

PetroShare Corp

Well Name: **SHOOK 3-10-4CDH**

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

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

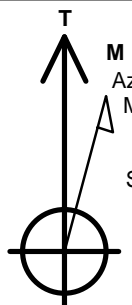
Ground Elevation: 5093.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1240633.16	3175582.42	39.992220	-104.873330	

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

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2058'FSL & 2184'FEL	-10.0	0.1	0.0	Point
BHL 460'FSL & 2188'FEL	7838.0	-6877.7	22.4	Point
LANDING PT 860'FSL & 2188'FEL	7838.0	-1198.5	2.8	Point



Azimuths to True North
Magnetic North: 8.45°

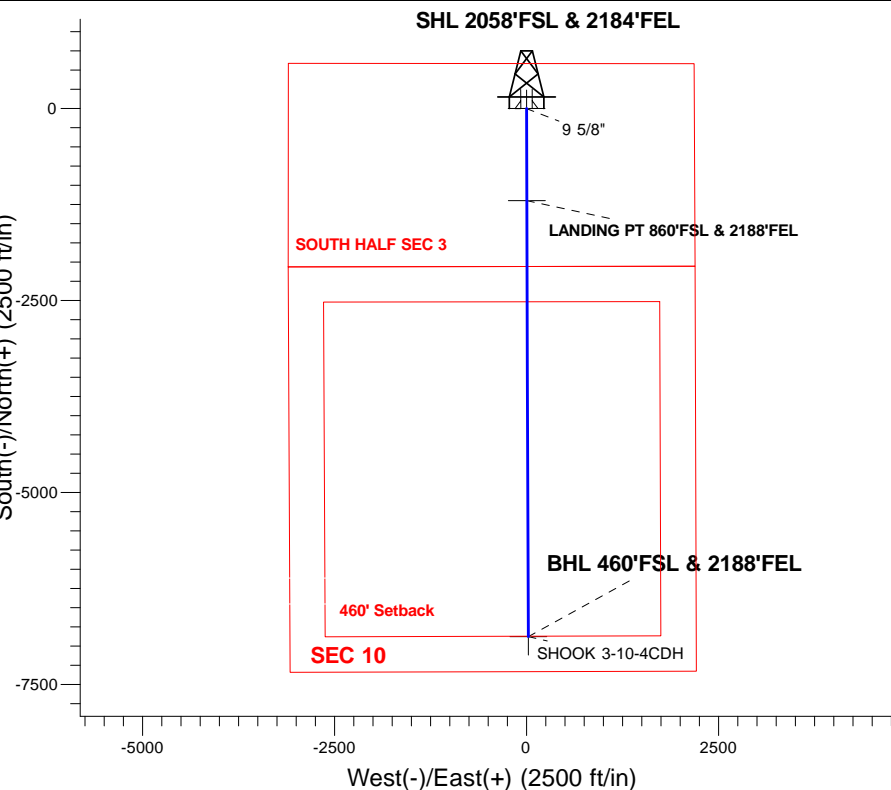
Magnetic Field
Strength: 52274.5snT
Dip Angle: 66.43°
Date: 12/31/2015
Model: HDGM

ANNOTATIONS

TVD	MD	Annotation
1400.0	1400.0	KOP - Start Build 1.50
1728.4	1728.8	Start 5475.2 hold at 1728.8 MD
7183.4	7204.1	Start DLS 8.00 TFO -0.14
7838.0	8267.4	Start 5679.3 hold at 8267.4 MD
7838.0	13946.7	TD at 13946.7

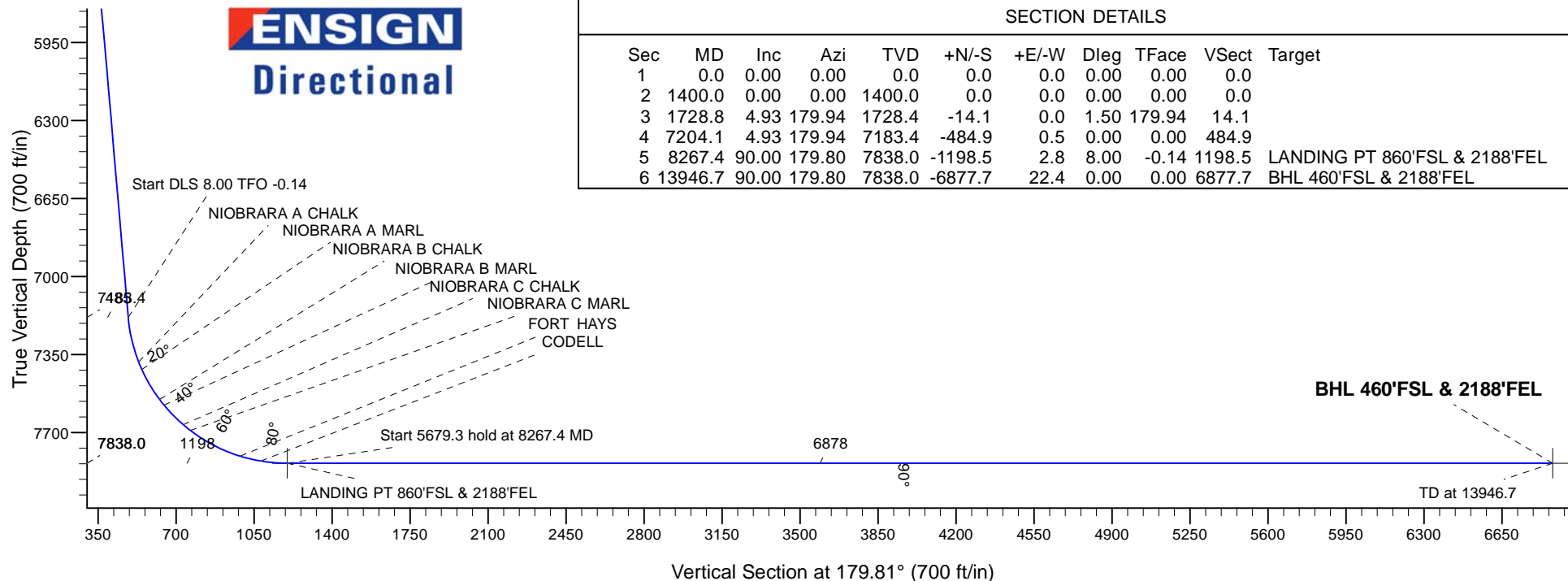
SHOOK PAD 3-1S-67W
SHOOK 3-10-4CDH
PLAN 1 (FEB 5, 2016)
14:22, February 22 2016

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	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	1728.8	4.93	179.94	1728.4	-14.1	0.0	1.50	179.94	14.1	
4	7204.1	4.93	179.94	7183.4	-484.9	0.5	0.00	0.00	484.9	
5	8267.4	90.00	179.80	7838.0	-1198.5	2.8	8.00	-0.14	1198.5	LANDING PT 860'FSL & 2188'FEL
6	13946.7	90.00	179.80	7838.0	-6877.7	22.4	0.00	0.00	6877.7	BHL 460'FSL & 2188'FEL





Directional

PetroShare Corp

SEC.3-T1S-R67W

SHOOK PAD 3-1S-67W

SHOOK 3-10-4CDH

Wellbore #1

Plan: PLAN 1 (FEB 5, 2016)

Standard Planning Report

22 February, 2016

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-4CDH
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 3-10-4CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 5, 2016)		

Project	SEC.3-T1S-R67W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	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 3-10-4CDH					
Well Position	+N/-S	-0.1 ft	Northing:	1,240,633.16 usft	Latitude:	39.992220
	+E/-W	103.7 ft	Easting:	3,175,582.42 usft	Longitude:	-104.873330
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,093.0 ft

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

Design	PLAN 1 (FEB 5, 2016)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	179.81

Plan Sections										
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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,728.8	4.93	179.94	1,728.4	-14.1	0.0	1.50	1.50	0.00	179.94	
7,204.1	4.93	179.94	7,183.4	-484.9	0.5	0.00	0.00	0.00	0.00	
8,267.4	90.00	179.80	7,838.0	-1,198.5	2.8	8.00	8.00	-0.01	-0.14	LANDING PT 860'FSI
13,946.7	90.00	179.80	7,838.0	-6,877.7	22.4	0.00	0.00	0.00	0.00	BHL 460'FSL & 2188'I

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-4CDH
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 3-10-4CDH	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 & 2184'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
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
FOX HILLS									
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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,500.0	1.50	179.94	1,500.0	-1.3	0.0	1.3	1.50	1.50	0.00
9 5/8"									
1,600.0	3.00	179.94	1,599.9	-5.2	0.0	5.2	1.50	1.50	0.00
1,700.0	4.50	179.94	1,699.7	-11.8	0.0	11.8	1.50	1.50	0.00
1,728.8	4.93	179.94	1,728.4	-14.1	0.0	14.1	1.50	1.50	0.00
Start 5475.2 hold at 1728.8 MD									
1,800.0	4.93	179.94	1,799.3	-20.3	0.0	20.3	0.00	0.00	0.00
1,900.0	4.93	179.94	1,899.0	-28.9	0.0	28.9	0.00	0.00	0.00
2,000.0	4.93	179.94	1,998.6	-37.5	0.0	37.5	0.00	0.00	0.00
2,100.0	4.93	179.94	2,098.2	-46.1	0.0	46.1	0.00	0.00	0.00
2,200.0	4.93	179.94	2,197.8	-54.7	0.1	54.7	0.00	0.00	0.00
2,300.0	4.93	179.94	2,297.5	-63.3	0.1	63.3	0.00	0.00	0.00
2,400.0	4.93	179.94	2,397.1	-71.9	0.1	71.9	0.00	0.00	0.00
2,500.0	4.93	179.94	2,496.7	-80.5	0.1	80.5	0.00	0.00	0.00
2,600.0	4.93	179.94	2,596.4	-89.0	0.1	89.0	0.00	0.00	0.00
2,700.0	4.93	179.94	2,696.0	-97.6	0.1	97.6	0.00	0.00	0.00
2,800.0	4.93	179.94	2,795.6	-106.2	0.1	106.2	0.00	0.00	0.00
2,900.0	4.93	179.94	2,895.3	-114.8	0.1	114.8	0.00	0.00	0.00
3,000.0	4.93	179.94	2,994.9	-123.4	0.1	123.4	0.00	0.00	0.00
3,100.0	4.93	179.94	3,094.5	-132.0	0.1	132.0	0.00	0.00	0.00
3,200.0	4.93	179.94	3,194.1	-140.6	0.1	140.6	0.00	0.00	0.00
3,300.0	4.93	179.94	3,293.8	-149.2	0.1	149.2	0.00	0.00	0.00
3,400.0	4.93	179.94	3,393.4	-157.8	0.2	157.8	0.00	0.00	0.00
3,500.0	4.93	179.94	3,493.0	-166.4	0.2	166.4	0.00	0.00	0.00
3,600.0	4.93	179.94	3,592.7	-175.0	0.2	175.0	0.00	0.00	0.00
3,700.0	4.93	179.94	3,692.3	-183.6	0.2	183.6	0.00	0.00	0.00
3,800.0	4.93	179.94	3,791.9	-192.2	0.2	192.2	0.00	0.00	0.00
3,900.0	4.93	179.94	3,891.6	-200.8	0.2	200.8	0.00	0.00	0.00
4,000.0	4.93	179.94	3,991.2	-209.4	0.2	209.4	0.00	0.00	0.00
4,100.0	4.93	179.94	4,090.8	-218.0	0.2	218.0	0.00	0.00	0.00
4,200.0	4.93	179.94	4,190.4	-226.6	0.2	226.6	0.00	0.00	0.00
4,300.0	4.93	179.94	4,290.1	-235.2	0.2	235.2	0.00	0.00	0.00
4,400.0	4.93	179.94	4,389.7	-243.8	0.2	243.8	0.00	0.00	0.00
4,500.0	4.93	179.94	4,489.3	-252.4	0.2	252.4	0.00	0.00	0.00
4,600.0	4.93	179.94	4,589.0	-261.0	0.3	261.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-4CDH
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 3-10-4CDH	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	4.93	179.94	4,688.6	-269.6	0.3	269.6	0.00	0.00	0.00
4,800.0	4.93	179.94	4,788.2	-278.2	0.3	278.2	0.00	0.00	0.00
4,900.0	4.93	179.94	4,887.9	-286.8	0.3	286.8	0.00	0.00	0.00
4,912.2	4.93	179.94	4,900.0	-287.9	0.3	287.9	0.00	0.00	0.00
SUSSEX									
5,000.0	4.93	179.94	4,987.5	-295.4	0.3	295.4	0.00	0.00	0.00
5,100.0	4.93	179.94	5,087.1	-304.0	0.3	304.0	0.00	0.00	0.00
5,200.0	4.93	179.94	5,186.7	-312.6	0.3	312.6	0.00	0.00	0.00
5,300.0	4.93	179.94	5,286.4	-321.2	0.3	321.2	0.00	0.00	0.00
5,400.0	4.93	179.94	5,386.0	-329.8	0.3	329.8	0.00	0.00	0.00
5,500.0	4.93	179.94	5,485.6	-338.4	0.3	338.4	0.00	0.00	0.00
5,600.0	4.93	179.94	5,585.3	-347.0	0.3	347.0	0.00	0.00	0.00
5,700.0	4.93	179.94	5,684.9	-355.6	0.3	355.6	0.00	0.00	0.00
5,800.0	4.93	179.94	5,784.5	-364.2	0.4	364.2	0.00	0.00	0.00
5,900.0	4.93	179.94	5,884.1	-372.8	0.4	372.8	0.00	0.00	0.00
6,000.0	4.93	179.94	5,983.8	-381.4	0.4	381.4	0.00	0.00	0.00
6,100.0	4.93	179.94	6,083.4	-390.0	0.4	390.0	0.00	0.00	0.00
6,200.0	4.93	179.94	6,183.0	-398.6	0.4	398.6	0.00	0.00	0.00
6,300.0	4.93	179.94	6,282.7	-407.2	0.4	407.2	0.00	0.00	0.00
6,400.0	4.93	179.94	6,382.3	-415.8	0.4	415.8	0.00	0.00	0.00
6,500.0	4.93	179.94	6,481.9	-424.4	0.4	424.4	0.00	0.00	0.00
6,600.0	4.93	179.94	6,581.6	-433.0	0.4	433.0	0.00	0.00	0.00
6,700.0	4.93	179.94	6,681.2	-441.6	0.4	441.6	0.00	0.00	0.00
6,800.0	4.93	179.94	6,780.8	-450.2	0.4	450.2	0.00	0.00	0.00
6,900.0	4.93	179.94	6,880.4	-458.8	0.5	458.8	0.00	0.00	0.00
7,000.0	4.93	179.94	6,980.1	-467.4	0.5	467.4	0.00	0.00	0.00
7,100.0	4.93	179.94	7,079.7	-476.0	0.5	476.0	0.00	0.00	0.00
7,200.0	4.93	179.94	7,179.3	-484.6	0.5	484.6	0.00	0.00	0.00
7,204.1	4.93	179.94	7,183.4	-484.9	0.5	484.9	0.00	0.00	0.00
Start DLS 8.00 TFO -0.14									
7,300.0	12.61	179.86	7,278.1	-499.5	0.5	499.5	8.00	8.00	-0.09
7,400.0	20.61	179.83	7,373.9	-528.1	0.6	528.1	8.00	8.00	-0.02
7,410.8	21.48	179.83	7,384.0	-532.0	0.6	532.0	8.00	8.00	-0.01
NIORARA A CHALK									
7,446.7	24.34	179.83	7,417.0	-545.9	0.6	545.9	8.00	8.00	-0.01
NIORARA A MARL									
7,500.0	28.61	179.82	7,464.7	-569.7	0.7	569.7	8.00	8.00	-0.01
7,600.0	36.61	179.82	7,548.9	-623.5	0.9	623.5	8.00	8.00	-0.01
7,603.9	36.92	179.82	7,552.0	-625.9	0.9	625.9	8.00	8.00	0.00
NIORARA B CHALK									
7,635.7	39.46	179.82	7,577.0	-645.5	0.9	645.5	8.00	8.00	0.00
NIORARA B MARL									
7,700.0	44.61	179.81	7,624.7	-688.6	1.1	688.6	8.00	8.00	0.00
7,759.0	49.33	179.81	7,665.0	-731.7	1.2	731.7	8.00	8.00	0.00
NIORARA C CHALK									
7,800.0	52.61	179.81	7,690.8	-763.5	1.3	763.5	8.00	8.00	0.00
7,800.3	52.63	179.81	7,691.0	-763.8	1.3	763.8	8.00	8.00	0.00
NIORARA C MARL									
7,900.0	60.61	179.81	7,745.8	-846.9	1.6	846.9	8.00	8.00	0.00
8,000.0	68.61	179.81	7,788.7	-937.2	1.9	937.2	8.00	8.00	0.00
8,052.5	72.81	179.81	7,806.0	-986.8	2.1	986.8	8.00	8.00	0.00
FORT HAYS									
8,100.0	76.61	179.80	7,818.5	-1,032.6	2.2	1,032.6	8.00	8.00	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 3-10-4CDH	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)
8,147.6	80.41	179.80	7,828.0	-1,079.2	2.4	1,079.2	8.00	8.00	0.00
CODELL									
8,200.0	84.61	179.80	7,834.8	-1,131.1	2.6	1,131.1	8.00	8.00	0.00
8,267.4	90.00	179.80	7,838.0	-1,198.5	2.8	1,198.5	8.00	8.00	0.00
Start 5679.3 hold at 8267.4 MD - LANDING PT 860'FSL & 2188'FEL									
8,300.0	90.00	179.80	7,838.0	-1,231.0	2.9	1,231.0	0.00	0.00	0.00
8,400.0	90.00	179.80	7,838.0	-1,331.0	3.3	1,331.0	0.00	0.00	0.00
8,500.0	90.00	179.80	7,838.0	-1,431.0	3.6	1,431.0	0.00	0.00	0.00
8,600.0	90.00	179.80	7,838.0	-1,531.0	4.0	1,531.0	0.00	0.00	0.00
8,700.0	90.00	179.80	7,838.0	-1,631.0	4.3	1,631.0	0.00	0.00	0.00
8,800.0	90.00	179.80	7,838.0	-1,731.0	4.6	1,731.0	0.00	0.00	0.00
8,900.0	90.00	179.80	7,838.0	-1,831.0	5.0	1,831.0	0.00	0.00	0.00
9,000.0	90.00	179.80	7,838.0	-1,931.0	5.3	1,931.0	0.00	0.00	0.00
9,100.0	90.00	179.80	7,838.0	-2,031.0	5.7	2,031.0	0.00	0.00	0.00
9,200.0	90.00	179.80	7,838.0	-2,131.0	6.0	2,131.0	0.00	0.00	0.00
9,300.0	90.00	179.80	7,838.0	-2,231.0	6.4	2,231.0	0.00	0.00	0.00
9,400.0	90.00	179.80	7,838.0	-2,331.0	6.7	2,331.0	0.00	0.00	0.00
9,500.0	90.00	179.80	7,838.0	-2,431.0	7.1	2,431.0	0.00	0.00	0.00
9,600.0	90.00	179.80	7,838.0	-2,531.0	7.4	2,531.0	0.00	0.00	0.00
9,700.0	90.00	179.80	7,838.0	-2,631.0	7.8	2,631.0	0.00	0.00	0.00
9,800.0	90.00	179.80	7,838.0	-2,731.0	8.1	2,731.0	0.00	0.00	0.00
9,900.0	90.00	179.80	7,838.0	-2,831.0	8.4	2,831.0	0.00	0.00	0.00
10,000.0	90.00	179.80	7,838.0	-2,931.0	8.8	2,931.0	0.00	0.00	0.00
10,100.0	90.00	179.80	7,838.0	-3,031.0	9.1	3,031.0	0.00	0.00	0.00
10,200.0	90.00	179.80	7,838.0	-3,131.0	9.5	3,131.0	0.00	0.00	0.00
10,300.0	90.00	179.80	7,838.0	-3,231.0	9.8	3,231.0	0.00	0.00	0.00
10,400.0	90.00	179.80	7,838.0	-3,331.0	10.2	3,331.0	0.00	0.00	0.00
10,500.0	90.00	179.80	7,838.0	-3,431.0	10.5	3,431.0	0.00	0.00	0.00
10,600.0	90.00	179.80	7,838.0	-3,531.0	10.9	3,531.0	0.00	0.00	0.00
10,700.0	90.00	179.80	7,838.0	-3,631.0	11.2	3,631.0	0.00	0.00	0.00
10,800.0	90.00	179.80	7,838.0	-3,731.0	11.6	3,731.0	0.00	0.00	0.00
10,900.0	90.00	179.80	7,838.0	-3,831.0	11.9	3,831.0	0.00	0.00	0.00
11,000.0	90.00	179.80	7,838.0	-3,931.0	12.2	3,931.0	0.00	0.00	0.00
11,100.0	90.00	179.80	7,838.0	-4,031.0	12.6	4,031.0	0.00	0.00	0.00
11,200.0	90.00	179.80	7,838.0	-4,131.0	12.9	4,131.0	0.00	0.00	0.00
11,300.0	90.00	179.80	7,838.0	-4,231.0	13.3	4,231.0	0.00	0.00	0.00
11,400.0	90.00	179.80	7,838.0	-4,331.0	13.6	4,331.0	0.00	0.00	0.00
11,500.0	90.00	179.80	7,838.0	-4,431.0	14.0	4,431.0	0.00	0.00	0.00
11,600.0	90.00	179.80	7,838.0	-4,531.0	14.3	4,531.0	0.00	0.00	0.00
11,700.0	90.00	179.80	7,838.0	-4,631.0	14.7	4,631.0	0.00	0.00	0.00
11,800.0	90.00	179.80	7,838.0	-4,731.0	15.0	4,731.0	0.00	0.00	0.00
11,900.0	90.00	179.80	7,838.0	-4,831.0	15.4	4,831.0	0.00	0.00	0.00
12,000.0	90.00	179.80	7,838.0	-4,931.0	15.7	4,931.0	0.00	0.00	0.00
12,100.0	90.00	179.80	7,838.0	-5,031.0	16.0	5,031.0	0.00	0.00	0.00
12,200.0	90.00	179.80	7,838.0	-5,131.0	16.4	5,131.0	0.00	0.00	0.00
12,300.0	90.00	179.80	7,838.0	-5,231.0	16.7	5,231.0	0.00	0.00	0.00
12,400.0	90.00	179.80	7,838.0	-5,331.0	17.1	5,331.0	0.00	0.00	0.00
12,500.0	90.00	179.80	7,838.0	-5,431.0	17.4	5,431.0	0.00	0.00	0.00
12,600.0	90.00	179.80	7,838.0	-5,531.0	17.8	5,531.0	0.00	0.00	0.00
12,700.0	90.00	179.80	7,838.0	-5,631.0	18.1	5,631.0	0.00	0.00	0.00
12,800.0	90.00	179.80	7,838.0	-5,731.0	18.5	5,731.0	0.00	0.00	0.00
12,900.0	90.00	179.80	7,838.0	-5,831.0	18.8	5,831.0	0.00	0.00	0.00
13,000.0	90.00	179.80	7,838.0	-5,931.0	19.2	5,931.0	0.00	0.00	0.00
13,100.0	90.00	179.80	7,838.0	-6,031.0	19.5	6,031.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-4CDH
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 3-10-4CDH	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)
13,200.0	90.00	179.80	7,838.0	-6,131.0	19.8	6,131.0	0.00	0.00	0.00
13,300.0	90.00	179.80	7,838.0	-6,231.0	20.2	6,231.0	0.00	0.00	0.00
13,400.0	90.00	179.80	7,838.0	-6,331.0	20.5	6,331.0	0.00	0.00	0.00
13,500.0	90.00	179.80	7,838.0	-6,431.0	20.9	6,431.0	0.00	0.00	0.00
13,600.0	90.00	179.80	7,838.0	-6,531.0	21.2	6,531.0	0.00	0.00	0.00
13,700.0	90.00	179.80	7,838.0	-6,631.0	21.6	6,631.0	0.00	0.00	0.00
13,800.0	90.00	179.80	7,838.0	-6,731.0	21.9	6,731.0	0.00	0.00	0.00
13,900.0	90.00	179.80	7,838.0	-6,831.0	22.3	6,831.0	0.00	0.00	0.00
13,946.7	90.00	179.80	7,838.0	-6,877.7	22.4	6,877.7	0.00	0.00	0.00
TD at 13946.7 - BHL 460'FSL & 2188'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 & 2184'FI	0.00	0.00	-10.0	0.1	0.0	1,240,633.21	3,175,582.42	39.992220	-104.873330
- plan misses target center by 10.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Point									
BHL 460'FSL & 2188'FE	0.00	0.00	7,838.0	-6,877.7	22.4	1,233,756.06	3,175,653.44	39.973340	-104.873250
- plan hits target center									
- Point									
LANDING PT 860'FSL &	0.00	0.00	7,838.0	-1,198.5	2.8	1,239,434.80	3,175,593.69	39.988930	-104.873320
- plan hits target center									
- Point									

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

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
740.0	740.0	FOX HILLS		0.00	
4,912.2	4,900.0	SUSSEX		0.00	
7,410.8	7,384.0	NIOBRARA A CHALK		0.00	
7,446.7	7,417.0	NIOBRARA A MARL		0.00	
7,603.9	7,552.0	NIOBRARA B CHALK		0.00	
7,635.7	7,577.0	NIOBRARA B MARL		0.00	
7,759.0	7,665.0	NIOBRARA C CHALK		0.00	
7,800.3	7,691.0	NIOBRARA C MARL		0.00	
8,052.5	7,806.0	FORT HAYS		0.00	
8,147.6	7,828.0	CODELL		0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-4CDH
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 3-10-4CDH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 5, 2016)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,400.0	1,400.0	0.0	0.0	KOP - Start Build 1.50
1,728.8	1,728.4	-14.1	0.0	Start 5475.2 hold at 1728.8 MD
7,204.1	7,183.4	-484.9	0.5	Start DLS 8.00 TFO -0.14
8,267.4	7,838.0	-1,198.5	2.8	Start 5679.3 hold at 8267.4 MD
13,946.7	7,838.0	-6,877.7	22.4	TD at 13946.7