

PetroShare Corp

Well Name: **SHOOK 3-10-2NCH**

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

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

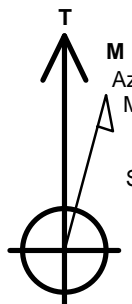
Ground Elevation: 5093.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1240633.25	3175596.43	39.992220	-104.873280	

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

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2058'FSL & 2169'FEL	-10.0	0.1	0.0	Point
BHL 460'FSL & 1900'FEL	7675.0	-6874.0	294.3	Point
LANDING PT 860'FSL & 1900'FEL	7675.0	-1198.4	277.4	Point



Azimuths to True North
Magnetic North: 8.45°

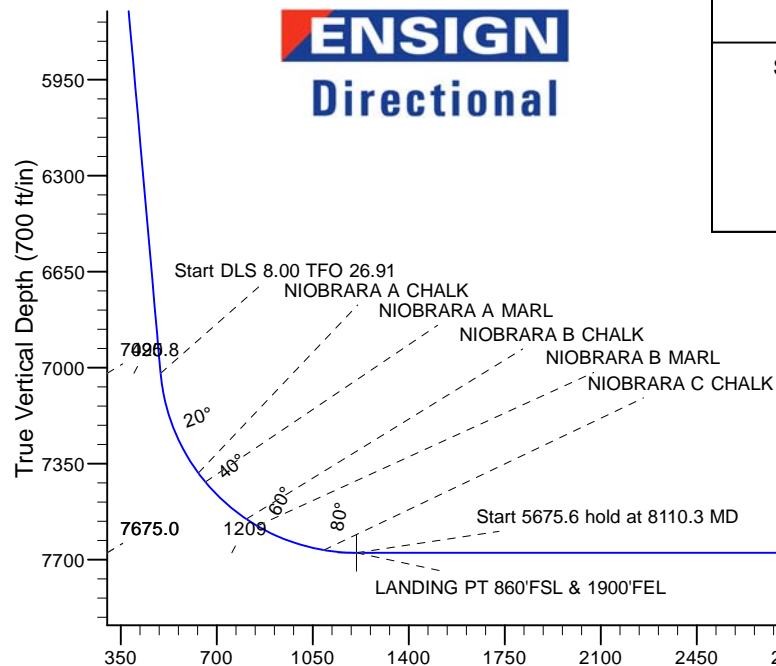
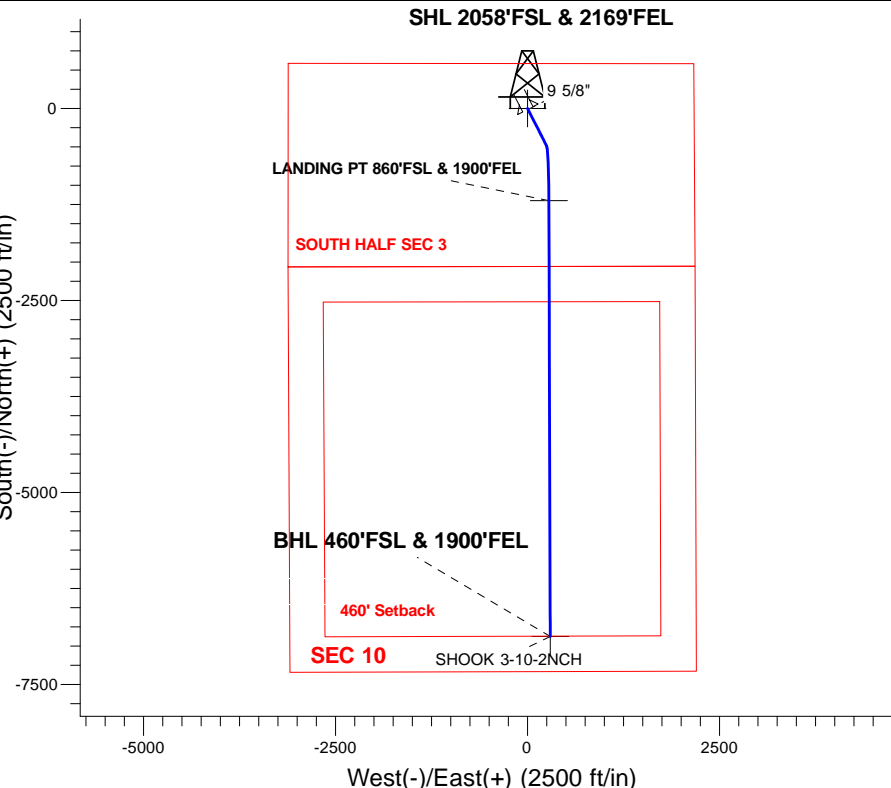
Magnetic Field
Strength: 52274.5snT
Dip Angle: 66.43°
Date: 12/31/2015
Model: HDGM

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP - Start Build 1.50
1567.0	1567.6	Start 5479.2 hold at 1567.6 MD
7020.8	7046.8	Start DLS 8.00 TFO 26.91
7675.0	8110.3	Start 5675.6 hold at 8110.3 MD
7675.0	13785.9	TD at 13785.9

SHOOK PAD 3-1S-67W
SHOOK 3-10-2NCH
PLAN 1 (FEB 5, 2016)
14:06, 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	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1567.6	5.51	153.03	1567.0	-15.8	8.0	1.50	153.03	16.1	
4	7046.8	5.51	153.03	7020.8	-485.0	246.8	0.00	0.00	495.1	
5	8110.3	90.00	179.83	7675.0	-1198.4	277.4	8.00	26.91	1209.2	LANDING PT 860'FSL & 1900'FEL
6	13785.9	90.00	179.83	7675.0	-6874.0	294.3	0.00	0.00	6880.3	BHL 460'FSL & 1900'FEL

Vertical Section at 177.55° (700 ft/in)



Directional

PetroShare Corp

SEC.3-T1S-R67W

SHOOK PAD 3-1S-67W

SHOOK 3-10-2NCH

Wellbore #1

Plan: PLAN 1 (FEB 5, 2016)

Standard Planning Report

22 February, 2016

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
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 3-10-2NCH	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 3-10-2NCH					
Well Position	+N/-S	-0.1 ft	Northing:	1,240,633.25 usft	Latitude:	39.992220
	+E/-W	117.7 ft	Easting:	3,175,596.43 usft	Longitude:	-104.873280
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) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	177.55

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,567.6	5.51	153.03	1,567.0	-15.8	8.0	1.50	1.50	0.00	153.03	
7,046.8	5.51	153.03	7,020.8	-485.0	246.8	0.00	0.00	0.00	0.00	
8,110.3	90.00	179.83	7,675.0	-1,198.4	277.4	8.00	7.94	2.52	26.91	LANDING PT 860'FSI
13,785.9	90.00	179.83	7,675.0	-6,874.0	294.3	0.00	0.00	0.00	0.00	BHL 460'FSL & 1900'

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
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 3-10-2NCH	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 & 2169'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
KOP - Start Build 1.50									
1,300.0	1.50	153.03	1,300.0	-1.2	0.6	1.2	1.50	1.50	0.00
1,400.0	3.00	153.03	1,399.9	-4.7	2.4	4.8	1.50	1.50	0.00
1,500.0	4.50	153.03	1,499.7	-10.5	5.3	10.7	1.50	1.50	0.00
9 5/8"									
1,567.6	5.51	153.03	1,567.0	-15.8	8.0	16.1	1.50	1.50	0.00
Start 5479.2 hold at 1567.6 MD									
1,600.0	5.51	153.03	1,599.3	-18.5	9.4	18.9	0.00	0.00	0.00
1,700.0	5.51	153.03	1,698.8	-27.1	13.8	27.7	0.00	0.00	0.00
1,800.0	5.51	153.03	1,798.4	-35.7	18.1	36.4	0.00	0.00	0.00
1,900.0	5.51	153.03	1,897.9	-44.2	22.5	45.1	0.00	0.00	0.00
2,000.0	5.51	153.03	1,997.4	-52.8	26.9	53.9	0.00	0.00	0.00
2,100.0	5.51	153.03	2,097.0	-61.3	31.2	62.6	0.00	0.00	0.00
2,200.0	5.51	153.03	2,196.5	-69.9	35.6	71.4	0.00	0.00	0.00
2,300.0	5.51	153.03	2,296.0	-78.5	39.9	80.1	0.00	0.00	0.00
2,400.0	5.51	153.03	2,395.6	-87.0	44.3	88.9	0.00	0.00	0.00
2,500.0	5.51	153.03	2,495.1	-95.6	48.7	97.6	0.00	0.00	0.00
2,600.0	5.51	153.03	2,594.7	-104.2	53.0	106.3	0.00	0.00	0.00
2,700.0	5.51	153.03	2,694.2	-112.7	57.4	115.1	0.00	0.00	0.00
2,800.0	5.51	153.03	2,793.7	-121.3	61.7	123.8	0.00	0.00	0.00
2,900.0	5.51	153.03	2,893.3	-129.9	66.1	132.6	0.00	0.00	0.00
3,000.0	5.51	153.03	2,992.8	-138.4	70.4	141.3	0.00	0.00	0.00
3,100.0	5.51	153.03	3,092.3	-147.0	74.8	150.0	0.00	0.00	0.00
3,200.0	5.51	153.03	3,191.9	-155.5	79.2	158.8	0.00	0.00	0.00
3,300.0	5.51	153.03	3,291.4	-164.1	83.5	167.5	0.00	0.00	0.00
3,400.0	5.51	153.03	3,391.0	-172.7	87.9	176.3	0.00	0.00	0.00
3,500.0	5.51	153.03	3,490.5	-181.2	92.2	185.0	0.00	0.00	0.00
3,600.0	5.51	153.03	3,590.0	-189.8	96.6	193.8	0.00	0.00	0.00
3,700.0	5.51	153.03	3,689.6	-198.4	101.0	202.5	0.00	0.00	0.00
3,800.0	5.51	153.03	3,789.1	-206.9	105.3	211.2	0.00	0.00	0.00
3,900.0	5.51	153.03	3,888.6	-215.5	109.7	220.0	0.00	0.00	0.00
4,000.0	5.51	153.03	3,988.2	-224.1	114.0	228.7	0.00	0.00	0.00
4,100.0	5.51	153.03	4,087.7	-232.6	118.4	237.5	0.00	0.00	0.00
4,200.0	5.51	153.03	4,187.3	-241.2	122.7	246.2	0.00	0.00	0.00
4,300.0	5.51	153.03	4,286.8	-249.7	127.1	255.0	0.00	0.00	0.00
4,400.0	5.51	153.03	4,386.3	-258.3	131.5	263.7	0.00	0.00	0.00
4,500.0	5.51	153.03	4,485.9	-266.9	135.8	272.4	0.00	0.00	0.00
4,600.0	5.51	153.03	4,585.4	-275.4	140.2	281.2	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 3-10-2NCH	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	5.51	153.03	4,684.9	-284.0	144.5	289.9	0.00	0.00	0.00
4,800.0	5.51	153.03	4,784.5	-292.6	148.9	298.7	0.00	0.00	0.00
4,900.0	5.51	153.03	4,884.0	-301.1	153.2	307.4	0.00	0.00	0.00
4,916.1	5.51	153.03	4,900.0	-302.5	153.9	308.8	0.00	0.00	0.00
SUSSEX									
5,000.0	5.51	153.03	4,983.6	-309.7	157.6	316.2	0.00	0.00	0.00
5,100.0	5.51	153.03	5,083.1	-318.3	162.0	324.9	0.00	0.00	0.00
5,200.0	5.51	153.03	5,182.6	-326.8	166.3	333.6	0.00	0.00	0.00
5,300.0	5.51	153.03	5,282.2	-335.4	170.7	342.4	0.00	0.00	0.00
5,400.0	5.51	153.03	5,381.7	-343.9	175.0	351.1	0.00	0.00	0.00
5,500.0	5.51	153.03	5,481.2	-352.5	179.4	359.9	0.00	0.00	0.00
5,600.0	5.51	153.03	5,580.8	-361.1	183.8	368.6	0.00	0.00	0.00
5,700.0	5.51	153.03	5,680.3	-369.6	188.1	377.3	0.00	0.00	0.00
5,800.0	5.51	153.03	5,779.8	-378.2	192.5	386.1	0.00	0.00	0.00
5,900.0	5.51	153.03	5,879.4	-386.8	196.8	394.8	0.00	0.00	0.00
6,000.0	5.51	153.03	5,978.9	-395.3	201.2	403.6	0.00	0.00	0.00
6,100.0	5.51	153.03	6,078.5	-403.9	205.5	412.3	0.00	0.00	0.00
6,200.0	5.51	153.03	6,178.0	-412.5	209.9	421.1	0.00	0.00	0.00
6,300.0	5.51	153.03	6,277.5	-421.0	214.3	429.8	0.00	0.00	0.00
6,400.0	5.51	153.03	6,377.1	-429.6	218.6	438.5	0.00	0.00	0.00
6,500.0	5.51	153.03	6,476.6	-438.1	223.0	447.3	0.00	0.00	0.00
6,600.0	5.51	153.03	6,576.1	-446.7	227.3	456.0	0.00	0.00	0.00
6,700.0	5.51	153.03	6,675.7	-455.3	231.7	464.8	0.00	0.00	0.00
6,800.0	5.51	153.03	6,775.2	-463.8	236.1	473.5	0.00	0.00	0.00
6,900.0	5.51	153.03	6,874.8	-472.4	240.4	482.3	0.00	0.00	0.00
7,000.0	5.51	153.03	6,974.3	-481.0	244.8	491.0	0.00	0.00	0.00
7,046.8	5.51	153.03	7,020.8	-485.0	246.8	495.1	0.00	0.00	0.00
Start DLS 8.00 TFO 26.91									
7,100.0	9.51	164.77	7,073.6	-491.5	249.1	501.7	8.00	7.50	22.05
7,200.0	17.35	171.82	7,170.8	-514.3	253.4	524.6	8.00	7.84	7.06
7,300.0	25.29	174.54	7,263.9	-550.4	257.6	560.9	8.00	7.94	2.72
7,400.0	33.26	176.02	7,351.0	-599.1	261.5	609.7	8.00	7.97	1.48
7,440.2	36.47	176.45	7,384.0	-622.0	263.0	632.6	8.00	7.98	1.07
NIORARA A CHALK									
7,482.1	39.81	176.84	7,417.0	-647.8	264.5	658.6	8.00	7.98	0.91
NIORARA A MARL									
7,500.0	41.24	176.98	7,430.6	-659.4	265.2	670.2	8.00	7.98	0.82
7,600.0	49.23	177.68	7,501.0	-730.3	268.4	741.1	8.00	7.98	0.69
7,684.1	55.94	178.14	7,552.0	-797.0	270.9	807.8	8.00	7.99	0.55
NIORARA B CHALK									
7,700.0	57.21	178.22	7,560.8	-810.3	271.3	821.1	8.00	7.99	0.50
7,731.0	59.69	178.37	7,577.0	-836.7	272.1	847.5	8.00	7.99	0.48
NIORARA B MARL									
7,800.0	65.20	178.68	7,608.9	-897.8	273.6	908.7	8.00	7.99	0.44
7,900.0	73.19	179.08	7,644.4	-991.2	275.5	1,002.1	8.00	7.99	0.40
7,990.4	80.42	179.41	7,665.0	-1,079.1	276.6	1,090.0	8.00	7.99	0.37
NIORARA C CHALK									
8,000.0	81.19	179.44	7,666.5	-1,088.6	276.7	1,099.5	8.00	7.99	0.36
8,100.0	89.18	179.79	7,674.9	-1,188.2	277.4	1,199.0	8.00	7.99	0.35
8,110.3	90.00	179.83	7,675.0	-1,198.4	277.4	1,209.2	8.00	7.99	0.35
Start 5675.6 hold at 8110.3 MD - LANDING PT 860'FSL & 1900'FEL									
8,200.0	90.00	179.83	7,675.0	-1,288.2	277.7	1,298.9	0.00	0.00	0.00
8,300.0	90.00	179.83	7,675.0	-1,388.2	278.0	1,398.8	0.00	0.00	0.00

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Site:	SHOOK PAD 3-1S-67W	North Reference:	True
Well:	SHOOK 3-10-2NCH	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)
8,400.0	90.00	179.83	7,675.0	-1,488.2	278.3	1,498.7	0.00	0.00	0.00
8,500.0	90.00	179.83	7,675.0	-1,588.2	278.6	1,598.6	0.00	0.00	0.00
8,600.0	90.00	179.83	7,675.0	-1,688.2	278.9	1,698.6	0.00	0.00	0.00
8,700.0	90.00	179.83	7,675.0	-1,788.2	279.2	1,798.5	0.00	0.00	0.00
8,800.0	90.00	179.83	7,675.0	-1,888.2	279.5	1,898.4	0.00	0.00	0.00
8,900.0	90.00	179.83	7,675.0	-1,988.2	279.8	1,998.3	0.00	0.00	0.00
9,000.0	90.00	179.83	7,675.0	-2,088.2	280.1	2,098.2	0.00	0.00	0.00
9,100.0	90.00	179.83	7,675.0	-2,188.2	280.4	2,198.2	0.00	0.00	0.00
9,200.0	90.00	179.83	7,675.0	-2,288.2	280.6	2,298.1	0.00	0.00	0.00
9,300.0	90.00	179.83	7,675.0	-2,388.2	280.9	2,398.0	0.00	0.00	0.00
9,400.0	90.00	179.83	7,675.0	-2,488.2	281.2	2,497.9	0.00	0.00	0.00
9,500.0	90.00	179.83	7,675.0	-2,588.2	281.5	2,597.8	0.00	0.00	0.00
9,600.0	90.00	179.83	7,675.0	-2,688.2	281.8	2,697.8	0.00	0.00	0.00
9,700.0	90.00	179.83	7,675.0	-2,788.2	282.1	2,797.7	0.00	0.00	0.00
9,800.0	90.00	179.83	7,675.0	-2,888.2	282.4	2,897.6	0.00	0.00	0.00
9,900.0	90.00	179.83	7,675.0	-2,988.2	282.7	2,997.5	0.00	0.00	0.00
10,000.0	90.00	179.83	7,675.0	-3,088.2	283.0	3,097.4	0.00	0.00	0.00
10,100.0	90.00	179.83	7,675.0	-3,188.2	283.3	3,197.4	0.00	0.00	0.00
10,200.0	90.00	179.83	7,675.0	-3,288.2	283.6	3,297.3	0.00	0.00	0.00
10,300.0	90.00	179.83	7,675.0	-3,388.2	283.9	3,397.2	0.00	0.00	0.00
10,400.0	90.00	179.83	7,675.0	-3,488.2	284.2	3,497.1	0.00	0.00	0.00
10,500.0	90.00	179.83	7,675.0	-3,588.2	284.5	3,597.1	0.00	0.00	0.00
10,600.0	90.00	179.83	7,675.0	-3,688.2	284.8	3,697.0	0.00	0.00	0.00
10,700.0	90.00	179.83	7,675.0	-3,788.2	285.1	3,796.9	0.00	0.00	0.00
10,800.0	90.00	179.83	7,675.0	-3,888.2	285.4	3,896.8	0.00	0.00	0.00
10,900.0	90.00	179.83	7,675.0	-3,988.2	285.7	3,996.7	0.00	0.00	0.00
11,000.0	90.00	179.83	7,675.0	-4,088.2	286.0	4,096.7	0.00	0.00	0.00
11,100.0	90.00	179.83	7,675.0	-4,188.2	286.3	4,196.6	0.00	0.00	0.00
11,200.0	90.00	179.83	7,675.0	-4,288.2	286.6	4,296.5	0.00	0.00	0.00
11,300.0	90.00	179.83	7,675.0	-4,388.2	286.9	4,396.4	0.00	0.00	0.00
11,400.0	90.00	179.83	7,675.0	-4,488.2	287.2	4,496.3	0.00	0.00	0.00
11,500.0	90.00	179.83	7,675.0	-4,588.2	287.5	4,596.3	0.00	0.00	0.00
11,600.0	90.00	179.83	7,675.0	-4,688.2	287.8	4,696.2	0.00	0.00	0.00
11,700.0	90.00	179.83	7,675.0	-4,788.2	288.1	4,796.1	0.00	0.00	0.00
11,800.0	90.00	179.83	7,675.0	-4,888.2	288.4	4,896.0	0.00	0.00	0.00
11,900.0	90.00	179.83	7,675.0	-4,988.2	288.7	4,995.9	0.00	0.00	0.00
12,000.0	90.00	179.83	7,675.0	-5,088.2	289.0	5,095.9	0.00	0.00	0.00
12,100.0	90.00	179.83	7,675.0	-5,188.2	289.3	5,195.8	0.00	0.00	0.00
12,200.0	90.00	179.83	7,675.0	-5,288.2	289.6	5,295.7	0.00	0.00	0.00
12,300.0	90.00	179.83	7,675.0	-5,388.2	289.9	5,395.6	0.00	0.00	0.00
12,400.0	90.00	179.83	7,675.0	-5,488.2	290.2	5,495.5	0.00	0.00	0.00
12,500.0	90.00	179.83	7,675.0	-5,588.2	290.5	5,595.5	0.00	0.00	0.00
12,600.0	90.00	179.83	7,675.0	-5,688.2	290.8	5,695.4	0.00	0.00	0.00
12,700.0	90.00	179.83	7,675.0	-5,788.2	291.1	5,795.3	0.00	0.00	0.00
12,800.0	90.00	179.83	7,675.0	-5,888.2	291.4	5,895.2	0.00	0.00	0.00
12,900.0	90.00	179.83	7,675.0	-5,988.2	291.7	5,995.2	0.00	0.00	0.00
13,000.0	90.00	179.83	7,675.0	-6,088.2	291.9	6,095.1	0.00	0.00	0.00
13,100.0	90.00	179.83	7,675.0	-6,188.2	292.2	6,195.0	0.00	0.00	0.00
13,200.0	90.00	179.83	7,675.0	-6,288.2	292.5	6,294.9	0.00	0.00	0.00
13,300.0	90.00	179.83	7,675.0	-6,388.2	292.8	6,394.8	0.00	0.00	0.00
13,400.0	90.00	179.83	7,675.0	-6,488.2	293.1	6,494.8	0.00	0.00	0.00
13,500.0	90.00	179.83	7,675.0	-6,588.2	293.4	6,594.7	0.00	0.00	0.00
13,600.0	90.00	179.83	7,675.0	-6,688.2	293.7	6,694.6	0.00	0.00	0.00
13,700.0	90.00	179.83	7,675.0	-6,788.2	294.0	6,794.5	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
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 3-10-2NCH	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)
13,785.9	90.00	179.83	7,675.0	-6,874.0	294.3	6,880.3	0.00	0.00	0.00
TD at 13785.9 - BHL 460'FSL & 1900'FEL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2058'FSL & 2169'FI - plan misses target center by 10.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Point	0.00	0.00	-10.0	0.1	0.0	1,240,633.31	3,175,596.43	39.992220	-104.873280
LANDING PT 860'FSL & - plan hits target center - Point	0.00	0.00	7,675.0	-1,198.4	277.4	1,239,436.84	3,175,882.29	39.988930	-104.872290
BHL 460'FSL & 1900'FE - plan hits target center - Point	0.00	0.00	7,675.0	-6,874.0	294.3	1,233,761.72	3,175,939.28	39.973350	-104.872230

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,500.0	1,499.7	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	
4,916.1	4,900.0	SUSSEX		0.00	
7,440.2	7,384.0	NIOBRARA A CHALK		0.00	
7,482.1	7,417.0	NIOBRARA A MARL		0.00	
7,684.1	7,552.0	NIOBRARA B CHALK		0.00	
7,731.0	7,577.0	NIOBRARA B MARL		0.00	
7,990.4	7,665.0	NIOBRARA C CHALK		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,200.0	1,200.0	0.0	0.0	KOP - Start Build 1.50
1,567.6	1,567.0	-15.8	8.0	Start 5479.2 hold at 1567.6 MD
7,046.8	7,020.8	-485.0	246.8	Start DLS 8.00 TFO 26.91
8,110.3	7,675.0	-1,198.4	277.4	Start 5675.6 hold at 8110.3 MD
13,785.9	7,675.0	-6,874.0	294.3	TD at 13785.9



Directional

PetroShare Corp

SEC.3-T1S-R67W

SHOOK PAD 3-1S-67W

SHOOK 3-10-2NCH

Wellbore #1

PLAN 1 (FEB 5, 2016)

Anticollision Report

22 February, 2016

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Reference	PLAN 1 (FEB 5, 2016)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 2/22/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,785.9	PLAN 1 (FEB 5, 2016) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SHOOK PAD 3-1S-67W						
SHOOK 3-10-1CDH - Wellbore #1 - PLAN 1 (FEB 4, 201	200.0	200.0	117.7	117.0	174.525	CC, ES
SHOOK 3-10-1CDH - Wellbore #1 - PLAN 1 (FEB 4, 201	1,200.0	1,155.8	230.3	224.7	41.129	SF
SHOOK 3-10-1NAH - Wellbore #1 - PLAN 1 (FEB 4, 201	1,000.0	1,000.0	58.8	54.6	13.778	CC, ES
SHOOK 3-10-1NAH - Wellbore #1 - PLAN 1 (FEB 4, 201	1,200.0	1,198.0	62.0	56.9	12.172	SF
SHOOK 3-10-1NBH - Wellbore #1 - PLAN 1 (FEB 4, 201	600.0	600.0	89.7	87.2	36.265	CC, ES
SHOOK 3-10-1NBH - Wellbore #1 - PLAN 1 (FEB 4, 201	1,100.0	1,089.1	114.6	110.0	24.751	SF
SHOOK 3-10-1NCH - Wellbore #1 - PLAN 1 (FEB 4 2016	400.0	400.0	103.7	102.1	65.892	CC, ES
SHOOK 3-10-1NCH - Wellbore #1 - PLAN 1 (FEB 4 2016	1,100.0	1,078.7	156.1	151.3	32.748	SF
SHOOK 3-10-2CDH - Wellbore #1 - PLAN 1 (FEB 4, 201	800.0	800.0	72.9	69.5	21.608	CC, ES
SHOOK 3-10-2CDH - Wellbore #1 - PLAN 1 (FEB 4, 201	1,200.0	1,193.7	87.8	82.7	17.371	SF
SHOOK 3-10-2NAH - Wellbore #1 - PLAN 1 (FEB 5 201	800.0	800.0	44.8	41.5	13.297	CC, ES
SHOOK 3-10-2NAH - Wellbore #1 - PLAN 1 (FEB 5 201	13,785.9	13,588.4	910.5	655.5	3.570	SF
SHOOK 3-10-2NBH - Wellbore #1 - PLAN 1 (FEB 4 2016	1,200.0	1,200.0	44.8	39.7	8.672	CC, ES
SHOOK 3-10-2NBH - Wellbore #1 - PLAN 1 (FEB 4 2016	1,300.0	1,299.4	46.1	40.5	8.283	SF
SHOOK 3-10-3CDH - Wellbore #1 - PLAN 1 (FEB 4 201	1,200.0	1,200.0	28.0	22.8	5.420	CC, ES
SHOOK 3-10-3CDH - Wellbore #1 - PLAN 1 (FEB 4 201	1,300.0	1,300.0	28.6	23.0	5.122	SF
SHOOK 3-10-3NBH - Wellbore #1 - PLAN 1 (FEB 5 201	1,000.0	1,000.0	16.8	12.5	3.937	CC, ES
SHOOK 3-10-3NBH - Wellbore #1 - PLAN 1 (FEB 5 201	13,785.9	13,688.7	310.0	59.9	1.239	Level 2, SF
SHOOK 3-10-4CDH - Wellbore #1 - PLAN 1 (FEB 5, 201	1,200.0	1,200.0	14.0	8.8	2.710	CC, ES
SHOOK 3-10-4CDH - Wellbore #1 - PLAN 1 (FEB 5, 201	13,785.9	13,944.0	329.1	93.5	1.397	Level 3, SF
SHOOK 3-10-4NBH - Wellbore #1 - PLAN 1 (FEB 5 201	600.0	600.0	61.6	59.2	24.932	CC, ES
SHOOK 3-10-4NBH - Wellbore #1 - PLAN 1 (FEB 5 201	900.0	895.0	72.6	68.8	19.361	SF
SHOOK 3-10-5CDH - Wellbore #1 - PLAN 1 (FEB 5 201	800.0	800.0	30.8	27.5	9.142	CC, ES
SHOOK 3-10-5CDH - Wellbore #1 - PLAN 1 (FEB 5 201	13,785.9	13,987.8	599.9	344.3	2.347	SF
SHOOK 3-10-6CDH - Wellbore #1 - PLAN 1 (FEB 5 201	400.0	400.0	75.7	74.1	48.083	CC, ES
SHOOK 3-10-6CDH - Wellbore #1 - PLAN 1 (FEB 5 201	800.0	788.6	100.3	97.0	30.336	SF

Offset Design	SHOOK PAD 3-1S-67W - SHOOK 3-10-1CDH - Wellbore #1 - PLAN 1 (FEB 4, 2016)											Offset Site Error:	0.0 ft
Survey Program:	0-MWD											Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.1	-117.7	117.7				
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.1	-117.7	117.7	117.5	0.22	523.576	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-1CDH - Wellbore #1 - PLAN 1 (FEB 4, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.1	-117.7	117.7	117.0	0.67	174.525 CC, ES		
300.0	300.0	297.6	297.6	0.6	0.5	-90.34	-0.7	-118.7	118.7	117.6	1.10	107.889		
400.0	400.0	395.1	395.0	0.8	0.7	-91.41	-3.0	-121.6	121.8	120.2	1.53	79.649		
500.0	500.0	492.3	492.0	1.0	1.0	-93.08	-6.8	-126.5	126.9	125.0	1.98	64.223		
600.0	600.0	589.1	588.5	1.2	1.2	-95.18	-12.1	-133.3	134.4	131.9	2.44	54.977		
700.0	700.0	685.5	684.2	1.5	1.5	-97.56	-18.8	-142.0	144.1	141.2	2.93	49.191		
800.0	800.0	781.2	779.0	1.7	1.8	-100.04	-27.0	-152.5	156.3	152.9	3.43	45.524		
900.0	900.0	876.2	872.7	1.9	2.1	-102.50	-36.6	-164.8	171.0	167.1	3.95	43.248		
1,000.0	1,000.0	970.4	965.2	2.1	2.5	-104.85	-47.4	-178.8	188.3	183.8	4.49	41.928		
1,100.0	1,100.0	1,063.6	1,056.3	2.4	2.9	-107.03	-59.6	-194.5	208.0	203.0	5.04	41.284		
1,200.0	1,200.0	1,155.8	1,145.8	2.6	3.3	-109.00	-72.9	-211.7	230.3	224.7	5.60	41.129 SF		
1,300.0	1,300.0	1,246.9	1,233.8	2.8	3.8	96.10	-87.4	-230.3	255.2	249.5	5.72	44.615		
1,400.0	1,399.9	1,336.9	1,320.2	3.0	4.3	94.84	-102.9	-250.3	282.6	276.5	6.16	45.913		
1,500.0	1,499.7	1,425.7	1,404.7	3.1	4.9	94.05	-119.5	-271.7	312.5	305.9	6.61	47.283		
1,567.6	1,567.0	1,484.9	1,460.8	3.3	5.2	93.71	-131.2	-286.8	334.0	327.0	6.93	48.217		
1,600.0	1,599.3	1,513.1	1,487.4	3.3	5.4	93.75	-137.0	-294.2	344.6	337.5	7.09	48.638		
1,700.0	1,698.8	1,600.0	1,568.9	3.6	6.0	93.78	-155.5	-318.1	378.8	371.3	7.59	49.926		
1,800.0	1,798.4	1,683.9	1,646.9	3.8	6.6	93.74	-174.5	-342.5	415.1	407.0	8.10	51.240		
1,900.0	1,897.9	1,767.2	1,723.6	4.0	7.3	93.63	-194.4	-368.1	453.3	444.7	8.63	52.550		
2,000.0	1,997.4	1,849.0	1,798.3	4.3	8.0	93.48	-214.9	-394.5	493.4	484.3	9.16	53.876		
2,100.0	2,097.0	1,934.3	1,875.4	4.5	8.7	93.30	-237.1	-423.2	535.3	525.5	9.72	55.095		
2,200.0	2,196.5	2,025.0	1,957.3	4.8	9.5	93.12	-261.0	-453.9	577.4	567.1	10.29	56.105		
2,300.0	2,296.0	2,115.7	2,039.3	5.0	10.3	92.97	-284.8	-484.7	619.4	608.6	10.87	56.968		
2,400.0	2,395.6	2,206.4	2,121.2	5.3	11.1	92.84	-308.7	-515.4	661.5	650.1	11.46	57.713		
2,500.0	2,495.1	2,297.1	2,203.1	5.5	11.9	92.72	-332.5	-546.1	703.6	691.6	12.06	58.358		
2,600.0	2,594.7	2,387.8	2,285.1	5.8	12.7	92.62	-356.4	-576.8	745.7	733.1	12.66	58.919		
2,700.0	2,694.2	2,478.5	2,367.0	6.1	13.5	92.52	-380.2	-607.6	787.9	774.6	13.26	59.413		
2,800.0	2,793.7	2,569.2	2,449.0	6.4	14.3	92.44	-404.1	-638.3	830.0	816.1	13.87	59.849		
2,900.0	2,893.3	2,659.9	2,530.9	6.6	15.1	92.36	-427.9	-669.0	872.1	857.6	14.48	60.236		
3,000.0	2,992.8	2,750.6	2,612.8	6.9	15.9	92.30	-451.8	-699.7	914.2	899.1	15.09	60.581		
3,100.0	3,092.3	2,841.3	2,694.8	7.2	16.7	92.23	-475.6	-730.4	956.3	940.6	15.70	60.891		
3,200.0	3,191.9	2,932.0	2,776.7	7.5	17.5	92.18	-499.5	-761.2	998.4	982.1	16.32	61.169		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-1NAH - Wellbore #1 - PLAN 1 (FEB 4, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-58.8	58.8					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-58.8	58.8	58.6	0.22	261.788		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-58.8	58.8	58.2	0.67	87.263		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-58.8	58.8	57.7	1.12	52.358		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-58.8	58.8	57.3	1.57	37.398		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-58.8	58.8	56.8	2.02	29.088		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-58.8	58.8	56.4	2.47	23.799		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-58.8	58.8	55.9	2.92	20.138		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-58.8	58.8	55.5	3.37	17.453		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-58.8	58.8	55.0	3.82	15.399		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-58.8	58.8	54.6	4.27	13.778 CC, ES		
1,100.0	1,100.0	1,099.1	1,099.1	2.4	2.3	-90.98	-1.0	-59.6	59.6	54.9	4.69	12.704		
1,200.0	1,200.0	1,198.0	1,197.9	2.6	2.5	-93.83	-4.1	-61.8	62.0	56.9	5.10	12.172 SF		
1,300.0	1,300.0	1,296.8	1,296.5	2.8	2.7	-109.87	-9.3	-65.6	66.8	61.3	5.48	12.184		
1,400.0	1,399.9	1,395.2	1,394.5	3.0	2.9	-107.53	-16.5	-70.8	74.3	68.5	5.86	12.695		
1,500.0	1,499.7	1,493.2	1,491.8	3.1	3.1	-106.08	-25.7	-77.5	84.6	78.3	6.25	13.528		
1,567.6	1,567.0	1,559.1	1,557.1	3.3	3.3	-105.52	-33.1	-82.8	93.0	86.4	6.54	14.222		
1,600.0	1,599.3	1,590.6	1,588.3	3.3	3.4	-105.34	-36.9	-85.5	97.4	90.7	6.67	14.586		
1,700.0	1,698.8	1,687.6	1,683.8	3.6	3.7	-104.30	-50.0	-95.0	112.2	105.0	7.12	15.745		
1,800.0	1,798.4	1,783.8	1,778.3	3.8	4.0	-102.78	-64.9	-105.8	128.9	121.3	7.60	16.967		
1,900.0	1,897.9	1,879.3	1,871.5	4.0	4.3	-101.01	-81.6	-117.9	147.6	139.6	8.09	18.247		
2,000.0	1,997.4	1,973.8	1,963.3	4.3	4.7	-99.15	-100.0	-131.2	168.4	159.8	8.60	19.580		
2,100.0	2,097.0	2,067.4	2,053.6	4.5	5.1	-97.29	-120.1	-145.6	191.3	182.2	9.13	20.965		
2,200.0	2,196.5	2,159.9	2,142.2	4.8	5.6	-95.50	-141.6	-161.2	216.4	206.7	9.66	22.395		
2,300.0	2,296.0	2,251.2	2,229.0	5.0	6.1	-93.80	-164.6	-177.8	243.6	233.4	10.21	23.868		
2,400.0	2,395.6	2,341.3	2,313.9	5.3	6.6	-92.21	-188.9	-195.4	272.9	262.2	10.75	25.378		
2,500.0	2,495.1	2,430.0	2,396.9	5.5	7.1	-90.73	-214.4	-213.8	304.4	293.1	11.31	26.919		
2,600.0	2,594.7	2,517.4	2,477.8	5.8	7.7	-89.37	-241.0	-233.1	338.0	326.1	11.86	28.489		
2,700.0	2,694.2	2,603.8	2,557.1	6.1	8.4	-88.11	-268.9	-253.2	373.7	361.2	12.43	30.070		
2,800.0	2,793.7	2,696.5	2,641.8	6.4	9.0	-86.93	-299.4	-275.3	410.3	397.3	13.01	31.543		
2,900.0	2,893.3	2,789.3	2,726.6	6.6	9.7	-85.94	-329.9	-297.3	447.1	433.5	13.59	32.889		
3,000.0	2,992.8	2,882.0	2,811.3	6.9	10.5	-85.10	-360.5	-319.4	483.9	469.8	14.18	34.121		
3,100.0	3,092.3	2,974.7	2,896.1	7.2	11.2	-84.38	-391.0	-341.5	520.9	506.1	14.78	35.252		
3,200.0	3,191.9	3,067.5	2,980.8	7.5	11.9	-83.76	-421.5	-363.5	557.9	542.5	15.37	36.292		
3,300.0	3,291.4	3,160.2	3,065.5	7.7	12.6	-83.21	-452.0	-385.6	595.0	579.0	15.97	37.251		
3,400.0	3,391.0	3,253.0	3,150.3	8.0	13.4	-82.73	-482.6	-407.7	632.1	615.5	16.57	38.137		
3,500.0	3,490.5	3,345.7	3,235.0	8.3	14.1	-82.30	-513.1	-429.7	669.2	652.0	17.18	38.957		
3,600.0	3,590.0	3,438.4	3,319.8	8.6	14.8	-81.91	-543.6	-451.8	706.4	688.6	17.78	39.718		
3,700.0	3,689.6	3,531.2	3,404.5	8.9	15.6	-81.56	-574.2	-473.9	743.6	725.2	18.39	40.426		
3,800.0	3,789.1	3,623.9	3,489.3	9.1	16.3	-81.25	-604.7	-495.9	780.8	761.8	19.00	41.086		
3,900.0	3,888.6	3,716.6	3,574.0	9.4	17.1	-80.97	-635.2	-518.0	818.0	798.4	19.62	41.702		
4,000.0	3,988.2	3,809.4	3,658.7	9.7	17.8	-80.71	-665.7	-540.1	855.2	835.0	20.23	42.278		
4,100.0	4,087.7	3,902.1	3,743.5	10.0	18.6	-80.47	-696.3	-562.1	892.5	871.6	20.84	42.818		
4,200.0	4,187.3	3,994.9	3,828.2	10.3	19.3	-80.25	-726.8	-584.2	929.8	908.3	21.46	43.325		
4,300.0	4,286.8	4,087.6	3,913.0	10.6	20.1	-80.05	-757.3	-606.2	967.0	945.0	22.08	43.802		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-1NBH - Wellbore #1 - PLAN 1 (FEB 4, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-89.7	89.7					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-89.7	89.7	89.4	0.22	398.915		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-89.7	89.7	89.0	0.67	132.972		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-89.7	89.7	88.5	1.12	79.783		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-89.7	89.7	88.1	1.57	56.988		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-89.7	89.7	87.6	2.02	44.324		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-89.7	89.7	87.2	2.47	36.265 CC, ES		
700.0	700.0	698.3	698.3	1.5	1.4	-90.54	-0.9	-90.6	90.6	87.7	2.90	31.287		
800.0	800.0	796.6	796.5	1.7	1.6	-92.17	-3.5	-93.2	93.4	90.1	3.31	28.248		
900.0	900.0	894.5	894.2	1.9	1.8	-94.67	-8.0	-97.7	98.2	94.5	3.73	26.324		
1,000.0	1,000.0	992.1	991.4	2.1	2.0	-97.76	-14.2	-103.9	105.2	101.0	4.17	25.222		
1,100.0	1,100.0	1,089.1	1,087.8	2.4	2.3	-101.15	-22.0	-111.8	114.6	110.0	4.63	24.751 SF		
1,200.0	1,200.0	1,185.6	1,183.3	2.6	2.6	-104.59	-31.6	-121.4	126.5	121.4	5.11	24.775		
1,300.0	1,300.0	1,281.3	1,277.7	2.8	2.9	99.39	-42.7	-132.6	141.3	135.8	5.49	25.753		
1,400.0	1,399.9	1,376.3	1,371.0	3.0	3.2	97.43	-55.5	-145.3	158.9	153.0	5.90	26.911		
1,500.0	1,499.7	1,470.4	1,462.9	3.1	3.6	96.27	-69.7	-159.6	179.1	172.7	6.34	28.242		
1,567.6	1,567.0	1,533.5	1,524.3	3.3	3.8	95.83	-80.1	-170.1	194.1	187.5	6.65	29.195		
1,600.0	1,599.3	1,563.6	1,553.4	3.3	4.0	95.78	-85.3	-175.3	201.7	194.9	6.80	29.654		
1,700.0	1,698.8	1,655.7	1,642.3	3.6	4.4	95.48	-102.3	-192.3	226.6	219.3	7.29	31.091		
1,800.0	1,798.4	1,746.8	1,729.6	3.8	4.9	95.03	-120.6	-210.7	253.6	245.8	7.79	32.551		
1,900.0	1,897.9	1,836.6	1,815.1	4.0	5.4	94.49	-140.1	-230.2	282.7	274.3	8.31	34.031		
2,000.0	1,997.4	1,925.2	1,898.8	4.3	6.0	93.90	-160.6	-250.8	313.8	305.0	8.83	35.528		
2,100.0	2,097.0	2,012.5	1,980.5	4.5	6.5	93.29	-182.2	-272.5	347.0	337.7	9.37	37.041		
2,200.0	2,196.5	2,100.0	2,061.7	4.8	7.2	92.65	-205.2	-295.6	382.3	372.4	9.92	38.546		
2,300.0	2,296.0	2,182.8	2,137.9	5.0	7.8	92.05	-228.2	-318.6	419.5	409.0	10.46	40.093		
2,400.0	2,395.6	2,267.7	2,215.3	5.3	8.5	91.44	-252.9	-343.4	458.6	447.6	11.02	41.603		
2,500.0	2,495.1	2,359.4	2,298.5	5.5	9.2	90.85	-280.0	-370.5	498.4	486.8	11.61	42.926		
2,600.0	2,594.7	2,451.0	2,381.8	5.8	10.0	90.36	-307.0	-397.7	538.1	525.9	12.20	44.114		
2,700.0	2,694.2	2,542.7	2,465.0	6.1	10.7	89.93	-334.1	-424.8	578.0	565.2	12.79	45.178		
2,800.0	2,793.7	2,634.4	2,548.3	6.4	11.5	89.55	-361.1	-452.0	617.8	604.4	13.39	46.133		
2,900.0	2,893.3	2,726.0	2,631.6	6.6	12.2	89.22	-388.2	-479.1	657.6	643.6	13.99	46.996		
3,000.0	2,992.8	2,817.7	2,714.8	6.9	13.0	88.93	-415.3	-506.3	697.5	682.9	14.60	47.778		
3,100.0	3,092.3	2,909.3	2,798.1	7.2	13.8	88.67	-442.3	-533.4	737.4	722.2	15.21	48.489		
3,200.0	3,191.9	3,001.0	2,881.3	7.5	14.6	88.44	-469.4	-560.6	777.3	761.5	15.82	49.137		
3,300.0	3,291.4	3,092.6	2,964.6	7.7	15.3	88.23	-496.4	-587.7	817.2	800.8	16.43	49.731		
3,400.0	3,391.0	3,184.3	3,047.8	8.0	16.1	88.04	-523.5	-614.8	857.1	840.0	17.05	50.276		
3,500.0	3,490.5	3,275.9	3,131.1	8.3	16.9	87.86	-550.5	-642.0	897.0	879.3	17.67	50.778		
3,600.0	3,590.0	3,367.6	3,214.4	8.6	17.7	87.70	-577.6	-669.1	936.9	918.7	18.28	51.242		
3,700.0	3,689.6	3,459.2	3,297.6	8.9	18.4	87.56	-604.7	-696.3	976.9	958.0	18.91	51.672		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-1NCH - Wellbore #1 - PLAN 1 (FEB 4 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-103.7	103.7					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-103.7	103.7	103.4	0.22	461.245		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-103.7	103.7	103.0	0.67	153.748		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-103.7	103.7	102.5	1.12	92.249		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-103.7	103.7	102.1	1.57	65.892 CC, ES		
500.0	500.0	498.0	498.0	1.0	1.0	-90.43	-0.8	-104.6	104.6	102.6	2.00	52.402		
600.0	600.0	595.8	595.7	1.2	1.2	-91.74	-3.3	-107.5	107.6	105.2	2.41	44.575		
700.0	700.0	693.4	693.1	1.5	1.4	-93.76	-7.4	-112.2	112.6	109.8	2.85	39.550		
800.0	800.0	790.6	789.9	1.7	1.6	-96.29	-13.1	-118.7	119.8	116.5	3.30	36.322		
900.0	900.0	887.3	886.0	1.9	1.9	-99.11	-20.4	-127.1	129.4	125.7	3.77	34.328		
1,000.0	1,000.0	983.4	981.1	2.1	2.2	-102.02	-29.2	-137.2	141.5	137.2	4.26	33.214		
1,100.0	1,100.0	1,078.7	1,075.2	2.4	2.5	-104.86	-39.5	-149.0	156.1	151.3	4.77	32.748 SF		
1,200.0	1,200.0	1,173.2	1,168.0	2.6	2.8	-107.52	-51.3	-162.4	173.3	168.0	5.29	32.765		
1,300.0	1,300.0	1,266.8	1,259.4	2.8	3.2	97.10	-64.4	-177.4	193.2	187.6	5.58	34.651		
1,400.0	1,399.9	1,359.5	1,349.4	3.0	3.7	95.55	-78.8	-194.0	215.9	209.8	6.01	35.941		
1,500.0	1,499.7	1,451.1	1,437.9	3.1	4.1	94.62	-94.5	-211.9	241.0	234.5	6.45	37.343		
1,567.6	1,567.0	1,512.4	1,496.7	3.3	4.4	94.26	-105.8	-224.8	259.3	252.6	6.77	38.321		
1,600.0	1,599.3	1,541.6	1,524.6	3.3	4.6	94.26	-111.3	-231.2	268.5	261.6	6.93	38.769		
1,700.0	1,698.8	1,630.8	1,609.6	3.6	5.1	94.17	-129.3	-251.7	298.2	290.7	7.42	40.182		
1,800.0	1,798.4	1,718.8	1,692.7	3.8	5.7	93.97	-148.2	-273.4	329.9	322.0	7.93	41.606		
1,900.0	1,897.9	1,805.4	1,773.9	4.0	6.3	93.71	-168.1	-296.2	363.7	355.3	8.45	43.042		
2,000.0	1,997.4	1,890.7	1,853.1	4.3	6.9	93.39	-188.9	-320.0	399.6	390.6	8.98	44.480		
2,100.0	2,097.0	1,974.5	1,930.3	4.5	7.5	93.04	-210.4	-344.6	437.3	427.8	9.52	45.924		
2,200.0	2,196.5	2,056.9	2,005.4	4.8	8.2	92.68	-232.7	-370.1	477.1	467.0	10.07	47.382		
2,300.0	2,296.0	2,145.8	2,085.9	5.0	8.9	92.30	-257.5	-398.5	518.1	507.5	10.64	48.678		
2,400.0	2,395.6	2,236.9	2,168.4	5.3	9.7	91.96	-283.0	-427.6	559.2	548.0	11.23	49.808		
2,500.0	2,495.1	2,328.0	2,250.9	5.5	10.5	91.67	-308.4	-456.8	600.3	588.5	11.82	50.801		
2,600.0	2,594.7	2,419.1	2,333.4	5.8	11.3	91.41	-333.9	-485.9	641.5	629.1	12.41	51.680		
2,700.0	2,694.2	2,510.2	2,415.9	6.1	12.1	91.19	-359.3	-515.1	682.6	669.6	13.01	52.460		
2,800.0	2,793.7	2,601.3	2,498.3	6.4	12.8	90.99	-384.8	-544.2	723.8	710.1	13.62	53.157		
2,900.0	2,893.3	2,692.5	2,580.8	6.6	13.6	90.82	-410.2	-573.3	764.9	750.7	14.22	53.782		
3,000.0	2,992.8	2,783.6	2,663.3	6.9	14.4	90.66	-435.7	-602.5	806.1	791.2	14.83	54.344		
3,100.0	3,092.3	2,874.7	2,745.8	7.2	15.2	90.51	-461.2	-631.6	847.2	831.8	15.45	54.854		
3,200.0	3,191.9	2,965.8	2,828.3	7.5	16.0	90.38	-486.6	-660.8	888.4	872.4	16.06	55.317		
3,300.0	3,291.4	3,056.9	2,910.8	7.7	16.8	90.27	-512.1	-689.9	929.6	912.9	16.68	55.739		
3,400.0	3,391.0	3,148.0	2,993.3	8.0	17.6	90.16	-537.5	-719.1	970.8	953.5	17.30	56.126		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-2CDH - Wellbore #1 - PLAN 1 (FEB 4, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-72.9	72.9					
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-72.9	72.9	72.6	0.22	324.118		
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-72.9	72.9	72.2	0.67	108.039		
300.0	300.0	300.0	300.0	0.6	0.6	-89.97	0.0	-72.9	72.9	71.7	1.12	64.824		
400.0	400.0	400.0	400.0	0.8	0.8	-89.97	0.0	-72.9	72.9	71.3	1.57	46.303		
500.0	500.0	500.0	500.0	1.0	1.0	-89.97	0.0	-72.9	72.9	70.8	2.02	36.013		
600.0	600.0	600.0	600.0	1.2	1.2	-89.97	0.0	-72.9	72.9	70.4	2.47	29.465		
700.0	700.0	700.0	700.0	1.5	1.5	-89.97	0.0	-72.9	72.9	69.9	2.92	24.932		
800.0	800.0	800.0	800.0	1.7	1.7	-89.97	0.0	-72.9	72.9	69.5	3.37	21.608 CC, ES		
900.0	900.0	898.7	898.7	1.9	1.9	-90.72	-0.9	-73.7	73.7	69.9	3.79	19.428		
1,000.0	1,000.0	997.4	997.3	2.1	2.1	-92.87	-3.8	-76.2	76.3	72.1	4.20	18.174		
1,100.0	1,100.0	1,095.7	1,095.4	2.4	2.3	-96.12	-8.6	-80.3	80.9	76.3	4.62	17.524		
1,200.0	1,200.0	1,193.7	1,193.0	2.6	2.5	-100.06	-15.3	-86.1	87.8	82.7	5.05	17.371 SF		
1,300.0	1,300.0	1,291.2	1,289.8	2.8	2.7	103.29	-23.8	-93.5	97.3	91.9	5.45	17.845		
1,400.0	1,399.9	1,388.1	1,385.8	3.0	3.0	100.89	-34.1	-102.5	109.8	103.9	5.85	18.762		
1,500.0	1,499.7	1,484.4	1,480.8	3.1	3.3	99.47	-46.2	-112.9	125.0	118.7	6.27	19.926		
1,567.6	1,567.0	1,549.1	1,544.3	3.3	3.5	98.95	-55.3	-120.8	136.7	130.1	6.57	20.801		
1,600.0	1,599.3	1,580.0	1,574.6	3.3	3.6	98.83	-59.9	-124.8	142.7	135.9	6.72	21.240		
1,700.0	1,698.8	1,674.7	1,667.1	3.6	3.9	98.24	-75.3	-138.2	162.6	155.4	7.19	22.618		
1,800.0	1,798.4	1,768.6	1,758.2	3.8	4.3	97.40	-92.3	-152.9	184.5	176.9	7.68	24.039		
1,900.0	1,897.9	1,861.4	1,847.8	4.0	4.8	96.43	-110.7	-168.8	208.7	200.5	8.18	25.495		
2,000.0	1,997.4	1,953.2	1,935.7	4.3	5.2	95.39	-130.5	-186.0	234.9	226.2	8.70	26.982		
2,100.0	2,097.0	2,043.7	2,021.9	4.5	5.7	94.34	-151.6	-204.3	263.2	254.0	9.24	28.496		
2,200.0	2,196.5	2,133.0	2,106.1	4.8	6.3	93.31	-173.9	-223.7	293.6	283.8	9.78	30.035		
2,300.0	2,296.0	2,221.0	2,188.4	5.0	6.8	92.31	-197.4	-244.0	326.1	315.8	10.32	31.593		
2,400.0	2,395.6	2,307.5	2,268.7	5.3	7.4	91.35	-221.8	-265.2	360.6	349.8	10.87	33.168		
2,500.0	2,495.1	2,399.6	2,353.6	5.5	8.1	90.43	-248.8	-288.6	396.5	385.1	11.45	34.635		
2,600.0	2,594.7	2,492.7	2,439.4	5.8	8.8	89.64	-276.1	-312.2	432.5	420.5	12.03	35.950		
2,700.0	2,694.2	2,585.9	2,525.3	6.1	9.5	88.98	-303.3	-335.9	468.5	455.9	12.62	37.133		
2,800.0	2,793.7	2,679.0	2,611.2	6.4	10.2	88.41	-330.6	-359.5	504.6	491.4	13.21	38.203		
2,900.0	2,893.3	2,772.2	2,697.0	6.6	10.9	87.92	-357.9	-383.2	540.7	526.9	13.80	39.172		
3,000.0	2,992.8	2,865.4	2,782.9	6.9	11.6	87.48	-385.2	-406.8	576.9	562.5	14.40	40.054		
3,100.0	3,092.3	2,958.5	2,868.8	7.2	12.3	87.10	-412.5	-430.5	613.0	598.0	15.00	40.859		
3,200.0	3,191.9	3,051.7	2,954.7	7.5	13.0	86.76	-439.8	-454.2	649.2	633.6	15.61	41.596		
3,300.0	3,291.4	3,144.8	3,040.5	7.7	13.8	86.46	-467.1	-477.8	685.4	669.2	16.21	42.272		
3,400.0	3,391.0	3,238.0	3,126.4	8.0	14.5	86.19	-494.3	-501.5	721.7	704.8	16.82	42.895		
3,500.0	3,490.5	3,331.1	3,212.3	8.3	15.2	85.94	-521.6	-525.1	757.9	740.5	17.44	43.470		
3,600.0	3,590.0	3,424.3	3,298.1	8.6	15.9	85.72	-548.9	-548.8	794.1	776.1	18.05	44.002		
3,700.0	3,689.6	3,517.4	3,384.0	8.9	16.7	85.51	-576.2	-572.4	830.4	811.7	18.66	44.496		
3,800.0	3,789.1	3,610.6	3,469.9	9.1	17.4	85.33	-603.5	-596.1	866.7	847.4	19.28	44.955		
3,900.0	3,888.6	3,703.8	3,555.8	9.4	18.1	85.15	-630.8	-619.7	902.9	883.0	19.90	45.383		
4,000.0	3,988.2	3,796.9	3,641.6	9.7	18.8	85.00	-658.0	-643.4	939.2	918.7	20.51	45.783		
4,100.0	4,087.7	3,890.1	3,727.5	10.0	19.6	84.85	-685.3	-667.1	975.5	954.4	21.13	46.158		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-2NAH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	44.8	44.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	44.8	44.8	44.6	0.22	199.457		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	44.8	44.8	44.2	0.67	66.486		
300.0	300.0	300.0	300.0	0.6	0.6	90.04	0.0	44.8	44.8	43.7	1.12	39.891		
400.0	400.0	400.0	400.0	0.8	0.8	90.04	0.0	44.8	44.8	43.3	1.57	28.494		
500.0	500.0	500.0	500.0	1.0	1.0	90.04	0.0	44.8	44.8	42.8	2.02	22.162		
600.0	600.0	600.0	600.0	1.2	1.2	90.04	0.0	44.8	44.8	42.4	2.47	18.132		
700.0	700.0	700.0	700.0	1.5	1.5	90.04	0.0	44.8	44.8	41.9	2.92	15.343		
800.0	800.0	800.0	800.0	1.7	1.7	90.04	0.0	44.8	44.8	41.5	3.37	13.297 CC, ES		
900.0	900.0	898.9	898.9	1.9	1.9	90.75	-0.6	46.0	46.0	42.2	3.80	12.107		
1,000.0	1,000.0	997.7	997.7	2.1	2.1	92.66	-2.3	49.4	49.5	45.3	4.21	11.751		
1,100.0	1,100.0	1,096.3	1,096.0	2.4	2.3	95.31	-5.1	55.1	55.5	50.9	4.64	11.970		
1,200.0	1,200.0	1,194.4	1,193.7	2.6	2.5	98.17	-9.1	63.1	64.0	59.0	5.07	12.637		
1,300.0	1,300.0	1,292.2	1,290.8	2.8	2.7	-52.80	-14.1	73.2	74.3	68.9	5.47	13.582		
1,400.0	1,399.9	1,389.6	1,387.2	3.0	3.0	-52.14	-20.2	85.5	85.5	79.7	5.86	14.590		
1,500.0	1,499.7	1,486.6	1,482.9	3.1	3.3	-52.40	-27.3	100.0	97.6	91.3	6.27	15.566		
1,567.6	1,567.0	1,552.3	1,547.5	3.3	3.5	-52.94	-32.8	111.0	106.2	99.6	6.56	16.195		
1,600.0	1,599.3	1,584.4	1,579.0	3.3	3.6	-53.31	-35.5	116.5	110.3	103.6	6.70	16.465		
1,700.0	1,698.8	1,683.6	1,676.3	3.6	4.0	-54.29	-44.0	133.6	123.1	115.9	7.15	17.206		
1,800.0	1,798.4	1,782.8	1,773.6	3.8	4.4	-55.09	-52.5	150.7	135.9	128.3	7.62	17.827		
1,900.0	1,897.9	1,881.9	1,870.9	4.0	4.8	-55.75	-60.9	167.8	148.7	140.6	8.11	18.343		
2,000.0	1,997.4	1,981.1	1,968.2	4.3	5.1	-56.31	-69.4	184.9	161.6	153.0	8.61	18.777		
2,100.0	2,097.0	2,080.2	2,065.5	4.5	5.5	-56.78	-77.9	202.0	174.4	165.3	9.11	19.143		
2,200.0	2,196.5	2,179.4	2,162.8	4.8	5.9	-57.19	-86.3	219.1	187.3	177.7	9.63	19.455		
2,300.0	2,296.0	2,278.6	2,260.1	5.0	6.3	-57.55	-94.8	236.2	200.2	190.0	10.15	19.721		
2,400.0	2,395.6	2,377.7	2,357.5	5.3	6.8	-57.86	-103.2	253.3	213.1	202.4	10.68	19.949		
2,500.0	2,495.1	2,476.9	2,454.8	5.5	7.2	-58.14	-111.7	270.4	226.0	214.7	11.22	20.146		
2,600.0	2,594.7	2,576.0	2,552.1	5.8	7.6	-58.39	-120.2	287.5	238.8	227.1	11.76	20.317		
2,700.0	2,694.2	2,675.2	2,649.4	6.1	8.0	-58.61	-128.6	304.6	251.7	239.4	12.30	20.467		
2,800.0	2,793.7	2,774.4	2,746.7	6.4	8.4	-58.81	-137.1	321.7	264.6	251.8	12.85	20.598		
2,900.0	2,893.3	2,873.5	2,844.0	6.6	8.8	-58.99	-145.6	338.8	277.5	264.2	13.40	20.714		
3,000.0	2,992.8	2,972.7	2,941.3	6.9	9.3	-59.16	-154.0	355.9	290.5	276.5	13.95	20.816		
3,100.0	3,092.3	3,071.8	3,038.6	7.2	9.7	-59.31	-162.5	373.0	303.4	288.9	14.51	20.907		
3,200.0	3,191.9	3,171.0	3,135.9	7.5	10.1	-59.45	-171.0	390.1	316.3	301.2	15.07	20.988		
3,300.0	3,291.4	3,270.2	3,233.2	7.7	10.5	-59.58	-179.4	407.2	329.2	313.6	15.63	21.061		
3,400.0	3,391.0	3,369.3	3,330.5	8.0	10.9	-59.70	-187.9	424.3	342.1	325.9	16.19	21.126		
3,500.0	3,490.5	3,468.5	3,427.8	8.3	11.4	-59.81	-196.4	441.3	355.0	338.3	16.76	21.185		
3,600.0	3,590.0	3,567.6	3,525.1	8.6	11.8	-59.91	-204.8	458.4	367.9	350.6	17.32	21.238		
3,700.0	3,689.6	3,666.8	3,622.5	8.9	12.2	-60.01	-213.3	475.5	380.8	363.0	17.89	21.287		
3,800.0	3,789.1	3,766.0	3,719.8	9.1	12.7	-60.09	-221.8	492.6	393.8	375.3	18.46	21.331		
3,900.0	3,888.6	3,865.1	3,817.1	9.4	13.1	-60.18	-230.2	509.7	406.7	387.7	19.03	21.371		
4,000.0	3,988.2	3,964.3	3,914.4	9.7	13.5	-60.26	-238.7	526.8	419.6	400.0	19.60	21.407		
4,100.0	4,087.7	4,063.4	4,011.7	10.0	13.9	-60.33	-247.1	543.9	432.5	412.3	20.17	21.441		
4,200.0	4,187.3	4,162.6	4,109.0	10.3	14.4	-60.40	-255.6	561.0	445.4	424.7	20.75	21.472		
4,300.0	4,286.8	4,261.8	4,206.3	10.6	14.8	-60.47	-264.1	578.1	458.4	437.0	21.32	21.501		
4,400.0	4,386.3	4,360.9	4,303.6	10.9	15.2	-60.53	-272.5	595.2	471.3	449.4	21.89	21.527		
4,500.0	4,485.9	4,460.1	4,400.9	11.1	15.6	-60.59	-281.0	612.3	484.2	461.7	22.47	21.551		
4,600.0	4,585.4	4,559.2	4,498.2	11.4	16.1	-60.64	-289.5	629.4	497.1	474.1	23.04	21.574		
4,700.0	4,684.9	4,658.4	4,595.5	11.7	16.5	-60.69	-297.9	646.5	510.1	486.4	23.62	21.595		
4,800.0	4,784.5	4,757.6	4,692.8	12.0	16.9	-60.74	-306.4	663.6	523.0	498.8	24.20	21.614		
4,900.0	4,884.0	4,856.7	4,790.2	12.3	17.4	-60.79	-314.9	680.7	535.9	511.1	24.77	21.632		
5,000.0	4,983.6	4,955.9	4,887.5	12.6	17.8	-60.84	-323.3	697.8	548.8	523.5	25.35	21.649		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-2NAH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,083.1	5,055.1	4,984.8	12.9	18.2	-60.88	-331.8	714.9	561.7	535.8	25.93	21.665		
5,200.0	5,182.6	5,154.2	5,082.1	13.2	18.7	-60.92	-340.3	732.0	574.7	548.2	26.51	21.680		
5,300.0	5,282.2	5,253.4	5,179.4	13.4	19.1	-60.96	-348.7	749.1	587.6	560.5	27.09	21.694		
5,400.0	5,381.7	5,352.5	5,276.7	13.7	19.5	-61.00	-357.2	766.2	600.5	572.9	27.67	21.706		
5,500.0	5,481.2	5,451.7	5,374.0	14.0	19.9	-61.04	-365.6	783.3	613.5	585.2	28.25	21.719		
5,600.0	5,580.8	5,550.9	5,471.3	14.3	20.4	-61.07	-374.1	800.4	626.4	597.6	28.83	21.730		
5,700.0	5,680.3	5,650.0	5,568.6	14.6	20.8	-61.10	-382.6	817.5	639.3	609.9	29.41	21.741		
5,800.0	5,779.8	5,749.2	5,665.9	14.9	21.2	-61.14	-391.0	834.5	652.2	622.2	29.99	21.751		
5,900.0	5,879.4	5,848.3	5,763.2	15.2	21.7	-61.17	-399.5	851.6	665.2	634.6	30.57	21.761		
6,000.0	5,978.9	5,947.5	5,860.5	15.5	22.1	-61.20	-408.0	868.7	678.1	646.9	31.15	21.770		
6,100.0	6,078.5	6,046.7	5,957.9	15.8	22.5	-61.23	-416.4	885.8	691.0	659.3	31.73	21.778		
6,200.0	6,178.0	6,145.8	6,055.2	16.1	23.0	-61.25	-424.9	902.9	703.9	671.6	32.31	21.786		
6,300.0	6,277.5	6,245.0	6,152.5	16.3	23.4	-61.28	-433.4	920.0	716.9	684.0	32.89	21.794		
6,400.0	6,377.1	6,344.1	6,249.8	16.6	23.8	-61.31	-441.8	937.1	729.8	696.3	33.47	21.801		
6,500.0	6,476.6	6,443.3	6,347.1	16.9	24.3	-61.33	-450.3	954.2	742.7	708.7	34.06	21.808		
6,600.0	6,576.1	6,542.5	6,444.4	17.2	24.7	-61.35	-458.8	971.3	755.6	721.0	34.64	21.815		
6,700.0	6,675.7	6,641.6	6,541.7	17.5	25.1	-61.38	-467.2	988.4	768.6	733.4	35.22	21.821		
6,800.0	6,775.2	6,740.8	6,639.0	17.8	25.6	-61.40	-475.7	1,005.5	781.5	745.7	35.80	21.827		
6,900.0	6,874.8	6,839.9	6,736.3	18.1	26.0	-61.42	-484.2	1,022.6	794.4	758.0	36.39	21.833		
7,000.0	6,974.3	6,937.0	6,831.0	18.4	26.4	-61.09	-497.3	1,039.2	807.5	770.5	36.93	21.866		
7,046.8	7,020.8	6,981.5	6,873.5	18.5	26.6	-60.63	-507.6	1,046.8	813.7	776.6	37.15	21.902		
7,050.0	7,024.1	6,984.5	6,876.4	18.5	26.7	-61.73	-508.4	1,047.3	814.1	777.0	37.16	21.908		
7,100.0	7,073.6	7,031.3	6,920.4	18.7	26.9	-71.10	-522.3	1,055.0	820.9	783.6	37.33	21.991		
7,150.0	7,122.6	7,077.6	6,963.0	18.9	27.2	-74.48	-538.9	1,062.5	827.7	790.1	37.56	22.034		
7,200.0	7,170.8	7,123.4	7,004.0	19.1	27.5	-75.86	-558.0	1,069.8	834.4	796.5	37.86	22.040		
7,250.0	7,218.0	7,168.9	7,043.4	19.4	27.8	-76.38	-579.6	1,076.8	841.0	802.8	38.22	22.006		
7,300.0	7,263.9	7,213.9	7,081.0	19.7	28.1	-76.45	-603.5	1,083.5	847.6	808.9	38.64	21.934		
7,350.0	7,308.3	7,258.7	7,116.8	20.0	28.4	-76.28	-629.5	1,089.8	853.9	814.8	39.13	21.824		
7,400.0	7,351.0	7,303.1	7,150.7	20.3	28.7	-75.97	-657.5	1,095.9	860.1	820.4	39.68	21.676		
7,450.0	7,391.9	7,347.2	7,182.7	20.7	29.1	-75.59	-687.4	1,101.6	866.0	825.7	40.30	21.489		
7,500.0	7,430.6	7,391.0	7,212.5	21.2	29.5	-75.17	-719.0	1,106.9	871.6	830.6	40.99	21.263		
7,550.0	7,467.0	7,434.7	7,240.3	21.6	29.8	-74.73	-752.3	1,111.9	876.9	835.2	41.76	21.000		
7,600.0	7,501.0	7,478.1	7,265.9	22.1	30.2	-74.31	-787.0	1,116.5	881.9	839.3	42.60	20.701		
7,650.0	7,532.3	7,521.3	7,289.3	22.7	30.7	-73.90	-823.1	1,120.8	886.5	843.0	43.53	20.367		
7,700.0	7,560.8	7,564.3	7,310.5	23.2	31.1	-73.52	-860.4	1,124.6	890.7	846.2	44.53	20.001		
7,750.0	7,586.4	7,607.2	7,329.3	23.9	31.5	-73.17	-898.8	1,128.0	894.5	848.9	45.63	19.605		
7,800.0	7,608.9	7,650.0	7,345.7	24.5	32.0	-72.86	-938.1	1,131.1	897.8	851.0	46.81	19.182		
7,850.0	7,628.3	7,692.7	7,359.9	25.1	32.4	-72.59	-978.3	1,133.7	900.7	852.6	48.07	18.736		
7,900.0	7,644.4	7,735.3	7,371.6	25.8	32.9	-72.37	-1,019.2	1,135.9	903.1	853.7	49.42	18.272		
7,950.0	7,657.2	7,777.8	7,380.8	26.5	33.4	-72.19	-1,060.7	1,137.7	905.0	854.1	50.85	17.795		
8,000.0	7,666.5	7,820.3	7,387.7	27.3	33.9	-72.07	-1,102.6	1,139.0	906.4	854.0	52.36	17.311		
8,050.0	7,672.5	7,862.7	7,392.0	28.0	34.4	-71.99	-1,144.8	1,139.9	907.3	853.3	53.93	16.824		
8,100.0	7,674.9	7,905.2	7,393.9	28.8	34.9	-71.96	-1,187.2	1,140.4	907.6	852.1	55.55	16.339		
8,110.3	7,675.0	7,913.9	7,394.0	28.9	35.0	-71.96	-1,195.9	1,140.4	907.6	851.7	55.89	16.240		
8,200.0	7,675.0	8,003.2	7,394.0	30.3	36.1	-71.97	-1,285.2	1,140.8	907.7	849.2	58.52	15.510		
8,300.0	7,675.0	8,103.2	7,394.0	31.9	37.4	-71.97	-1,385.2	1,141.1	907.7	846.2	61.55	14.749		
8,400.0	7,675.0	8,203.2	7,394.0	33.5	38.8	-71.97	-1,485.2	1,141.5	907.8	843.1	64.64	14.044		
8,500.0	7,675.0	8,303.2	7,394.0	35.1	40.2	-71.97	-1,585.1	1,141.8	907.8	840.0	67.79	13.392		
8,600.0	7,675.0	8,403.2	7,394.0	36.8	41.6	-71.97	-1,685.1	1,142.2	907.9	836.9	70.99	12.789		
8,700.0	7,675.0	8,503.2	7,394.0	38.5	43.1	-71.97	-1,785.1	1,142.5	907.9	833.7	74.23	12.231		
8,800.0	7,675.0	8,603.2	7,394.0	40.2	44.6	-71.97	-1,885.1	1,142.9	908.0	830.5	77.51	11.714		
8,900.0	7,675.0	8,703.2	7,394.0	41.9	46.2	-71.97	-1,985.1	1,143.2	908.0	827.2	80.83	11.234		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-2NAH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	7,675.0	8,803.2	7,394.0	43.7	47.8	-71.97	-2,085.1	1,143.6	908.1	823.9	84.18	10.788		
9,100.0	7,675.0	8,903.2	7,394.0	45.4	49.4	-71.98	-2,185.1	1,143.9	908.1	820.6	87.55	10.373		
9,200.0	7,675.0	9,003.2	7,394.0	47.2	51.0	-71.98	-2,285.1	1,144.3	908.2	817.2	90.94	9.986		
9,300.0	7,675.0	9,103.2	7,394.0	49.0	52.6	-71.98	-2,385.1	1,144.6	908.2	813.9	94.36	9.625		
9,400.0	7,675.0	9,203.2	7,394.0	50.8	54.3	-71.98	-2,485.1	1,145.0	908.3	810.5	97.79	9.288		
9,500.0	7,675.0	9,303.2	7,394.0	52.6	55.9	-71.98	-2,585.1	1,145.3	908.3	807.1	101.24	8.972		
9,600.0	7,675.0	9,403.2	7,394.0	54.4	57.6	-71.98	-2,685.1	1,145.7	908.4	803.7	104.71	8.675		
9,700.0	7,675.0	9,503.2	7,394.0	56.2	59.3	-71.98	-2,785.1	1,146.0	908.4	800.2	108.19	8.397		
9,800.0	7,675.0	9,603.2	7,394.0	58.0	61.0	-71.98	-2,885.1	1,146.4	908.5	796.8	111.68	8.135		
9,900.0	7,675.0	9,703.2	7,394.0	59.9	62.8	-71.98	-2,985.1	1,146.7	908.5	793.4	115.18	7.888		
10,000.0	7,675.0	9,803.2	7,394.0	61.7	64.5	-71.98	-3,085.1	1,147.1	908.6	789.9	118.70	7.655		
10,100.0	7,675.0	9,903.2	7,394.0	63.5	66.3	-71.99	-3,185.1	1,147.4	908.6	786.4	122.22	7.434		
10,200.0	7,675.0	10,003.2	7,394.0	65.4	68.0	-71.99	-3,285.1	1,147.8	908.7	782.9	125.75	7.226		
10,300.0	7,675.0	10,103.2	7,394.0	67.2	69.8	-71.99	-3,385.1	1,148.1	908.7	779.4	129.29	7.029		
10,400.0	7,675.0	10,203.2	7,394.0	69.1	71.6	-71.99	-3,485.1	1,148.5	908.8	775.9	132.84	6.841		
10,500.0	7,675.0	10,303.2	7,394.0	70.9	73.3	-71.99	-3,585.1	1,148.8	908.8	772.4	136.39	6.663		
10,600.0	7,675.0	10,403.2	7,394.0	72.8	75.1	-71.99	-3,685.1	1,149.2	908.9	768.9	139.95	6.494		
10,700.0	7,675.0	10,503.2	7,394.0	74.6	76.9	-71.99	-3,785.1	1,149.5	908.9	765.4	143.52	6.333		
10,800.0	7,675.0	10,603.2	7,394.0	76.5	78.7	-71.99	-3,885.1	1,149.9	909.0	761.9	147.09	6.180		
10,900.0	7,675.0	10,703.2	7,394.0	78.4	80.5	-71.99	-3,985.1	1,150.2	909.0	758.4	150.66	6.034		
11,000.0	7,675.0	10,803.2	7,394.0	80.2	82.3	-71.99	-4,085.1	1,150.6	909.1	754.8	154.24	5.894		
11,100.0	7,675.0	10,903.2	7,394.0	82.1	84.1	-72.00	-4,185.1	1,150.9	909.1	751.3	157.83	5.760		
11,200.0	7,675.0	11,003.2	7,394.0	84.0	86.0	-72.00	-4,285.1	1,151.3	909.2	747.8	161.42	5.633		
11,300.0	7,675.0	11,103.2	7,394.0	85.8	87.8	-72.00	-4,385.1	1,151.6	909.2	744.2	165.01	5.510		
11,400.0	7,675.0	11,203.2	7,394.0	87.7	89.6	-72.00	-4,485.1	1,152.0	909.3	740.7	168.60	5.393		
11,500.0	7,675.0	11,303.2	7,394.0	89.6	91.4	-72.00	-4,585.1	1,152.3	909.3	737.1	172.20	5.281		
11,600.0	7,675.0	11,403.2	7,394.0	91.5	93.3	-72.00	-4,685.1	1,152.7	909.4	733.6	175.81	5.173		
11,700.0	7,675.0	11,503.2	7,394.0	93.3	95.1	-72.00	-4,785.1	1,153.0	909.4	730.0	179.41	5.069		
11,800.0	7,675.0	11,603.2	7,394.0	95.2	96.9	-72.00	-4,885.1	1,153.4	909.5	726.5	183.02	4.969		
11,900.0	7,675.0	11,703.2	7,394.0	97.1	98.8	-72.00	-4,985.1	1,153.7	909.5	722.9	186.63	4.874		
12,000.0	7,675.0	11,803.2	7,394.0	99.0	100.6	-72.01	-5,085.1	1,154.1	909.6	719.4	190.24	4.781		
12,100.0	7,675.0	11,903.2	7,394.0	100.9	102.5	-72.01	-5,185.1	1,154.4	909.6	715.8	193.86	4.692		
12,200.0	7,675.0	12,003.2	7,394.0	102.8	104.3	-72.01	-5,285.1	1,154.8	909.7	712.2	197.47	4.607		
12,300.0	7,675.0	12,103.2	7,394.0	104.7	106.2	-72.01	-5,385.1	1,155.1	909.7	708.7	201.09	4.524		
12,400.0	7,675.0	12,203.2	7,394.0	106.5	108.0	-72.01	-5,485.1	1,155.5	909.8	705.1	204.71	4.444		
12,500.0	7,675.0	12,303.2	7,394.0	108.4	109.9	-72.01	-5,585.1	1,155.8	909.8	701.5	208.34	4.367		
12,600.0	7,675.0	12,403.2	7,394.0	110.3	111.7	-72.01	-5,685.1	1,156.2	909.9	697.9	211.96	4.293		
12,700.0	7,675.0	12,503.2	7,394.0	112.2	113.6	-72.01	-5,785.1	1,156.5	909.9	694.4	215.59	4.221		
12,800.0	7,675.0	12,603.2	7,394.0	114.1	115.5	-72.01	-5,885.1	1,156.9	910.0	690.8	219.22	4.151		
12,900.0	7,675.0	12,703.2	7,394.0	116.0	117.3	-72.01	-5,985.1	1,157.2	910.0	687.2	222.85	4.084		
13,000.0	7,675.0	12,803.2	7,394.0	117.9	119.2	-72.02	-6,085.1	1,157.6	910.1	683.6	226.48	4.018		
13,100.0	7,675.0	12,903.2	7,394.0	119.8	121.1	-72.02	-6,185.1	1,157.9	910.2	680.0	230.11	3.955		
13,200.0	7,675.0	13,003.2	7,394.0	121.7	122.9	-72.02	-6,285.1	1,158.3	910.2	676.5	233.74	3.894		
13,300.0	7,675.0	13,103.2	7,394.0	123.6	124.8	-72.02	-6,385.1	1,158.6	910.3	672.9	237.38	3.835		
13,400.0	7,675.0	13,203.2	7,394.0	125.5	126.7	-72.02	-6,485.1	1,159.0	910.3	669.3	241.02	3.777		
13,500.0	7,675.0	13,303.2	7,394.0	127.4	128.5	-72.02	-6,585.1	1,159.3	910.4	665.7	244.65	3.721		
13,600.0	7,675.0	13,403.2	7,394.0	129.3	130.4	-72.02	-6,685.1	1,159.7	910.4	662.1	248.29	3.667		
13,700.0	7,675.0	13,503.2	7,394.0	131.2	132.3	-72.02	-6,785.1	1,160.0	910.5	658.5	251.93	3.614		
13,785.9	7,675.0	13,588.4	7,394.0	132.8	133.9	-72.02	-6,870.4	1,160.3	910.5	655.5	255.05	3.570 SF		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-2NBH - Wellbore #1 - PLAN 1 (FEB 4 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-44.8	44.8					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-44.8	44.8	44.6	0.22	199.457		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-44.8	44.8	44.2	0.67	66.486		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-44.8	44.8	43.7	1.12	39.891		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-44.8	44.8	43.3	1.57	28.494		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-44.8	44.8	42.8	2.02	22.162		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-44.8	44.8	42.4	2.47	18.132		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-44.8	44.8	41.9	2.92	15.343		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-44.8	44.8	41.5	3.37	13.297		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-44.8	44.8	41.0	3.82	11.733		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-44.8	44.8	40.6	4.27	10.498		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-44.8	44.8	40.1	4.72	9.498		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-44.8	44.8	39.7	5.17	8.672 CC, ES		
1,300.0	1,300.0	1,299.4	1,299.4	2.8	2.8	117.03	-1.1	-45.5	46.1	40.5	5.56	8.283 SF		
1,400.0	1,399.9	1,398.7	1,398.6	3.0	3.0	117.13	-4.4	-47.4	49.8	43.9	5.92	8.425		
1,500.0	1,499.7	1,497.8	1,497.5	3.1	3.1	117.26	-10.0	-50.7	56.1	49.8	6.29	8.925		
1,567.6	1,567.0	1,564.7	1,564.1	3.3	3.3	117.34	-15.0	-53.6	61.7	55.2	6.55	9.425		
1,600.0	1,599.3	1,596.7	1,595.9	3.3	3.3	117.32	-17.7	-55.3	64.8	58.1	6.68	9.699		
1,700.0	1,698.8	1,695.2	1,693.8	3.6	3.6	116.12	-27.6	-61.1	75.0	67.9	7.10	10.569		
1,800.0	1,798.4	1,793.4	1,791.0	3.8	3.8	113.79	-39.6	-68.1	86.7	79.1	7.55	11.487		
1,900.0	1,897.9	1,891.0	1,887.2	4.0	4.1	110.83	-53.7	-76.4	99.9	91.9	8.02	12.462		
2,000.0	1,997.4	1,988.0	1,982.4	4.3	4.4	107.60	-69.8	-85.8	115.0	106.5	8.51	13.503		
2,100.0	2,097.0	2,084.2	2,076.3	4.5	4.7	104.33	-87.8	-96.4	132.0	123.0	9.03	14.617		
2,200.0	2,196.5	2,179.6	2,168.9	4.8	5.1	101.17	-107.7	-108.1	151.1	141.6	9.56	15.807		
2,300.0	2,296.0	2,274.0	2,259.9	5.0	5.5	98.21	-129.3	-120.8	172.4	162.3	10.10	17.071		
2,400.0	2,395.6	2,367.3	2,349.2	5.3	5.9	95.47	-152.6	-134.5	196.0	185.3	10.65	18.404		
2,500.0	2,495.1	2,459.4	2,436.7	5.5	6.4	92.97	-177.4	-149.0	221.8	210.6	11.20	19.801		
2,600.0	2,594.7	2,550.3	2,522.4	5.8	6.9	90.71	-203.7	-164.5	249.8	238.1	11.76	21.253		
2,700.0	2,694.2	2,639.9	2,606.0	6.1	7.5	88.68	-231.2	-180.7	280.1	267.8	12.31	22.752		
2,800.0	2,793.7	2,729.4	2,688.9	6.4	8.0	86.82	-260.4	-197.8	312.6	299.7	12.87	24.288		
2,900.0	2,893.3	2,823.2	2,775.5	6.6	8.7	85.18	-291.6	-216.1	345.9	332.5	13.45	25.723		
3,000.0	2,992.8	2,917.1	2,862.1	6.9	9.3	83.82	-322.7	-234.4	379.5	365.4	14.03	27.055		
3,100.0	3,092.3	3,011.0	2,948.7	7.2	10.0	82.69	-353.9	-252.7	413.2	398.5	14.61	28.286		
3,200.0	3,191.9	3,104.8	3,035.4	7.5	10.7	81.72	-385.1	-271.0	447.0	431.8	15.19	29.425		
3,300.0	3,291.4	3,198.7	3,122.0	7.7	11.4	80.89	-416.2	-289.3	480.9	465.1	15.78	30.479		
3,400.0	3,391.0	3,292.5	3,208.6	8.0	12.1	80.17	-447.4	-307.6	514.9	498.5	16.37	31.456		
3,500.0	3,490.5	3,386.4	3,295.3	8.3	12.7	79.54	-478.5	-325.9	548.9	532.0	16.96	32.363		
3,600.0	3,590.0	3,480.3	3,381.9	8.6	13.4	78.98	-509.7	-344.2	583.0	565.5	17.56	33.208		
3,700.0	3,689.6	3,574.1	3,468.5	8.9	14.1	78.48	-540.8	-362.5	617.2	599.0	18.15	33.996		
3,800.0	3,789.1	3,668.0	3,555.1	9.1	14.8	78.04	-572.0	-380.8	651.4	632.6	18.75	34.732		
3,900.0	3,888.6	3,761.8	3,641.8	9.4	15.5	77.64	-603.1	-399.1	685.6	666.2	19.36	35.420		
4,000.0	3,988.2	3,855.7	3,728.4	9.7	16.2	77.27	-634.3	-417.4	719.8	699.9	19.96	36.065		
4,100.0	4,087.7	3,949.6	3,815.0	10.0	17.0	76.95	-665.4	-435.7	754.1	733.6	20.56	36.671		
4,200.0	4,187.3	4,043.4	3,901.6	10.3	17.7	76.64	-696.6	-454.0	788.4	767.2	21.17	37.240		
4,300.0	4,286.8	4,137.3	3,988.3	10.6	18.4	76.37	-727.8	-472.3	822.7	800.9	21.78	37.776		
4,400.0	4,386.3	4,231.1	4,074.9	10.9	19.1	76.11	-758.9	-490.6	857.0	834.7	22.39	38.281		
4,500.0	4,485.9	4,325.0	4,161.5	11.1	19.8	75.88	-790.1	-508.9	891.4	868.4	23.00	38.758		
4,600.0	4,585.4	4,418.9	4,248.2	11.4	20.5	75.66	-821.2	-527.2	925.7	902.1	23.61	39.210		
4,700.0	4,684.9	4,512.7	4,334.8	11.7	21.2	75.46	-852.4	-545.5	960.1	935.9	24.22	39.637		
4,800.0	4,784.5	4,606.6	4,421.4	12.0	21.9	75.27	-883.5	-563.8	994.5	969.6	24.84	40.042		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-3CDH - Wellbore #1 - PLAN 1 (FEB 4 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-28.0	28.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-28.0	28.0	27.8	0.22	124.661		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-28.0	28.0	27.3	0.67	41.554		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-28.0	28.0	26.9	1.12	24.932		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-28.0	28.0	26.4	1.57	17.809		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-28.0	28.0	26.0	2.02	13.851		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-28.0	28.0	25.5	2.47	11.333		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-28.0	28.0	25.1	2.92	9.589		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-28.0	28.0	24.6	3.37	8.311		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-28.0	28.0	24.2	3.82	7.333		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-28.0	28.0	23.7	4.27	6.561		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-28.0	28.0	23.3	4.72	5.936		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-28.0	28.0	22.8	5.17	5.420 CC, ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	119.32	0.0	-28.0	28.6	23.0	5.59	5.122 SF		
1,400.0	1,399.9	1,399.9	1,399.9	3.0	3.0	125.68	0.0	-28.0	30.8	24.8	5.99	5.132		
1,500.0	1,499.7	1,499.6	1,499.5	3.1	3.2	132.25	-1.2	-28.6	35.2	28.8	6.37	5.519		
1,567.6	1,567.0	1,566.9	1,566.9	3.3	3.4	135.15	-3.3	-29.5	39.5	32.9	6.61	5.979		
1,600.0	1,599.3	1,599.2	1,599.1	3.3	3.4	136.05	-4.7	-30.2	41.9	35.2	6.73	6.226		
1,700.0	1,698.8	1,698.8	1,698.5	3.6	3.6	136.26	-10.6	-32.8	49.4	42.3	7.12	6.945		
1,800.0	1,798.4	1,798.3	1,797.6	3.8	3.8	133.82	-18.9	-36.6	57.2	49.7	7.53	7.604		
1,900.0	1,897.9	1,897.6	1,896.2	4.0	4.0	129.73	-29.5	-41.4	65.6	57.6	7.96	8.234		
2,000.0	1,997.4	1,996.5	1,994.1	4.3	4.2	124.67	-42.3	-47.2	74.9	66.4	8.43	8.880		
2,100.0	2,097.0	2,095.0	2,091.2	4.5	4.5	119.16	-57.4	-54.0	85.5	76.6	8.93	9.581		
2,200.0	2,196.5	2,192.8	2,187.1	4.8	4.8	113.58	-74.7	-61.8	98.0	88.5	9.45	10.369		
2,300.0	2,296.0	2,289.9	2,281.9	5.0	5.1	108.23	-94.0	-70.6	112.5	102.5	9.99	11.263		
2,400.0	2,395.6	2,386.1	2,375.2	5.3	5.5	103.26	-115.3	-80.2	129.3	118.8	10.54	12.269		
2,500.0	2,495.1	2,481.4	2,467.0	5.5	5.8	98.76	-138.5	-90.7	148.5	137.4	11.09	13.386		
2,600.0	2,594.7	2,575.6	2,557.1	5.8	6.3	94.76	-163.5	-102.0	170.2	158.5	11.65	14.607		
2,700.0	2,694.2	2,668.7	2,645.5	6.1	6.8	91.23	-190.2	-114.1	194.4	182.1	12.21	15.920		
2,800.0	2,793.7	2,760.5	2,731.9	6.4	7.3	88.13	-218.4	-126.9	221.0	208.2	12.76	17.311		
2,900.0	2,893.3	2,853.3	2,818.6	6.6	7.8	85.38	-248.6	-140.5	249.7	236.4	13.32	18.750		
3,000.0	2,992.8	2,948.3	2,907.3	6.9	8.4	83.11	-279.8	-154.7	279.2	265.4	13.88	20.112		
3,100.0	3,092.3	3,043.4	2,995.9	7.2	9.0	81.27	-311.0	-168.8	309.1	294.6	14.45	21.389		
3,200.0	3,191.9	3,138.4	3,084.6	7.5	9.6	79.75	-342.1	-182.9	339.1	324.1	15.02	22.582		
3,300.0	3,291.4	3,233.4	3,173.2	7.7	10.2	78.48	-373.3	-197.0	369.4	353.8	15.59	23.695		
3,400.0	3,391.0	3,328.4	3,261.8	8.0	10.9	77.40	-404.5	-211.1	399.7	383.6	16.16	24.734		
3,500.0	3,490.5	3,423.5	3,350.5	8.3	11.5	76.47	-435.7	-225.2	430.2	413.5	16.74	25.703		
3,600.0	3,590.0	3,518.5	3,439.1	8.6	12.1	75.67	-466.8	-239.3	460.8	443.5	17.32	26.609		
3,700.0	3,689.6	3,613.5	3,527.8	8.9	12.8	74.96	-498.0	-253.4	491.5	473.6	17.90	27.457		
3,800.0	3,789.1	3,708.5	3,616.4	9.1	13.4	74.34	-529.2	-267.5	522.2	503.7	18.48	28.251		
3,900.0	3,888.6	3,803.5	3,705.1	9.4	14.1	73.79	-560.4	-281.6	553.0	533.9	19.07	28.995		
4,000.0	3,988.2	3,898.6	3,793.7	9.7	14.8	73.29	-591.5	-295.8	583.8	564.1	19.66	29.694		
4,100.0	4,087.7	3,993.6	3,882.4	10.0	15.4	72.84	-622.7	-309.9	614.6	594.4	20.25	30.350		
4,200.0	4,187.3	4,088.6	3,971.0	10.3	16.1	72.44	-653.9	-324.0	645.5	624.6	20.84	30.969		
4,300.0	4,286.8	4,183.6	4,059.7	10.6	16.7	72.08	-685.1	-338.1	676.4	654.9	21.44	31.552		
4,400.0	4,386.3	4,278.6	4,148.3	10.9	17.4	71.74	-716.2	-352.2	707.3	685.3	22.03	32.103		
4,500.0	4,485.9	4,373.7	4,236.9	11.1	18.1	71.43	-747.4	-366.3	738.2	715.6	22.63	32.624		
4,600.0	4,585.4	4,468.7	4,325.6	11.4	18.8	71.15	-778.6	-380.4	769.2	746.0	23.23	33.116		
4,700.0	4,684.9	4,563.7	4,414.2	11.7	19.4	70.89	-809.8	-394.5	800.2	776.3	23.83	33.583		
4,800.0	4,784.5	4,658.7	4,502.9	12.0	20.1	70.65	-840.9	-408.6	831.2	806.7	24.43	34.026		
4,900.0	4,884.0	4,753.8	4,591.5	12.3	20.8	70.43	-872.1	-422.7	862.2	837.1	25.03	34.447		
5,000.0	4,983.6	4,848.8	4,680.2	12.6	21.4	70.22	-903.3	-436.9	893.2	867.5	25.63	34.848		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-3CDH - Wellbore #1 - PLAN 1 (FEB 4 2016)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	5,083.1	4,943.8	4,768.8	12.9	22.1	70.03	-934.5	-451.0	924.2	898.0	26.23	35.229	
5,200.0	5,182.6	5,038.8	4,857.5	13.2	22.8	69.85	-965.6	-465.1	955.2	928.4	26.84	35.592	
5,300.0	5,282.2	5,133.8	4,946.1	13.4	23.5	69.68	-996.8	-479.2	986.3	958.8	27.44	35.938	

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design		SHOOK PAD 3-1S-67W - SHOOK 3-10-3NBH - Wellbore #1 - PLAN 1 (FEB 5 2016)											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	16.8	16.8	16.8	0.00	N/A			
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	16.8	16.8	16.6	0.22	74.797			
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	16.8	16.8	16.1	0.67	24.932			
300.0	300.0	300.0	300.0	0.6	0.6	90.04	0.0	16.8	16.8	15.7	1.12	14.959			
400.0	400.0	400.0	400.0	0.8	0.8	90.04	0.0	16.8	16.8	15.2	1.57	10.685			
500.0	500.0	500.0	500.0	1.0	1.0	90.04	0.0	16.8	16.8	14.8	2.02	8.311			
600.0	600.0	600.0	600.0	1.2	1.2	90.04	0.0	16.8	16.8	14.3	2.47	6.800			
700.0	700.0	700.0	700.0	1.5	1.5	90.04	0.0	16.8	16.8	13.9	2.92	5.754			
800.0	800.0	800.0	800.0	1.7	1.7	90.04	0.0	16.8	16.8	13.4	3.37	4.986			
900.0	900.0	900.0	900.0	1.9	1.9	90.04	0.0	16.8	16.8	13.0	3.82	4.400			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.04	0.0	16.8	16.8	12.5	4.27	3.937 CC, ES			
1,100.0	1,100.0	1,099.7	1,099.7	2.4	2.3	93.00	-0.9	17.7	17.8	13.1	4.70	3.783			
1,200.0	1,200.0	1,199.2	1,199.1	2.6	2.5	100.16	-3.7	20.5	20.8	15.7	5.10	4.084			
1,300.0	1,300.0	1,298.5	1,298.2	2.8	2.7	-46.87	-8.2	25.1	25.5	20.1	5.49	4.654			
1,400.0	1,399.9	1,397.7	1,397.0	3.0	2.9	-44.03	-14.6	31.5	30.9	25.0	5.86	5.272			
1,500.0	1,499.7	1,497.1	1,495.7	3.1	3.2	-43.23	-22.7	39.6	36.6	30.3	6.25	5.853			
1,567.6	1,567.0	1,564.6	1,562.7	3.3	3.3	-44.05	-28.4	45.4	39.7	33.1	6.52	6.081			
1,600.0	1,599.3	1,597.0	1,594.9	3.3	3.4	-44.70	-31.1	48.1	40.9	34.3	6.65	6.151			
1,700.0	1,698.8	1,696.9	1,694.1	3.6	3.7	-46.46	-39.6	56.6	44.9	37.8	7.08	6.338			
1,800.0	1,798.4	1,796.8	1,793.3	3.8	3.9	-47.94	-48.1	65.2	48.9	41.4	7.53	6.494			
1,900.0	1,897.9	1,896.7	1,892.4	4.0	4.2	-49.19	-56.5	73.7	52.9	44.9	7.99	6.625			
2,000.0	1,997.4	1,996.6	1,991.6	4.3	4.5	-50.26	-65.0	82.2	57.0	48.5	8.46	6.733			
2,100.0	2,097.0	2,096.5	2,090.8	4.5	4.8	-51.19	-73.5	90.7	61.1	52.1	8.95	6.824			
2,200.0	2,196.5	2,196.5	2,190.0	4.8	5.1	-52.00	-82.0	99.3	65.1	55.7	9.44	6.900			
2,300.0	2,296.0	2,296.4	2,289.2	5.0	5.4	-52.72	-90.4	107.8	69.2	59.3	9.94	6.964			
2,400.0	2,395.6	2,396.3	2,388.4	5.3	5.7	-53.36	-98.9	116.3	73.3	62.9	10.45	7.018			
2,500.0	2,495.1	2,496.2	2,487.6	5.5	6.0	-53.93	-107.4	124.8	77.5	66.5	10.97	7.064			
2,600.0	2,594.7	2,596.1	2,586.8	5.8	6.3	-54.44	-115.9	133.4	81.6	70.1	11.49	7.103			
2,700.0	2,694.2	2,696.0	2,685.9	6.1	6.6	-54.90	-124.3	141.9	85.7	73.7	12.01	7.136			
2,800.0	2,793.7	2,795.9	2,785.1	6.4	6.9	-55.33	-132.8	150.4	89.8	77.3	12.54	7.165			
2,900.0	2,893.3	2,895.8	2,884.3	6.6	7.2	-55.71	-141.3	158.9	94.0	80.9	13.07	7.189			
3,000.0	2,992.8	2,995.8	2,983.5	6.9	7.5	-56.06	-149.7	167.5	98.1	84.5	13.61	7.211			
3,100.0	3,092.3	3,095.7	3,082.7	7.2	7.8	-56.38	-158.2	176.0	102.3	88.1	14.15	7.229			
3,200.0	3,191.9	3,195.6	3,181.9	7.5	8.1	-56.68	-166.7	184.5	106.4	91.7	14.69	7.245			
3,300.0	3,291.4	3,295.5	3,281.1	7.7	8.5	-56.96	-175.2	193.0	110.6	95.3	15.23	7.259			
3,400.0	3,391.0	3,395.4	3,380.2	8.0	8.8	-57.21	-183.6	201.6	114.7	98.9	15.78	7.271			
3,500.0	3,490.5	3,495.3	3,479.4	8.3	9.1	-57.45	-192.1	210.1	118.9	102.5	16.32	7.282			
3,600.0	3,590.0	3,595.2	3,578.6	8.6	9.4	-57.67	-200.6	218.6	123.0	106.1	16.87	7.291			
3,700.0	3,689.6	3,695.2	3,677.8	8.9	9.7	-57.88	-209.0	227.1	127.2	109.7	17.42	7.299			
3,800.0	3,789.1	3,795.1	3,777.0	9.1	10.0	-58.07	-217.5	235.7	131.3	113.4	17.97	7.306			
3,900.0	3,888.6	3,895.0	3,876.2	9.4	10.4	-58.25	-226.0	244.2	135.5	117.0	18.53	7.313			
4,000.0	3,988.2	3,994.9	3,975.4	9.7	10.7	-58.42	-234.5	252.7	139.7	120.6	19.08	7.318			
4,100.0	4,087.7	4,094.8	4,074.6	10.0	11.0	-58.58	-242.9	261.2	143.8	124.2	19.64	7.323			
4,200.0	4,187.3	4,194.7	4,173.7	10.3	11.3	-58.74	-251.4	269.7	148.0	127.8	20.19	7.328			
4,300.0	4,286.8	4,294.6	4,272.9	10.6	11.6	-58.88	-259.9	278.3	152.1	131.4	20.75	7.332			
4,400.0	4,386.3	4,394.5	4,372.1	10.9	11.9	-59.02	-268.3	286.8	156.3	135.0	21.31	7.335			
4,500.0	4,485.9	4,494.5	4,471.3	11.1	12.3	-59.15	-276.8	295.3	160.5	138.6	21.87	7.338			
4,600.0	4,585.4	4,594.4	4,570.5	11.4	12.6	-59.27	-285.3	303.8	164.6	142.2	22.43	7.341			
4,700.0	4,684.9	4,694.3	4,669.7	11.7	12.9	-59.39	-293.8	312.4	168.8	145.8	22.99	7.343			
4,800.0	4,784.5	4,794.2	4,768.9	12.0	13.2	-59.50	-302.2	320.9	173.0	149.4	23.55	7.345			
4,900.0	4,884.0	4,894.1	4,868.1	12.3	13.5	-59.60	-310.7	329.4	177.1	153.0	24.11	7.347			
5,000.0	4,983.6	4,994.0	4,967.2	12.6	13.9	-59.70	-319.2	337.9	181.3	156.6	24.67	7.349			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-3NBH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,083.1	5,093.9	5,066.4	12.9	14.2	-59.80	-327.6	346.5	185.5	160.3	25.24	7.350		
5,200.0	5,182.6	5,193.8	5,165.6	13.2	14.5	-59.89	-336.1	355.0	189.7	163.9	25.80	7.351		
5,300.0	5,282.2	5,293.8	5,264.8	13.4	14.8	-59.98	-344.6	363.5	193.8	167.5	26.36	7.353		
5,400.0	5,381.7	5,393.7	5,364.0	13.7	15.1	-60.06	-353.1	372.0	198.0	171.1	26.93	7.353		
5,500.0	5,481.2	5,493.6	5,463.2	14.0	15.5	-60.14	-361.5	380.6	202.2	174.7	27.49	7.354		
5,600.0	5,580.8	5,593.5	5,562.4	14.3	15.8	-60.22	-370.0	389.1	206.3	178.3	28.05	7.355		
5,700.0	5,680.3	5,693.4	5,661.6	14.6	16.1	-60.30	-378.5	397.6	210.5	181.9	28.62	7.356		
5,800.0	5,779.8	5,793.3	5,760.7	14.9	16.4	-60.37	-387.0	406.1	214.7	185.5	29.19	7.356		
5,900.0	5,879.4	5,893.2	5,859.9	15.2	16.8	-60.44	-395.4	414.7	218.9	189.1	29.75	7.357		
6,000.0	5,978.9	5,993.1	5,959.1	15.5	17.1	-60.50	-403.9	423.2	223.0	192.7	30.32	7.357		
6,100.0	6,078.5	6,093.1	6,058.3	15.8	17.4	-60.57	-412.4	431.7	227.2	196.3	30.88	7.357		
6,200.0	6,178.0	6,193.0	6,157.5	16.1	17.7	-60.63	-420.8	440.2	231.4	199.9	31.45	7.357		
6,300.0	6,277.5	6,292.9	6,256.7	16.3	18.0	-60.69	-429.3	448.8	235.6	203.5	32.02	7.358		
6,400.0	6,377.1	6,392.8	6,355.9	16.6	18.4	-60.75	-437.8	457.3	239.7	207.2	32.58	7.358		
6,500.0	6,476.6	6,492.7	6,455.0	16.9	18.7	-60.80	-446.3	465.8	243.9	210.8	33.15	7.358		
6,600.0	6,576.1	6,592.6	6,554.2	17.2	19.0	-60.85	-454.7	474.3	248.1	214.4	33.72	7.358		
6,700.0	6,675.7	6,692.5	6,653.4	17.5	19.3	-60.91	-463.2	482.8	252.3	218.0	34.28	7.358		
6,800.0	6,775.2	6,792.4	6,752.6	17.8	19.7	-60.96	-471.7	491.4	256.4	221.6	34.85	7.358		
6,900.0	6,874.8	6,892.4	6,851.8	18.1	20.0	-61.00	-480.1	499.9	260.6	225.2	35.42	7.358		
7,000.0	6,974.3	6,991.7	6,950.3	18.4	20.3	-60.79	-489.8	508.4	264.8	228.9	35.97	7.363		
7,046.8	7,020.8	7,037.5	6,995.2	18.5	20.5	-59.93	-497.7	512.2	267.0	230.8	36.16	7.383		
7,050.0	7,024.1	7,040.6	6,998.3	18.5	20.5	-61.00	-498.4	512.5	267.1	231.0	36.17	7.386		
7,100.0	7,073.6	7,089.1	7,045.1	18.7	20.7	-70.07	-510.1	516.6	269.6	233.2	36.36	7.415		
7,150.0	7,122.6	7,137.1	7,090.6	18.9	20.9	-73.17	-524.9	520.5	272.1	235.5	36.60	7.435		
7,200.0	7,170.8	7,184.8	7,134.8	19.1	21.2	-74.29	-542.6	524.3	274.8	237.9	36.91	7.444		
7,250.0	7,218.0	7,232.2	7,177.3	19.4	21.5	-74.56	-563.0	528.1	277.4	240.2	37.28	7.443		
7,300.0	7,263.9	7,279.2	7,218.2	19.7	21.8	-74.41	-586.0	531.6	280.1	242.4	37.70	7.431		
7,350.0	7,308.3	7,326.0	7,257.2	20.0	22.2	-74.03	-611.5	535.1	282.8	244.6	38.18	7.408		
7,400.0	7,351.0	7,372.4	7,294.2	20.3	22.5	-73.54	-639.3	538.3	285.4	246.7	38.71	7.374		
7,450.0	7,391.9	7,418.6	7,329.2	20.7	22.9	-72.98	-669.3	541.4	288.0	248.7	39.30	7.328		
7,500.0	7,430.6	7,464.6	7,362.1	21.2	23.3	-72.41	-701.3	544.4	290.5	250.6	39.96	7.271		
7,550.0	7,467.0	7,510.3	7,392.6	21.6	23.8	-71.84	-735.2	547.1	292.9	252.2	40.68	7.201		
7,600.0	7,501.0	7,555.8	7,420.8	22.1	24.2	-71.29	-770.9	549.6	295.2	253.7	41.46	7.119		
7,650.0	7,532.3	7,600.0	7,446.0	22.7	24.7	-70.79	-807.1	551.9	297.3	255.0	42.31	7.027		
7,700.0	7,560.8	7,646.4	7,470.0	23.2	25.2	-70.30	-846.7	554.1	299.3	256.0	43.26	6.918		
7,750.0	7,586.4	7,691.4	7,490.8	23.9	25.8	-69.88	-886.6	556.0	301.0	256.8	44.27	6.800		
7,800.0	7,608.9	7,736.3	7,509.0	24.5	26.3	-69.50	-927.6	557.7	302.6	257.3	45.37	6.670		
7,850.0	7,628.3	7,781.1	7,524.6	25.1	26.9	-69.18	-969.5	559.2	304.0	257.4	46.55	6.531		
7,900.0	7,644.4	7,825.8	7,537.5	25.8	27.5	-68.91	-1,012.3	560.5	305.1	257.3	47.80	6.383		
7,950.0	7,657.2	7,870.4	7,547.7	26.5	28.1	-68.70	-1,055.7	561.5	306.0	256.9	49.14	6.228		
8,000.0	7,666.5	7,915.0	7,555.2	27.3	28.7	-68.55	-1,099.7	562.3	306.7	256.2	50.55	6.068		
8,050.0	7,672.5	7,959.5	7,559.9	28.0	29.3	-68.46	-1,144.0	562.9	307.2	255.1	52.03	5.903		
8,100.0	7,674.9	8,004.1	7,561.9	28.8	30.0	-68.43	-1,188.4	563.2	307.3	253.8	53.58	5.736		
8,110.3	7,675.0	8,013.2	7,562.0	28.9	30.1	-68.43	-1,197.6	563.2	307.3	253.4	53.90	5.702		
8,200.0	7,675.0	8,102.8	7,562.0	30.3	31.4	-68.43	-1,287.2	563.5	307.4	250.9	56.52	5.438		
8,300.0	7,675.0	8,202.8	7,562.0	31.9	32.9	-68.43	-1,387.2	563.9	307.4	247.9	59.52	5.165		
8,400.0	7,675.0	8,302.8	7,562.0	33.5	34.5	-68.44	-1,487.2	564.2	307.5	244.9	62.59	4.913		
8,500.0	7,675.0	8,402.8	7,562.0	35.1	36.1	-68.44	-1,587.2	564.6	307.5	241.8	65.70	4.680		
8,600.0	7,675.0	8,502.8	7,562.0	36.8	37.7	-68.44	-1,687.2	564.9	307.6	238.7	68.87	4.466		
8,700.0	7,675.0	8,602.8	7,562.0	38.5	39.3	-68.45	-1,787.2	565.3	307.6	235.5	72.08	4.268		
8,800.0	7,675.0	8,702.8	7,562.0	40.2	41.0	-68.45	-1,887.2	565.6	307.7	232.3	75.32	4.085		
8,900.0	7,675.0	8,802.8	7,562.0	41.9	42.7	-68.46	-1,987.2	566.0	307.7	229.1	78.60	3.915		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-3NBH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	7,675.0	8,902.8	7,562.0	43.7	44.4	-68.46	-2,087.2	566.3	307.8	225.9	81.90	3.758		
9,100.0	7,675.0	9,002.8	7,562.0	45.4	46.1	-68.46	-2,187.2	566.7	307.8	222.6	85.23	3.611		
9,200.0	7,675.0	9,102.8	7,562.0	47.2	47.9	-68.47	-2,287.2	567.0	307.9	219.3	88.58	3.475		
9,300.0	7,675.0	9,202.8	7,562.0	49.0	49.6	-68.47	-2,387.2	567.4	307.9	215.9	91.95	3.349		
9,400.0	7,675.0	9,302.8	7,562.0	50.8	51.4	-68.47	-2,487.2	567.7	307.9	212.6	95.34	3.230		
9,500.0	7,675.0	9,402.8	7,562.0	52.6	53.2	-68.48	-2,587.2	568.1	308.0	209.3	98.74	3.119		
9,600.0	7,675.0	9,502.8	7,562.0	54.4	54.9	-68.48	-2,687.2	568.4	308.0	205.9	102.16	3.015		
9,700.0	7,675.0	9,602.8	7,562.0	56.2	56.7	-68.48	-2,787.2	568.7	308.1	202.5	105.59	2.918		
9,800.0	7,675.0	9,702.8	7,562.0	58.0	58.5	-68.49	-2,887.2	569.1	308.1	199.1	109.03	2.826		
9,900.0	7,675.0	9,802.8	7,562.0	59.9	60.3	-68.49	-2,987.2	569.4	308.2	195.7	112.48	2.740		
10,000.0	7,675.0	9,902.8	7,562.0	61.7	62.1	-68.49	-3,087.2	569.8	308.2	192.3	115.94	2.658		
10,100.0	7,675.0	10,002.8	7,562.0	63.5	64.0	-68.50	-3,187.2	570.1	308.3	188.9	119.41	2.582		
10,200.0	7,675.0	10,102.8	7,562.0	65.4	65.8	-68.50	-3,287.2	570.5	308.3	185.4	122.89	2.509		
10,300.0	7,675.0	10,202.8	7,562.0	67.2	67.6	-68.50	-3,387.2	570.8	308.4	182.0	126.37	2.440		
10,400.0	7,675.0	10,302.8	7,562.0	69.1	69.5	-68.51	-3,487.2	571.2	308.4	178.5	129.87	2.375		
10,500.0	7,675.0	10,402.8	7,562.0	70.9	71.3	-68.51	-3,587.2	571.5	308.5	175.1	133.37	2.313		
10,600.0	7,675.0	10,502.8	7,562.0	72.8	73.1	-68.51	-3,687.2	571.9	308.5	171.6	136.87	2.254		
10,700.0	7,675.0	10,602.8	7,562.0	74.6	75.0	-68.52	-3,787.2	572.2	308.6	168.2	140.38	2.198		
10,800.0	7,675.0	10,702.8	7,562.0	76.5	76.8	-68.52	-3,887.2	572.6	308.6	164.7	143.90	2.145		
10,900.0	7,675.0	10,802.8	7,562.0	78.4	78.7	-68.52	-3,987.2	572.9	308.7	161.2	147.41	2.094		
11,000.0	7,675.0	10,902.8	7,562.0	80.2	80.5	-68.53	-4,087.2	573.3	308.7	157.8	150.94	2.045		
11,100.0	7,675.0	11,002.8	7,562.0	82.1	82.4	-68.53	-4,187.2	573.6	308.7	154.3	154.47	1.999		
11,200.0	7,675.0	11,102.8	7,562.0	84.0	84.3	-68.53	-4,287.2	574.0	308.8	150.8	158.00	1.954		
11,300.0	7,675.0	11,202.8	7,562.0	85.8	86.1	-68.54	-4,387.2	574.3	308.8	147.3	161.53	1.912		
11,400.0	7,675.0	11,302.8	7,562.0	87.7	88.0	-68.54	-4,487.2	574.7	308.9	143.8	165.07	1.871		
11,500.0	7,675.0	11,402.8	7,562.0	89.6	89.9	-68.54	-4,587.2	575.0	308.9	140.3	168.61	1.832		
11,600.0	7,675.0	11,502.8	7,562.0	91.5	91.7	-68.55	-4,687.2	575.4	309.0	136.8	172.16	1.795		
11,700.0	7,675.0	11,602.8	7,562.0	93.3	93.6	-68.55	-4,787.2	575.7	309.0	133.3	175.71	1.759		
11,800.0	7,675.0	11,702.8	7,562.0	95.2	95.5	-68.55	-4,887.2	576.1	309.1	129.8	179.26	1.724		
11,900.0	7,675.0	11,802.8	7,562.0	97.1	97.3	-68.56	-4,987.2	576.4	309.1	126.3	182.81	1.691		
12,000.0	7,675.0	11,902.8	7,562.0	99.0	99.2	-68.56	-5,087.2	576.8	309.2	122.8	186.37	1.659		
12,100.0	7,675.0	12,002.8	7,562.0	100.9	101.1	-68.57	-5,187.2	577.1	309.2	119.3	189.92	1.628		
12,200.0	7,675.0	12,102.8	7,562.0	102.8	103.0	-68.57	-5,287.2	577.4	309.3	115.8	193.48	1.598		
12,300.0	7,675.0	12,202.8	7,562.0	104.7	104.9	-68.57	-5,387.2	577.8	309.3	112.3	197.04	1.570		
12,400.0	7,675.0	12,302.8	7,562.0	106.5	106.7	-68.58	-5,487.2	578.1	309.4	108.7	200.61	1.542		
12,500.0	7,675.0	12,402.8	7,562.0	108.4	108.6	-68.58	-5,587.2	578.5	309.4	105.2	204.17	1.515		
12,600.0	7,675.0	12,502.8	7,562.0	110.3	110.5	-68.58	-5,687.2	578.8	309.4	101.7	207.74	1.490 Level 3		
12,700.0	7,675.0	12,602.8	7,562.0	112.2	112.4	-68.59	-5,787.2	579.2	309.5	98.2	211.31	1.465 Level 3		
12,800.0	7,675.0	12,702.8	7,562.0	114.1	114.3	-68.59	-5,887.2	579.5	309.5	94.7	214.88	1.441 Level 3		
12,900.0	7,675.0	12,802.8	7,562.0	116.0	116.2	-68.59	-5,987.2	579.9	309.6	91.1	218.45	1.417 Level 3		
13,000.0	7,675.0	12,902.8	7,562.0	117.9	118.0	-68.60	-6,087.2	580.2	309.6	87.6	222.02	1.395 Level 3		
13,100.0	7,675.0	13,002.8	7,562.0	119.8	119.9	-68.60	-6,187.2	580.6	309.7	84.1	225.60	1.373 Level 3		
13,200.0	7,675.0	13,102.8	7,562.0	121.7	121.8	-68.60	-6,287.2	580.9	309.7	80.6	229.17	1.352 Level 3		
13,300.0	7,675.0	13,202.8	7,562.0	123.6	123.7	-68.61	-6,387.2	581.3	309.8	77.0	232.75	1.331 Level 3		
13,400.0	7,675.0	13,302.8	7,562.0	125.5	125.6	-68.61	-6,487.2	581.6	309.8	73.5	236.33	1.311 Level 3		
13,500.0	7,675.0	13,402.8	7,562.0	127.4	127.5	-68.61	-6,587.1	582.0	309.9	70.0	239.91	1.292 Level 3		
13,600.0	7,675.0	13,502.8	7,562.0	129.3	129.4	-68.62	-6,687.1	582.3	309.9	66.4	243.49	1.273 Level 3		
13,700.0	7,675.0	13,602.8	7,562.0	131.2	131.3	-68.62	-6,787.1	582.7	310.0	62.9	247.07	1.255 Level 3		
13,785.9	7,675.0	13,688.7	7,562.0	132.8	132.9	-68.62	-6,873.0	583.0	310.0	59.9	250.14	1.239 Level 2, SF		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-4CDH - Wellbore #1 - PLAN 1 (FEB 5, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-14.0	14.0	14.0	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-14.0	14.0	13.8	0.22	62.330		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-14.0	14.0	13.3	0.67	20.777		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-14.0	14.0	12.9	1.12	12.466		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-14.0	14.0	12.4	1.57	8.904		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-14.0	14.0	12.0	2.02	6.926		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-14.0	14.0	11.5	2.47	5.666		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-14.0	14.0	11.1	2.92	4.795		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-14.0	14.0	10.6	3.37	4.155		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-14.0	14.0	10.2	3.82	3.666		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-14.0	14.0	9.7	4.27	3.281		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-14.0	14.0	9.3	4.72	2.968		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-14.0	14.0	8.8	5.17	2.710 CC, ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	121.55	0.0	-14.0	14.7	9.1	5.59	2.620		
1,400.0	1,399.9	1,399.9	1,399.9	3.0	3.0	132.84	0.0	-14.0	17.0	11.0	5.99	2.844		
1,500.0	1,499.7	1,499.9	1,499.9	3.1	3.2	142.33	-1.3	-14.0	21.4	15.1	6.37	3.365		
1,567.6	1,567.0	1,567.6	1,567.6	3.3	3.3	145.66	-3.7	-14.0	25.1	18.5	6.61	3.802		
1,600.0	1,599.3	1,600.1	1,600.0	3.3	3.4	146.49	-5.2	-14.0	26.9	20.2	6.73	4.007		
1,700.0	1,698.8	1,700.3	1,700.0	3.6	3.6	145.80	-11.8	-14.0	31.7	24.6	7.10	4.468		
1,800.0	1,798.4	1,800.4	1,799.7	3.8	3.8	142.52	-20.3	-14.0	35.6	28.1	7.51	4.749		
1,900.0	1,897.9	1,900.3	1,899.2	4.0	4.0	139.76	-28.9	-14.0	39.6	31.7	7.93	4.997		
2,000.0	1,997.4	2,000.2	1,998.8	4.3	4.2	137.51	-37.5	-14.0	43.6	35.3	8.36	5.218		
2,100.0	2,097.0	2,100.1	2,098.3	4.5	4.4	135.64	-46.1	-14.0	47.7	38.9	8.81	5.415		
2,200.0	2,196.5	2,200.0	2,197.8	4.8	4.6	134.06	-54.7	-14.0	51.8	42.6	9.28	5.589		
2,300.0	2,296.0	2,299.9	2,297.4	5.0	4.9	132.72	-63.2	-13.9	56.0	46.3	9.75	5.745		
2,400.0	2,395.6	2,399.8	2,396.9	5.3	5.1	131.57	-71.8	-13.9	60.2	50.0	10.23	5.883		
2,500.0	2,495.1	2,499.7	2,496.4	5.5	5.3	130.56	-80.4	-13.9	64.4	53.7	10.73	6.006		
2,600.0	2,594.7	2,599.6	2,596.0	5.8	5.6	129.68	-89.0	-13.9	68.6	57.4	11.22	6.116		
2,700.0	2,694.2	2,699.5	2,695.5	6.1	5.8	128.90	-97.6	-13.9	72.9	61.2	11.73	6.214		
2,800.0	2,793.7	2,799.4	2,795.0	6.4	6.1	128.21	-106.2	-13.9	77.1	64.9	12.24	6.303		
2,900.0	2,893.3	2,899.3	2,894.6	6.6	6.3	127.59	-114.8	-13.9	81.4	68.6	12.75	6.383		
3,000.0	2,992.8	2,999.2	2,994.1	6.9	6.6	127.03	-123.4	-13.9	85.7	72.4	13.27	6.455		
3,100.0	3,092.3	3,099.1	3,093.6	7.2	6.9	126.52	-132.0	-13.9	90.0	76.2	13.79	6.521		
3,200.0	3,191.9	3,199.0	3,193.2	7.5	7.1	126.06	-140.5	-13.9	94.2	79.9	14.32	6.581		
3,300.0	3,291.4	3,298.9	3,292.7	7.7	7.4	125.65	-149.1	-13.9	98.5	83.7	14.85	6.636		
3,400.0	3,391.0	3,398.8	3,392.3	8.0	7.6	125.26	-157.7	-13.9	102.8	87.5	15.38	6.686		
3,500.0	3,490.5	3,498.7	3,491.8	8.3	7.9	124.91	-166.3	-13.8	107.1	91.2	15.91	6.732		
3,600.0	3,590.0	3,598.7	3,591.3	8.6	8.2	124.58	-174.9	-13.8	111.4	95.0	16.45	6.775		
3,700.0	3,689.6	3,698.6	3,690.9	8.9	8.4	124.28	-183.5	-13.8	115.7	98.8	16.99	6.814		
3,800.0	3,789.1	3,798.5	3,790.4	9.1	8.7	124.00	-192.1	-13.8	120.1	102.5	17.53	6.850		
3,900.0	3,888.6	3,898.4	3,889.9	9.4	9.0	123.74	-200.7	-13.8	124.4	106.3	18.07	6.884		
4,000.0	3,988.2	3,998.3	3,989.5	9.7	9.2	123.49	-209.3	-13.8	128.7	110.1	18.61	6.915		
4,100.0	4,087.7	4,098.2	4,089.0	10.0	9.5	123.27	-217.9	-13.8	133.0	113.9	19.15	6.945		
4,200.0	4,187.3	4,198.1	4,188.5	10.3	9.8	123.05	-226.4	-13.8	137.3	117.6	19.70	6.972		
4,300.0	4,286.8	4,298.0	4,288.1	10.6	10.0	122.85	-235.0	-13.8	141.7	121.4	20.24	6.997		
4,400.0	4,386.3	4,397.9	4,387.6	10.9	10.3	122.67	-243.6	-13.8	146.0	125.2	20.79	7.021		
4,500.0	4,485.9	4,497.8	4,487.1	11.1	10.6	122.49	-252.2	-13.8	150.3	129.0	21.34	7.044		
4,600.0	4,585.4	4,597.7	4,586.7	11.4	10.9	122.32	-260.8	-13.8	154.6	132.7	21.89	7.065		
4,700.0	4,684.9	4,697.6	4,686.2	11.7	11.1	122.16	-269.4	-13.7	159.0	136.5	22.44	7.085		
4,800.0	4,784.5	4,797.5	4,785.7	12.0	11.4	122.01	-278.0	-13.7	163.3	140.3	22.99	7.104		
4,900.0	4,884.0	4,897.4	4,885.3	12.3	11.7	121.87	-286.6	-13.7	167.6	144.1	23.54	7.121		
5,000.0	4,983.6	4,997.3	4,984.8	12.6	12.0	121.73	-295.2	-13.7	171.9	147.9	24.09	7.138		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-4CDH - Wellbore #1 - PLAN 1 (FEB 5, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,083.1	5,097.2	5,084.4	12.9	12.2	121.61	-303.8	-13.7	176.3	151.6	24.64	7.154		
5,200.0	5,182.6	5,197.1	5,183.9	13.2	12.5	121.48	-312.3	-13.7	180.6	155.4	25.19	7.169		
5,300.0	5,282.2	5,297.0	5,283.4	13.4	12.8	121.37	-320.9	-13.7	184.9	159.2	25.75	7.183		
5,400.0	5,381.7	5,396.9	5,383.0	13.7	13.1	121.26	-329.5	-13.7	189.3	163.0	26.30	7.197		
5,500.0	5,481.2	5,496.9	5,482.5	14.0	13.3	121.15	-338.1	-13.7	193.6	166.8	26.86	7.210		
5,600.0	5,580.8	5,596.8	5,582.0	14.3	13.6	121.05	-346.7	-13.7	198.0	170.5	27.41	7.222		
5,700.0	5,680.3	5,696.7	5,681.6	14.6	13.9	120.95	-355.3	-13.7	202.3	174.3	27.96	7.234		
5,800.0	5,779.8	5,796.6	5,781.1	14.9	14.2	120.86	-363.9	-13.7	206.6	178.1	28.52	7.245		
5,900.0	5,879.4	5,896.5	5,880.6	15.2	14.4	120.77	-372.5	-13.6	211.0	181.9	29.08	7.256		
6,000.0	5,978.9	5,996.4	5,980.2	15.5	14.7	120.68	-381.1	-13.6	215.3	185.7	29.63	7.266		
6,100.0	6,078.5	6,096.3	6,079.7	15.8	15.0	120.60	-389.7	-13.6	219.6	189.5	30.19	7.276		
6,200.0	6,178.0	6,196.2	6,179.2	16.1	15.3	120.52	-398.2	-13.6	224.0	193.2	30.75	7.285		
6,300.0	6,277.5	6,296.1	6,278.8	16.3	15.5	120.44	-406.8	-13.6	228.3	197.0	31.30	7.294		
6,400.0	6,377.1	6,396.0	6,378.3	16.6	15.8	120.37	-415.4	-13.6	232.7	200.8	31.86	7.303		
6,500.0	6,476.6	6,495.9	6,477.8	16.9	16.1	120.30	-424.0	-13.6	237.0	204.6	32.42	7.311		
6,600.0	6,576.1	6,595.8	6,577.4	17.2	16.4	120.23	-432.6	-13.6	241.3	208.4	32.98	7.319		
6,700.0	6,675.7	6,695.7	6,676.9	17.5	16.6	120.17	-441.2	-13.6	245.7	212.1	33.53	7.326		
6,800.0	6,775.2	6,795.6	6,776.5	17.8	16.9	120.10	-449.8	-13.6	250.0	215.9	34.09	7.334		
6,900.0	6,874.8	6,895.5	6,876.0	18.1	17.2	120.04	-458.4	-13.6	254.4	219.7	34.65	7.341		
7,000.0	6,974.3	6,995.4	6,975.5	18.4	17.5	119.98	-467.0	-13.6	258.7	223.5	35.21	7.348		
7,046.8	7,020.8	7,042.2	7,022.1	18.5	17.6	119.96	-471.0	-13.5	260.7	225.3	35.47	7.351		
7,050.0	7,024.1	7,045.4	7,025.3	18.5	17.6	118.78	-471.3	-13.5	260.9	225.4	35.49	7.351		
7,100.0	7,073.6	7,095.3	7,075.0	18.7	17.8	108.52	-475.6	-13.5	263.2	227.4	35.77	7.357		
7,150.0	7,122.6	7,144.9	7,124.5	18.9	17.9	105.00	-479.8	-13.5	265.7	229.6	36.05	7.371		
7,200.0	7,170.8	7,194.1	7,173.4	19.1	18.0	104.16	-484.0	-13.5	268.7	232.4	36.31	7.400		
7,250.0	7,218.0	7,244.9	7,224.0	19.4	18.2	104.71	-489.6	-13.5	272.2	235.7	36.58	7.443		
7,300.0	7,263.9	7,297.1	7,275.3	19.7	18.4	105.70	-498.9	-13.5	276.2	239.3	36.88	7.488		
7,350.0	7,308.3	7,350.3	7,326.8	20.0	18.6	106.91	-512.2	-13.5	280.4	243.2	37.23	7.531		
7,400.0	7,351.0	7,404.4	7,377.9	20.3	18.9	108.20	-529.6	-13.4	284.8	247.2	37.62	7.572		
7,450.0	7,391.9	7,459.4	7,428.6	20.7	19.2	109.52	-551.3	-13.4	289.5	251.4	38.04	7.609		
7,500.0	7,430.6	7,515.5	7,478.2	21.2	19.6	110.83	-577.2	-13.3	294.2	255.7	38.51	7.639		
7,550.0	7,467.0	7,572.5	7,526.5	21.6	20.0	112.09	-607.6	-13.2	298.9	259.9	39.02	7.661		
7,600.0	7,501.0	7,630.6	7,573.1	22.1	20.5	113.28	-642.3	-13.1	303.6	264.0	39.58	7.671		
7,650.0	7,532.3	7,689.7	7,617.3	22.7	21.0	114.39	-681.4	-12.9	308.2	268.0	40.20	7.665		
7,700.0	7,560.8	7,749.7	7,658.9	23.2	21.6	115.40	-724.6	-12.8	312.5	271.6	40.89	7.642		
7,750.0	7,586.4	7,810.6	7,697.2	23.9	22.3	116.32	-772.0	-12.7	316.5	274.9	41.66	7.598		
7,800.0	7,608.9	7,872.4	7,731.8	24.5	23.0	117.12	-823.1	-12.5	320.2	277.7	42.53	7.530		
7,850.0	7,628.3	7,934.9	7,762.2	25.1	23.8	117.81	-877.8	-12.3	323.5	280.0	43.49	7.438		
7,900.0	7,644.4	7,998.1	7,788.0	25.8	24.6	118.39	-935.5	-12.1	326.2	281.7	44.56	7.321		
7,950.0	7,657.2	8,061.9	7,808.7	26.5	25.5	118.84	-995.8	-11.9	328.4	282.7	45.75	7.179		
8,000.0	7,666.5	8,126.2	7,824.1	27.3	26.4	119.17	-1,058.1	-11.7	330.1	283.0	47.06	7.014		
8,050.0	7,672.5	8,190.7	7,833.9	28.0	27.4	119.38	-1,121.9	-11.5	331.1	282.6	48.48	6.829		
8,100.0	7,674.9	8,255.4	7,837.9	28.8	28.4	119.46	-1,186.4	-11.2	331.5	281.4	50.03	6.626		
8,110.3	7,675.0	8,268.4	7,838.0	28.9	28.6	119.46	-1,199.4	-11.2	331.5	281.1	50.35	6.583		
8,200.0	7,675.0	8,358.1	7,838.0	30.3	30.0	119.46	-1,289.2	-10.9	331.4	278.6	52.84	6.272		
8,300.0	7,675.0	8,458.1	7,838.0	31.9	31.6	119.46	-1,389.2	-10.5	331.4	275.7	55.68	5.952		
8,400.0	7,675.0	8,558.1	7,838.0	33.5	33.2	119.47	-1,489.2	-10.2	331.3	272.8	58.58	5.657		
8,500.0	7,675.0	8,658.1	7,838.0	35.1	34.9	119.47	-1,589.2	-9.9	331.3	269.8	61.53	5.385		
8,600.0	7,675.0	8,758.1	7,838.0	36.8	36.6	119.48	-1,689.2	-9.5	331.3	266.7	64.52	5.134		
8,700.0	7,675.0	8,858.1	7,838.0	38.5	38.3	119.48	-1,789.2	-9.2	331.2	263.7	67.56	4.903		
8,800.0	7,675.0	8,958.1	7,838.0	40.2	40.0	119.48	-1,889.2	-8.8	331.2	260.5	70.63	4.689		
8,900.0	7,675.0	9,058.1	7,838.0	41.9	41.7	119.49	-1,989.2	-8.5	331.1	257.4	73.73	4.491		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-4CDH - Wellbore #1 - PLAN 1 (FEB 5, 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	7,675.0	9,158.1	7,838.0	43.7	43.5	119.49	-2,089.2	-8.1	331.1	254.2	76.85	4.308		
9,100.0	7,675.0	9,258.1	7,838.0	45.4	45.3	119.50	-2,189.2	-7.8	331.0	251.0	80.00	4.138		
9,200.0	7,675.0	9,358.1	7,838.0	47.2	47.0	119.50	-2,289.2	-7.4	331.0	247.8	83.17	3.980		
9,300.0	7,675.0	9,458.1	7,838.0	49.0	48.8	119.51	-2,389.2	-7.1	331.0	244.6	86.36	3.833		
9,400.0	7,675.0	9,558.1	7,838.0	50.8	50.6	119.51	-2,489.2	-6.8	330.9	241.4	89.56	3.695		
9,500.0	7,675.0	9,658.1	7,838.0	52.6	52.4	119.51	-2,589.2	-6.4	330.9	238.1	92.78	3.566		
9,600.0	7,675.0	9,758.1	7,838.0	54.4	54.3	119.52	-2,689.2	-6.1	330.8	234.8	96.01	3.446		
9,700.0	7,675.0	9,858.1	7,838.0	56.2	56.1	119.52	-2,789.2	-5.7	330.8	231.5	99.25	3.333		
9,800.0	7,675.0	9,958.1	7,838.0	58.0	57.9	119.53	-2,889.2	-5.4	330.8	228.3	102.50	3.227		
9,900.0	7,675.0	10,058.1	7,838.0	59.9	59.8	119.53	-2,989.2	-5.0	330.7	224.9	105.77	3.127		
10,000.0	7,675.0	10,158.1	7,838.0	61.7	61.6	119.53	-3,089.2	-4.7	330.7	221.6	109.04	3.033		
10,100.0	7,675.0	10,258.1	7,838.0	63.5	63.4	119.54	-3,189.2	-4.3	330.6	218.3	112.32	2.944		
10,200.0	7,675.0	10,358.1	7,838.0	65.4	65.3	119.54	-3,289.2	-4.0	330.6	215.0	115.60	2.860		
10,300.0	7,675.0	10,458.1	7,838.0	67.2	67.1	119.55	-3,389.2	-3.6	330.5	211.7	118.90	2.780		
10,400.0	7,675.0	10,558.1	7,838.0	69.1	69.0	119.55	-3,489.2	-3.3	330.5	208.3	122.20	2.705		
10,500.0	7,675.0	10,658.1	7,838.0	70.9	70.8	119.55	-3,589.2	-3.0	330.5	205.0	125.50	2.633		
10,600.0	7,675.0	10,758.1	7,838.0	72.8	72.7	119.56	-3,689.2	-2.6	330.4	201.6	128.81	2.565		
10,700.0	7,675.0	10,858.1	7,838.0	74.6	74.6	119.56	-3,789.2	-2.3	330.4	198.3	132.12	2.501		
10,800.0	7,675.0	10,958.1	7,838.0	76.5	76.4	119.57	-3,889.2	-1.9	330.3	194.9	135.44	2.439		
10,900.0	7,675.0	11,058.1	7,838.0	78.4	78.3	119.57	-3,989.2	-1.6	330.3	191.5	138.77	2.380		
11,000.0	7,675.0	11,158.1	7,838.0	80.2	80.2	119.57	-4,089.2	-1.2	330.3	188.2	142.09	2.324		
11,100.0	7,675.0	11,258.1	7,838.0	82.1	82.0	119.58	-4,189.2	-0.9	330.2	184.8	145.42	2.271		
11,200.0	7,675.0	11,358.1	7,838.0	84.0	83.9	119.58	-4,289.2	-0.5	330.2	181.4	148.76	2.220		
11,300.0	7,675.0	11,458.1	7,838.0	85.8	85.8	119.59	-4,389.2	-0.2	330.1	178.0	152.09	2.171		
11,400.0	7,675.0	11,558.1	7,838.0	87.7	87.7	119.59	-4,489.2	0.2	330.1	174.7	155.43	2.124		
11,500.0	7,675.0	11,658.1	7,838.0	89.6	89.6	119.60	-4,589.2	0.5	330.0	171.3	158.77	2.079		
11,600.0	7,675.0	11,758.1	7,838.0	91.5	91.4	119.60	-4,689.2	0.8	330.0	167.9	162.12	2.036		
11,700.0	7,675.0	11,858.1	7,838.0	93.3	93.3	119.60	-4,789.2	1.2	330.0	164.5	165.46	1.994		
11,800.0	7,675.0	11,958.1	7,838.0	95.2	95.2	119.61	-4,889.2	1.5	329.9	161.1	168.81	1.954		
11,900.0	7,675.0	12,058.1	7,838.0	97.1	97.1	119.61	-4,989.2	1.9	329.9	157.7	172.16	1.916		
12,000.0	7,675.0	12,158.1	7,838.0	99.0	99.0	119.62	-5,089.2	2.2	329.8	154.3	175.51	1.879		
12,100.0	7,675.0	12,258.1	7,838.0	100.9	100.9	119.62	-5,189.1	2.6	329.8	150.9	178.87	1.844		
12,200.0	7,675.0	12,358.1	7,838.0	102.8	102.8	119.62	-5,289.1	2.9	329.8	147.5	182.22	1.810		
12,300.0	7,675.0	12,458.1	7,838.0	104.7	104.6	119.63	-5,389.1	3.3	329.7	144.1	185.58	1.777		
12,400.0	7,675.0	12,558.1	7,838.0	106.5	106.5	119.63	-5,489.1	3.6	329.7	140.7	188.94	1.745		
12,500.0	7,675.0	12,658.1	7,838.0	108.4	108.4	119.64	-5,589.1	4.0	329.6	137.3	192.30	1.714		
12,600.0	7,675.0	12,758.1	7,838.0	110.3	110.3	119.64	-5,689.1	4.3	329.6	133.9	195.66	1.684		
12,700.0	7,675.0	12,858.1	7,838.0	112.2	112.2	119.64	-5,789.1	4.6	329.5	130.5	199.02	1.656		
12,800.0	7,675.0	12,958.1	7,838.0	114.1	114.1	119.65	-5,889.1	5.0	329.5	127.1	202.39	1.628		
12,900.0	7,675.0	13,058.1	7,838.0	116.0	116.0	119.65	-5,989.1	5.3	329.5	123.7	205.75	1.601		
13,000.0	7,675.0	13,158.1	7,838.0	117.9	117.9	119.66	-6,089.1	5.7	329.4	120.3	209.12	1.575		
13,100.0	7,675.0	13,258.1	7,838.0	119.8	119.8	119.66	-6,189.1	6.0	329.4	116.9	212.48	1.550		
13,200.0	7,675.0	13,358.1	7,838.0	121.7	121.7	119.67	-6,289.1	6.4	329.3	113.5	215.85	1.526		
13,300.0	7,675.0	13,458.1	7,838.0	123.6	123.6	119.67	-6,389.1	6.7	329.3	110.1	219.22	1.502		
13,400.0	7,675.0	13,558.1	7,838.0	125.5	125.5	119.67	-6,489.1	7.1	329.3	106.7	222.59	1.479 Level 3		
13,500.0	7,675.0	13,658.1	7,838.0	127.4	127.4	119.68	-6,589.1	7.4	329.2	103.3	225.96	1.457 Level 3		
13,600.0	7,675.0	13,758.1	7,838.0	129.3	129.3	119.68	-6,689.1	7.8	329.2	99.8	229.33	1.435 Level 3		
13,700.0	7,675.0	13,858.1	7,838.0	131.2	131.2	119.69	-6,789.1	8.1	329.1	96.4	232.70	1.414 Level 3		
13,785.9	7,675.0	13,944.0	7,838.0	132.8	132.8	119.69	-6,875.0	8.4	329.1	93.5	235.59	1.397 Level 3, SF		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-4NBH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	61.6	61.6					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	61.6	61.6	61.4	0.22	274.254		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	61.6	61.6	61.0	0.67	91.418		
300.0	300.0	300.0	300.0	0.6	0.6	90.04	0.0	61.6	61.6	60.5	1.12	54.851		
400.0	400.0	400.0	400.0	0.8	0.8	90.04	0.0	61.6	61.6	60.1	1.57	39.179		
500.0	500.0	500.0	500.0	1.0	1.0	90.04	0.0	61.6	61.6	59.6	2.02	30.473		
600.0	600.0	600.0	600.0	1.2	1.2	90.04	0.0	61.6	61.6	59.2	2.47	24.932 CC, ES		
700.0	700.0	698.5	698.5	1.5	1.4	90.46	-0.5	62.8	62.8	59.9	2.90	21.665		
800.0	800.0	796.9	796.8	1.7	1.6	91.64	-1.9	66.4	66.5	63.1	3.32	20.020		
900.0	900.0	895.0	894.7	1.9	1.8	93.34	-4.2	72.2	72.6	68.8	3.75	19.361 SF		
1,000.0	1,000.0	992.7	992.0	2.1	2.1	95.28	-7.4	80.4	81.1	77.0	4.18	19.408		
1,100.0	1,100.0	1,089.9	1,088.6	2.4	2.3	97.24	-11.5	90.8	92.3	87.7	4.62	19.969		
1,200.0	1,200.0	1,186.5	1,184.2	2.6	2.6	99.07	-16.5	103.4	105.9	100.9	5.07	20.910		
1,300.0	1,300.0	1,282.4	1,278.8	2.8	2.9	-52.63	-22.3	118.2	121.4	115.9	5.49	22.123		
1,400.0	1,399.9	1,377.9	1,372.6	3.0	3.2	-52.20	-29.0	135.1	137.7	131.8	5.89	23.371		
1,500.0	1,499.7	1,474.1	1,466.5	3.1	3.6	-52.42	-36.5	154.2	154.7	148.4	6.31	24.497		
1,567.6	1,567.0	1,540.7	1,531.5	3.3	3.9	-52.91	-41.8	167.8	165.7	159.1	6.62	25.048		
1,600.0	1,599.3	1,572.7	1,562.7	3.3	4.0	-53.26	-44.4	174.3	170.8	164.1	6.76	25.260		
1,700.0	1,698.8	1,671.4	1,659.0	3.6	4.5	-54.22	-52.3	194.4	186.6	179.4	7.23	25.818		
1,800.0	1,798.4	1,770.1	1,755.3	3.8	4.9	-55.03	-60.3	214.5	202.5	194.8	7.71	26.256		
1,900.0	1,897.9	1,868.8	1,851.6	4.0	5.3	-55.72	-68.2	234.6	218.4	210.2	8.21	26.603		
2,000.0	1,997.4	1,967.5	1,947.9	4.3	5.8	-56.31	-76.1	254.7	234.3	225.6	8.72	26.879		
2,100.0	2,097.0	2,066.2	2,044.2	4.5	6.2	-56.83	-84.0	274.8	250.3	241.0	9.24	27.099		
2,200.0	2,196.5	2,164.9	2,140.5	4.8	6.7	-57.29	-92.0	294.9	266.2	256.5	9.76	27.274		
2,300.0	2,296.0	2,263.6	2,236.8	5.0	7.2	-57.70	-99.9	315.0	282.2	271.9	10.29	27.413		
2,400.0	2,395.6	2,362.3	2,333.1	5.3	7.6	-58.06	-107.8	335.1	298.2	287.4	10.83	27.524		
2,500.0	2,495.1	2,461.0	2,429.4	5.5	8.1	-58.39	-115.7	355.3	314.2	302.8	11.38	27.612		
2,600.0	2,594.7	2,559.7	2,525.7	5.8	8.5	-58.68	-123.6	375.4	330.2	318.3	11.93	27.683		
2,700.0	2,694.2	2,658.4	2,622.0	6.1	9.0	-58.95	-131.6	395.5	346.2	333.8	12.48	27.738		
2,800.0	2,793.7	2,757.1	2,718.3	6.4	9.5	-59.19	-139.5	415.6	362.3	349.2	13.04	27.782		
2,900.0	2,893.3	2,855.8	2,814.6	6.6	10.0	-59.41	-147.4	435.7	378.3	364.7	13.60	27.816		
3,000.0	2,992.8	2,954.5	2,910.9	6.9	10.4	-59.62	-155.3	455.8	394.3	380.2	14.16	27.842		
3,100.0	3,092.3	3,053.2	3,007.2	7.2	10.9	-59.81	-163.3	475.9	410.4	395.6	14.73	27.862		
3,200.0	3,191.9	3,151.8	3,103.5	7.5	11.4	-59.98	-171.2	496.0	426.4	411.1	15.30	27.876		
3,300.0	3,291.4	3,250.5	3,199.8	7.7	11.8	-60.14	-179.1	516.1	442.5	426.6	15.87	27.886		
3,400.0	3,391.0	3,349.2	3,296.1	8.0	12.3	-60.30	-187.0	536.2	458.5	442.1	16.44	27.893		
3,500.0	3,490.5	3,447.9	3,392.4	8.3	12.8	-60.44	-194.9	556.4	474.6	457.6	17.01	27.896		
3,600.0	3,590.0	3,546.6	3,488.7	8.6	13.2	-60.57	-202.9	576.5	490.6	473.0	17.59	27.897		
3,700.0	3,689.6	3,645.3	3,585.0	8.9	13.7	-60.69	-210.8	596.6	506.7	488.5	18.16	27.896		
3,800.0	3,789.1	3,744.0	3,681.3	9.1	14.2	-60.80	-218.7	616.7	522.7	504.0	18.74	27.894		
3,900.0	3,888.6	3,842.7	3,777.6	9.4	14.7	-60.91	-226.6	636.8	538.8	519.5	19.32	27.890		
4,000.0	3,988.2	3,941.4	3,873.9	9.7	15.1	-61.02	-234.6	656.9	554.9	535.0	19.90	27.885		
4,100.0	4,087.7	4,040.1	3,970.2	10.0	15.6	-61.11	-242.5	677.0	570.9	550.5	20.48	27.879		
4,200.0	4,187.3	4,138.8	4,066.5	10.3	16.1	-61.20	-250.4	697.1	587.0	565.9	21.06	27.872		
4,300.0	4,286.8	4,237.5	4,162.8	10.6	16.6	-61.29	-258.3	717.2	603.1	581.4	21.64	27.865		
4,400.0	4,386.3	4,336.2	4,259.1	10.9	17.0	-61.37	-266.3	737.3	619.1	596.9	22.23	27.857		
4,500.0	4,485.9	4,434.9	4,355.4	11.1	17.5	-61.45	-274.2	757.5	635.2	612.4	22.81	27.849		
4,600.0	4,585.4	4,533.6	4,451.7	11.4	18.0	-61.52	-282.1	777.6	651.3	627.9	23.39	27.840		
4,700.0	4,684.9	4,632.3	4,548.0	11.7	18.5	-61.59	-290.0	797.7	667.4	643.4	23.98	27.831		
4,800.0	4,784.5	4,731.0	4,644.4	12.0	18.9	-61.66	-297.9	817.8	683.4	658.9	24.56	27.822		
4,900.0	4,884.0	4,829.7	4,740.7	12.3	19.4	-61.72	-305.9	837.9	699.5	674.4	25.15	27.813		
5,000.0	4,983.6	4,928.4	4,837.0	12.6	19.9	-61.78	-313.8	858.0	715.6	689.9	25.74	27.804		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-4NBH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,083.1	5,027.1	4,933.3	12.9	20.4	-61.84	-321.7	878.1	731.7	705.3	26.32	27.795		
5,200.0	5,182.6	5,125.8	5,029.6	13.2	20.8	-61.90	-329.6	898.2	747.7	720.8	26.91	27.786		
5,300.0	5,282.2	5,224.5	5,125.9	13.4	21.3	-61.95	-337.6	918.3	763.8	736.3	27.50	27.777		
5,400.0	5,381.7	5,323.2	5,222.2	13.7	21.8	-62.00	-345.5	938.5	779.9	751.8	28.09	27.768		
5,500.0	5,481.2	5,421.9	5,318.5	14.0	22.3	-62.05	-353.4	958.6	796.0	767.3	28.68	27.759		
5,600.0	5,580.8	5,520.6	5,414.8	14.3	22.7	-62.10	-361.3	978.7	812.1	782.8	29.26	27.750		
5,700.0	5,680.3	5,619.3	5,511.1	14.6	23.2	-62.15	-369.2	998.8	828.1	798.3	29.85	27.741		
5,800.0	5,779.8	5,718.0	5,607.4	14.9	23.7	-62.19	-377.2	1,018.9	844.2	813.8	30.44	27.732		
5,900.0	5,879.4	5,816.7	5,703.7	15.2	24.2	-62.23	-385.1	1,039.0	860.3	829.3	31.03	27.723		
6,000.0	5,978.9	5,915.4	5,800.0	15.5	24.6	-62.27	-393.0	1,059.1	876.4	844.8	31.62	27.715		
6,100.0	6,078.5	6,014.0	5,896.3	15.8	25.1	-62.31	-400.9	1,079.2	892.5	860.3	32.21	27.706		
6,200.0	6,178.0	6,112.7	5,992.6	16.1	25.6	-62.35	-408.9	1,099.3	908.6	875.8	32.80	27.698		
6,300.0	6,277.5	6,211.4	6,088.9	16.3	26.1	-62.38	-416.8	1,119.4	924.6	891.2	33.39	27.689		
6,400.0	6,377.1	6,310.1	6,185.2	16.6	26.5	-62.42	-424.7	1,139.6	940.7	906.7	33.98	27.681		
6,500.0	6,476.6	6,408.8	6,281.5	16.9	27.0	-62.45	-432.6	1,159.7	956.8	922.2	34.58	27.673		
6,600.0	6,576.1	6,507.5	6,377.8	17.2	27.5	-62.49	-440.6	1,179.8	972.9	937.7	35.17	27.665		
6,700.0	6,675.7	6,606.2	6,474.1	17.5	28.0	-62.52	-448.5	1,199.9	989.0	953.2	35.76	27.658		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-5CDH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.03	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	30.8	30.8	30.6	0.22	137.127		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	30.8	30.8	30.1	0.67	45.709		
300.0	300.0	300.0	300.0	0.6	0.6	90.03	0.0	30.8	30.8	29.7	1.12	27.425		
400.0	400.0	400.0	400.0	0.8	0.8	90.03	0.0	30.8	30.8	29.2	1.57	19.590		
500.0	500.0	500.0	500.0	1.0	1.0	90.03	0.0	30.8	30.8	28.8	2.02	15.236		
600.0	600.0	600.0	600.0	1.2	1.2	90.03	0.0	30.8	30.8	28.3	2.47	12.466		
700.0	700.0	700.0	700.0	1.5	1.5	90.03	0.0	30.8	30.8	27.9	2.92	10.548		
800.0	800.0	800.0	800.0	1.7	1.7	90.03	0.0	30.8	30.8	27.5	3.37	9.142 CC, ES		
900.0	900.0	899.3	899.3	1.9	1.9	91.30	-0.7	31.9	31.9	28.1	3.80	8.403		
1,000.0	1,000.0	998.5	998.4	2.1	2.1	94.63	-2.8	35.1	35.3	31.1	4.21	8.377		
1,100.0	1,100.0	1,097.4	1,097.1	2.4	2.3	98.93	-6.4	40.5	41.1	36.5	4.63	8.870		
1,200.0	1,200.0	1,195.9	1,195.2	2.6	2.5	103.21	-11.3	48.0	49.5	44.4	5.06	9.781		
1,300.0	1,300.0	1,294.0	1,292.6	2.8	2.7	-46.88	-17.5	57.5	59.7	54.2	5.47	10.915		
1,400.0	1,399.9	1,392.6	1,390.2	3.0	3.0	-45.77	-25.0	69.0	70.3	64.5	5.86	12.006		
1,500.0	1,499.7	1,492.1	1,488.8	3.1	3.3	-46.18	-32.9	80.9	79.6	73.3	6.26	12.707		
1,567.6	1,567.0	1,559.5	1,555.5	3.3	3.5	-47.14	-38.1	89.0	84.8	78.3	6.55	12.954		
1,600.0	1,599.3	1,591.8	1,587.4	3.3	3.6	-47.73	-40.7	92.9	87.1	80.4	6.69	13.030		
1,700.0	1,698.8	1,691.5	1,686.1	3.6	3.9	-49.34	-48.5	104.8	94.4	87.2	7.13	13.229		
1,800.0	1,798.4	1,791.2	1,784.8	3.8	4.2	-50.73	-56.3	116.7	101.7	94.1	7.60	13.385		
1,900.0	1,897.9	1,890.9	1,883.5	4.0	4.5	-51.93	-64.2	128.7	109.0	100.9	8.07	13.506		
2,000.0	1,997.4	1,990.6	1,982.1	4.3	4.9	-52.98	-72.0	140.6	116.4	107.8	8.56	13.600		
2,100.0	2,097.0	2,090.3	2,080.8	4.5	5.2	-53.90	-79.8	152.6	123.8	114.8	9.06	13.673		
2,200.0	2,196.5	2,190.1	2,179.5	4.8	5.5	-54.72	-87.7	164.5	131.3	121.7	9.56	13.728		
2,300.0	2,296.0	2,289.8	2,278.2	5.0	5.9	-55.45	-95.5	176.5	138.7	128.7	10.08	13.770		
2,400.0	2,395.6	2,389.5	2,376.8	5.3	6.2	-56.11	-103.3	188.4	146.2	135.6	10.60	13.800		
2,500.0	2,495.1	2,489.2	2,475.5	5.5	6.6	-56.70	-111.2	200.4	153.8	142.6	11.12	13.823		
2,600.0	2,594.7	2,588.9	2,574.2	5.8	6.9	-57.24	-119.0	212.3	161.3	149.6	11.66	13.838		
2,700.0	2,694.2	2,688.6	2,672.9	6.1	7.2	-57.73	-126.8	224.3	168.8	156.6	12.19	13.848		
2,800.0	2,793.7	2,788.3	2,771.5	6.4	7.6	-58.17	-134.7	236.2	176.4	163.7	12.73	13.854		
2,900.0	2,893.3	2,888.0	2,870.2	6.6	7.9	-58.58	-142.5	248.1	183.9	170.7	13.27	13.856		
3,000.0	2,992.8	2,987.7	2,968.9	6.9	8.3	-58.96	-150.3	260.1	191.5	177.7	13.82	13.856		
3,100.0	3,092.3	3,087.4	3,067.6	7.2	8.6	-59.31	-158.1	272.0	199.1	184.7	14.37	13.854		
3,200.0	3,191.9	3,187.1	3,166.3	7.5	9.0	-59.63	-166.0	284.0	206.7	191.8	14.92	13.850		
3,300.0	3,291.4	3,286.8	3,264.9	7.7	9.3	-59.93	-173.8	295.9	214.3	198.8	15.48	13.845		
3,400.0	3,391.0	3,386.5	3,363.6	8.0	9.7	-60.21	-181.6	307.9	221.9	205.8	16.03	13.838		
3,500.0	3,490.5	3,486.2	3,462.3	8.3	10.0	-60.48	-189.5	319.8	229.5	212.9	16.59	13.831		
3,600.0	3,590.0	3,585.9	3,561.0	8.6	10.4	-60.72	-197.3	331.8	237.1	219.9	17.15	13.824		
3,700.0	3,689.6	3,685.6	3,659.6	8.9	10.7	-60.95	-205.1	343.7	244.7	227.0	17.71	13.815		
3,800.0	3,789.1	3,785.3	3,758.3	9.1	11.1	-61.16	-213.0	355.7	252.3	234.0	18.27	13.807		
3,900.0	3,888.6	3,885.0	3,857.0	9.4	11.4	-61.37	-220.8	367.6	259.9	241.1	18.84	13.798		
4,000.0	3,988.2	3,984.7	3,955.7	9.7	11.8	-61.56	-228.6	379.5	267.5	248.1	19.40	13.789		
4,100.0	4,087.7	4,084.5	4,054.3	10.0	12.1	-61.74	-236.5	391.5	275.2	255.2	19.97	13.781		
4,200.0	4,187.3	4,184.2	4,153.0	10.3	12.5	-61.91	-244.3	403.4	282.8	262.3	20.53	13.772		
4,300.0	4,286.8	4,283.9	4,251.7	10.6	12.8	-62.07	-252.1	415.4	290.4	269.3	21.10	13.763		
4,400.0	4,386.3	4,383.6	4,350.4	10.9	13.2	-62.23	-259.9	427.3	298.0	276.4	21.67	13.754		
4,500.0	4,485.9	4,483.3	4,449.1	11.1	13.5	-62.37	-267.8	439.3	305.7	283.4	22.24	13.745		
4,600.0	4,585.4	4,583.0	4,547.7	11.4	13.9	-62.51	-275.6	451.2	313.3	290.5	22.81	13.736		
4,700.0	4,684.9	4,682.7	4,646.4	11.7	14.2	-62.64	-283.4	463.2	321.0	297.6	23.38	13.728		
4,800.0	4,784.5	4,782.4	4,745.1	12.0	14.6	-62.77	-291.3	475.1	328.6	304.6	23.95	13.719		
4,900.0	4,884.0	4,882.1	4,843.8	12.3	14.9	-62.89	-299.1	487.1	336.2	311.7	24.52	13.711		
5,000.0	4,983.6	4,981.8	4,942.4	12.6	15.3	-63.01	-306.9	499.0	343.9	318.8	25.09	13.703		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-5CDH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,083.1	5,081.5	5,041.1	12.9	15.7	-63.12	-314.8	510.9	351.5	325.8	25.67	13.695		
5,200.0	5,182.6	5,181.2	5,139.8	13.2	16.0	-63.22	-322.6	522.9	359.2	332.9	26.24	13.687		
5,300.0	5,282.2	5,280.9	5,238.5	13.4	16.4	-63.32	-330.4	534.8	366.8	340.0	26.81	13.680		
5,400.0	5,381.7	5,380.6	5,337.1	13.7	16.7	-63.42	-338.3	546.8	374.4	347.1	27.39	13.672		
5,500.0	5,481.2	5,480.3	5,435.8	14.0	17.1	-63.51	-346.1	558.7	382.1	354.1	27.96	13.665		
5,600.0	5,580.8	5,580.0	5,534.5	14.3	17.4	-63.60	-353.9	570.7	389.7	361.2	28.54	13.658		
5,700.0	5,680.3	5,679.7	5,633.2	14.6	17.8	-63.69	-361.7	582.6	397.4	368.3	29.11	13.651		
5,800.0	5,779.8	5,779.4	5,731.9	14.9	18.1	-63.77	-369.6	594.6	405.0	375.3	29.69	13.644		
5,900.0	5,879.4	5,879.1	5,830.5	15.2	18.5	-63.85	-377.4	606.5	412.7	382.4	30.26	13.637		
6,000.0	5,978.9	5,978.9	5,929.2	15.5	18.8	-63.93	-385.2	618.5	420.3	389.5	30.84	13.630		
6,100.0	6,078.5	6,078.6	6,027.9	15.8	19.2	-64.00	-393.1	630.4	428.0	396.6	31.41	13.624		
6,200.0	6,178.0	6,178.3	6,126.6	16.1	19.5	-64.07	-400.9	642.3	435.6	403.6	31.99	13.618		
6,300.0	6,277.5	6,278.0	6,225.2	16.3	19.9	-64.14	-408.7	654.3	443.3	410.7	32.57	13.612		
6,400.0	6,377.1	6,377.7	6,323.9	16.6	20.3	-64.21	-416.6	666.2	450.9	417.8	33.14	13.606		
6,500.0	6,476.6	6,477.4	6,422.6	16.9	20.6	-64.27	-424.4	678.2	458.6	424.9	33.72	13.600		
6,600.0	6,576.1	6,577.1	6,521.3	17.2	21.0	-64.33	-432.2	690.1	466.3	432.0	34.30	13.594		
6,700.0	6,675.7	6,676.8	6,619.9	17.5	21.3	-64.39	-440.1	702.1	473.9	439.0	34.88	13.588		
6,800.0	6,775.2	6,776.5	6,718.6	17.8	21.7	-64.45	-447.9	714.0	481.6	446.1	35.45	13.583		
6,900.0	6,874.8	6,876.2	6,817.3	18.1	22.0	-64.51	-455.7	726.0	489.2	453.2	36.03	13.578		
7,000.0	6,974.3	6,975.9	6,916.0	18.4	22.4	-64.56	-463.6	737.9	496.9	460.3	36.61	13.572		
7,046.8	7,020.8	7,022.5	6,962.1	18.5	22.5	-64.59	-467.2	743.5	500.5	463.6	36.88	13.570		
7,050.0	7,024.1	7,025.8	6,965.3	18.5	22.6	-65.74	-467.5	743.9	500.7	463.8	36.90	13.571		
7,100.0	7,073.6	7,075.6	7,014.6	18.7	22.7	-76.16	-471.4	749.8	504.6	467.4	37.19	13.569		
7,150.0	7,122.6	7,125.1	7,063.6	18.9	22.9	-80.92	-475.3	755.8	508.6	471.0	37.56	13.541		
7,200.0	7,170.8	7,174.0	7,112.1	19.1	23.1	-84.01	-479.1	761.6	512.8	474.8	38.01	13.491		
7,250.0	7,218.0	7,222.3	7,159.8	19.4	23.3	-86.49	-482.9	767.4	517.4	478.9	38.53	13.430		
7,300.0	7,263.9	7,271.7	7,208.7	19.7	23.4	-88.77	-487.3	773.3	522.5	483.4	39.11	13.361		
7,350.0	7,308.3	7,324.1	7,260.1	20.0	23.6	-90.84	-495.2	779.6	528.0	488.3	39.74	13.287		
7,400.0	7,351.0	7,377.9	7,312.1	20.3	23.9	-92.69	-507.2	785.9	533.8	493.4	40.42	13.208		
7,450.0	7,391.9	7,433.2	7,364.5	20.7	24.1	-94.38	-523.6	792.3	539.8	498.6	41.13	13.123		
7,500.0	7,430.6	7,490.0	7,416.9	21.2	24.5	-95.94	-544.7	798.7	545.9	504.0	41.89	13.033		
7,550.0	7,467.0	7,548.5	7,468.9	21.6	24.8	-97.38	-570.6	805.1	552.1	509.4	42.68	12.936		
7,600.0	7,501.0	7,608.6	7,520.0	22.1	25.2	-98.71	-601.7	811.3	558.2	514.7	43.51	12.830		
7,650.0	7,532.3	7,670.5	7,569.6	22.7	25.7	-99.95	-638.1	817.5	564.3	519.9	44.38	12.714		
7,700.0	7,560.8	7,734.2	7,617.3	23.2	26.2	-101.08	-679.8	823.4	570.1	524.8	45.29	12.587		
7,750.0	7,586.4	7,799.6	7,662.2	23.9	26.7	-102.10	-727.0	829.0	575.6	529.3	46.24	12.447		
7,800.0	7,608.9	7,866.6	7,703.6	24.5	27.4	-103.02	-779.5	834.1	580.6	533.4	47.25	12.289		
7,850.0	7,628.3	7,935.3	7,740.8	25.1	28.1	-103.81	-837.0	838.8	585.2	536.9	48.30	12.115		
7,900.0	7,644.4	8,005.5	7,772.9	25.8	28.8	-104.49	-899.2	842.9	589.1	539.7	49.41	11.922		
7,950.0	7,657.2	8,076.9	7,799.3	26.5	29.6	-105.04	-965.4	846.3	592.3	541.7	50.59	11.709		
8,000.0	7,666.5	8,149.3	7,819.2	27.3	30.5	-105.45	-1,035.0	849.0	594.7	542.9	51.82	11.477		
8,050.0	7,672.5	8,222.5	7,832.2	28.0	31.4	-105.71	-1,107.0	850.8	596.3	543.2	53.12	11.225		
8,100.0	7,674.9	8,296.1	7,837.8	28.8	32.4	-105.83	-1,180.3	851.7	597.1	542.6	54.49	10.957		
8,110.3	7,675.0	8,311.3	7,838.0	28.9	32.6	-105.84	-1,195.5	851.8	597.1	542.3	54.78	10.900		
8,200.0	7,675.0	8,402.0	7,838.0	30.3	33.8	-105.84	-1,286.2	852.1	597.1	539.7	57.43	10.399		
8,300.0	7,675.0	8,502.0	7,838.0	31.9	35.2	-105.84	-1,386.2	852.5	597.2	536.7	60.45	9.879		
8,400.0	7,675.0	8,602.0	7,838.0	33.5	36.7	-105.84	-1,486.2	852.8	597.2	533.7	63.55	9.398		
8,500.0	7,675.0	8,702.0	7,838.0	35.1	38.1	-105.84	-1,586.2	853.2	597.3	530.6	66.71	8.954		
8,600.0	7,675.0	8,802.0	7,838.0	36.8	39.7	-105.84	-1,686.2	853.5	597.3	527.4	69.92	8.543		
8,700.0	7,675.0	8,902.0	7,838.0	38.5	41.2	-105.83	-1,786.2	853.9	597.4	524.2	73.18	8.163		
8,800.0	7,675.0	9,002.0	7,838.0	40.2	42.8	-105.83	-1,886.2	854.2	597.4	521.0	76.48	7.812		
8,900.0	7,675.0	9,102.0	7,838.0	41.9	44.4	-105.83	-1,986.2	854.6	597.5	517.7	79.82	7.486		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design SHOOK PAD 3-1S-67W - SHOOK 3-10-5CDH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.0	7,675.0	9,202.0	7,838.0	43.7	46.1	-105.83	-2,086.2	854.9	597.5	514.4	83.19	7.183		
9,100.0	7,675.0	9,302.0	7,838.0	45.4	47.7	-105.83	-2,186.2	855.3	597.6	511.0	86.58	6.902		
9,200.0	7,675.0	9,402.0	7,838.0	47.2	49.4	-105.83	-2,286.2	855.6	597.6	507.6	90.00	6.640		
9,300.0	7,675.0	9,502.0	7,838.0	49.0	51.1	-105.83	-2,386.2	856.0	597.7	504.3	93.44	6.396		
9,400.0	7,675.0	9,602.0	7,838.0	50.8	52.8	-105.82	-2,486.2	856.3	597.7	500.8	96.91	6.168		
9,500.0	7,675.0	9,702.0	7,838.0	52.6	54.5	-105.82	-2,586.2	856.7	597.8	497.4	100.38	5.955		
9,600.0	7,675.0	9,802.0	7,838.0	54.4	56.3	-105.82	-2,686.2	857.0	597.8	494.0	103.88	5.755		
9,700.0	7,675.0	9,902.0	7,838.0	56.2	58.0	-105.82	-2,786.2	857.4	597.9	490.5	107.39	5.568		
9,800.0	7,675.0	10,002.0	7,838.0	58.0	59.8	-105.82	-2,886.2	857.7	597.9	487.0	110.91	5.391		
9,900.0	7,675.0	10,102.0	7,838.0	59.9	61.5	-105.82	-2,986.2	858.1	598.0	483.5	114.45	5.225		
10,000.0	7,675.0	10,202.0	7,838.0	61.7	63.3	-105.82	-3,086.2	858.4	598.0	480.1	117.99	5.069		
10,100.0	7,675.0	10,302.0	7,838.0	63.5	65.1	-105.82	-3,186.2	858.8	598.1	476.5	121.55	4.921		
10,200.0	7,675.0	10,402.0	7,838.0	65.4	66.9	-105.81	-3,286.2	859.1	598.1	473.0	125.11	4.781		
10,300.0	7,675.0	10,502.0	7,838.0	67.2	68.7	-105.81	-3,386.2	859.5	598.2	469.5	128.68	4.649		
10,400.0	7,675.0	10,602.0	7,838.0	69.1	70.5	-105.81	-3,486.2	859.8	598.2	466.0	132.26	4.523		
10,500.0	7,675.0	10,702.0	7,838.0	70.9	72.3	-105.81	-3,586.2	860.2	598.3	462.4	135.85	4.404		
10,600.0	7,675.0	10,802.0	7,838.0	72.8	74.1	-105.81	-3,686.2	860.5	598.3	458.9	139.44	4.291		
10,700.0	7,675.0	10,902.0	7,838.0	74.6	75.9	-105.81	-3,786.2	860.9	598.4	455.4	143.04	4.183		
10,800.0	7,675.0	11,002.0	7,838.0	76.5	77.7	-105.81	-3,886.2	861.2	598.4	451.8	146.64	4.081		
10,900.0	7,675.0	11,102.0	7,838.0	78.4	79.6	-105.80	-3,986.2	861.6	598.5	448.2	150.25	3.983		
11,000.0	7,675.0	11,202.0	7,838.0	80.2	81.4	-105.80	-4,086.2	861.9	598.5	444.7	153.86	3.890		
11,100.0	7,675.0	11,302.0	7,838.0	82.1	83.2	-105.80	-4,186.2	862.3	598.6	441.1	157.48	3.801		
11,200.0	7,675.0	11,402.0	7,838.0	84.0	85.1	-105.80	-4,286.2	862.6	598.6	437.5	161.10	3.716		
11,300.0	7,675.0	11,502.0	7,838.0	85.8	86.9	-105.80	-4,386.2	863.0	598.7	434.0	164.73	3.634		
11,400.0	7,675.0	11,602.0	7,838.0	87.7	88.8	-105.80	-4,486.2	863.3	598.7	430.4	168.36	3.556		
11,500.0	7,675.0	11,702.0	7,838.0	89.6	90.6	-105.80	-4,586.2	863.7	598.8	426.8	171.99	3.481		
11,600.0	7,675.0	11,802.0	7,838.0	91.5	92.5	-105.79	-4,686.2	864.0	598.8	423.2	175.63	3.410		
11,700.0	7,675.0	11,902.0	7,838.0	93.3	94.3	-105.79	-4,786.1	864.4	598.9	419.6	179.27	3.341		
11,800.0	7,675.0	12,002.0	7,838.0	95.2	96.2	-105.79	-4,886.1	864.7	598.9	416.0	182.91	3.274		
11,900.0	7,675.0	12,102.0	7,838.0	97.1	98.0	-105.79	-4,986.1	865.1	599.0	412.4	186.56	3.211		
12,000.0	7,675.0	12,202.0	7,838.0	99.0	99.9	-105.79	-5,086.1	865.4	599.0	408.8	190.20	3.149		
12,100.0	7,675.0	12,302.0	7,838.0	100.9	101.8	-105.79	-5,186.1	865.8	599.1	405.2	193.85	3.090		
12,200.0	7,675.0	12,402.0	7,838.0	102.8	103.6	-105.79	-5,286.1	866.1	599.1	401.6	197.51	3.034		
12,300.0	7,675.0	12,502.0	7,838.0	104.7	105.5	-105.79	-5,386.1	866.5	599.2	398.0	201.16	2.979		
12,400.0	7,675.0	12,602.0	7,838.0	106.5	107.4	-105.78	-5,486.1	866.8	599.2	394.4	204.82	2.926		
12,500.0	7,675.0	12,702.0	7,838.0	108.4	109.2	-105.78	-5,586.1	867.2	599.3	390.8	208.47	2.875		
12,600.0	7,675.0	12,802.0	7,838.0	110.3	111.1	-105.78	-5,686.1	867.5	599.3	387.2	212.13	2.825		
12,700.0	7,675.0	12,902.0	7,838.0	112.2	113.0	-105.78	-5,786.1	867.9	599.4	383.6	215.79	2.778		
12,800.0	7,675.0	13,002.0	7,838.0	114.1	114.8	-105.78	-5,886.1	868.2	599.4	380.0	219.46	2.731		
12,900.0	7,675.0	13,102.0	7,838.0	116.0	116.7	-105.78	-5,986.1	868.5	599.5	376.4	223.12	2.687		
13,000.0	7,675.0	13,202.0	7,838.0	117.9	118.6	-105.78	-6,086.1	868.9	599.5	372.7	226.79	2.644		
13,100.0	7,675.0	13,302.0	7,838.0	119.8	120.5	-105.77	-6,186.1	869.2	599.6	369.1	230.46	2.602		
13,200.0	7,675.0	13,402.0	7,838.0	121.7	122.3	-105.77	-6,286.1	869.6	599.6	365.5	234.12	2.561		
13,300.0	7,675.0	13,502.0	7,838.0	123.6	124.2	-105.77	-6,386.1	869.9	599.7	361.9	237.79	2.522		
13,400.0	7,675.0	13,602.0	7,838.0	125.5	126.1	-105.77	-6,486.1	870.3	599.7	358.3	241.47	2.484		
13,500.0	7,675.0	13,702.0	7,838.0	127.4	128.0	-105.77	-6,586.1	870.6	599.8	354.6	245.14	2.447		
13,600.0	7,675.0	13,802.0	7,838.0	129.3	129.9	-105.77	-6,686.1	871.0	599.8	351.0	248.81	2.411		
13,700.0	7,675.0	13,902.0	7,838.0	131.2	131.8	-105.77	-6,786.1	871.3	599.9	347.4	252.49	2.376		
13,785.9	7,675.0	13,987.8	7,838.0	132.8	133.4	-105.77	-6,872.0	871.6	599.9	344.3	255.64	2.347 SF		

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

Offset Design		SHOOK PAD 3-1S-67W - SHOOK 3-10-6CDH - Wellbore #1 - PLAN 1 (FEB 5 2016)											Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	90.03	0.0	75.7	75.7					
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	75.7	75.7	75.4	0.22	336.584		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	75.7	75.7	75.0	0.67	112.195		
300.0	300.0	300.0	300.0	0.6	0.6	90.03	0.0	75.7	75.7	74.5	1.12	67.317		
400.0	400.0	400.0	400.0	0.8	0.8	90.03	0.0	75.7	75.7	74.1	1.57	48.083	CC, ES	
500.0	500.0	497.7	497.6	1.0	1.0	90.39	-0.5	77.1	77.2	75.2	2.00	38.552		
600.0	600.0	595.1	595.0	1.2	1.2	91.38	-2.0	81.6	81.8	79.4	2.43	33.685		
700.0	700.0	692.2	691.7	1.5	1.4	92.80	-4.4	89.0	89.5	86.6	2.86	31.250		
800.0	800.0	788.6	787.5	1.7	1.7	94.41	-7.7	99.3	100.3	97.0	3.31	30.336	SF	
900.0	900.0	884.3	882.2	1.9	1.9	96.03	-11.9	112.3	114.3	110.6	3.76	30.410		
1,000.0	1,000.0	979.0	975.5	2.1	2.3	97.54	-16.9	128.0	131.4	127.2	4.22	31.143		
1,100.0	1,100.0	1,072.6	1,067.1	2.4	2.6	98.87	-22.8	146.2	151.6	146.9	4.69	32.317		
1,200.0	1,200.0	1,167.1	1,159.1	2.6	3.1	100.03	-29.5	167.1	174.5	169.4	5.18	33.704		
1,300.0	1,300.0	1,264.5	1,253.7	2.8	3.5	-52.09	-36.6	189.0	197.2	191.7	5.58	35.347		
1,400.0	1,399.9	1,362.2	1,348.6	3.0	4.0	-51.89	-43.7	211.0	218.4	212.4	6.00	36.369		
1,500.0	1,499.7	1,460.3	1,443.9	3.1	4.4	-52.21	-50.9	233.1	238.0	231.5	6.45	36.910		
1,567.6	1,567.0	1,526.7	1,508.4	3.3	4.8	-52.65	-55.7	248.1	250.3	243.6	6.76	37.038		
1,600.0	1,599.3	1,558.5	1,539.3	3.3	4.9	-52.97	-58.0	255.2	256.1	249.2	6.91	37.051		
1,700.0	1,698.8	1,656.8	1,634.9	3.6	5.4	-53.87	-65.1	277.4	273.9	266.5	7.39	37.042		
1,800.0	1,798.4	1,755.1	1,730.4	3.8	5.9	-54.66	-72.3	299.5	291.8	283.9	7.89	36.978		
1,900.0	1,897.9	1,853.5	1,825.9	4.0	6.4	-55.35	-79.4	321.7	309.7	301.3	8.40	36.874		
2,000.0	1,997.4	1,951.8	1,921.4	4.3	6.9	-55.97	-86.6	343.8	327.7	318.8	8.92	36.745		
2,100.0	2,097.0	2,050.1	2,016.9	4.5	7.4	-56.53	-93.7	366.0	345.7	336.3	9.45	36.600		
2,200.0	2,196.5	2,148.4	2,112.4	4.8	7.9	-57.03	-100.9	388.1	363.7	353.8	9.98	36.445		
2,300.0	2,296.0	2,246.7	2,208.0	5.0	8.4	-57.48	-108.0	410.3	381.8	371.3	10.52	36.285		
2,400.0	2,395.6	2,345.0	2,303.5	5.3	8.9	-57.89	-115.2	432.4	399.9	388.8	11.07	36.125		
2,500.0	2,495.1	2,443.3	2,399.0	5.5	9.4	-58.27	-122.3	454.6	418.0	406.4	11.62	35.965		
2,600.0	2,594.7	2,541.6	2,494.5	5.8	9.9	-58.62	-129.5	476.7	436.1	423.9	12.18	35.809		
2,700.0	2,694.2	2,640.0	2,590.0	6.1	10.4	-58.93	-136.6	498.9	454.2	441.5	12.74	35.656		
2,800.0	2,793.7	2,738.3	2,685.6	6.4	10.9	-59.23	-143.8	521.0	472.4	459.1	13.30	35.508		
2,900.0	2,893.3	2,836.6	2,781.1	6.6	11.4	-59.50	-150.9	543.2	490.5	476.7	13.87	35.365		
3,000.0	2,992.8	2,934.9	2,876.6	6.9	11.9	-59.75	-158.1	565.3	508.7	494.3	14.44	35.227		
3,100.0	3,092.3	3,033.2	2,972.1	7.2	12.4	-59.99	-165.2	587.4	526.9	511.9	15.01	35.095		
3,200.0	3,191.9	3,131.5	3,067.6	7.5	12.9	-60.20	-172.4	609.6	545.1	529.5	15.59	34.968		
3,300.0	3,291.4	3,229.8	3,163.2	7.7	13.4	-60.41	-179.5	631.7	563.2	547.1	16.16	34.846		
3,400.0	3,391.0	3,328.1	3,258.7	8.0	13.9	-60.60	-186.7	653.9	581.4	564.7	16.74	34.730		
3,500.0	3,490.5	3,426.5	3,354.2	8.3	14.4	-60.78	-193.8	676.0	599.6	582.3	17.32	34.618		
3,600.0	3,590.0	3,524.8	3,449.7	8.6	14.9	-60.95	-200.9	698.2	617.8	599.9	17.90	34.511		
3,700.0	3,689.6	3,623.1	3,545.2	8.9	15.4	-61.11	-208.1	720.3	636.0	617.6	18.49	34.408		
3,800.0	3,789.1	3,721.4	3,640.7	9.1	16.0	-61.26	-215.2	742.5	654.3	635.2	19.07	34.310		
3,900.0	3,888.6	3,819.7	3,736.3	9.4	16.5	-61.41	-222.4	764.6	672.5	652.8	19.65	34.216		
4,000.0	3,988.2	3,918.0	3,831.8	9.7	17.0	-61.54	-229.5	786.8	690.7	670.5	20.24	34.126		
4,100.0	4,087.7	4,016.3	3,927.3	10.0	17.5	-61.67	-236.7	808.9	708.9	688.1	20.83	34.039		
4,200.0	4,187.3	4,114.6	4,022.8	10.3	18.0	-61.79	-243.8	831.1	727.2	705.7	21.41	33.956		
4,300.0	4,286.8	4,213.0	4,118.3	10.6	18.5	-61.91	-251.0	853.2	745.4	723.4	22.00	33.877		
4,400.0	4,386.3	4,311.3	4,213.9	10.9	19.0	-62.02	-258.1	875.4	763.6	741.0	22.59	33.800		
4,500.0	4,485.9	4,409.6	4,309.4	11.1	19.5	-62.13	-265.3	897.5	781.9	758.7	23.18	33.726		
4,600.0	4,585.4	4,507.9	4,404.9	11.4	20.0	-62.23	-272.4	919.7	800.1	776.3	23.77	33.656		
4,700.0	4,684.9	4,606.2	4,500.4	11.7	20.5	-62.32	-279.6	941.8	818.4	794.0	24.36	33.588		
4,800.0	4,784.5	4,704.5	4,595.9	12.0	21.0	-62.42	-286.7	963.9	836.6	811.6	24.96	33.522		
4,900.0	4,884.0	4,802.8	4,691.5	12.3	21.5	-62.50	-293.9	986.1	854.8	829.3	25.55	33.459		
5,000.0	4,983.6	4,901.1	4,787.0	12.6	22.0	-62.59	-301.0	1,008.2	873.1	847.0	26.14	33.399		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PetroShare Corp	Local Co-ordinate Reference:	Well SHOOK 3-10-2NCH
Project:	SEC.3-T1S-R67W	TVD Reference:	RKB @ 5109.0ft (EST KB 16')
Reference Site:	SHOOK PAD 3-1S-67W	MD Reference:	RKB @ 5109.0ft (EST KB 16')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	SHOOK 3-10-2NCH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	PLAN 1 (FEB 5, 2016)	Offset TVD Reference:	Offset Datum

SHOOK PAD 3-1S-67W - SHOOK 3-10-6CDH - Wellbore #1 - PLAN 1 (FEB 5 2016)													Offset Site Error:	0.0 ft
Survey Program:		0-MWVD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,100.0	5,083.1	4,999.5	4,882.5	12.9	22.5	-62.67	-308.2	1,030.4	891.3	864.6	26.74	33.340		
5,200.0	5,182.6	5,097.8	4,978.0	13.2	23.0	-62.75	-315.3	1,052.5	909.6	882.3	27.33	33.284		
5,300.0	5,282.2	5,196.1	5,073.5	13.4	23.5	-62.82	-322.5	1,074.7	927.9	899.9	27.92	33.229		
5,400.0	5,381.7	5,294.4	5,169.0	13.7	24.1	-62.89	-329.6	1,096.8	946.1	917.6	28.52	33.176		
5,500.0	5,481.2	5,392.7	5,264.6	14.0	24.6	-62.96	-336.7	1,119.0	964.4	935.3	29.11	33.126		
5,600.0	5,580.8	5,491.0	5,360.1	14.3	25.1	-63.03	-343.9	1,141.1	982.6	952.9	29.71	33.076		

Reference Depths are relative to RKB @ 5109.0ft (EST KB 16')	Coordinates are relative to: SHOOK 3-10-2NCH
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 0.40°



Reference Depths are relative to RKB @ 5109.0ft (EST KB 16')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: SHOOK 3-10-2NCH
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.40°

