

# PetroShare Corp

Well Name: **SHOOK 3-10-6CDH**

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

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

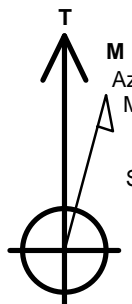
Ground Elevation: 5093.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1240633.75	3175672.08	39.992220	-104.873010	

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

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2058'FSL & 2094'FEL	-10.0	0.0	0.0	Point
BHL 460'FSL & 460'FEL	7838.0	-6870.3	1659.2	Point
LANDING PT 860'FSL & 460'FEL	7838.0	-1194.7	1642.0	Point



Azimuths to True North  
Magnetic North: 8.45°

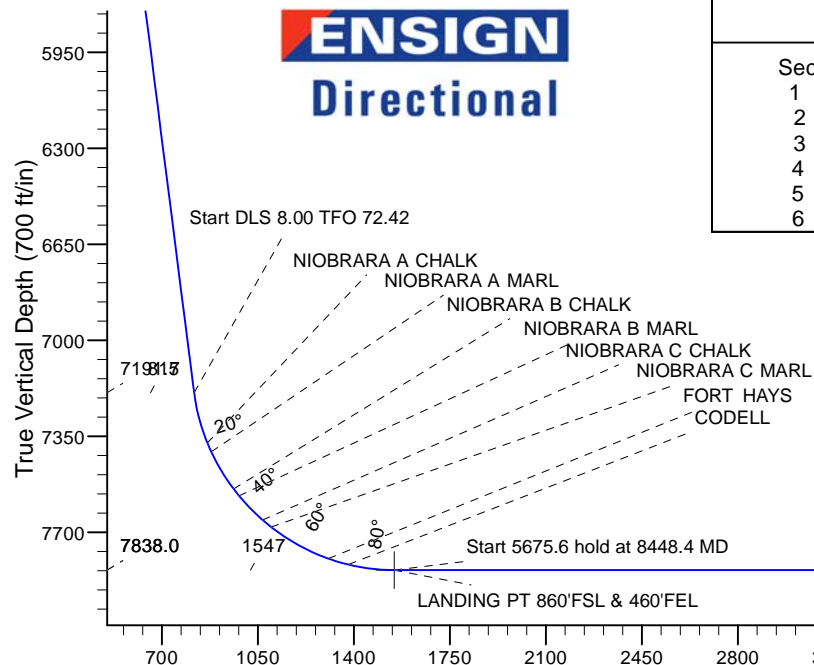
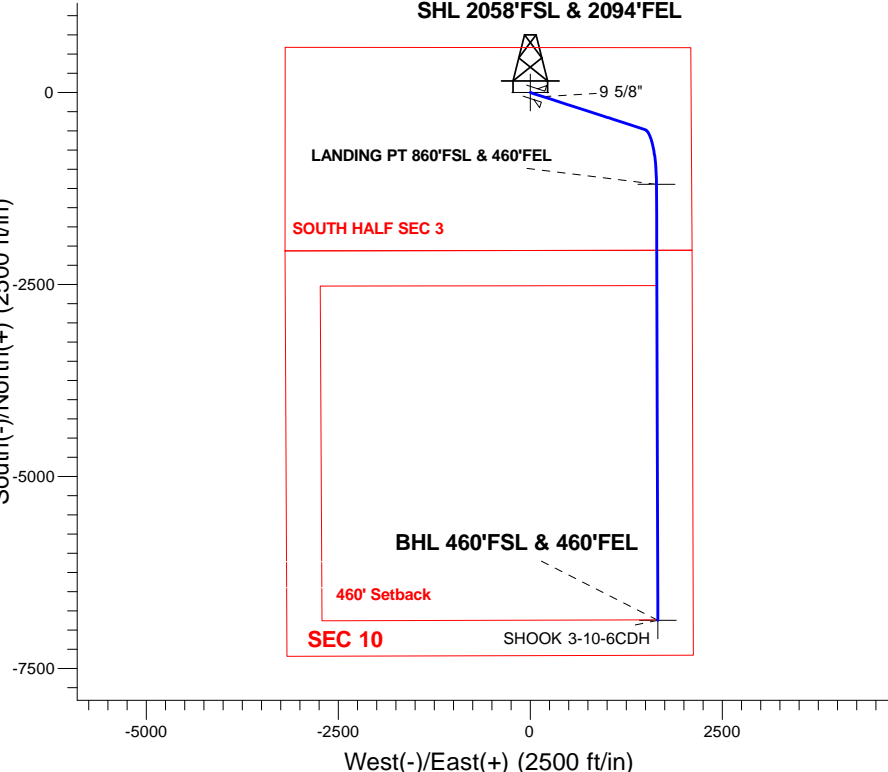
Magnetic Field  
Strength: 52274.5snT  
Dip Angle: 66.43°  
Date: 12/31/2015  
Model: HDGM

## ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP - Start Build 1.89
1119.2	1126.1	Start 6249.9 hold at 1126.1 MD
7191.5	7376.0	Start DLS 8.00 TFO 72.42
7838.0	8448.4	Start 5675.6 hold at 8448.4 MD
7838.0	14124.0	TD at 14124.0

SHOOK PAD 3-1S-67W  
SHOOK 3-10-6CDH  
PLAN 1 ( FEB 5 2016)  
15:33, February 22 2016

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



## 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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1126.1	13.69	107.89	1119.2	-26.5	82.2	1.89	107.89	45.1	
4	7376.0	13.69	107.89	7191.5	-480.9	1490.1	0.00	0.00	817.3	
5	8448.4	90.00	179.83	7838.0	-1194.7	1642.0	8.00	72.42	1546.8	LANDING PT 860'FSL & 460'FEL
6	14124.0	90.00	179.83	7838.0	-6870.3	1659.2	0.00	0.00	7067.8	BHL 460'FSL & 460'FEL

Vertical Section at 166.42° (700 ft/in)



# Directional

## **PetroShare Corp**

**SEC.3-T1S-R67W**

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

**SHOOK 3-10-6CDH**

**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 3-10-6CDH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	RKB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	RKB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-6CDH	<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 3-10-6CDH					
Well Position	+N/-S	-0.1 ft	Northing:	1,240,633.74 usft	Latitude:	39.992220
	+E/-W	193.3 ft	Easting:	3,175,672.08 usft	Longitude:	-104.873010
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	166.42

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,126.1	13.69	107.89	1,119.2	-26.5	82.2	1.89	1.89	0.00	107.89	
7,376.0	13.69	107.89	7,191.5	-480.9	1,490.1	0.00	0.00	0.00	0.00	
8,448.4	90.00	179.83	7,838.0	-1,194.7	1,642.0	8.00	7.12	6.71	72.42	LANDING PT 860'FSI
14,124.0	90.00	179.83	7,838.0	-6,870.3	1,659.2	0.00	0.00	0.00	0.00	BHL 460'FSL & 460'F

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-6CDH
Company:	PetroShare Corp	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Project:	SEC.3-T1S-R67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site:	SHOOK PAD 3-1S-67W	North Reference:	True
Well:	SHOOK 3-10-6CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
SHL 2058'FSL & 2094'FEL									
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
KOP - Start Build 1.89									
500.0	1.89	107.89	500.0	-0.5	1.6	0.9	1.89	1.89	0.00
600.0	3.77	107.89	599.9	-2.0	6.3	3.4	1.89	1.89	0.00
700.0	5.66	107.89	699.5	-4.5	14.1	7.7	1.89	1.89	0.00
740.7	6.42	107.89	740.0	-5.9	18.2	10.0	1.89	1.89	0.00
FOX HILLS									
800.0	7.54	107.89	798.8	-8.1	25.0	13.7	1.89	1.89	0.00
900.0	9.43	107.89	897.7	-12.6	39.1	21.4	1.89	1.89	0.00
1,000.0	11.31	107.89	996.1	-18.1	56.2	30.8	1.89	1.89	0.00
1,100.0	13.20	107.89	1,093.8	-24.7	76.4	41.9	1.89	1.89	0.00
1,126.1	13.69	107.89	1,119.2	-26.5	82.2	45.1	1.89	1.89	0.00
Start 6249.9 hold at 1126.1 MD									
1,200.0	13.69	107.89	1,191.0	-31.9	98.8	54.2	0.00	0.00	0.00
1,300.0	13.69	107.89	1,288.2	-39.2	121.3	66.6	0.00	0.00	0.00
1,400.0	13.69	107.89	1,385.3	-46.4	143.9	78.9	0.00	0.00	0.00
1,500.0	13.69	107.89	1,482.5	-53.7	166.4	91.3	0.00	0.00	0.00
9 5/8"									
1,600.0	13.69	107.89	1,579.6	-61.0	188.9	103.6	0.00	0.00	0.00
1,700.0	13.69	107.89	1,676.8	-68.2	211.5	116.0	0.00	0.00	0.00
1,800.0	13.69	107.89	1,774.0	-75.5	234.0	128.3	0.00	0.00	0.00
1,900.0	13.69	107.89	1,871.1	-82.8	256.5	140.7	0.00	0.00	0.00
2,000.0	13.69	107.89	1,968.3	-90.1	279.0	153.0	0.00	0.00	0.00
2,100.0	13.69	107.89	2,065.4	-97.3	301.6	165.4	0.00	0.00	0.00
2,200.0	13.69	107.89	2,162.6	-104.6	324.1	177.8	0.00	0.00	0.00
2,300.0	13.69	107.89	2,259.7	-111.9	346.6	190.1	0.00	0.00	0.00
2,400.0	13.69	107.89	2,356.9	-119.1	369.1	202.5	0.00	0.00	0.00
2,500.0	13.69	107.89	2,454.1	-126.4	391.7	214.8	0.00	0.00	0.00
2,600.0	13.69	107.89	2,551.2	-133.7	414.2	227.2	0.00	0.00	0.00
2,700.0	13.69	107.89	2,648.4	-140.9	436.7	239.5	0.00	0.00	0.00
2,800.0	13.69	107.89	2,745.5	-148.2	459.3	251.9	0.00	0.00	0.00
2,900.0	13.69	107.89	2,842.7	-155.5	481.8	264.2	0.00	0.00	0.00
3,000.0	13.69	107.89	2,939.9	-162.8	504.3	276.6	0.00	0.00	0.00
3,100.0	13.69	107.89	3,037.0	-170.0	526.8	289.0	0.00	0.00	0.00
3,200.0	13.69	107.89	3,134.2	-177.3	549.4	301.3	0.00	0.00	0.00
3,300.0	13.69	107.89	3,231.3	-184.6	571.9	313.7	0.00	0.00	0.00
3,400.0	13.69	107.89	3,328.5	-191.8	594.4	326.0	0.00	0.00	0.00
3,500.0	13.69	107.89	3,425.6	-199.1	616.9	338.4	0.00	0.00	0.00
3,600.0	13.69	107.89	3,522.8	-206.4	639.5	350.7	0.00	0.00	0.00
3,700.0	13.69	107.89	3,620.0	-213.6	662.0	363.1	0.00	0.00	0.00
3,800.0	13.69	107.89	3,717.1	-220.9	684.5	375.4	0.00	0.00	0.00
3,900.0	13.69	107.89	3,814.3	-228.2	707.1	387.8	0.00	0.00	0.00
4,000.0	13.69	107.89	3,911.4	-235.5	729.6	400.2	0.00	0.00	0.00
4,100.0	13.69	107.89	4,008.6	-242.7	752.1	412.5	0.00	0.00	0.00
4,200.0	13.69	107.89	4,105.7	-250.0	774.6	424.9	0.00	0.00	0.00
4,300.0	13.69	107.89	4,202.9	-257.3	797.2	437.2	0.00	0.00	0.00
4,400.0	13.69	107.89	4,300.1	-264.5	819.7	449.6	0.00	0.00	0.00
4,500.0	13.69	107.89	4,397.2	-271.8	842.2	461.9	0.00	0.00	0.00
4,600.0	13.69	107.89	4,494.4	-279.1	864.7	474.3	0.00	0.00	0.00

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Project:	SEC.3-T1S-R67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site:	SHOOK PAD 3-1S-67W	North Reference:	True
Well:	SHOOK 3-10-6CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	13.69	107.89	4,591.5	-286.3	887.3	486.6	0.00	0.00	0.00
4,800.0	13.69	107.89	4,688.7	-293.6	909.8	499.0	0.00	0.00	0.00
4,900.0	13.69	107.89	4,785.9	-300.9	932.3	511.4	0.00	0.00	0.00
5,000.0	13.69	107.89	4,883.0	-308.2	954.9	523.7	0.00	0.00	0.00
5,017.5	13.69	107.89	4,900.0	-309.4	958.8	525.9	0.00	0.00	0.00
<b>SUSSEX</b>									
5,100.0	13.69	107.89	4,980.2	-315.4	977.4	536.1	0.00	0.00	0.00
5,200.0	13.69	107.89	5,077.3	-322.7	999.9	548.4	0.00	0.00	0.00
5,300.0	13.69	107.89	5,174.5	-330.0	1,022.4	560.8	0.00	0.00	0.00
5,400.0	13.69	107.89	5,271.6	-337.2	1,045.0	573.1	0.00	0.00	0.00
5,500.0	13.69	107.89	5,368.8	-344.5	1,067.5	585.5	0.00	0.00	0.00
5,600.0	13.69	107.89	5,466.0	-351.8	1,090.0	597.8	0.00	0.00	0.00
5,700.0	13.69	107.89	5,563.1	-359.0	1,112.5	610.2	0.00	0.00	0.00
5,800.0	13.69	107.89	5,660.3	-366.3	1,135.1	622.5	0.00	0.00	0.00
5,900.0	13.69	107.89	5,757.4	-373.6	1,157.6	634.9	0.00	0.00	0.00
6,000.0	13.69	107.89	5,854.6	-380.9	1,180.1	647.3	0.00	0.00	0.00
6,100.0	13.69	107.89	5,951.7	-388.1	1,202.7	659.6	0.00	0.00	0.00
6,200.0	13.69	107.89	6,048.9	-395.4	1,225.2	672.0	0.00	0.00	0.00
6,300.0	13.69	107.89	6,146.1	-402.7	1,247.7	684.3	0.00	0.00	0.00
6,400.0	13.69	107.89	6,243.2	-409.9	1,270.2	696.7	0.00	0.00	0.00
6,500.0	13.69	107.89	6,340.4	-417.2	1,292.8	709.0	0.00	0.00	0.00
6,600.0	13.69	107.89	6,437.5	-424.5	1,315.3	721.4	0.00	0.00	0.00
6,700.0	13.69	107.89	6,534.7	-431.8	1,337.8	733.7	0.00	0.00	0.00
6,800.0	13.69	107.89	6,631.9	-439.0	1,360.3	746.1	0.00	0.00	0.00
6,900.0	13.69	107.89	6,729.0	-446.3	1,382.9	758.5	0.00	0.00	0.00
7,000.0	13.69	107.89	6,826.2	-453.6	1,405.4	770.8	0.00	0.00	0.00
7,100.0	13.69	107.89	6,923.3	-460.8	1,427.9	783.2	0.00	0.00	0.00
7,200.0	13.69	107.89	7,020.5	-468.1	1,450.5	795.5	0.00	0.00	0.00
7,300.0	13.69	107.89	7,117.6	-475.4	1,473.0	807.9	0.00	0.00	0.00
7,376.0	13.69	107.89	7,191.5	-480.9	1,490.1	817.3	0.00	0.00	0.00
<b>Start DLS 8.00 TFO 72.42</b>									
7,400.0	14.39	115.27	7,214.8	-483.0	1,495.5	820.6	8.00	2.89	30.77
7,500.0	19.14	137.95	7,310.6	-500.5	1,517.8	842.9	8.00	4.75	22.68
7,568.0	23.38	147.42	7,374.0	-520.2	1,532.5	865.4	8.00	6.23	13.92
<b>NIOBRARA A CHALK</b>									
7,600.0	25.52	150.80	7,403.1	-531.6	1,539.3	878.1	8.00	6.70	10.56
7,604.3	25.81	151.22	7,407.0	-533.2	1,540.2	879.9	8.00	6.83	9.62
<b>NIOBRARA A MARL</b>									
7,700.0	32.59	158.58	7,490.5	-575.5	1,559.7	925.6	8.00	7.08	7.70
7,762.8	37.20	162.06	7,542.0	-609.3	1,571.7	961.3	8.00	7.35	5.54
<b>NIOBRARA B CHALK</b>									
7,794.7	39.58	163.55	7,567.0	-628.3	1,577.5	981.0	8.00	7.45	4.69
<b>NIOBRARA B MARL</b>									
7,800.0	39.97	163.79	7,571.1	-631.5	1,578.5	984.4	8.00	7.49	4.41
7,900.0	47.53	167.59	7,643.3	-698.5	1,595.4	1,053.5	8.00	7.56	3.80
7,917.6	48.88	168.16	7,655.0	-711.3	1,598.2	1,066.6	8.00	7.62	3.25
<b>NIOBRARA C CHALK</b>									
7,958.4	52.00	169.40	7,681.0	-742.2	1,604.3	1,098.1	8.00	7.65	3.04
<b>NIOBRARA C MARL</b>									
8,000.0	55.19	170.56	7,705.7	-775.1	1,610.1	1,131.5	8.00	7.68	2.79
8,100.0	62.91	173.02	7,757.1	-860.0	1,622.3	1,216.8	8.00	7.72	2.46
8,198.6	70.56	175.14	7,796.0	-950.0	1,631.6	1,306.5	8.00	7.75	2.14
<b>FORT HAYS</b>									

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Company:	PetroShare Corp	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Project:	SEC.3-T1S-R67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site:	SHOOK PAD 3-1S-67W	North Reference:	True
Well:	SHOOK 3-10-6CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
8,200.0	70.66	175.16	7,796.5	-951.3	1,631.7	1,307.8	8.00	7.77	2.03
8,276.5	76.61	176.67	7,818.0	-1,024.5	1,636.9	1,380.1	8.00	7.78	1.96
CODELL									
8,300.0	78.44	177.11	7,823.1	-1,047.4	1,638.1	1,402.7	8.00	7.78	1.89
8,400.0	86.23	178.95	7,836.4	-1,146.4	1,641.5	1,499.7	8.00	7.79	1.84
8,448.4	90.00	179.83	7,838.0	-1,194.7	1,642.0	1,546.8	8.00	7.79	1.81
Start 5675.6 hold at 8448.4 MD - LANDING PT 860'FSL & 460'FEL									
8,500.0	90.00	179.83	7,838.0	-1,246.3	1,642.2	1,597.0	0.00	0.00	0.00
8,600.0	90.00	179.83	7,838.0	-1,346.3	1,642.5	1,694.3	0.00	0.00	0.00
8,700.0	90.00	179.83	7,838.0	-1,446.3	1,642.8	1,791.6	0.00	0.00	0.00
8,800.0	90.00	179.83	7,838.0	-1,546.3	1,643.1	1,888.8	0.00	0.00	0.00
8,900.0	90.00	179.83	7,838.0	-1,646.3	1,643.4	1,986.1	0.00	0.00	0.00
9,000.0	90.00	179.83	7,838.0	-1,746.3	1,643.7	2,083.4	0.00	0.00	0.00
9,100.0	90.00	179.83	7,838.0	-1,846.3	1,644.0	2,180.7	0.00	0.00	0.00
9,200.0	90.00	179.83	7,838.0	-1,946.3	1,644.3	2,277.9	0.00	0.00	0.00
9,300.0	90.00	179.83	7,838.0	-2,046.3	1,644.6	2,375.2	0.00	0.00	0.00
9,400.0	90.00	179.83	7,838.0	-2,146.3	1,644.9	2,472.5	0.00	0.00	0.00
9,500.0	90.00	179.83	7,838.0	-2,246.3	1,645.2	2,569.8	0.00	0.00	0.00
9,600.0	90.00	179.83	7,838.0	-2,346.3	1,645.5	2,667.0	0.00	0.00	0.00
9,700.0	90.00	179.83	7,838.0	-2,446.3	1,645.8	2,764.3	0.00	0.00	0.00
9,800.0	90.00	179.83	7,838.0	-2,546.3	1,646.1	2,861.6	0.00	0.00	0.00
9,900.0	90.00	179.83	7,838.0	-2,646.3	1,646.4	2,958.9	0.00	0.00	0.00
10,000.0	90.00	179.83	7,838.0	-2,746.3	1,646.7	3,056.1	0.00	0.00	0.00
10,100.0	90.00	179.83	7,838.0	-2,846.3	1,647.0	3,153.4	0.00	0.00	0.00
10,200.0	90.00	179.83	7,838.0	-2,946.3	1,647.3	3,250.7	0.00	0.00	0.00
10,300.0	90.00	179.83	7,838.0	-3,046.3	1,647.6	3,348.0	0.00	0.00	0.00
10,400.0	90.00	179.83	7,838.0	-3,146.3	1,647.9	3,445.2	0.00	0.00	0.00
10,500.0	90.00	179.83	7,838.0	-3,246.3	1,648.2	3,542.5	0.00	0.00	0.00
10,600.0	90.00	179.83	7,838.0	-3,346.3	1,648.5	3,639.8	0.00	0.00	0.00
10,700.0	90.00	179.83	7,838.0	-3,446.3	1,648.8	3,737.1	0.00	0.00	0.00
10,800.0	90.00	179.83	7,838.0	-3,546.3	1,649.1	3,834.4	0.00	0.00	0.00
10,900.0	90.00	179.83	7,838.0	-3,646.3	1,649.4	3,931.6	0.00	0.00	0.00
11,000.0	90.00	179.83	7,838.0	-3,746.3	1,649.8	4,028.9	0.00	0.00	0.00
11,100.0	90.00	179.83	7,838.0	-3,846.3	1,650.1	4,126.2	0.00	0.00	0.00
11,200.0	90.00	179.83	7,838.0	-3,946.3	1,650.4	4,223.5	0.00	0.00	0.00
11,300.0	90.00	179.83	7,838.0	-4,046.3	1,650.7	4,320.7	0.00	0.00	0.00
11,400.0	90.00	179.83	7,838.0	-4,146.3	1,651.0	4,418.0	0.00	0.00	0.00
11,500.0	90.00	179.83	7,838.0	-4,246.3	1,651.3	4,515.3	0.00	0.00	0.00
11,600.0	90.00	179.83	7,838.0	-4,346.3	1,651.6	4,612.6	0.00	0.00	0.00
11,700.0	90.00	179.83	7,838.0	-4,446.3	1,651.9	4,709.8	0.00	0.00	0.00
11,800.0	90.00	179.83	7,838.0	-4,546.3	1,652.2	4,807.1	0.00	0.00	0.00
11,900.0	90.00	179.83	7,838.0	-4,646.3	1,652.5	4,904.4	0.00	0.00	0.00
12,000.0	90.00	179.83	7,838.0	-4,746.3	1,652.8	5,001.7	0.00	0.00	0.00
12,100.0	90.00	179.83	7,838.0	-4,846.3	1,653.1	5,098.9	0.00	0.00	0.00
12,200.0	90.00	179.83	7,838.0	-4,946.3	1,653.4	5,196.2	0.00	0.00	0.00
12,300.0	90.00	179.83	7,838.0	-5,046.3	1,653.7	5,293.5	0.00	0.00	0.00
12,400.0	90.00	179.83	7,838.0	-5,146.3	1,654.0	5,390.8	0.00	0.00	0.00
12,500.0	90.00	179.83	7,838.0	-5,246.3	1,654.3	5,488.0	0.00	0.00	0.00
12,600.0	90.00	179.83	7,838.0	-5,346.3	1,654.6	5,585.3	0.00	0.00	0.00
12,700.0	90.00	179.83	7,838.0	-5,446.3	1,654.9	5,682.6	0.00	0.00	0.00
12,800.0	90.00	179.83	7,838.0	-5,546.3	1,655.2	5,779.9	0.00	0.00	0.00
12,900.0	90.00	179.83	7,838.0	-5,646.3	1,655.5	5,877.1	0.00	0.00	0.00
13,000.0	90.00	179.83	7,838.0	-5,746.3	1,655.8	5,974.4	0.00	0.00	0.00
13,100.0	90.00	179.83	7,838.0	-5,846.3	1,656.1	6,071.7	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well SHOOK 3-10-6CDH
<b>Company:</b>	PetroShare Corp	<b>TVD Reference:</b>	RKB @ 5109.0ft (EST KB 16')
<b>Project:</b>	SEC.3-T1S-R67W	<b>MD Reference:</b>	RKB @ 5109.0ft (EST KB 16')
<b>Site:</b>	SHOOK PAD 3-1S-67W	<b>North Reference:</b>	True
<b>Well:</b>	SHOOK 3-10-6CDH	<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)
13,200.0	90.00	179.83	7,838.0	-5,946.3	1,656.4	6,169.0	0.00	0.00	0.00
13,300.0	90.00	179.83	7,838.0	-6,046.3	1,656.7	6,266.3	0.00	0.00	0.00
13,400.0	90.00	179.83	7,838.0	-6,146.3	1,657.0	6,363.5	0.00	0.00	0.00
13,500.0	90.00	179.83	7,838.0	-6,246.3	1,657.3	6,460.8	0.00	0.00	0.00
13,600.0	90.00	179.83	7,838.0	-6,346.3	1,657.6	6,558.1	0.00	0.00	0.00
13,700.0	90.00	179.83	7,838.0	-6,446.3	1,657.9	6,655.4	0.00	0.00	0.00
13,800.0	90.00	179.83	7,838.0	-6,546.3	1,658.2	6,752.6	0.00	0.00	0.00
13,900.0	90.00	179.83	7,838.0	-6,646.3	1,658.5	6,849.9	0.00	0.00	0.00
14,000.0	90.00	179.83	7,838.0	-6,746.3	1,658.8	6,947.2	0.00	0.00	0.00
14,100.0	90.00	179.83	7,838.0	-6,846.3	1,659.1	7,044.5	0.00	0.00	0.00
14,124.0	90.00	179.83	7,838.0	-6,870.3	1,659.2	7,067.8	0.00	0.00	0.00
TD at 14124.0 - BHL 460'FSL & 460'FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL 2058'FSL & 2094'FI	0.00	0.00	-10.0	0.0	0.0	1,240,633.75	3,175,672.08	39.992220	-104.873010
- plan misses target center by 10.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Point									
BHL 460'FSL & 460'FEL	0.00	0.00	7,838.0	-6,870.3	1,659.2	1,233,775.60	3,177,379.77	39.973360	-104.867090
- plan hits target center									
- Point									
LANDING PT 860'FSL &	0.00	0.00	7,838.0	-1,194.7	1,642.0	1,239,450.72	3,177,322.45	39.988940	-104.867150
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,500.0	1,482.5	9 5/8"	9-5/8	12-1/4	

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-6CDH
Company:	PetroShare Corp	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Project:	SEC.3-T1S-R67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site:	SHOOK PAD 3-1S-67W	North Reference:	True
Well:	SHOOK 3-10-6CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 ( FEB 5 2016)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
740.7	740.0	FOX HILLS		0.00	
5,017.5	4,900.0	SUSSEX		0.00	
7,568.0	7,374.0	NIOBRARA A CHALK		0.00	
7,604.3	7,407.0	NIOBRARA A MARL		0.00	
7,762.8	7,542.0	NIOBRARA B CHALK		0.00	
7,794.7	7,567.0	NIOBRARA B MARL		0.00	
7,917.6	7,655.0	NIOBRARA C CHALK		0.00	
7,958.4	7,681.0	NIOBRARA C MARL		0.00	
8,198.6	7,796.0	FORT HAYS		0.00	
8,276.5	7,818.0	CODELL		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP - Start Build 1.89
1,126.1	1,119.2	-26.5	82.2	Start 6249.9 hold at 1126.1 MD
7,376.0	7,191.5	-480.9	1,490.1	Start DLS 8.00 TFO 72.42
8,448.4	7,838.0	-1,194.7	1,642.0	Start 5675.6 hold at 8448.4 MD
14,124.0	7,838.0	-6,870.3	1,659.2	TD at 14124.0