106.62	5755.46	-665.73	2230.30	0.00	0.00	-622.01	
5	7337.71	90.00	1.12	6400.00	-39.35	2541.14	9.00	-104.03	10.32	
6	15037.39	90.00	1.12	6400.00	7658.86	2691.86	0.00	0.00	7710.01	SONIC STAR 1101-07H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
SONIC STAR 1101-07H_SHL	0.00	0.00	0.00	0.00	40.670794	-104.049106
SONIC STAR 1101-07H_KOP	6263.85	5755.46	-665.73	2230.30	40.668967	-104.041067
SONIC STAR 1101-07H_LP	7337.71	6400.00	-39.43	2541.38	40.670686	-104.039945
SONIC STAR 1101-07H_BHL	15037.39	6400.00	7658.86	2691.86	40.691816	-104.039400



WELL DETAILS: SONIC STAR 1101-07H

GL = 4881'

RKB = 16' @ 4897.00usft (RIG)

Plan: Design #1 (SONIC STAR 1101-07H/Plan B)

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

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
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 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Design #1		

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-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 1101-07H				
Well Position	+N/-S	0.00 usft	Northing:	1,490,505.73 usft	Latitude:	40.670794
	+E/-W	0.00 usft	Easting:	3,402,456.75 usft	Longitude:	-104.049107
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,881.00 usft
Grid Convergence:		0.94 °				

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/5/2020	7.48	67.09	52,216.57179594

Design	Design #1				
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	1.12	

Plan Survey Tool Program	Date	11/9/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,500.00	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,500.00	15,037.39	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 1101-07H
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 1101-07H	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	
260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,543.50	25.67	106.62	1,500.99	-80.87	270.93	2.00	2.00	0.00	106.62	
6,263.85	25.67	106.62	5,755.46	-665.73	2,230.30	0.00	0.00	0.00	0.00	
7,337.71	90.00	1.12	6,400.00	-39.35	2,541.14	9.00	5.99	-9.82	-104.03	
15,037.39	90.00	1.12	6,400.00	7,658.86	2,691.86	0.00	0.00	0.00	0.00	SONIC STAR 1101-07H

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
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 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	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
260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 260.00ft									
300.00	0.80	106.62	300.00	-0.08	0.27	-0.07	2.00	2.00	0.00
400.00	2.80	106.62	399.94	-0.98	3.28	-0.91	2.00	2.00	0.00
500.00	4.80	106.62	499.72	-2.87	9.63	-2.69	2.00	2.00	0.00
600.00	6.80	106.62	599.20	-5.76	19.31	-5.39	2.00	2.00	0.00
700.00	8.80	106.62	698.27	-9.65	32.31	-9.01	2.00	2.00	0.00
800.00	10.80	106.62	796.81	-14.51	48.62	-13.56	2.00	2.00	0.00
900.00	12.80	106.62	894.69	-20.36	68.22	-19.03	2.00	2.00	0.00
1,000.00	14.80	106.62	991.80	-27.18	91.07	-25.40	2.00	2.00	0.00
1,100.00	16.80	106.62	1,088.02	-34.97	117.16	-32.68	2.00	2.00	0.00
1,200.00	18.80	106.62	1,183.22	-43.72	146.45	-40.84	2.00	2.00	0.00
1,300.00	20.80	106.62	1,277.31	-53.40	178.91	-49.90	2.00	2.00	0.00
1,400.00	22.80	106.62	1,370.15	-64.02	214.49	-59.82	2.00	2.00	0.00
1,500.00	24.80	106.62	1,461.64	-75.57	253.16	-70.60	2.00	2.00	0.00
1,542.40	25.65	106.62	1,500.00	-80.74	270.48	-75.43	2.00	2.00	0.00
9 5/8"									
1,543.50	25.67	106.62	1,500.99	-80.87	270.93	-75.56	2.00	2.00	0.00
Hold Tangent @ 1543.50ft									
1,600.00	25.67	106.62	1,551.91	-87.87	294.38	-82.10	0.00	0.00	0.00
1,700.00	25.67	106.62	1,642.04	-100.26	335.89	-93.68	0.00	0.00	0.00
1,800.00	25.67	106.62	1,732.17	-112.65	377.40	-105.25	0.00	0.00	0.00
1,900.00	25.67	106.62	1,822.30	-125.04	418.91	-116.83	0.00	0.00	0.00
2,000.00	25.67	106.62	1,912.44	-137.43	460.42	-128.41	0.00	0.00	0.00
2,100.00	25.67	106.62	2,002.57	-149.82	501.93	-139.98	0.00	0.00	0.00
2,200.00	25.67	106.62	2,092.70	-162.21	543.44	-151.56	0.00	0.00	0.00
2,300.00	25.67	106.62	2,182.83	-174.60	584.95	-163.14	0.00	0.00	0.00
2,400.00	25.67	106.62	2,272.96	-186.99	626.46	-174.71	0.00	0.00	0.00
2,500.00	25.67	106.62	2,363.09	-199.38	667.96	-186.29	0.00	0.00	0.00
2,600.00	25.67	106.62	2,453.22	-211.77	709.47	-197.86	0.00	0.00	0.00
2,700.00	25.67	106.62	2,543.35	-224.16	750.98	-209.44	0.00	0.00	0.00
2,800.00	25.67	106.62	2,633.48	-236.55	792.49	-221.02	0.00	0.00	0.00
2,900.00	25.67	106.62	2,723.61	-248.94	834.00	-232.59	0.00	0.00	0.00
3,000.00	25.67	106.62	2,813.74	-261.33	875.51	-244.17	0.00	0.00	0.00
3,100.00	25.67	106.62	2,903.87	-273.72	917.02	-255.75	0.00	0.00	0.00
3,200.00	25.67	106.62	2,994.00	-286.11	958.53	-267.32	0.00	0.00	0.00
3,300.00	25.67	106.62	3,084.13	-298.50	1,000.04	-278.90	0.00	0.00	0.00
3,400.00	25.67	106.62	3,174.26	-310.89	1,041.55	-290.48	0.00	0.00	0.00
3,500.00	25.67	106.62	3,264.39	-323.28	1,083.05	-302.05	0.00	0.00	0.00
3,600.00	25.67	106.62	3,354.52	-335.67	1,124.56	-313.63	0.00	0.00	0.00
3,700.00	25.67	106.62	3,444.65	-348.06	1,166.07	-325.21	0.00	0.00	0.00
3,800.00	25.67	106.62	3,534.78	-360.45	1,207.58	-336.78	0.00	0.00	0.00
3,900.00	25.67	106.62	3,624.91	-372.84	1,249.09	-348.36	0.00	0.00	0.00
4,000.00	25.67	106.62	3,715.04	-385.23	1,290.60	-359.93	0.00	0.00	0.00
4,100.00	25.67	106.62	3,805.17	-397.63	1,332.11	-371.51	0.00	0.00	0.00
4,200.00	25.67	106.62	3,895.30	-410.02	1,373.62	-383.09	0.00	0.00	0.00
4,300.00	25.67	106.62	3,985.43	-422.41	1,415.13	-394.66	0.00	0.00	0.00
4,400.00	25.67	106.62	4,075.56	-434.80	1,456.64	-406.24	0.00	0.00	0.00
4,500.00	25.67	106.62	4,165.70	-447.19	1,498.14	-417.82	0.00	0.00	0.00
4,600.00	25.67	106.62	4,255.83	-459.58	1,539.65	-429.39	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
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 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	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	25.67	106.62	4,345.96	-471.97	1,581.16	-440.97	0.00	0.00	0.00
4,800.00	25.67	106.62	4,436.09	-484.36	1,622.67	-452.55	0.00	0.00	0.00
4,900.00	25.67	106.62	4,526.22	-496.75	1,664.18	-464.12	0.00	0.00	0.00
5,000.00	25.67	106.62	4,616.35	-509.14	1,705.69	-475.70	0.00	0.00	0.00
5,100.00	25.67	106.62	4,706.48	-521.53	1,747.20	-487.28	0.00	0.00	0.00
5,200.00	25.67	106.62	4,796.61	-533.92	1,788.71	-498.85	0.00	0.00	0.00
5,300.00	25.67	106.62	4,886.74	-546.31	1,830.22	-510.43	0.00	0.00	0.00
5,400.00	25.67	106.62	4,976.87	-558.70	1,871.73	-522.00	0.00	0.00	0.00
5,500.00	25.67	106.62	5,067.00	-571.09	1,913.23	-533.58	0.00	0.00	0.00
5,600.00	25.67	106.62	5,157.13	-583.48	1,954.74	-545.16	0.00	0.00	0.00
5,700.00	25.67	106.62	5,247.26	-595.87	1,996.25	-556.73	0.00	0.00	0.00
5,800.00	25.67	106.62	5,337.39	-608.26	2,037.76	-568.31	0.00	0.00	0.00
5,900.00	25.67	106.62	5,427.52	-620.65	2,079.27	-579.89	0.00	0.00	0.00
6,000.00	25.67	106.62	5,517.65	-633.04	2,120.78	-591.46	0.00	0.00	0.00
6,100.00	25.67	106.62	5,607.78	-645.43	2,162.29	-603.04	0.00	0.00	0.00
6,200.00	25.67	106.62	5,697.91	-657.82	2,203.80	-614.62	0.00	0.00	0.00
6,263.85	25.67	106.62	5,755.46	-665.73	2,230.30	-622.01	0.00	0.00	0.00
KOP @ 6263.85ft :: DLS = 9°/100'									
6,300.00	25.07	99.15	5,788.13	-669.19	2,245.37	-625.17	9.00	-1.67	-20.66
6,400.00	25.44	77.97	5,878.76	-668.08	2,287.37	-623.24	9.00	0.37	-21.18
6,500.00	28.59	59.32	5,968.00	-651.36	2,329.04	-605.71	9.00	3.15	-18.66
6,600.00	33.75	45.00	6,053.66	-619.45	2,369.34	-573.02	9.00	5.16	-14.32
6,700.00	40.15	34.43	6,133.61	-573.12	2,407.29	-525.96	9.00	6.40	-10.58
6,800.00	47.27	26.45	6,205.91	-513.52	2,441.94	-465.69	9.00	7.13	-7.98
6,900.00	54.84	20.16	6,268.75	-442.11	2,472.45	-393.70	9.00	7.56	-6.28
7,000.00	62.67	14.97	6,320.61	-360.66	2,498.07	-311.76	9.00	7.83	-5.19
7,100.00	70.67	10.47	6,360.19	-271.17	2,518.16	-221.90	9.00	8.00	-4.50
7,200.00	78.77	6.40	6,386.54	-175.84	2,532.23	-126.31	9.00	8.10	-4.07
7,300.00	86.92	2.55	6,398.99	-77.02	2,539.93	-27.36	9.00	8.15	-3.85
7,337.71	90.00	1.12	6,400.00	-39.35	2,541.14	10.32	9.00	8.17	-3.79
End Build @ 7337.71ft									
7,400.00	90.00	1.12	6,400.00	22.93	2,542.36	72.62	0.00	0.00	0.00
7,500.00	90.00	1.12	6,400.00	122.91	2,544.31	172.62	0.00	0.00	0.00
7,600.00	90.00	1.12	6,400.00	222.89	2,546.27	272.62	0.00	0.00	0.00
7,700.00	90.00	1.12	6,400.00	322.87	2,548.23	372.62	0.00	0.00	0.00
7,800.00	90.00	1.12	6,400.00	422.85	2,550.19	472.62	0.00	0.00	0.00
7,900.00	90.00	1.12	6,400.00	522.83	2,552.14	572.62	0.00	0.00	0.00
8,000.00	90.00	1.12	6,400.00	622.81	2,554.10	672.62	0.00	0.00	0.00
8,100.00	90.00	1.12	6,400.00	722.79	2,556.06	772.62	0.00	0.00	0.00
8,200.00	90.00	1.12	6,400.00	822.78	2,558.02	872.62	0.00	0.00	0.00
8,300.00	90.00	1.12	6,400.00	922.76	2,559.97	972.62	0.00	0.00	0.00
8,400.00	90.00	1.12	6,400.00	1,022.74	2,561.93	1,072.62	0.00	0.00	0.00
8,500.00	90.00	1.12	6,400.00	1,122.72	2,563.89	1,172.62	0.00	0.00	0.00
8,600.00	90.00	1.12	6,400.00	1,222.70	2,565.85	1,272.62	0.00	0.00	0.00
8,700.00	90.00	1.12	6,400.00	1,322.68	2,567.80	1,372.62	0.00	0.00	0.00
8,800.00	90.00	1.12	6,400.00	1,422.66	2,569.76	1,472.62	0.00	0.00	0.00
8,900.00	90.00	1.12	6,400.00	1,522.64	2,571.72	1,572.62	0.00	0.00	0.00
9,000.00	90.00	1.12	6,400.00	1,622.62	2,573.68	1,672.62	0.00	0.00	0.00
9,100.00	90.00	1.12	6,400.00	1,722.60	2,575.63	1,772.62	0.00	0.00	0.00
9,200.00	90.00	1.12	6,400.00	1,822.58	2,577.59	1,872.62	0.00	0.00	0.00
9,300.00	90.00	1.12	6,400.00	1,922.56	2,579.55	1,972.62	0.00	0.00	0.00
9,400.00	90.00	1.12	6,400.00	2,022.55	2,581.51	2,072.62	0.00	0.00	0.00
9,500.00	90.00	1.12	6,400.00	2,122.53	2,583.47	2,172.62	0.00	0.00	0.00
9,600.00	90.00	1.12	6,400.00	2,222.51	2,585.42	2,272.62	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
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 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	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	6,400.00	2,322.49	2,587.38	2,372.62	0.00	0.00	0.00	
9,800.00	90.00	1.12	6,400.00	2,422.47	2,589.34	2,472.62	0.00	0.00	0.00	
9,900.00	90.00	1.12	6,400.00	2,522.45	2,591.30	2,572.62	0.00	0.00	0.00	
10,000.00	90.00	1.12	6,400.00	2,622.43	2,593.25	2,672.62	0.00	0.00	0.00	
10,100.00	90.00	1.12	6,400.00	2,722.41	2,595.21	2,772.62	0.00	0.00	0.00	
10,200.00	90.00	1.12	6,400.00	2,822.39	2,597.17	2,872.62	0.00	0.00	0.00	
10,300.00	90.00	1.12	6,400.00	2,922.37	2,599.13	2,972.62	0.00	0.00	0.00	
10,400.00	90.00	1.12	6,400.00	3,022.35	2,601.08	3,072.62	0.00	0.00	0.00	
10,500.00	90.00	1.12	6,400.00	3,122.33	2,603.04	3,172.62	0.00	0.00	0.00	
10,600.00	90.00	1.12	6,400.00	3,222.32	2,605.00	3,272.62	0.00	0.00	0.00	
10,700.00	90.00	1.12	6,400.00	3,322.30	2,606.96	3,372.62	0.00	0.00	0.00	
10,800.00	90.00	1.12	6,400.00	3,422.28	2,608.91	3,472.62	0.00	0.00	0.00	
10,900.00	90.00	1.12	6,400.00	3,522.26	2,610.87	3,572.62	0.00	0.00	0.00	
11,000.00	90.00	1.12	6,400.00	3,622.24	2,612.83	3,672.62	0.00	0.00	0.00	
11,100.00	90.00	1.12	6,400.00	3,722.22	2,614.79	3,772.62	0.00	0.00	0.00	
11,200.00	90.00	1.12	6,400.00	3,822.20	2,616.74	3,872.62	0.00	0.00	0.00	
11,300.00	90.00	1.12	6,400.00	3,922.18	2,618.70	3,972.62	0.00	0.00	0.00	
11,400.00	90.00	1.12	6,400.00	4,022.16	2,620.66	4,072.62	0.00	0.00	0.00	
11,500.00	90.00	1.12	6,400.00	4,122.14	2,622.62	4,172.62	0.00	0.00	0.00	
11,600.00	90.00	1.12	6,400.00	4,222.12	2,624.57	4,272.62	0.00	0.00	0.00	
11,700.00	90.00	1.12	6,400.00	4,322.10	2,626.53	4,372.62	0.00	0.00	0.00	
11,800.00	90.00	1.12	6,400.00	4,422.09	2,628.49	4,472.62	0.00	0.00	0.00	
11,900.00	90.00	1.12	6,400.00	4,522.07	2,630.45	4,572.62	0.00	0.00	0.00	
12,000.00	90.00	1.12	6,400.00	4,622.05	2,632.40	4,672.62	0.00	0.00	0.00	
12,100.00	90.00	1.12	6,400.00	4,722.03	2,634.36	4,772.62	0.00	0.00	0.00	
12,200.00	90.00	1.12	6,400.00	4,822.01	2,636.32	4,872.62	0.00	0.00	0.00	
12,300.00	90.00	1.12	6,400.00	4,921.99	2,638.28	4,972.62	0.00	0.00	0.00	
12,400.00	90.00	1.12	6,400.00	5,021.97	2,640.23	5,072.62	0.00	0.00	0.00	
12,500.00	90.00	1.12	6,400.00	5,121.95	2,642.19	5,172.62	0.00	0.00	0.00	
12,600.00	90.00	1.12	6,400.00	5,221.93	2,644.15	5,272.62	0.00	0.00	0.00	
12,700.00	90.00	1.12	6,400.00	5,321.91	2,646.11	5,372.62	0.00	0.00	0.00	
12,800.00	90.00	1.12	6,400.00	5,421.89	2,648.06	5,472.62	0.00	0.00	0.00	
12,900.00	90.00	1.12	6,400.00	5,521.88	2,650.02	5,572.62	0.00	0.00	0.00	
13,000.00	90.00	1.12	6,400.00	5,621.86	2,651.98	5,672.62	0.00	0.00	0.00	
13,100.00	90.00	1.12	6,400.00	5,721.84	2,653.94	5,772.62	0.00	0.00	0.00	
13,200.00	90.00	1.12	6,400.00	5,821.82	2,655.89	5,872.62	0.00	0.00	0.00	
13,300.00	90.00	1.12	6,400.00	5,921.80	2,657.85	5,972.62	0.00	0.00	0.00	
13,400.00	90.00	1.12	6,400.00	6,021.78	2,659.81	6,072.62	0.00	0.00	0.00	
13,500.00	90.00	1.12	6,400.00	6,121.76	2,661.77	6,172.62	0.00	0.00	0.00	
13,600.00	90.00	1.12	6,400.00	6,221.74	2,663.72	6,272.62	0.00	0.00	0.00	
13,700.00	90.00	1.12	6,400.00	6,321.72	2,665.68	6,372.62	0.00	0.00	0.00	
13,800.00	90.00	1.12	6,400.00	6,421.70	2,667.64	6,472.62	0.00	0.00	0.00	
13,900.00	90.00	1.12	6,400.00	6,521.68	2,669.60	6,572.62	0.00	0.00	0.00	
14,000.00	90.00	1.12	6,400.00	6,621.66	2,671.55	6,672.62	0.00	0.00	0.00	
14,100.00	90.00	1.12	6,400.00	6,721.65	2,673.51	6,772.62	0.00	0.00	0.00	
14,200.00	90.00	1.12	6,400.00	6,821.63	2,675.47	6,872.62	0.00	0.00	0.00	
14,300.00	90.00	1.12	6,400.00	6,921.61	2,677.43	6,972.62	0.00	0.00	0.00	
14,400.00	90.00	1.12	6,400.00	7,021.59	2,679.39	7,072.62	0.00	0.00	0.00	
14,500.00	90.00	1.12	6,400.00	7,121.57	2,681.34	7,172.62	0.00	0.00	0.00	
14,600.00	90.00	1.12	6,400.00	7,221.55	2,683.30	7,272.62	0.00	0.00	0.00	
14,700.00	90.00	1.12	6,400.00	7,321.53	2,685.26	7,372.62	0.00	0.00	0.00	
14,800.00	90.00	1.12	6,400.00	7,421.51	2,687.22	7,472.62	0.00	0.00	0.00	
14,900.00	90.00	1.12	6,400.00	7,521.49	2,689.17	7,572.62	0.00	0.00	0.00	
15,000.00	90.00	1.12	6,400.00	7,621.47	2,691.13	7,672.62	0.00	0.00	0.00	

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
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 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	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)
15,037.39	90.00	1.12	6,400.00	7,658.86	2,691.86	7,710.01	0.00	0.00	0.00
TD Well @ 15037.39ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,542.40	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)	
260.00	260.00	0.00	0.00	Begin Nudge @ 260.00ft
1,543.50	1,500.99	-80.87	270.93	Hold Tangent @ 1543.50ft
6,263.85	5,755.46	-665.73	2,230.30	KOP @ 6263.85ft :: DLS = 9°/100'
7,337.71	6,400.00	-39.35	2,541.14	End Build @ 7337.71ft
15,037.39	6,400.00	7,658.86	2,691.86	TD Well @ 15037.39ft