

VERDAD RESOURCES

WATTENBERG FIELD

8N-60W-11 SONIC STAR 1101 PAD

SONIC STAR 1101-07H

Wellbore #1

Plan: Design #1

Standard Planning Report

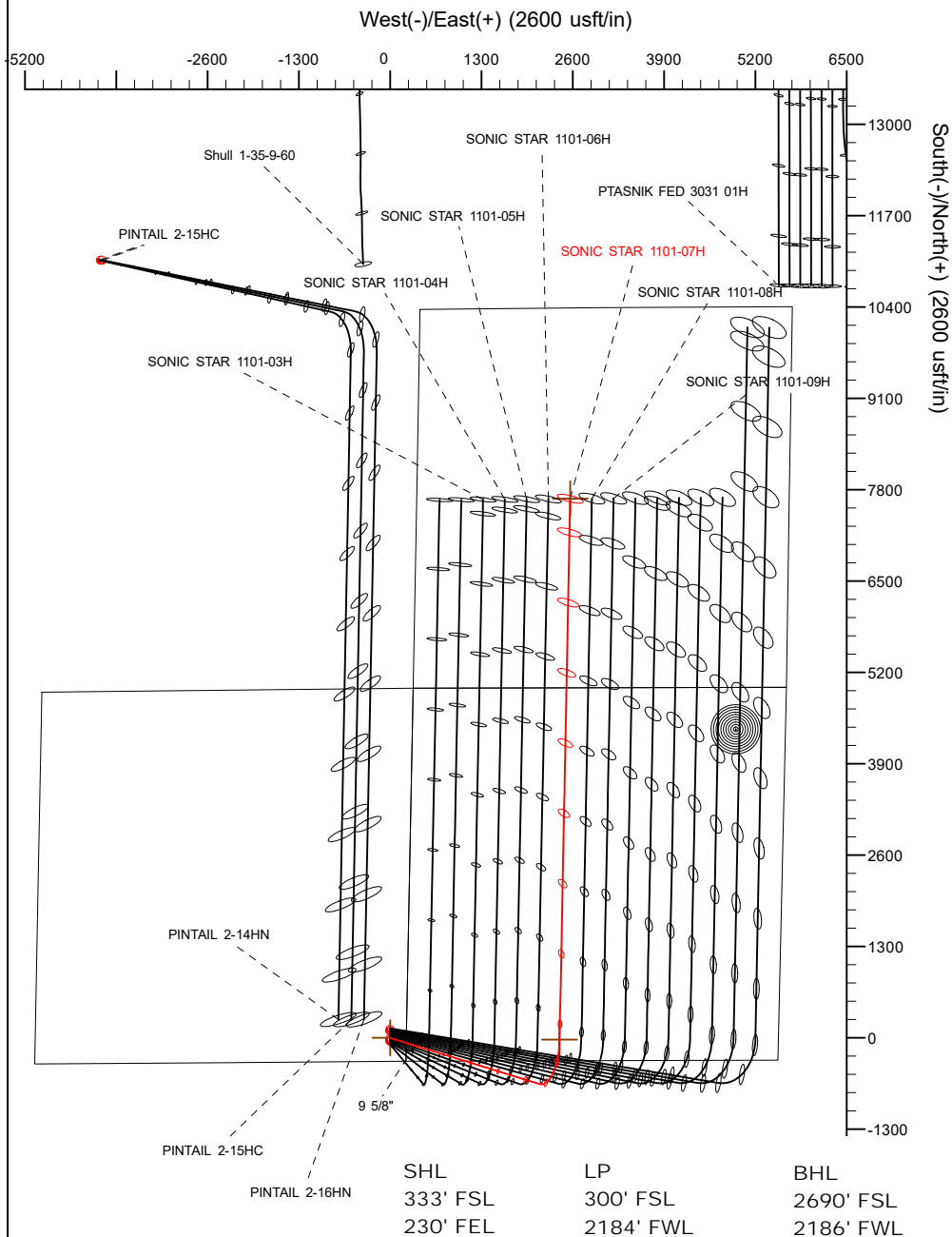
06 March, 2018

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

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1761.76	9 5/8"	9-5/8

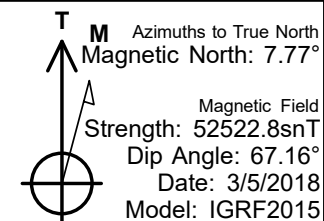
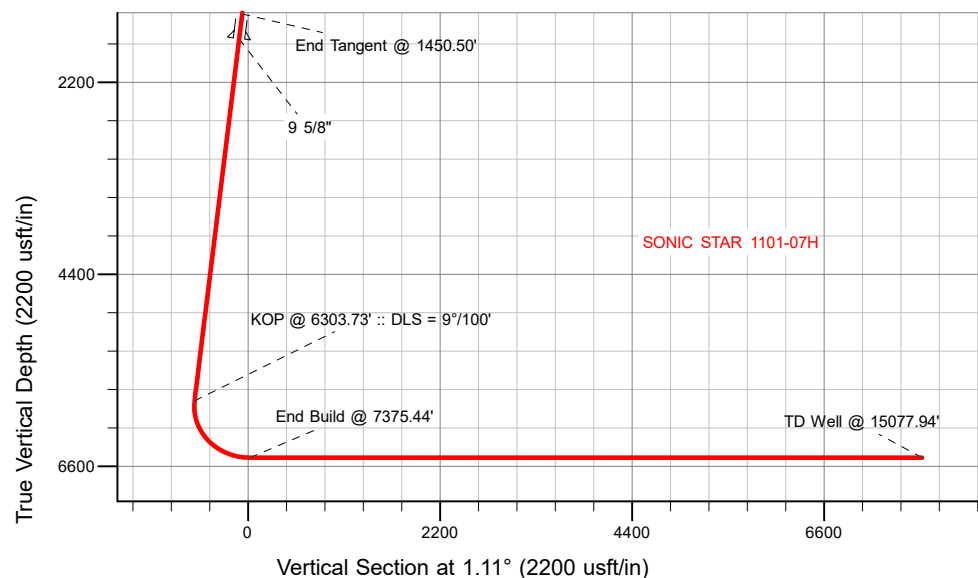


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	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	1450.50	24.01	107.15	1415.67	-73.09	236.86	2.00	107.15	-68.49	
4	6303.73	24.01	107.15	5848.97	-655.40	2123.81	0.00	0.00	-614.13	
5	7375.44	90.00	1.11	6500.00	-28.35	2414.76	9.00	-104.71	-18.43	
6	15077.94	90.00	1.11	6500.00	7672.69	2564.52	0.00	0.00	7720.93	SONIC STAR 1101-07H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
SONIC STAR 1101-07H_SHL	0.00	0.00	0.00	40.670753	-104.049108
SONIC STAR 1101-07H_BHL	6500.00	7672.69	2564.52	40.691813	-104.039860



WELL DETAILS: SONIC STAR 1101-07H

GL = 4880'

RKB = 20' @ 4900.00usft (RIG)

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

Created By: _____ Date: 3/6/2018
 Reviewed: _____ Date: _____

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4900.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4900.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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 "	Grid Convergence:	0.94 °

Well	SONIC STAR 1101-07H					
Well Position	+N/-S	90.02 usft	Northing:	1,490,490.71 usft	Latitude:	40.670753
	+E/-W	1.75 usft	Easting:	3,402,456.69 usft	Longitude:	-104.049108
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,880.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/5/2018	7.77	67.16	52,522.83508216

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	1.11

Plan Survey Tool Program	Date	3/5/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,700.00	15,077.94	Design #1 (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	
1,450.50	24.01	107.15	1,415.67	-73.09	236.86	2.00	2.00	0.00	107.15	
6,303.73	24.01	107.15	5,848.97	-655.40	2,123.81	0.00	0.00	0.00	0.00	
7,375.44	90.00	1.11	6,500.00	-28.35	2,414.76	9.00	6.16	-9.89	-104.71	
15,077.94	90.00	1.11	6,500.00	7,672.69	2,564.52	0.00	0.00	0.00	0.00	SONIC STAR 1101-07

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4900.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4900.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Tangent @ 250.00'									
300.00	1.00	107.15	300.00	-0.13	0.42	-0.12	2.00	2.00	0.00
400.00	3.00	107.15	399.93	-1.16	3.75	-1.08	2.00	2.00	0.00
500.00	5.00	107.15	499.68	-3.21	10.42	-3.01	2.00	2.00	0.00
600.00	7.00	107.15	599.13	-6.30	20.40	-5.90	2.00	2.00	0.00
700.00	9.00	107.15	698.15	-10.40	33.70	-9.75	2.00	2.00	0.00
800.00	11.00	107.15	796.63	-15.52	50.29	-14.54	2.00	2.00	0.00
900.00	13.00	107.15	894.44	-21.65	70.16	-20.29	2.00	2.00	0.00
1,000.00	15.00	107.15	991.46	-28.78	93.27	-26.97	2.00	2.00	0.00
1,100.00	17.00	107.15	1,087.58	-36.91	119.61	-34.59	2.00	2.00	0.00
1,200.00	19.00	107.15	1,182.68	-46.02	149.14	-43.13	2.00	2.00	0.00
1,300.00	21.00	107.15	1,276.65	-56.11	181.82	-52.58	2.00	2.00	0.00
1,400.00	23.00	107.15	1,369.36	-67.15	217.61	-62.93	2.00	2.00	0.00
1,450.50	24.01	107.15	1,415.67	-73.09	236.86	-68.49	2.00	2.00	0.00
End Tangent @ 1450.50'									
1,500.00	24.01	107.15	1,460.89	-79.03	256.10	-74.06	0.00	0.00	0.00
1,600.00	24.01	107.15	1,552.24	-91.03	294.98	-85.30	0.00	0.00	0.00
1,700.00	24.01	107.15	1,643.58	-103.03	333.86	-96.54	0.00	0.00	0.00
1,761.76	24.01	107.15	1,700.00	-110.44	357.88	-103.49	0.00	0.00	0.00
9 5/8"									
1,800.00	24.01	107.15	1,734.93	-115.03	372.74	-107.78	0.00	0.00	0.00
1,900.00	24.01	107.15	1,826.28	-127.03	411.62	-119.03	0.00	0.00	0.00
2,000.00	24.01	107.15	1,917.63	-139.02	450.50	-130.27	0.00	0.00	0.00
2,100.00	24.01	107.15	2,008.97	-151.02	489.38	-141.51	0.00	0.00	0.00
2,200.00	24.01	107.15	2,100.32	-163.02	528.26	-152.76	0.00	0.00	0.00
2,300.00	24.01	107.15	2,191.67	-175.02	567.14	-164.00	0.00	0.00	0.00
2,400.00	24.01	107.15	2,283.02	-187.02	606.03	-175.24	0.00	0.00	0.00
2,500.00	24.01	107.15	2,374.36	-199.02	644.91	-186.48	0.00	0.00	0.00
2,600.00	24.01	107.15	2,465.71	-211.01	683.79	-197.73	0.00	0.00	0.00
2,700.00	24.01	107.15	2,557.06	-223.01	722.67	-208.97	0.00	0.00	0.00
2,800.00	24.01	107.15	2,648.41	-235.01	761.55	-220.21	0.00	0.00	0.00
2,900.00	24.01	107.15	2,739.75	-247.01	800.43	-231.46	0.00	0.00	0.00
3,000.00	24.01	107.15	2,831.10	-259.01	839.31	-242.70	0.00	0.00	0.00
3,100.00	24.01	107.15	2,922.45	-271.00	878.19	-253.94	0.00	0.00	0.00
3,200.00	24.01	107.15	3,013.80	-283.00	917.07	-265.18	0.00	0.00	0.00
3,300.00	24.01	107.15	3,105.14	-295.00	955.95	-276.43	0.00	0.00	0.00
3,400.00	24.01	107.15	3,196.49	-307.00	994.83	-287.67	0.00	0.00	0.00
3,500.00	24.01	107.15	3,287.84	-319.00	1,033.71	-298.91	0.00	0.00	0.00
3,600.00	24.01	107.15	3,379.18	-331.00	1,072.59	-310.16	0.00	0.00	0.00
3,700.00	24.01	107.15	3,470.53	-342.99	1,111.47	-321.40	0.00	0.00	0.00
3,800.00	24.01	107.15	3,561.88	-354.99	1,150.35	-332.64	0.00	0.00	0.00
3,900.00	24.01	107.15	3,653.23	-366.99	1,189.23	-343.88	0.00	0.00	0.00
4,000.00	24.01	107.15	3,744.57	-378.99	1,228.11	-355.13	0.00	0.00	0.00
4,100.00	24.01	107.15	3,835.92	-390.99	1,266.99	-366.37	0.00	0.00	0.00
4,200.00	24.01	107.15	3,927.27	-402.99	1,305.87	-377.61	0.00	0.00	0.00
4,300.00	24.01	107.15	4,018.62	-414.98	1,344.75	-388.86	0.00	0.00	0.00
4,400.00	24.01	107.15	4,109.96	-426.98	1,383.63	-400.10	0.00	0.00	0.00
4,500.00	24.01	107.15	4,201.31	-438.98	1,422.51	-411.34	0.00	0.00	0.00
4,600.00	24.01	107.15	4,292.66	-450.98	1,461.39	-422.59	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4900.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4900.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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	24.01	107.15	4,384.01	-462.98	1,500.27	-433.83	0.00	0.00	0.00
4,800.00	24.01	107.15	4,475.35	-474.98	1,539.15	-445.07	0.00	0.00	0.00
4,900.00	24.01	107.15	4,566.70	-486.97	1,578.03	-456.31	0.00	0.00	0.00
5,000.00	24.01	107.15	4,658.05	-498.97	1,616.92	-467.56	0.00	0.00	0.00
5,100.00	24.01	107.15	4,749.40	-510.97	1,655.80	-478.80	0.00	0.00	0.00
5,200.00	24.01	107.15	4,840.74	-522.97	1,694.68	-490.04	0.00	0.00	0.00
5,300.00	24.01	107.15	4,932.09	-534.97	1,733.56	-501.29	0.00	0.00	0.00
5,400.00	24.01	107.15	5,023.44	-546.97	1,772.44	-512.53	0.00	0.00	0.00
5,500.00	24.01	107.15	5,114.79	-558.96	1,811.32	-523.77	0.00	0.00	0.00
5,600.00	24.01	107.15	5,206.13	-570.96	1,850.20	-535.01	0.00	0.00	0.00
5,700.00	24.01	107.15	5,297.48	-582.96	1,889.08	-546.26	0.00	0.00	0.00
5,800.00	24.01	107.15	5,388.83	-594.96	1,927.96	-557.50	0.00	0.00	0.00
5,900.00	24.01	107.15	5,480.18	-606.96	1,966.84	-568.74	0.00	0.00	0.00
6,000.00	24.01	107.15	5,571.52	-618.96	2,005.72	-579.99	0.00	0.00	0.00
6,100.00	24.01	107.15	5,662.87	-630.95	2,044.60	-591.23	0.00	0.00	0.00
6,200.00	24.01	107.15	5,754.22	-642.95	2,083.48	-602.47	0.00	0.00	0.00
6,303.73	24.01	107.15	5,848.97	-655.40	2,123.81	-614.13	0.00	0.00	0.00
KOP @ 6303.73' :: DLS = 9°/100'									
6,350.00	23.28	96.91	5,891.38	-659.28	2,141.89	-617.66	9.00	-1.57	-22.12
6,400.00	23.28	85.51	5,937.33	-659.69	2,161.56	-617.70	9.00	-0.01	-22.80
6,450.00	24.08	74.47	5,983.14	-656.19	2,181.24	-613.81	9.00	1.60	-22.09
6,500.00	25.61	64.38	6,028.54	-648.78	2,200.83	-606.03	9.00	3.07	-20.17
6,550.00	27.75	55.56	6,073.23	-637.52	2,220.18	-594.39	9.00	4.29	-17.65
6,600.00	30.38	48.03	6,116.94	-622.47	2,239.19	-578.98	9.00	5.25	-15.07
6,650.00	33.37	41.65	6,159.41	-603.73	2,257.74	-559.88	9.00	5.98	-12.75
6,700.00	36.64	36.26	6,200.37	-581.41	2,275.71	-537.22	9.00	6.54	-10.79
6,750.00	40.12	31.65	6,239.56	-555.66	2,293.00	-511.13	9.00	6.95	-9.21
6,800.00	43.75	27.68	6,276.76	-526.62	2,309.49	-481.78	9.00	7.27	-7.95
6,850.00	47.51	24.20	6,311.72	-494.48	2,325.08	-449.34	9.00	7.51	-6.94
6,900.00	51.36	21.13	6,344.24	-459.43	2,339.69	-414.02	9.00	7.70	-6.15
6,950.00	55.28	18.37	6,374.11	-421.70	2,353.21	-376.04	9.00	7.84	-5.51
7,000.00	59.25	15.87	6,401.14	-381.51	2,365.57	-335.62	9.00	7.95	-5.01
7,050.00	63.27	13.56	6,425.18	-339.12	2,376.69	-293.01	9.00	8.04	-4.61
7,100.00	67.33	11.42	6,446.07	-294.78	2,386.49	-248.49	9.00	8.11	-4.29
7,150.00	71.41	9.39	6,463.69	-248.76	2,394.93	-202.32	9.00	8.16	-4.05
7,200.00	75.51	7.46	6,477.92	-201.36	2,401.95	-154.79	9.00	8.21	-3.86
7,250.00	79.63	5.61	6,488.68	-152.86	2,407.49	-106.20	9.00	8.24	-3.72
7,300.00	83.76	3.80	6,495.90	-103.57	2,411.54	-56.83	9.00	8.26	-3.62
7,350.00	87.90	2.02	6,499.53	-53.77	2,414.07	-7.00	9.00	8.27	-3.56
7,375.44	90.00	1.11	6,500.00	-28.35	2,414.76	18.43	9.00	8.27	-3.54
End Build @ 7375.44'									
7,400.00	90.00	1.11	6,500.00	-3.79	2,415.24	42.99	0.00	0.00	0.00
7,500.00	90.00	1.11	6,500.00	96.19	2,417.19	142.99	0.00	0.00	0.00
7,600.00	90.00	1.11	6,500.00	196.17	2,419.13	242.99	0.00	0.00	0.00
7,700.00	90.00	1.11	6,500.00	296.15	2,421.08	342.99	0.00	0.00	0.00
7,800.00	90.00	1.11	6,500.00	396.13	2,423.02	442.99	0.00	0.00	0.00
7,900.00	90.00	1.11	6,500.00	496.11	2,424.96	542.99	0.00	0.00	0.00
8,000.00	90.00	1.11	6,500.00	596.09	2,426.91	642.99	0.00	0.00	0.00
8,100.00	90.00	1.11	6,500.00	696.07	2,428.85	742.99	0.00	0.00	0.00
8,200.00	90.00	1.11	6,500.00	796.05	2,430.80	842.99	0.00	0.00	0.00
8,300.00	90.00	1.11	6,500.00	896.04	2,432.74	942.99	0.00	0.00	0.00
8,400.00	90.00	1.11	6,500.00	996.02	2,434.68	1,042.99	0.00	0.00	0.00
8,500.00	90.00	1.11	6,500.00	1,096.00	2,436.63	1,142.99	0.00	0.00	0.00
8,600.00	90.00	1.11	6,500.00	1,195.98	2,438.57	1,242.99	0.00	0.00	0.00

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Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4900.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4900.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)	
8,700.00	90.00	1.11	6,500.00	1,295.96	2,440.52	1,342.99	0.00	0.00	0.00	
8,800.00	90.00	1.11	6,500.00	1,395.94	2,442.46	1,442.99	0.00	0.00	0.00	
8,900.00	90.00	1.11	6,500.00	1,495.92	2,444.41	1,542.99	0.00	0.00	0.00	
9,000.00	90.00	1.11	6,500.00	1,595.90	2,446.35	1,642.99	0.00	0.00	0.00	
9,100.00	90.00	1.11	6,500.00	1,695.88	2,448.29	1,742.99	0.00	0.00	0.00	
9,200.00	90.00	1.11	6,500.00	1,795.87	2,450.24	1,842.99	0.00	0.00	0.00	
9,300.00	90.00	1.11	6,500.00	1,895.85	2,452.18	1,942.99	0.00	0.00	0.00	
9,400.00	90.00	1.11	6,500.00	1,995.83	2,454.13	2,042.99	0.00	0.00	0.00	
9,500.00	90.00	1.11	6,500.00	2,095.81	2,456.07	2,142.99	0.00	0.00	0.00	
9,600.00	90.00	1.11	6,500.00	2,195.79	2,458.02	2,242.99	0.00	0.00	0.00	
9,700.00	90.00	1.11	6,500.00	2,295.77	2,459.96	2,342.99	0.00	0.00	0.00	
9,800.00	90.00	1.11	6,500.00	2,395.75	2,461.90	2,442.99	0.00	0.00	0.00	
9,900.00	90.00	1.11	6,500.00	2,495.73	2,463.85	2,542.99	0.00	0.00	0.00	
10,000.00	90.00	1.11	6,500.00	2,595.71	2,465.79	2,642.99	0.00	0.00	0.00	
10,100.00	90.00	1.11	6,500.00	2,695.70	2,467.74	2,742.99	0.00	0.00	0.00	
10,200.00	90.00	1.11	6,500.00	2,795.68	2,469.68	2,842.99	0.00	0.00	0.00	
10,300.00	90.00	1.11	6,500.00	2,895.66	2,471.63	2,942.99	0.00	0.00	0.00	
10,400.00	90.00	1.11	6,500.00	2,995.64	2,473.57	3,042.99	0.00	0.00	0.00	
10,500.00	90.00	1.11	6,500.00	3,095.62	2,475.51	3,142.99	0.00	0.00	0.00	
10,600.00	90.00	1.11	6,500.00	3,195.60	2,477.46	3,242.99	0.00	0.00	0.00	
10,700.00	90.00	1.11	6,500.00	3,295.58	2,479.40	3,342.99	0.00	0.00	0.00	
10,800.00	90.00	1.11	6,500.00	3,395.56	2,481.35	3,442.99	0.00	0.00	0.00	
10,900.00	90.00	1.11	6,500.00	3,495.54	2,483.29	3,542.99	0.00	0.00	0.00	
11,000.00	90.00	1.11	6,500.00	3,595.52	2,485.24	3,642.99	0.00	0.00	0.00	
11,100.00	90.00	1.11	6,500.00	3,695.51	2,487.18	3,742.99	0.00	0.00	0.00	
11,200.00	90.00	1.11	6,500.00	3,795.49	2,489.12	3,842.99	0.00	0.00	0.00	
11,300.00	90.00	1.11	6,500.00	3,895.47	2,491.07	3,942.99	0.00	0.00	0.00	
11,400.00	90.00	1.11	6,500.00	3,995.45	2,493.01	4,042.99	0.00	0.00	0.00	
11,500.00	90.00	1.11	6,500.00	4,095.43	2,494.96	4,142.99	0.00	0.00	0.00	
11,600.00	90.00	1.11	6,500.00	4,195.41	2,496.90	4,242.99	0.00	0.00	0.00	
11,700.00	90.00	1.11	6,500.00	4,295.39	2,498.85	4,342.99	0.00	0.00	0.00	
11,800.00	90.00	1.11	6,500.00	4,395.37	2,500.79	4,442.99	0.00	0.00	0.00	
11,900.00	90.00	1.11	6,500.00	4,495.35	2,502.73	4,542.99	0.00	0.00	0.00	
12,000.00	90.00	1.11	6,500.00	4,595.34	2,504.68	4,642.99	0.00	0.00	0.00	
12,100.00	90.00	1.11	6,500.00	4,695.32	2,506.62	4,742.99	0.00	0.00	0.00	
12,200.00	90.00	1.11	6,500.00	4,795.30	2,508.57	4,842.99	0.00	0.00	0.00	
12,300.00	90.00	1.11	6,500.00	4,895.28	2,510.51	4,942.99	0.00	0.00	0.00	
12,400.00	90.00	1.11	6,500.00	4,995.26	2,512.46	5,042.99	0.00	0.00	0.00	
12,500.00	90.00	1.11	6,500.00	5,095.24	2,514.40	5,142.99	0.00	0.00	0.00	
12,600.00	90.00	1.11	6,500.00	5,195.22	2,516.34	5,242.99	0.00	0.00	0.00	
12,700.00	90.00	1.11	6,500.00	5,295.20	2,518.29	5,342.99	0.00	0.00	0.00	
12,800.00	90.00	1.11	6,500.00	5,395.18	2,520.23	5,442.99	0.00	0.00	0.00	
12,900.00	90.00	1.11	6,500.00	5,495.17	2,522.18	5,542.99	0.00	0.00	0.00	
13,000.00	90.00	1.11	6,500.00	5,595.15	2,524.12	5,642.99	0.00	0.00	0.00	
13,100.00	90.00	1.11	6,500.00	5,695.13	2,526.07	5,742.99	0.00	0.00	0.00	
13,200.00	90.00	1.11	6,500.00	5,795.11	2,528.01	5,842.99	0.00	0.00	0.00	
13,300.00	90.00	1.11	6,500.00	5,895.09	2,529.95	5,942.99	0.00	0.00	0.00	
13,400.00	90.00	1.11	6,500.00	5,995.07	2,531.90	6,042.99	0.00	0.00	0.00	
13,500.00	90.00	1.11	6,500.00	6,095.05	2,533.84	6,142.99	0.00	0.00	0.00	
13,600.00	90.00	1.11	6,500.00	6,195.03	2,535.79	6,242.99	0.00	0.00	0.00	
13,700.00	90.00	1.11	6,500.00	6,295.01	2,537.73	6,342.99	0.00	0.00	0.00	
13,800.00	90.00	1.11	6,500.00	6,395.00	2,539.67	6,442.99	0.00	0.00	0.00	
13,900.00	90.00	1.11	6,500.00	6,494.98	2,541.62	6,542.99	0.00	0.00	0.00	
14,000.00	90.00	1.11	6,500.00	6,594.96	2,543.56	6,642.99	0.00	0.00	0.00	

Hewlett-Packard

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well SONIC STAR 1101-07H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4900.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4900.00usft (RIG)
Site:	8N-60W-11 SONIC STAR 1101 PAD	North Reference:	True
Well:	SONIC STAR 1101-07H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
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)	
14,100.00	90.00	1.11	6,500.00	6,694.94	2,545.51	6,742.99	0.00	0.00	0.00	
14,200.00	90.00	1.11	6,500.00	6,794.92	2,547.45	6,842.99	0.00	0.00	0.00	
14,300.00	90.00	1.11	6,500.00	6,894.90	2,549.40	6,942.99	0.00	0.00	0.00	
14,400.00	90.00	1.11	6,500.00	6,994.88	2,551.34	7,042.99	0.00	0.00	0.00	
14,500.00	90.00	1.11	6,500.00	7,094.86	2,553.28	7,142.99	0.00	0.00	0.00	
14,600.00	90.00	1.11	6,500.00	7,194.84	2,555.23	7,242.99	0.00	0.00	0.00	
14,700.00	90.00	1.11	6,500.00	7,294.83	2,557.17	7,342.99	0.00	0.00	0.00	
14,800.00	90.00	1.11	6,500.00	7,394.81	2,559.12	7,442.99	0.00	0.00	0.00	
14,900.00	90.00	1.11	6,500.00	7,494.79	2,561.06	7,542.99	0.00	0.00	0.00	
15,000.00	90.00	1.11	6,500.00	7,594.77	2,563.01	7,642.99	0.00	0.00	0.00	
15,077.94	90.00	1.11	6,500.00	7,672.69	2,564.52	7,720.93	0.00	0.00	0.00	
TD Well @ 15077.94'										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,761.76	1,700.00	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)		
250.00	250.00	0.00	0.00	Begin Tangent @ 250.00'	
1,450.50	1,415.67	-73.09	236.86	End Tangent @ 1450.50'	
6,303.73	5,848.97	-655.40	2,123.81	KOP @ 6303.73' :: DLS = 9°/100'	
7,375.44	6,500.00	-28.35	2,414.76	End Build @ 7375.44'	
15,077.94	6,500.00	7,672.69	2,564.52	TD Well @ 15077.94'	