

# PetroShare Corp

Well Name: **SHOOK 3-10-3NBH**

Surface Location: SHOOK PAD 3-1S-67W

North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

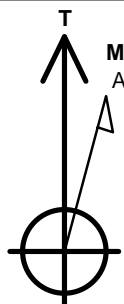
Ground Elevation: 5093.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1240633.36	3175613.24	39.992220	-104.873220	

EST KB 16' KB @ 5109.0ft (EST KB 16')

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2058'FSL & 2154'FEL	-10.0	0.0	0.0	Point
BHL 460'FSL & 1612' FEL	7562.0	-6874.0	566.2	Point
LANDING PT 860'FSL & 1612'FEL	7562.0	-1198.4	546.4	Point



Azimuths to True North  
Magnetic North: 8.45°

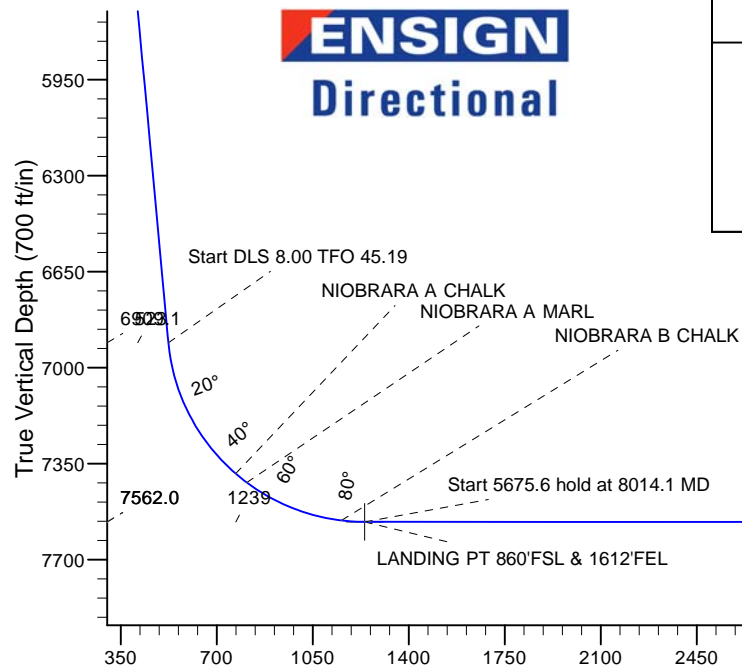
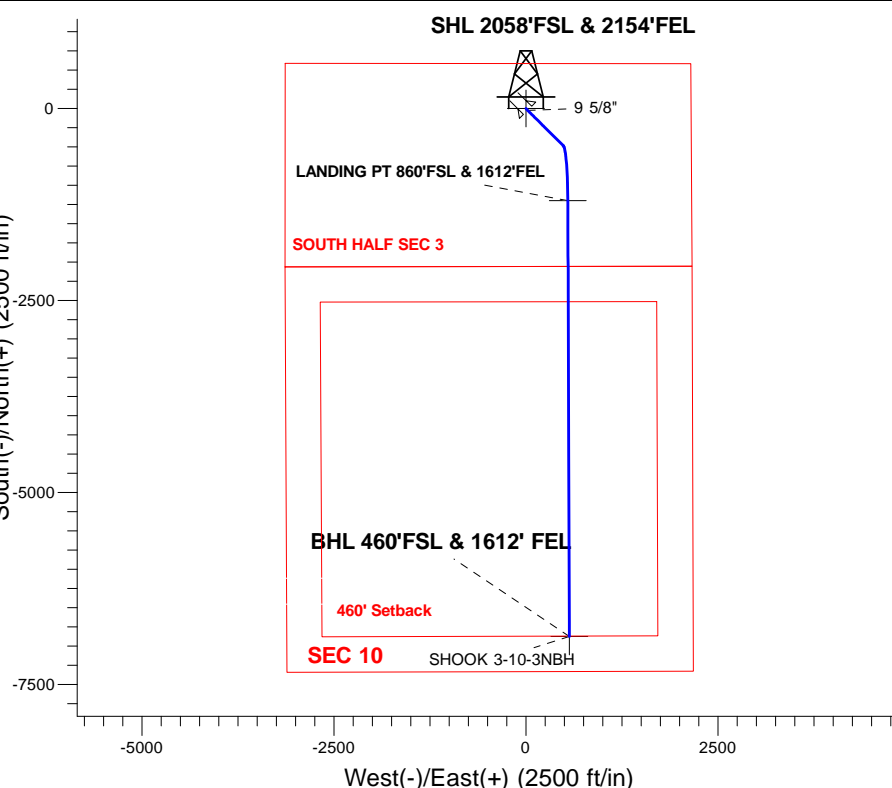
Magnetic Field  
Strength: 52274.5snT  
Dip Angle: 66.43°  
Date: 12/31/2015  
Model: HDGM

## ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP - Start Build 1.50
1459.5	1460.6	Start 5489.5 hold at 1460.6 MD
6909.1	6950.1	Start DLS 8.00 TFO 45.19
7562.0	8014.1	Start 5675.6 hold at 8014.1 MD
7562.0	13689.7	TD at 13689.7

SHOOK PAD 3-1S-67W  
SHOOK 3-10-3NBH  
PLAN 1 ( FEB 5 2016)  
14:11, February 22 2016

South(-)/North(+) (2500 ft/in)



**ENSIGN**  
Directional

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1460.6	6.91	134.82	1459.5	-19.6	19.7	1.50	134.82	21.1	
4	6950.1	6.91	134.82	6909.1	-485.0	488.0	0.00	0.00	523.4	
5	8014.1	90.00	179.80	7562.0	-1198.4	546.4	8.00	45.19	1239.2	LANDING PT 860'FSL & 1612'FEL
6	13689.7	90.00	179.80	7562.0	-6874.0	566.2	0.00	0.00	6897.3	BHL 460'FSL & 1612' FEL

Vertical Section at 175.29° (700 ft/in)



# Directional

## **PetroShare Corp**

**SEC.3-T1S-R67W**

**SHOOK PAD 3-1S-67W**

**SHOOK 3-10-3NBH**

**Wellbore #1**

**Plan: PLAN 1 ( FEB 5 2016)**

## **Standard Planning Report**

**22 February, 2016**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-3NBH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-3NBH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 ( FEB 5 2016)		

<b>Project</b>	SEC.3-T1S-R67W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		SHOOK PAD 3-1S-67W			
Site Position:		Northing:	1,240,632.47 usft	Latitude:	39.992220
From:	Lat/Long	Easting:	3,175,478.75 usft	Longitude:	-104.873700
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	SHOOK 3-10-3NBH					
Well Position	+N/-S	-0.1 ft	Northing:	1,240,633.36 usft	Latitude:	39.992220
	+E/-W	134.5 ft	Easting:	3,175,613.24 usft	Longitude:	-104.873220
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,093.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	12/31/2015	8.45	66.43	52,275

<b>Design</b>	PLAN 1 ( FEB 5 2016)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	175.29

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,460.6	6.91	134.82	1,459.5	-19.6	19.7	1.50	1.50	0.00	134.82	
6,950.1	6.91	134.82	6,909.1	-485.0	488.0	0.00	0.00	0.00	0.00	
8,014.1	90.00	179.80	7,562.0	-1,198.4	546.4	8.00	7.81	4.23	45.19	LANDING PT 860'FSI
13,689.7	90.00	179.80	7,562.0	-6,874.0	566.2	0.00	0.00	0.00	0.00	BHL 460'FSL & 1612'

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-3NBH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-3NBH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 ( FEB 5 2016)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SHL 2058'FSL &amp; 2154'FEL</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
740.0	0.00	0.00	740.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>FOX HILLS</b>									
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 1.50</b>									
1,100.0	1.50	134.82	1,100.0	-0.9	0.9	1.0	1.50	1.50	0.00
1,200.0	3.00	134.82	1,199.9	-3.7	3.7	4.0	1.50	1.50	0.00
1,300.0	4.50	134.82	1,299.7	-8.3	8.4	9.0	1.50	1.50	0.00
1,400.0	6.00	134.82	1,399.3	-14.8	14.8	15.9	1.50	1.50	0.00
1,460.6	6.91	134.82	1,459.5	-19.6	19.7	21.1	1.50	1.50	0.00
<b>Start 5489.5 hold at 1460.6 MD</b>									
1,500.0	6.91	134.82	1,498.6	-22.9	23.0	24.7	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.0	6.91	134.82	1,597.9	-31.4	31.6	33.9	0.00	0.00	0.00
1,700.0	6.91	134.82	1,697.1	-39.9	40.1	43.0	0.00	0.00	0.00
1,800.0	6.91	134.82	1,796.4	-48.3	48.6	52.2	0.00	0.00	0.00
1,900.0	6.91	134.82	1,895.7	-56.8	57.2	61.3	0.00	0.00	0.00
2,000.0	6.91	134.82	1,995.0	-65.3	65.7	70.5	0.00	0.00	0.00
2,100.0	6.91	134.82	2,094.2	-73.8	74.2	79.6	0.00	0.00	0.00
2,200.0	6.91	134.82	2,193.5	-82.2	82.8	88.8	0.00	0.00	0.00
2,300.0	6.91	134.82	2,292.8	-90.7	91.3	97.9	0.00	0.00	0.00
2,400.0	6.91	134.82	2,392.1	-99.2	99.8	107.1	0.00	0.00	0.00
2,500.0	6.91	134.82	2,491.3	-107.7	108.3	116.2	0.00	0.00	0.00
2,600.0	6.91	134.82	2,590.6	-116.2	116.9	125.4	0.00	0.00	0.00
2,700.0	6.91	134.82	2,689.9	-124.6	125.4	134.5	0.00	0.00	0.00
2,800.0	6.91	134.82	2,789.2	-133.1	133.9	143.7	0.00	0.00	0.00
2,900.0	6.91	134.82	2,888.4	-141.6	142.5	152.8	0.00	0.00	0.00
3,000.0	6.91	134.82	2,987.7	-150.1	151.0	162.0	0.00	0.00	0.00
3,100.0	6.91	134.82	3,087.0	-158.6	159.5	171.1	0.00	0.00	0.00
3,200.0	6.91	134.82	3,186.3	-167.0	168.1	180.3	0.00	0.00	0.00
3,300.0	6.91	134.82	3,285.5	-175.5	176.6	189.4	0.00	0.00	0.00
3,400.0	6.91	134.82	3,384.8	-184.0	185.1	198.6	0.00	0.00	0.00
3,500.0	6.91	134.82	3,484.1	-192.5	193.7	207.7	0.00	0.00	0.00
3,600.0	6.91	134.82	3,583.4	-201.0	202.2	216.9	0.00	0.00	0.00
3,700.0	6.91	134.82	3,682.6	-209.4	210.7	226.0	0.00	0.00	0.00
3,800.0	6.91	134.82	3,781.9	-217.9	219.3	235.2	0.00	0.00	0.00
3,900.0	6.91	134.82	3,881.2	-226.4	227.8	244.3	0.00	0.00	0.00
4,000.0	6.91	134.82	3,980.4	-234.9	236.3	253.5	0.00	0.00	0.00
4,100.0	6.91	134.82	4,079.7	-243.4	244.9	262.6	0.00	0.00	0.00
4,200.0	6.91	134.82	4,179.0	-251.8	253.4	271.8	0.00	0.00	0.00
4,300.0	6.91	134.82	4,278.3	-260.3	261.9	280.9	0.00	0.00	0.00
4,400.0	6.91	134.82	4,377.5	-268.8	270.4	290.1	0.00	0.00	0.00
4,500.0	6.91	134.82	4,476.8	-277.3	279.0	299.2	0.00	0.00	0.00
4,600.0	6.91	134.82	4,576.1	-285.8	287.5	308.4	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-3NBH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-3NBH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 ( FEB 5 2016)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	6.91	134.82	4,675.4	-294.2	296.0	317.5	0.00	0.00	0.00
4,800.0	6.91	134.82	4,774.6	-302.7	304.6	326.7	0.00	0.00	0.00
4,900.0	6.91	134.82	4,873.9	-311.2	313.1	335.8	0.00	0.00	0.00
4,926.3	6.91	134.82	4,900.0	-313.4	315.3	338.2	0.00	0.00	0.00
<b>SUSSEX</b>									
5,000.0	6.91	134.82	4,973.2	-319.7	321.6	345.0	0.00	0.00	0.00
5,100.0	6.91	134.82	5,072.5	-328.1	330.2	354.1	0.00	0.00	0.00
5,200.0	6.91	134.82	5,171.7	-336.6	338.7	363.3	0.00	0.00	0.00
5,300.0	6.91	134.82	5,271.0	-345.1	347.2	372.4	0.00	0.00	0.00
5,400.0	6.91	134.82	5,370.3	-353.6	355.8	381.6	0.00	0.00	0.00
5,500.0	6.91	134.82	5,469.6	-362.1	364.3	390.7	0.00	0.00	0.00
5,600.0	6.91	134.82	5,568.8	-370.5	372.8	399.9	0.00	0.00	0.00
5,700.0	6.91	134.82	5,668.1	-379.0	381.4	409.0	0.00	0.00	0.00
5,800.0	6.91	134.82	5,767.4	-387.5	389.9	418.2	0.00	0.00	0.00
5,900.0	6.91	134.82	5,866.7	-396.0	398.4	427.4	0.00	0.00	0.00
6,000.0	6.91	134.82	5,965.9	-404.5	407.0	436.5	0.00	0.00	0.00
6,100.0	6.91	134.82	6,065.2	-412.9	415.5	445.7	0.00	0.00	0.00
6,200.0	6.91	134.82	6,164.5	-421.4	424.0	454.8	0.00	0.00	0.00
6,300.0	6.91	134.82	6,263.7	-429.9	432.5	464.0	0.00	0.00	0.00
6,400.0	6.91	134.82	6,363.0	-438.4	441.1	473.1	0.00	0.00	0.00
6,500.0	6.91	134.82	6,462.3	-446.9	449.6	482.3	0.00	0.00	0.00
6,600.0	6.91	134.82	6,561.6	-455.3	458.1	491.4	0.00	0.00	0.00
6,700.0	6.91	134.82	6,660.8	-463.8	466.7	500.6	0.00	0.00	0.00
6,800.0	6.91	134.82	6,760.1	-472.3	475.2	509.7	0.00	0.00	0.00
6,900.0	6.91	134.82	6,859.4	-480.8	483.7	518.9	0.00	0.00	0.00
6,950.1	6.91	134.82	6,909.1	-485.0	488.0	523.4	0.00	0.00	0.00
<b>Start DLS 8.00 TFO 45.19</b>									
7,000.0	10.12	151.14	6,958.5	-491.0	492.3	529.7	8.00	6.44	32.70
7,100.0	17.55	164.09	7,055.5	-513.2	500.6	552.6	8.00	7.42	12.95
7,200.0	25.32	169.37	7,148.6	-548.8	508.7	588.7	8.00	7.77	5.28
7,300.0	33.19	172.28	7,235.7	-597.0	516.4	637.4	8.00	7.87	2.91
7,400.0	41.11	174.17	7,315.4	-656.9	523.4	697.7	8.00	7.92	1.89
7,500.0	49.05	175.54	7,385.9	-727.4	529.7	768.4	8.00	7.94	1.37
7,500.1	49.05	175.54	7,386.0	-727.5	529.7	768.5	0.00	0.00	0.00
<b>NIOBRARA A CHALK</b>									
7,552.7	53.25	176.13	7,419.0	-768.4	532.7	809.5	8.02	7.97	1.13
<b>NIOBRARA A MARL</b>									
7,600.0	57.01	176.61	7,446.0	-807.1	535.1	848.3	8.00	7.96	1.02
7,700.0	64.97	177.51	7,494.5	-894.3	539.6	935.6	8.00	7.96	0.90
7,800.0	72.94	178.29	7,530.4	-987.5	543.0	1,028.8	8.00	7.97	0.79
7,900.0	80.91	179.02	7,553.0	-1,084.8	545.2	1,125.9	8.00	7.97	0.72
7,929.3	83.24	179.22	7,557.0	-1,113.8	545.7	1,154.8	8.00	7.97	0.70
<b>NIOBRARA B CHALK</b>									
8,000.0	88.88	179.70	7,561.9	-1,184.3	546.3	1,225.2	8.00	7.97	0.69
8,014.1	90.00	179.80	7,562.0	-1,198.4	546.4	1,239.2	8.00	7.97	0.68
<b>Start 5675.6 hold at 8014.1 MD - LANDING PT 860'FSL &amp; 1612'FEL</b>									
8,100.0	90.00	179.80	7,562.0	-1,284.3	546.7	1,324.9	0.00	0.00	0.00
8,200.0	90.00	179.80	7,562.0	-1,384.3	547.1	1,424.6	0.00	0.00	0.00
8,300.0	90.00	179.80	7,562.0	-1,484.3	547.4	1,524.3	0.00	0.00	0.00
8,400.0	90.00	179.80	7,562.0	-1,584.3	547.7	1,623.9	0.00	0.00	0.00
8,500.0	90.00	179.80	7,562.0	-1,684.3	548.1	1,723.6	0.00	0.00	0.00
8,600.0	90.00	179.80	7,562.0	-1,784.3	548.4	1,823.3	0.00	0.00	0.00
8,700.0	90.00	179.80	7,562.0	-1,884.3	548.8	1,923.0	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-3NBH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-3NBH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 ( FEB 5 2016)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.0	90.00	179.80	7,562.0	-1,984.3	549.1	2,022.7	0.00	0.00	0.00
8,900.0	90.00	179.80	7,562.0	-2,084.3	549.5	2,122.4	0.00	0.00	0.00
9,000.0	90.00	179.80	7,562.0	-2,184.3	549.8	2,222.1	0.00	0.00	0.00
9,100.0	90.00	179.80	7,562.0	-2,284.3	550.2	2,321.8	0.00	0.00	0.00
9,200.0	90.00	179.80	7,562.0	-2,384.3	550.5	2,421.5	0.00	0.00	0.00
9,300.0	90.00	179.80	7,562.0	-2,484.3	550.9	2,521.2	0.00	0.00	0.00
9,400.0	90.00	179.80	7,562.0	-2,584.3	551.2	2,620.9	0.00	0.00	0.00
9,500.0	90.00	179.80	7,562.0	-2,684.3	551.6	2,720.5	0.00	0.00	0.00
9,600.0	90.00	179.80	7,562.0	-2,784.3	551.9	2,820.2	0.00	0.00	0.00
9,700.0	90.00	179.80	7,562.0	-2,884.3	552.3	2,919.9	0.00	0.00	0.00
9,800.0	90.00	179.80	7,562.0	-2,984.3	552.6	3,019.6	0.00	0.00	0.00
9,900.0	90.00	179.80	7,562.0	-3,084.3	553.0	3,119.3	0.00	0.00	0.00
10,000.0	90.00	179.80	7,562.0	-3,184.3	553.3	3,219.0	0.00	0.00	0.00
10,100.0	90.00	179.80	7,562.0	-3,284.3	553.7	3,318.7	0.00	0.00	0.00
10,200.0	90.00	179.80	7,562.0	-3,384.3	554.0	3,418.4	0.00	0.00	0.00
10,300.0	90.00	179.80	7,562.0	-3,484.3	554.4	3,518.1	0.00	0.00	0.00
10,400.0	90.00	179.80	7,562.0	-3,584.3	554.7	3,617.8	0.00	0.00	0.00
10,500.0	90.00	179.80	7,562.0	-3,684.3	555.1	3,717.4	0.00	0.00	0.00
10,600.0	90.00	179.80	7,562.0	-3,784.3	555.4	3,817.1	0.00	0.00	0.00
10,700.0	90.00	179.80	7,562.0	-3,884.3	555.8	3,916.8	0.00	0.00	0.00
10,800.0	90.00	179.80	7,562.0	-3,984.3	556.1	4,016.5	0.00	0.00	0.00
10,900.0	90.00	179.80	7,562.0	-4,084.3	556.4	4,116.2	0.00	0.00	0.00
11,000.0	90.00	179.80	7,562.0	-4,184.3	556.8	4,215.9	0.00	0.00	0.00
11,100.0	90.00	179.80	7,562.0	-4,284.3	557.1	4,315.6	0.00	0.00	0.00
11,200.0	90.00	179.80	7,562.0	-4,384.3	557.5	4,415.3	0.00	0.00	0.00
11,300.0	90.00	179.80	7,562.0	-4,484.3	557.8	4,515.0	0.00	0.00	0.00
11,400.0	90.00	179.80	7,562.0	-4,584.3	558.2	4,614.7	0.00	0.00	0.00
11,500.0	90.00	179.80	7,562.0	-4,684.3	558.5	4,714.4	0.00	0.00	0.00
11,600.0	90.00	179.80	7,562.0	-4,784.3	558.9	4,814.0	0.00	0.00	0.00
11,700.0	90.00	179.80	7,562.0	-4,884.3	559.2	4,913.7	0.00	0.00	0.00
11,800.0	90.00	179.80	7,562.0	-4,984.3	559.6	5,013.4	0.00	0.00	0.00
11,900.0	90.00	179.80	7,562.0	-5,084.3	559.9	5,113.1	0.00	0.00	0.00
12,000.0	90.00	179.80	7,562.0	-5,184.3	560.3	5,212.8	0.00	0.00	0.00
12,100.0	90.00	179.80	7,562.0	-5,284.3	560.6	5,312.5	0.00	0.00	0.00
12,200.0	90.00	179.80	7,562.0	-5,384.3	561.0	5,412.2	0.00	0.00	0.00
12,300.0	90.00	179.80	7,562.0	-5,484.3	561.3	5,511.9	0.00	0.00	0.00
12,400.0	90.00	179.80	7,562.0	-5,584.3	561.7	5,611.6	0.00	0.00	0.00
12,500.0	90.00	179.80	7,562.0	-5,684.3	562.0	5,711.3	0.00	0.00	0.00
12,600.0	90.00	179.80	7,562.0	-5,784.3	562.4	5,810.9	0.00	0.00	0.00
12,700.0	90.00	179.80	7,562.0	-5,884.3	562.7	5,910.6	0.00	0.00	0.00
12,800.0	90.00	179.80	7,562.0	-5,984.3	563.1	6,010.3	0.00	0.00	0.00
12,900.0	90.00	179.80	7,562.0	-6,084.3	563.4	6,110.0	0.00	0.00	0.00
13,000.0	90.00	179.80	7,562.0	-6,184.3	563.8	6,209.7	0.00	0.00	0.00
13,100.0	90.00	179.80	7,562.0	-6,284.3	564.1	6,309.4	0.00	0.00	0.00
13,200.0	90.00	179.80	7,562.0	-6,384.3	564.4	6,409.1	0.00	0.00	0.00
13,300.0	90.00	179.80	7,562.0	-6,484.3	564.8	6,508.8	0.00	0.00	0.00
13,400.0	90.00	179.80	7,562.0	-6,584.3	565.1	6,608.5	0.00	0.00	0.00
13,500.0	90.00	179.80	7,562.0	-6,684.3	565.5	6,708.2	0.00	0.00	0.00
13,600.0	90.00	179.80	7,562.0	-6,784.3	565.8	6,807.9	0.00	0.00	0.00
13,689.7	90.00	179.80	7,562.0	-6,874.0	566.2	6,897.3	0.00	0.00	0.00
TD at 13689.7 - BHL 460'FSL & 1612' FEL									

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-3NBH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	KB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-3NBH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 ( FEB 5 2016)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
SHL 2058'FSL & 2154'FI	0.00	0.00	-10.0	0.0	0.0	1,240,633.37	3,175,613.24	39.992220	-104.873220
- plan misses target center by 10.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Point									
BHL 460'FSL & 1612' FE	0.00	0.00	7,562.0	-6,874.0	566.2	1,233,763.77	3,176,227.94	39.973350	-104.871200
- plan hits target center									
- Point									
LANDING PT 860'FSL &	0.00	0.00	7,562.0	-1,198.4	546.4	1,239,438.86	3,176,168.08	39.988930	-104.871270
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(")	(")
1,500.0	1,498.6	9 5/8"	9-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
740.0	740.0	FOX HILLS		0.00	
4,926.3	4,900.0	SUSSEX		0.00	
7,500.1	7,386.0	NIOBRARA A CHALK		0.00	
7,552.7	7,419.0	NIOBRARA A MARL		0.00	
7,929.3	7,557.0	NIOBRARA B CHALK		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
1,000.0	1,000.0	0.0	0.0	KOP - Start Build 1.50
1,460.6	1,459.5	-19.6	19.7	Start 5489.5 hold at 1460.6 MD
6,950.1	6,909.1	-485.0	488.0	Start DLS 8.00 TFO 45.19
8,014.1	7,562.0	-1,198.4	546.4	Start 5675.6 hold at 8014.1 MD
13,689.7	7,562.0	-6,874.0	566.2	TD at 13689.7