

Fifth Creek Energy Company, LLC

Well Name: **Critter Creek 232-1510H**

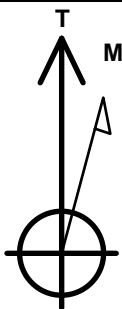
Surface Location: Critter Creek Pad 15-11N-63W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5226.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1578381.48	3300480.34	40.915969	-104.412814	

Original Well Elev WELL @ 5239.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 279'FSL & 915'FEL, SEC.15	1.0	0.0	0.0	Point
BHL 300"FNL & 350'FEL, SEC.10	7443.0	9970.0	531.8	Point
LP 300'FSL & 450'FEL, SEC.15	7483.0	25.5	464.4	Point



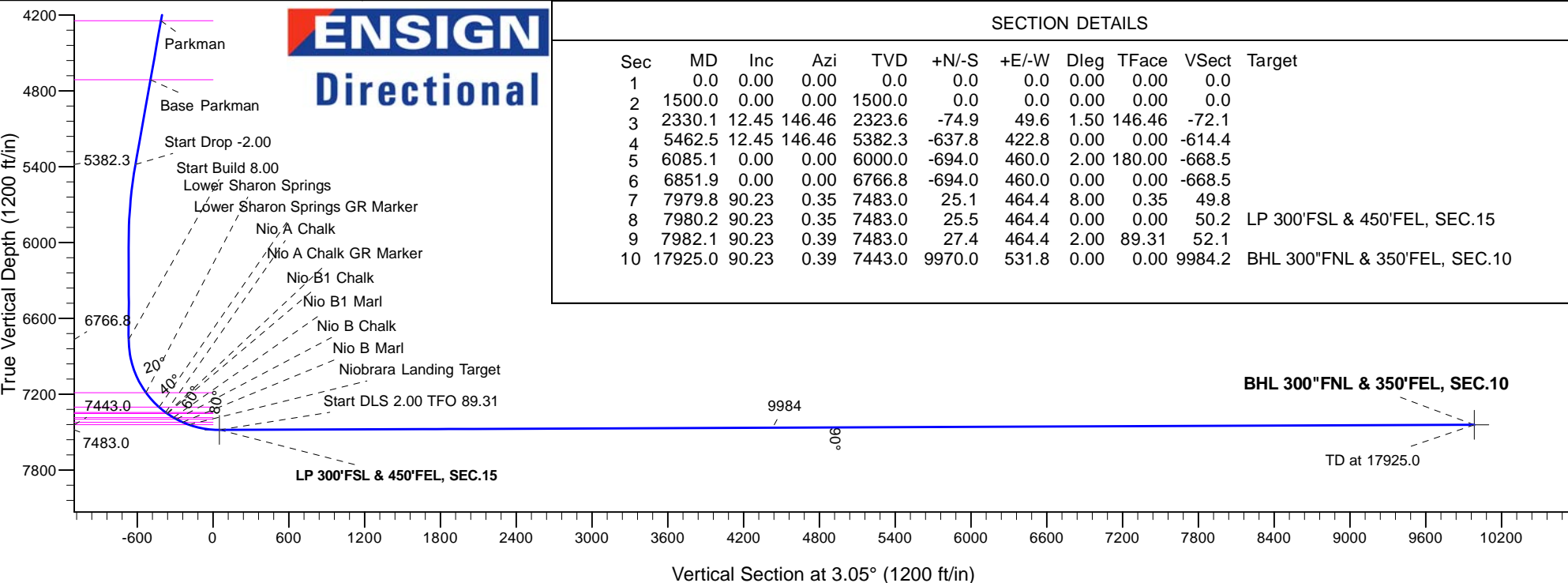
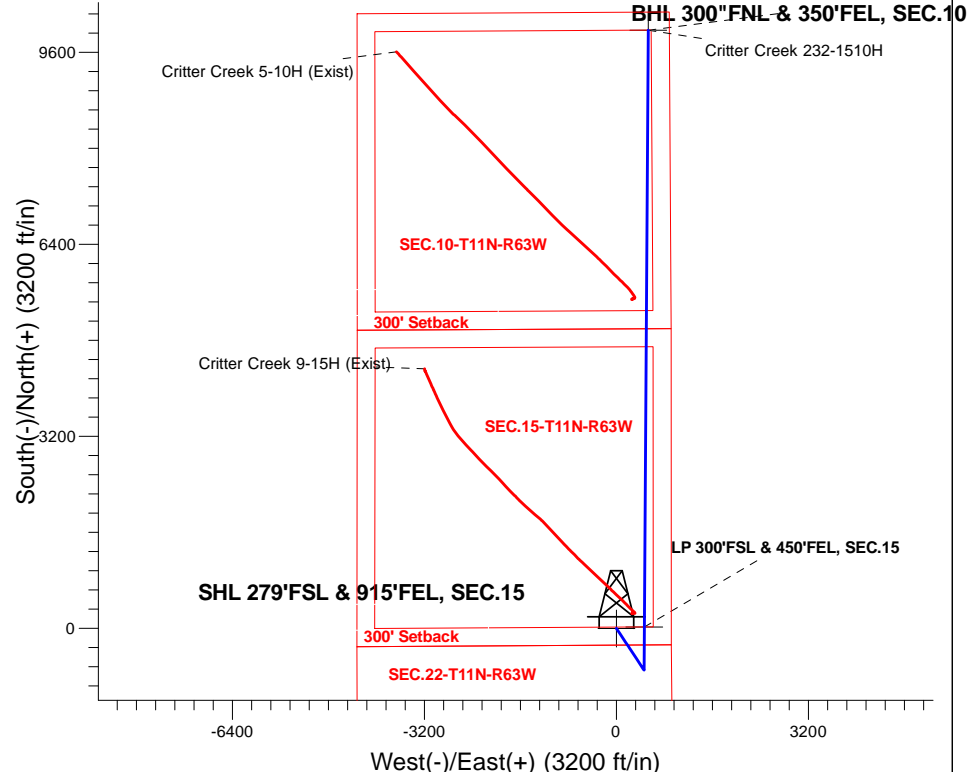
Azimuths to True North
Magnetic North: 7.94°

Magnetic Field
Strength: 52831.2snT
Dip Angle: 67.32°
Date: 2/21/2017
Model: IGRF2010

Critter Creek Pad 15-11N-63W
Critter Creek 232-1510H
Plan 1 (Feb 13, 2017)
14:14, February 21 2017

ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP - Start Build 1.50
5382.3	5462.5	Start Drop -2.00
6766.8	6851.9	Start Build 8.00
7483.0	7980.2	Start DLS 2.00 TFO 89.31
7483.0	7982.1	Start 9942.9 hold at 7982.1 MD
7443.0	17925.0	TD at 17925.0



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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	2330.1	12.45	146.46	2323.6	-74.9	49.6	1.50	146.46	-72.1	
4	5462.5	12.45	146.46	5382.3	-637.8	422.8	0.00	0.00	-614.4	
5	6085.1	0.00	0.00	6000.0	-694.0	460.0	2.00	180.00	-668.5	
6	6851.9	0.00	0.00	6766.8	-694.0	460.0	0.00	0.00	-668.5	
7	7979.8	90.23	0.35	7483.0	25.1	464.4	8.00	0.35	49.8	
8	7980.2	90.23	0.35	7483.0	25.5	464.4	0.00	0.00	50.2	LP 300'FSL & 450'FEL, SEC.15
9	7982.1	90.23	0.39	7483.0	27.4	464.4	2.00	89.31	52.1	
10	17925.0	90.23	0.39	7443.0	9970.0	531.8	0.00	0.00	9984.2	BHL 300"FNL & 350'FEL, SEC.10



Fifth Creek Energy Company, LLC

Sec.15-T11N-R63W

Critter Creek Pad 15-11N-63W

Critter Creek 232-1510H

Wellbore #1

Plan: Plan 1 (Feb 13, 2017)

Standard Planning Report

21 February, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 232-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

Project	Sec.15-T11N-R63W		
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	Critter Creek Pad 15-11N-63W				
Site Position:		Northing:	1,578,381.47 usft	Latitude:	40.915969
From:	Lat/Long	Easting:	3,300,480.34 usft	Longitude:	-104.412814
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.70 °

Well	Critter Creek 232-1510H					
Well Position	+N/-S	0.0 ft	Northing:	1,578,381.47 usft	Latitude:	40.915969
	+E/-W	0.0 ft	Easting:	3,300,480.34 usft	Longitude:	-104.412814
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,239.0 ft	Ground Level:	5,226.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/21/2017	7.94	67.32	52,831

Design	Plan 1 (Feb 13, 2017)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	3.05

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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,330.1	12.45	146.46	2,323.6	-74.9	49.6	1.50	1.50	0.00	146.46	
5,462.5	12.45	146.46	5,382.3	-637.8	422.8	0.00	0.00	0.00	0.00	
6,085.1	0.00	0.00	6,000.0	-694.0	460.0	2.00	-2.00	0.00	180.00	
6,851.9	0.00	0.00	6,766.8	-694.0	460.0	0.00	0.00	0.00	0.00	
7,979.8	90.23	0.35	7,483.0	25.1	464.4	8.00	8.00	0.00	0.35	
7,980.2	90.23	0.35	7,483.0	25.5	464.4	0.00	0.00	0.00	0.00	LP 300'FSL & 450'FEI
7,982.1	90.23	0.39	7,483.0	27.4	464.4	2.00	0.02	2.00	89.31	
17,925.0	90.23	0.39	7,443.0	9,970.0	531.8	0.00	0.00	0.00	0.00	BHL 300"FNL & 350"F

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Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 232-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

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
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
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,600.0	1.50	146.46	1,600.0	-1.1	0.7	-1.1	1.50	1.50	0.00
1,700.0	3.00	146.46	1,699.9	-4.4	2.9	-4.2	1.50	1.50	0.00
1,800.0	4.50	146.46	1,799.7	-9.8	6.5	-9.5	1.50	1.50	0.00
1,900.0	6.00	146.46	1,899.3	-17.4	11.6	-16.8	1.50	1.50	0.00
2,000.0	7.50	146.46	1,998.6	-27.2	18.1	-26.2	1.50	1.50	0.00
2,100.0	9.00	146.46	2,097.5	-39.2	26.0	-37.8	1.50	1.50	0.00
2,200.0	10.50	146.46	2,196.1	-53.3	35.3	-51.4	1.50	1.50	0.00
2,300.0	12.00	146.46	2,294.2	-69.6	46.1	-67.0	1.50	1.50	0.00
2,330.1	12.45	146.46	2,323.6	-74.9	49.6	-72.1	1.50	1.50	0.00
2,400.0	12.45	146.46	2,391.8	-87.4	58.0	-84.2	0.00	0.00	0.00
2,500.0	12.45	146.46	2,489.5	-105.4	69.9	-101.5	0.00	0.00	0.00
2,600.0	12.45	146.46	2,587.1	-123.4	81.8	-118.9	0.00	0.00	0.00
2,700.0	12.45	146.46	2,684.8	-141.4	93.7	-136.2	0.00	0.00	0.00
2,800.0	12.45	146.46	2,782.4	-159.3	105.6	-153.5	0.00	0.00	0.00
2,900.0	12.45	146.46	2,880.1	-177.3	117.5	-170.8	0.00	0.00	0.00
3,000.0	12.45	146.46	2,977.7	-195.3	129.4	-188.1	0.00	0.00	0.00
3,100.0	12.45	146.46	3,075.4	-213.3	141.3	-205.4	0.00	0.00	0.00
3,200.0	12.45	146.46	3,173.0	-231.2	153.3	-222.7	0.00	0.00	0.00
3,300.0	12.45	146.46	3,270.7	-249.2	165.2	-240.0	0.00	0.00	0.00
3,400.0	12.45	146.46	3,368.3	-267.2	177.1	-257.4	0.00	0.00	0.00
3,500.0	12.45	146.46	3,466.0	-285.1	189.0	-274.7	0.00	0.00	0.00
3,600.0	12.45	146.46	3,563.6	-303.1	200.9	-292.0	0.00	0.00	0.00
3,700.0	12.45	146.46	3,661.3	-321.1	212.8	-309.3	0.00	0.00	0.00
3,800.0	12.45	146.46	3,758.9	-339.1	224.7	-326.6	0.00	0.00	0.00
3,900.0	12.45	146.46	3,856.6	-357.0	236.6	-343.9	0.00	0.00	0.00
4,000.0	12.45	146.46	3,954.2	-375.0	248.6	-361.2	0.00	0.00	0.00
4,100.0	12.45	146.46	4,051.9	-393.0	260.5	-378.5	0.00	0.00	0.00
4,200.0	12.45	146.46	4,149.5	-410.9	272.4	-395.8	0.00	0.00	0.00
4,298.8	12.45	146.46	4,246.0	-428.7	284.2	-413.0	0.00	0.00	0.00
Parkman									
4,300.0	12.45	146.46	4,247.1	-428.9	284.3	-413.2	0.00	0.00	0.00
4,400.0	12.45	146.46	4,344.8	-446.9	296.2	-430.5	0.00	0.00	0.00
4,500.0	12.45	146.46	4,442.4	-464.9	308.1	-447.8	0.00	0.00	0.00
4,600.0	12.45	146.46	4,540.1	-482.8	320.0	-465.1	0.00	0.00	0.00
4,700.0	12.45	146.46	4,637.7	-500.8	331.9	-482.4	0.00	0.00	0.00
4,777.1	12.45	146.46	4,713.0	-514.7	341.1	-495.7	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

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)
Base Parkman									
4,800.0	12.45	146.46	4,735.4	-518.8	343.9	-499.7	0.00	0.00	0.00
4,900.0	12.45	146.46	4,833.0	-536.7	355.8	-517.0	0.00	0.00	0.00
5,000.0	12.45	146.46	4,930.7	-554.7	367.7	-534.3	0.00	0.00	0.00
5,100.0	12.45	146.46	5,028.3	-572.7	379.6	-551.7	0.00	0.00	0.00
5,200.0	12.45	146.46	5,126.0	-590.7	391.5	-569.0	0.00	0.00	0.00
5,300.0	12.45	146.46	5,223.6	-608.6	403.4	-586.3	0.00	0.00	0.00
5,400.0	12.45	146.46	5,321.3	-626.6	415.3	-603.6	0.00	0.00	0.00
5,462.5	12.45	146.46	5,382.3	-637.8	422.8	-614.4	0.00	0.00	0.00
Start Drop -2.00									
5,500.0	11.70	146.46	5,419.0	-644.4	427.1	-620.7	2.00	-2.00	0.00
5,600.0	9.70	146.46	5,517.2	-659.8	437.4	-635.6	2.00	-2.00	0.00
5,700.0	7.70	146.46	5,616.1	-672.5	445.7	-647.8	2.00	-2.00	0.00
5,800.0	5.70	146.46	5,715.4	-682.2	452.2	-657.1	2.00	-2.00	0.00
5,900.0	3.70	146.46	5,815.0	-689.0	456.7	-663.7	2.00	-2.00	0.00
6,000.0	1.70	146.46	5,914.9	-692.9	459.3	-667.5	2.00	-2.00	0.00
6,085.1	0.00	0.00	6,000.0	-694.0	460.0	-668.5	2.00	-2.00	0.00
6,100.0	0.00	0.00	6,014.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,114.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,214.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,314.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,414.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,514.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,614.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,714.9	-694.0	460.0	-668.5	0.00	0.00	0.00
6,851.9	0.00	0.00	6,766.8	-694.0	460.0	-668.5	0.00	0.00	0.00
Start Build 8.00									
6,900.0	3.85	0.35	6,814.9	-692.4	460.0	-666.9	8.00	8.00	0.00
7,000.0	11.85	0.35	6,913.9	-678.7	460.1	-653.3	8.00	8.00	0.00
7,100.0	19.85	0.35	7,010.0	-651.5	460.3	-626.0	8.00	8.00	0.00
7,200.0	27.85	0.35	7,101.4	-611.1	460.5	-585.7	8.00	8.00	0.00
7,300.0	35.85	0.35	7,186.2	-558.3	460.8	-533.0	8.00	8.00	0.00
7,302.2	36.02	0.35	7,188.0	-557.1	460.8	-531.7	8.00	8.00	0.00
Lower Sharon Springs									
7,400.0	43.85	0.35	7,263.0	-494.3	461.2	-469.0	8.00	8.00	0.00
7,457.8	48.47	0.35	7,303.0	-452.6	461.5	-427.4	8.00	8.00	0.00
Lower Sharon Springs GR Marker									
7,500.0	51.85	0.35	7,330.0	-420.2	461.7	-395.0	8.00	8.00	0.00
7,524.8	53.83	0.35	7,345.0	-400.5	461.8	-375.3	8.00	8.00	0.00
Nio A Chalk									
7,536.8	54.79	0.35	7,352.0	-390.7	461.9	-365.6	8.00	8.00	0.00
Nio A Chalk GR Marker									
7,540.3	55.07	0.35	7,354.0	-387.9	461.9	-362.7	8.00	8.00	0.00
Nio B1 Chalk									
7,597.8	59.67	0.35	7,385.0	-339.4	462.2	-314.3	8.00	8.00	0.00
Nio B1 Marl									
7,600.0	59.85	0.35	7,386.1	-337.5	462.2	-312.4	8.00	8.00	0.00
7,624.4	61.80	0.35	7,398.0	-316.2	462.3	-291.2	8.00	8.00	0.00
Nio B Chalk									
7,679.1	66.18	0.35	7,422.0	-267.1	462.6	-242.0	8.00	8.00	0.00
Nio B Marl									
7,700.0	67.85	0.35	7,430.1	-247.9	462.7	-222.9	8.00	8.00	0.00
7,733.4	70.52	0.35	7,442.0	-216.7	462.9	-191.7	8.00	8.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

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)
Niobrara Landing Target									
7,800.0	75.85	0.35	7,461.3	-152.9	463.3	-128.0	8.00	8.00	0.00
7,900.0	83.85	0.35	7,478.9	-54.6	463.9	-29.8	8.00	8.00	0.00
7,979.8	90.23	0.35	7,483.0	25.1	464.4	49.8	8.00	8.00	0.00
7,980.2	90.23	0.35	7,483.0	25.5	464.4	50.2	0.00	0.00	0.00
Start DLS 2.00 TFO 89.31									
7,982.1	90.23	0.39	7,483.0	27.4	464.4	52.1	1.98	0.02	1.98
Start 9942.9 hold at 7982.1 MD									
8,000.0	90.23	0.39	7,482.9	45.3	464.5	70.0	0.00	0.00	0.00
8,100.0	90.23	0.39	7,482.5	145.3	465.2	169.9	0.00	0.00	0.00
8,200.0	90.23	0.39	7,482.1	245.3	465.9	269.8	0.00	0.00	0.00
8,300.0	90.23	0.39	7,481.7	345.3	466.6	369.6	0.00	0.00	0.00
8,400.0	90.23	0.39	7,481.3	445.3	467.2	469.5	0.00	0.00	0.00
8,500.0	90.23	0.39	7,480.9	545.3	467.9	569.4	0.00	0.00	0.00
8,600.0	90.23	0.39	7,480.5	645.3	468.6	669.3	0.00	0.00	0.00
8,700.0	90.23	0.39	7,480.1	745.3	469.3	769.2	0.00	0.00	0.00
8,800.0	90.23	0.39	7,479.7	845.3	470.0	869.1	0.00	0.00	0.00
8,900.0	90.23	0.39	7,479.3	945.3	470.6	969.0	0.00	0.00	0.00
9,000.0	90.23	0.39	7,478.9	1,045.3	471.3	1,068.9	0.00	0.00	0.00
9,100.0	90.23	0.39	7,478.5	1,145.3	472.0	1,168.8	0.00	0.00	0.00
9,200.0	90.23	0.39	7,478.1	1,245.3	472.7	1,268.7	0.00	0.00	0.00
9,300.0	90.23	0.39	7,477.7	1,345.2	473.3	1,368.6	0.00	0.00	0.00
9,400.0	90.23	0.39	7,477.3	1,445.2	474.0	1,468.4	0.00	0.00	0.00
9,500.0	90.23	0.39	7,476.9	1,545.2	474.7	1,568.3	0.00	0.00	0.00
9,600.0	90.23	0.39	7,476.5	1,645.2	475.4	1,668.2	0.00	0.00	0.00
9,700.0	90.23	0.39	7,476.1	1,745.2	476.1	1,768.1	0.00	0.00	0.00
9,800.0	90.23	0.39	7,475.7	1,845.2	476.7	1,868.0	0.00	0.00	0.00
9,900.0	90.23	0.39	7,475.3	1,945.2	477.4	1,967.9	0.00	0.00	0.00
10,000.0	90.23	0.39	7,474.9	2,045.2	478.1	2,067.8	0.00	0.00	0.00
10,100.0	90.23	0.39	7,474.5	2,145.2	478.8	2,167.7	0.00	0.00	0.00
10,200.0	90.23	0.39	7,474.1	2,245.2	479.4	2,267.6	0.00	0.00	0.00
10,300.0	90.23	0.39	7,473.7	2,345.2	480.1	2,367.5	0.00	0.00	0.00
10,400.0	90.23	0.39	7,473.3	2,445.2	480.8	2,467.4	0.00	0.00	0.00
10,500.0	90.23	0.39	7,472.9	2,545.2	481.5	2,567.2	0.00	0.00	0.00
10,600.0	90.23	0.39	7,472.5	2,645.2	482.2	2,667.1	0.00	0.00	0.00
10,700.0	90.23	0.39	7,472.1	2,745.2	482.8	2,767.0	0.00	0.00	0.00
10,800.0	90.23	0.39	7,471.7	2,845.2	483.5	2,866.9	0.00	0.00	0.00
10,900.0	90.23	0.39	7,471.3	2,945.2	484.2	2,966.8	0.00	0.00	0.00
11,000.0	90.23	0.39	7,470.9	3,045.2	484.9	3,066.7	0.00	0.00	0.00
11,100.0	90.23	0.39	7,470.5	3,145.2	485.6	3,166.6	0.00	0.00	0.00
11,200.0	90.23	0.39	7,470.0	3,245.2	486.2	3,266.5	0.00	0.00	0.00
11,300.0	90.23	0.39	7,469.6	3,345.2	486.9	3,366.4	0.00	0.00	0.00
11,400.0	90.23	0.39	7,469.2	3,445.2	487.6	3,466.3	0.00	0.00	0.00
11,500.0	90.23	0.39	7,468.8	3,545.2	488.3	3,566.2	0.00	0.00	0.00
11,600.0	90.23	0.39	7,468.4	3,645.2	488.9	3,666.0	0.00	0.00	0.00
11,700.0	90.23	0.39	7,468.0	3,745.2	489.6	3,765.9	0.00	0.00	0.00
11,800.0	90.23	0.39	7,467.6	3,845.2	490.3	3,865.8	0.00	0.00	0.00
11,900.0	90.23	0.39	7,467.2	3,945.2	491.0	3,965.7	0.00	0.00	0.00
12,000.0	90.23	0.39	7,466.8	4,045.2	491.7	4,065.6	0.00	0.00	0.00
12,100.0	90.23	0.39	7,466.4	4,145.2	492.3	4,165.5	0.00	0.00	0.00
12,200.0	90.23	0.39	7,466.0	4,245.2	493.0	4,265.4	0.00	0.00	0.00
12,300.0	90.23	0.39	7,465.6	4,345.2	493.7	4,365.3	0.00	0.00	0.00
12,400.0	90.23	0.39	7,465.2	4,445.2	494.4	4,465.2	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 232-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

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)
12,500.0	90.23	0.39	7,464.8	4,545.1	495.0	4,565.1	0.00	0.00	0.00
12,600.0	90.23	0.39	7,464.4	4,645.1	495.7	4,665.0	0.00	0.00	0.00
12,700.0	90.23	0.39	7,464.0	4,745.1	496.4	4,764.8	0.00	0.00	0.00
12,800.0	90.23	0.39	7,463.6	4,845.1	497.1	4,864.7	0.00	0.00	0.00
12,900.0	90.23	0.39	7,463.2	4,945.1	497.8	4,964.6	0.00	0.00	0.00
13,000.0	90.23	0.39	7,462.8	5,045.1	498.4	5,064.5	0.00	0.00	0.00
13,100.0	90.23	0.39	7,462.4	5,145.1	499.1	5,164.4	0.00	0.00	0.00
13,200.0	90.23	0.39	7,462.0	5,245.1	499.8	5,264.3	0.00	0.00	0.00
13,300.0	90.23	0.39	7,461.6	5,345.1	500.5	5,364.2	0.00	0.00	0.00
13,400.0	90.23	0.39	7,461.2	5,445.1	501.1	5,464.1	0.00	0.00	0.00
13,500.0	90.23	0.39	7,460.8	5,545.1	501.8	5,564.0	0.00	0.00	0.00
13,600.0	90.23	0.39	7,460.4	5,645.1	502.5	5,663.9	0.00	0.00	0.00
13,700.0	90.23	0.39	7,460.0	5,745.1	503.2	5,763.8	0.00	0.00	0.00
13,800.0	90.23	0.39	7,459.6	5,845.1	503.9	5,863.7	0.00	0.00	0.00
13,900.0	90.23	0.39	7,459.2	5,945.1	504.5	5,963.5	0.00	0.00	0.00
14,000.0	90.23	0.39	7,458.8	6,045.1	505.2	6,063.4	0.00	0.00	0.00
14,100.0	90.23	0.39	7,458.4	6,145.1	505.9	6,163.3	0.00	0.00	0.00
14,200.0	90.23	0.39	7,458.0	6,245.1	506.6	6,263.2	0.00	0.00	0.00
14,300.0	90.23	0.39	7,457.6	6,345.1	507.2	6,363.1	0.00	0.00	0.00
14,400.0	90.23	0.39	7,457.2	6,445.1	507.9	6,463.0	0.00	0.00	0.00
14,500.0	90.23	0.39	7,456.8	6,545.1	508.6	6,562.9	0.00	0.00	0.00
14,600.0	90.23	0.39	7,456.4	6,645.1	509.3	6,662.8	0.00	0.00	0.00
14,700.0	90.23	0.39	7,456.0	6,745.1	510.0	6,762.7	0.00	0.00	0.00
14,800.0	90.23	0.39	7,455.6	6,845.1	510.6	6,862.6	0.00	0.00	0.00
14,900.0	90.23	0.39	7,455.2	6,945.1	511.3	6,962.5	0.00	0.00	0.00
15,000.0	90.23	0.39	7,454.8	7,045.1	512.0	7,062.3	0.00	0.00	0.00
15,100.0	90.23	0.39	7,454.4	7,145.1	512.7	7,162.2	0.00	0.00	0.00
15,200.0	90.23	0.39	7,454.0	7,245.1	513.3	7,262.1	0.00	0.00	0.00
15,300.0	90.23	0.39	7,453.6	7,345.1	514.0	7,362.0	0.00	0.00	0.00
15,400.0	90.23	0.39	7,453.2	7,445.1	514.7	7,461.9	0.00	0.00	0.00
15,500.0	90.23	0.39	7,452.8	7,545.1	515.4	7,561.8	0.00	0.00	0.00
15,600.0	90.23	0.39	7,452.4	7,645.1	516.1	7,661.7	0.00	0.00	0.00
15,700.0	90.23	0.39	7,451.9	7,745.1	516.7	7,761.6	0.00	0.00	0.00
15,800.0	90.23	0.39	7,451.5	7,845.0	517.4	7,861.5	0.00	0.00	0.00
15,900.0	90.23	0.39	7,451.1	7,945.0	518.1	7,961.4	0.00	0.00	0.00
16,000.0	90.23	0.39	7,450.7	8,045.0	518.8	8,061.3	0.00	0.00	0.00
16,100.0	90.23	0.39	7,450.3	8,145.0	519.5	8,161.1	0.00	0.00	0.00
16,200.0	90.23	0.39	7,449.9	8,245.0	520.1	8,261.0	0.00	0.00	0.00
16,300.0	90.23	0.39	7,449.5	8,345.0	520.8	8,360.9	0.00	0.00	0.00
16,400.0	90.23	0.39	7,449.1	8,445.0	521.5	8,460.8	0.00	0.00	0.00
16,500.0	90.23	0.39	7,448.7	8,545.0	522.2	8,560.7	0.00	0.00	0.00
16,600.0	90.23	0.39	7,448.3	8,645.0	522.8	8,660.6	0.00	0.00	0.00
16,700.0	90.23	0.39	7,447.9	8,745.0	523.5	8,760.5	0.00	0.00	0.00
16,800.0	90.23	0.39	7,447.5	8,845.0	524.2	8,860.4	0.00	0.00	0.00
16,900.0	90.23	0.39	7,447.1	8,945.0	524.9	8,960.3	0.00	0.00	0.00
17,000.0	90.23	0.39	7,446.7	9,045.0	525.6	9,060.2	0.00	0.00	0.00
17,100.0	90.23	0.39	7,446.3	9,145.0	526.2	9,160.1	0.00	0.00	0.00
17,200.0	90.23	0.39	7,445.9	9,245.0	526.9	9,259.9	0.00	0.00	0.00
17,300.0	90.23	0.39	7,445.5	9,345.0	527.6	9,359.8	0.00	0.00	0.00
17,400.0	90.23	0.39	7,445.1	9,445.0	528.3	9,459.7	0.00	0.00	0.00
17,500.0	90.23	0.39	7,444.7	9,545.0	528.9	9,559.6	0.00	0.00	0.00
17,600.0	90.23	0.39	7,444.3	9,645.0	529.6	9,659.5	0.00	0.00	0.00
17,700.0	90.23	0.39	7,443.9	9,745.0	530.3	9,759.4	0.00	0.00	0.00
17,800.0	90.23	0.39	7,443.5	9,845.0	531.0	9,859.3	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 232-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

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)
17,900.0	90.23	0.39	7,443.1	9,945.0	531.7	9,959.2	0.00	0.00	0.00
17,925.0	90.23	0.39	7,443.0	9,970.0	531.8	9,984.2	0.00	0.00	0.00
TD at 17925.0									

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
SHL 279'FSL & 915'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,578,381.46	3,300,480.34	40.915969	-104.412814
BHL 300'FNL & 350'FEL - plan hits target center - Point	0.00	0.00	7,443.0	9,970.0	531.8	1,588,357.45	3,300,889.90	40.943333	-104.410889
LP 300'FSL & 450'FEL, '1 - plan hits target center - Point	0.00	0.00	7,483.0	25.5	464.4	1,578,412.67	3,300,944.41	40.916039	-104.411134

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
1,400.0	1,400.0	9 5/8"		9-5/8	12-1/4

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
Cretaceous	4,298.8	4,246.0	Parkman		0.00	
	4,777.1	4,713.0	Base Parkman		0.00	
	7,302.2	7,188.0	Lower Sharon Springs		0.00	
	7,457.8	7,303.0	Lower Sharon Springs GR Marker		0.00	
	7,524.8	7,345.0	Nio A Chalk		0.00	
	7,536.8	7,352.0	Nio A Chalk GR Marker		0.00	
	7,540.3	7,354.0	Nio B1 Chalk		0.00	
	7,597.8	7,385.0	Nio B1 Marl		0.00	
	7,624.4	7,398.0	Nio B Chalk		0.00	
	7,679.1	7,422.0	Nio B Marl		0.00	
	7,733.4	7,442.0	Niobrara Landing Target		0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 232-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 13, 2017)		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 1.50	
5,462.5	5,382.3	-74.9	49.6	Start Drop -2.00	
6,851.9	6,766.8	-637.8	422.8	Start Build 8.00	
7,980.2	7,483.0	-694.0	460.0	Start DLS 2.00 TFO 89.31	
7,982.1	7,483.0	-694.0	460.0	Start 9942.9 hold at 7982.1 MD	
17,925.0	7,443.0	25.5	464.4	TD at 17925.0	



Fifth Creek Energy Company, LLC

Sec.15-T11N-R63W

Critter Creek Pad 15-11N-63W

Critter Creek 232-1510H

Wellbore #1

Plan 1 (Feb 13, 2017)

Anticollision Report

21 February, 2017

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Reference	Plan 1 (Feb 13, 2017)		
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 800.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	2/21/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,925.0	Plan 1 (Feb 13, 2017) (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						
Crittter Creek Pad 15-11N-63W						
Crittter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,501.0	750.1	743.6	115.042	CC, ES
Crittter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14,	2,300.0	2,295.2	798.8	788.8	80.374	SF
Crittter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	100.6	94.1	15.435	CC, ES
Crittter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,925.0	17,918.2	650.1	257.4	1.656	SF
Crittter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,501.0	774.7	768.2	118.815	CC, ES
Crittter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	2,000.0	1,999.6	793.0	784.5	92.393	SF
Crittter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	125.2	118.7	19.208	CC, ES
Crittter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	7,550.0	7,668.1	503.4	467.0	13.840	SF
Crittter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2	1,500.0	1,500.0	25.4	18.9	3.901	CC, ES
Crittter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2	7,673.0	7,627.2	102.1	66.4	2.863	SF
Crittter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	49.8	43.2	7.633	CC
Crittter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,925.0	17,998.8	376.6	5.9	1.016	Level 2, ES, SF
Crittter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	700.1	693.6	107.406	CC, ES
Crittter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14,	2,900.0	2,913.8	796.8	783.4	59.210	SF
Crittter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,502.0	799.9	793.4	122.630	CC, ES, SF
Crittter Creek 562-1527H - Wellbore #1 - Plan 1 (Feb 14,						Out of range
Crittter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,836.8	1,874.0	720.7	712.7	90.738	CC, ES
Crittter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14,	2,800.0	2,818.9	793.0	780.5	63.576	SF
Crittter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	75.2	68.7	11.534	CC, ES
Crittter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	7,750.0	7,597.4	198.1	163.0	5.645	SF
Existing Wells Sec.15 (Fifth Creek)						
Crittter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1	13,631.0	7,258.0	433.7	336.0	4.436	CC, ES
Crittter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1	13,800.0	7,313.2	459.3	351.8	4.272	SF
Crittter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1	1,339.4	1,351.4	358.2	353.8	81.106	CC
Crittter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1	1,600.0	1,611.8	358.7	353.2	65.124	ES
Crittter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1	8,600.0	7,345.2	485.3	454.2	15.592	SF

Offset Design		Crittter Creek Pad 15-11N-63W - Crittler Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)										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				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	1.0	1.0	0.0	0.0	-90.45	-5.8	-750.1	750.1						

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design		Crittter Creek Pad 15-11N-63W - Crittter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)											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			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
100.0	100.0	101.0	101.0	0.1	0.1	-90.45	-5.8	-750.1	750.1	749.9	0.23	3,304.338			
200.0	200.0	201.0	201.0	0.3	0.3	-90.45	-5.8	-750.1	750.1	749.5	0.68	1,108.765			
300.0	300.0	301.0	301.0	0.6	0.6	-90.45	-5.8	-750.1	750.1	749.0	1.13	666.144			
400.0	400.0	401.0	401.0	0.8	0.8	-90.45	-5.8	-750.1	750.1	748.6	1.58	476.089			
500.0	500.0	501.0	501.0	1.0	1.0	-90.45	-5.8	-750.1	750.1	748.1	2.03	370.409			
600.0	600.0	601.0	601.0	1.2	1.2	-90.45	-5.8	-750.1	750.1	747.7	2.47	303.123			
700.0	700.0	701.0	701.0	1.5	1.5	-90.45	-5.8	-750.1	750.1	747.2	2.92	256.524			
800.0	800.0	801.0	801.0	1.7	1.7	-90.45	-5.8	-750.1	750.1	746.8	3.37	222.344			
900.0	900.0	901.0	901.0	1.9	1.9	-90.45	-5.8	-750.1	750.1	746.3	3.82	196.201			
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.45	-5.8	-750.1	750.1	745.9	4.27	175.559			
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.45	-5.8	-750.1	750.1	745.4	4.72	158.847			
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.45	-5.8	-750.1	750.1	745.0	5.17	145.040			
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.45	-5.8	-750.1	750.1	744.5	5.62	133.442			
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.45	-5.8	-750.1	750.1	744.1	6.07	123.561			
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-90.45	-5.8	-750.1	750.1	743.6	6.52	115.042	CC, ES		
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	123.17	-5.8	-750.1	750.8	743.9	6.94	108.147			
1,700.0	1,699.9	1,700.9	1,700.9	3.6	3.7	123.39	-5.8	-750.1	753.0	745.7	7.34	102.558			
1,800.0	1,799.7	1,800.7	1,800.7	3.8	3.9	123.76	-5.8	-750.1	756.6	748.9	7.75	97.661			
1,900.0	1,899.3	1,900.3	1,900.3	4.0	4.2	124.26	-5.8	-750.1	761.8	753.6	8.16	93.349			
2,000.0	1,998.6	1,999.6	1,999.6	4.2	4.4	124.90	-5.8	-750.1	768.5	759.9	8.58	89.529			
2,100.0	2,097.5	2,098.5	2,098.5	4.5	4.6	125.66	-5.8	-750.1	776.8	767.8	9.02	86.128			
2,200.0	2,196.1	2,197.1	2,197.1	4.7	4.8	126.53	-5.8	-750.1	786.9	777.4	9.47	83.091			
2,300.0	2,294.2	2,295.2	2,295.2	5.0	5.0	127.50	-5.8	-750.1	798.8	788.8	9.94	80.374	SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	-90.43	-0.7	-100.6	100.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.43	-0.7	-100.6	100.6	100.4	0.22	447.606		
200.0	200.0	200.0	200.0	0.3	0.3	-90.43	-0.7	-100.6	100.6	99.9	0.67	149.202		
300.0	300.0	300.0	300.0	0.6	0.6	-90.43	-0.7	-100.6	100.6	99.5	1.12	89.521		
400.0	400.0	400.0	400.0	0.8	0.8	-90.43	-0.7	-100.6	100.6	99.0	1.57	63.944		
500.0	500.0	500.0	500.0	1.0	1.0	-90.43	-0.7	-100.6	100.6	98.6	2.02	49.734		
600.0	600.0	600.0	600.0	1.2	1.2	-90.43	-0.7	-100.6	100.6	98.1	2.47	40.691		
700.0	700.0	700.0	700.0	1.5	1.5	-90.43	-0.7	-100.6	100.6	97.7	2.92	34.431		
800.0	800.0	800.0	800.0	1.7	1.7	-90.43	-0.7	-100.6	100.6	97.2	3.37	29.840		
900.0	900.0	900.0	900.0	1.9	1.9	-90.43	-0.7	-100.6	100.6	96.8	3.82	26.330		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.43	-0.7	-100.6	100.6	96.3	4.27	23.558		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.43	-0.7	-100.6	100.6	95.9	4.72	21.315		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.43	-0.7	-100.6	100.6	95.4	5.17	19.461		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.43	-0.7	-100.6	100.6	95.0	5.62	17.904		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.43	-0.7	-100.6	100.6	94.5	6.07	16.578		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.43	-0.7	-100.6	100.6	94.1	6.52	15.435 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	123.72	-0.7	-100.6	101.3	94.4	6.94	14.599		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	125.50	-0.7	-100.6	103.6	96.2	7.34	14.109		
1,800.0	1,799.7	1,799.7	1,799.7	3.8	3.9	128.29	-0.7	-100.6	107.5	99.7	7.74	13.881		
1,900.0	1,899.3	1,899.3	1,899.3	4.0	4.2	131.85	-0.7	-100.6	113.4	105.2	8.15	13.910		
2,000.0	1,998.6	1,998.6	1,998.6	4.2	4.4	135.88	-0.7	-100.6	121.6	113.0	8.57	14.194		
2,100.0	2,097.5	2,097.5	2,097.5	4.5	4.6	140.08	-0.7	-100.6	132.3	123.3	8.98	14.732		
2,200.0	2,196.1	2,196.1	2,196.1	4.7	4.8	144.22	-0.7	-100.6	145.8	136.4	9.40	15.514		
2,300.0	2,294.2	2,294.2	2,294.2	5.0	5.0	148.10	-0.7	-100.6	162.1	152.3	9.81	16.524		
2,330.1	2,323.6	2,324.0	2,324.0	5.1	5.1	149.20	-0.8	-100.6	167.5	157.6	9.92	16.878		
2,400.0	2,391.8	2,393.7	2,393.7	5.4	5.2	151.37	-1.9	-100.7	180.2	170.0	10.21	17.645		
2,500.0	2,489.5	2,494.2	2,494.1	5.7	5.4	153.42	-5.7	-100.9	197.8	187.2	10.61	18.633		
2,600.0	2,587.1	2,595.3	2,595.0	6.1	5.6	154.51	-12.1	-101.2	214.3	203.3	11.03	19.427		
2,700.0	2,684.8	2,697.0	2,696.2	6.5	5.8	154.85	-21.3	-101.7	229.6	218.1	11.47	20.021		
2,800.0	2,782.4	2,799.0	2,797.6	6.9	6.0	154.58	-33.3	-102.3	243.6	231.7	11.93	20.423		
2,900.0	2,880.1	2,901.3	2,898.8	7.3	6.2	153.80	-47.9	-103.0	256.4	244.0	12.42	20.641		
3,000.0	2,977.7	3,003.6	2,999.7	7.7	6.4	152.57	-65.3	-103.9	268.0	255.1	12.95	20.691		
3,100.0	3,075.4	3,106.0	3,100.0	8.1	6.7	150.94	-85.4	-105.0	278.6	265.1	13.53	20.587		
3,200.0	3,173.0	3,208.0	3,199.4	8.6	7.0	148.94	-108.0	-106.1	288.4	274.2	14.17	20.351		
3,300.0	3,270.7	3,307.0	3,295.7	9.0	7.3	146.91	-131.2	-107.3	298.0	283.2	14.85	20.072		
3,400.0	3,368.3	3,406.0	3,391.9	9.4	7.6	145.01	-154.3	-108.5	308.0	292.4	15.56	19.796		
3,500.0	3,466.0	3,504.9	3,488.2	9.9	8.0	143.23	-177.4	-109.7	318.3	302.0	16.30	19.526		
3,600.0	3,563.6	3,603.9	3,584.4	10.3	8.3	141.57	-200.6	-110.9	328.9	311.8	17.07	19.266		
3,700.0	3,661.3	3,702.9	3,680.6	10.8	8.7	140.00	-223.7	-112.1	339.7	321.9	17.87	19.016		
3,800.0	3,758.9	3,801.9	3,776.9	11.2	9.1	138.54	-246.9	-113.3	350.8	332.1	18.68	18.780		
3,900.0	3,856.6	3,900.9	3,873.1	11.7	9.5	137.16	-270.0	-114.5	362.1	342.6	19.51	18.557		
4,000.0	3,954.2	3,999.9	3,969.4	12.1	9.9	135.87	-293.2	-115.7	373.6	353.2	20.36	18.347		
4,100.0	4,051.9	4,098.9	4,065.6	12.6	10.3	134.66	-316.3	-116.9	385.3	364.1	21.23	18.152		
4,200.0	4,149.5	4,197.9	4,161.9	13.1	10.8	133.51	-339.5	-118.1	397.1	375.0	22.10	17.969		
4,300.0	4,247.1	4,296.9	4,258.1	13.5	11.2	132.43	-362.6	-119.2	409.1	386.1	22.98	17.799		
4,400.0	4,344.8	4,395.9	4,354.3	14.0	11.6	131.42	-385.8	-120.4	421.2	397.3	23.88	17.641		
4,500.0	4,442.4	4,494.9	4,450.6	14.4	12.1	130.46	-408.9	-121.6	433.4	408.7	24.78	17.494		
4,600.0	4,540.1	4,593.9	4,546.8	14.9	12.5	129.55	-432.1	-122.8	445.8	420.1	25.68	17.357		
4,700.0	4,637.7	4,692.9	4,643.1	15.4	13.0	128.70	-455.2	-124.0	458.3	431.7	26.60	17.231		
4,800.0	4,735.4	4,791.8	4,739.3	15.8	13.4	127.88	-478.3	-125.2	470.8	443.3	27.51	17.113		
4,900.0	4,833.0	4,890.8	4,835.5	16.3	13.9	127.11	-501.5	-126.4	483.5	455.0	28.43	17.003		
5,000.0	4,930.7	4,989.8	4,931.8	16.8	14.3	126.38	-524.6	-127.6	496.2	466.8	29.36	16.902		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design		Crittter Creek Pad 15-11N-63W - Crittler Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)											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			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,100.0	5,028.3	5,088.8	5,028.0	17.2	14.8	125.69	-547.8	-128.8	509.0	478.7	30.28	16.807			
5,200.0	5,126.0	5,187.8	5,124.3	17.7	15.2	125.03	-570.9	-130.0	521.8	490.6	31.21	16.719			
5,300.0	5,223.6	5,286.8	5,220.5	18.2	15.7	124.40	-594.1	-131.2	534.8	502.6	32.15	16.636			
5,400.0	5,321.3	5,385.8	5,316.7	18.7	16.2	123.80	-617.2	-132.4	547.8	514.7	33.08	16.560			
5,462.5	5,382.3	5,448.1	5,377.4	18.9	16.4	123.48	-631.4	-133.1	555.9	522.3	33.60	16.544			
5,500.0	5,419.0	5,485.5	5,414.0	19.1	16.5	123.42	-639.3	-133.5	560.6	526.8	33.89	16.544			
5,600.0	5,517.2	5,585.8	5,512.5	19.4	16.9	123.27	-658.0	-134.5	571.8	537.3	34.55	16.551			
5,700.0	5,616.1	5,686.4	5,611.9	19.7	17.2	123.16	-673.4	-135.2	581.0	545.8	35.14	16.533			
5,800.0	5,715.4	5,787.2	5,712.0	19.9	17.4	123.08	-685.3	-135.9	588.0	552.4	35.66	16.491			
5,900.0	5,815.0	5,888.3	5,812.7	20.1	17.7	123.03	-693.6	-136.3	593.0	556.9	36.10	16.428			
6,000.0	5,914.9	5,989.5	5,913.8	20.3	17.8	122.99	-698.5	-136.5	595.9	559.4	36.46	16.344			
6,085.1	6,000.0	6,075.7	6,000.0	20.4	18.0	-90.55	-699.7	-136.6	596.6	559.9	36.75	16.237			
6,100.0	6,014.9	6,090.6	6,014.9	20.4	18.0	-90.55	-699.7	-136.6	596.6	559.8	36.79	16.218			
6,200.0	6,114.9	6,190.6	6,114.9	20.6	18.1	-90.55	-699.7	-136.6	596.6	559.6	37.06	16.098			
6,300.0	6,214.9	6,290.6	6,214.9	20.7	18.3	-90.55	-699.7	-136.6	596.6	559.3	37.34	15.980			
6,400.0	6,314.9	6,390.6	6,314.9	20.8	18.4	-90.55	-699.7	-136.6	596.6	559.0	37.62	15.861			
6,500.0	6,414.9	6,490.6	6,414.9	21.0	18.6	-90.55	-699.7	-136.6	596.6	558.7	37.90	15.743			
6,600.0	6,514.9	6,590.6	6,514.9	21.1	18.7	-90.55	-699.7	-136.6	596.6	558.4	38.18	15.625			
6,700.0	6,614.9	6,690.6	6,614.9	21.2	18.9	-90.55	-699.7	-136.6	596.6	558.2	38.47	15.508			
6,800.0	6,714.9	6,790.6	6,714.9	21.3	19.0	-90.55	-699.7	-136.6	596.6	557.9	38.77	15.391			
6,851.9	6,766.8	6,842.5	6,766.8	21.4	19.1	-90.55	-699.7	-136.6	596.6	557.7	38.92	15.331			
6,900.0	6,814.9	6,891.1	6,815.4	21.5	19.2	-90.90	-698.1	-136.6	596.6	557.6	39.00	15.299			
6,950.0	6,864.6	6,941.6	6,865.6	21.5	19.2	-90.89	-692.9	-136.6	596.7	557.6	39.05	15.281			
7,000.0	6,913.9	6,992.1	6,915.3	21.5	19.2	-90.88	-684.2	-136.6	596.7	557.7	39.03	15.289			
7,050.0	6,962.4	7,042.5	6,964.3	21.5	19.1	-90.87	-672.0	-136.5	596.7	557.8	38.95	15.322			
7,100.0	7,010.0	7,093.0	7,012.2	21.4	19.1	-90.85	-656.4	-136.5	596.8	558.0	38.81	15.378			
7,150.0	7,056.4	7,143.5	7,059.0	21.3	19.0	-90.82	-637.4	-136.5	596.9	558.3	38.62	15.456			
7,200.0	7,101.4	7,193.9	7,104.3	21.2	18.8	-90.80	-615.3	-136.4	597.0	558.6	38.38	15.553			
7,250.0	7,144.7	7,244.3	7,147.9	21.1	18.7	-90.77	-590.0	-136.4	597.1	558.9	38.11	15.667			
7,300.0	7,186.2	7,294.7	7,189.6	20.9	18.6	-90.73	-561.7	-136.3	597.2	559.4	37.81	15.793			
7,350.0	7,225.7	7,345.1	7,229.2	20.8	18.4	-90.69	-530.5	-136.3	597.3	559.8	37.50	15.929			
7,400.0	7,263.0	7,395.5	7,266.5	20.6	18.2	-90.65	-496.7	-136.2	597.4	560.2	37.18	16.070			
7,450.0	7,297.8	7,445.8	7,301.3	20.5	18.1	-90.60	-460.3	-136.1	597.6	560.7	36.86	16.210			
7,500.0	7,330.0	7,496.1	7,333.4	20.3	17.9	-90.55	-421.6	-136.0	597.7	561.1	36.57	16.345			
7,550.0	7,359.5	7,546.4	7,362.8	20.1	17.8	-90.50	-380.8	-135.9	597.9	561.6	36.31	16.467			
7,600.0	7,386.1	7,596.7	7,389.1	20.0	17.7	-90.45	-338.0	-135.9	598.0	562.0	36.09	16.571			
7,650.0	7,409.7	7,646.9	7,412.4	19.8	17.6	-90.39	-293.5	-135.8	598.2	562.3	35.93	16.651			
7,700.0	7,430.1	7,697.1	7,432.6	19.7	17.5	-90.34	-247.6	-135.7	598.4	562.6	35.83	16.701			
7,750.0	7,447.4	7,747.3	7,449.4	19.5	17.5	-90.28	-200.3	-135.6	598.6	562.8	35.81	16.717			
7,800.0	7,461.3	7,797.4	7,462.9	19.4	17.5	-90.22	-152.1	-135.5	598.8	562.9	35.87	16.694			
7,850.0	7,471.8	7,847.5	7,473.0	19.3	17.6	-90.16	-103.0	-135.4	599.0	563.0	36.01	16.633			
7,900.0	7,478.9	7,897.6	7,479.6	19.2	17.7	-90.09	-53.4	-135.3	599.2	562.9	36.24	16.531			
7,950.0	7,482.5	7,947.6	7,482.7	19.2	17.9	-90.03	-3.5	-135.2	599.4	562.8	36.57	16.392			
7,979.8	7,483.0	7,977.1	7,483.0	19.2	18.0	-90.00	26.1	-135.1	599.5	562.7	36.79	16.296			
7,980.2	7,483.0	7,977.6	7,483.0	19.2	18.0	-90.00	26.5	-135.1	599.5	562.7	36.79	16.295			
7,982.1	7,483.0	7,979.5	7,483.0	19.2	18.0	-90.00	28.4	-135.1	599.5	562.7	36.80	16.291			
8,000.0	7,482.9	7,997.4	7,482.9	19.2	18.0	-90.00	46.3	-135.1	599.6	562.7	36.89	16.254			
8,100.0	7,482.5	8,097.4	7,482.5	19.4	18.6	-90.00	146.3	-134.9	600.1	562.1	37.98	15.800			
8,200.0	7,482.1	8,197.4	7,482.1	20.1	19.3	-90.00	246.3	-134.7	600.6	561.2	39.42	15.235			
8,300.0	7,481.7	8,297.4	7,481.7	21.0	20.2	-90.00	346.3	-134.6	601.1	559.9	41.18	14.599			
8,400.0	7,481.3	8,397.4	7,481.3	22.1	21.2	-90.00	446.3	-134.4	601.6	558.4	43.20	13.926			
8,500.0	7,480.9	8,497.4	7,480.9	23.2	22.4	-90.00	546.3	-134.2	602.1	556.7	45.47	13.244			

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
8,600.0	7,480.5	8,597.4	7,480.5	24.5	23.6	-90.00	646.3	-134.0	602.6	554.7	47.93	12.573		
8,700.0	7,480.1	8,697.4	7,480.1	25.8	25.0	-90.00	746.3	-133.9	603.2	552.6	50.57	11.927		
8,800.0	7,479.7	8,797.4	7,479.7	27.2	26.4	-90.00	846.3	-133.7	603.7	550.3	53.36	11.313		
8,900.0	7,479.3	8,897.4	7,479.3	28.7	27.9	-90.00	946.3	-133.5	604.2	547.9	56.27	10.736		
9,000.0	7,478.9	8,997.4	7,478.9	30.2	29.4	-90.00	1,046.3	-133.4	604.7	545.4	59.29	10.198		
9,100.0	7,478.5	9,097.4	7,478.5	31.8	30.9	-90.00	1,146.3	-133.2	605.2	542.8	62.41	9.697		
9,200.0	7,478.1	9,197.4	7,478.1	33.3	32.6	-90.00	1,246.3	-133.0	605.7	540.1	65.60	9.233		
9,300.0	7,477.7	9,297.4	7,477.7	35.0	34.2	-90.00	1,346.3	-132.9	606.2	537.3	68.86	8.804		
9,400.0	7,477.3	9,397.3	7,477.3	36.6	35.9	-90.00	1,446.3	-132.7	606.7	534.5	72.17	8.406		
9,500.0	7,476.9	9,497.3	7,476.9	38.3	37.6	-90.00	1,546.3	-132.5	607.2	531.7	75.54	8.038		
9,600.0	7,476.5	9,597.3	7,476.5	40.0	39.3	-90.00	1,646.3	-132.3	607.7	528.8	78.96	7.697		
9,700.0	7,476.1	9,697.3	7,476.1	41.7	41.0	-90.00	1,746.3	-132.2	608.2	525.8	82.41	7.381		
9,800.0	7,475.7	9,797.3	7,475.7	43.4	42.8	-90.00	1,846.3	-132.0	608.7	522.9	85.89	7.087		
9,900.0	7,475.3	9,897.3	7,475.3	45.2	44.5	-90.00	1,946.3	-131.8	609.3	519.8	89.41	6.814		
10,000.0	7,474.9	9,997.3	7,474.9	46.9	46.3	-90.00	2,046.3	-131.7	609.8	516.8	92.95	6.560		
10,100.0	7,474.5	10,097.3	7,474.5	48.7	48.1	-90.00	2,146.3	-131.5	610.3	513.8	96.52	6.323		
10,200.0	7,474.1	10,197.3	7,474.0	50.5	49.9	-90.00	2,246.3	-131.3	610.8	510.7	100.10	6.101		
10,300.0	7,473.7	10,297.3	7,473.6	52.3	51.7	-90.00	2,346.3	-131.2	611.3	507.6	103.71	5.894		
10,400.0	7,473.3	10,397.3	7,473.2	54.1	53.5	-90.00	2,446.3	-131.0	611.8	504.5	107.33	5.700		
10,500.0	7,472.9	10,497.3	7,472.8	55.9	55.3	-90.00	2,546.2	-130.8	612.3	501.3	110.97	5.518		
10,600.0	7,472.5	10,597.3	7,472.4	57.7	57.2	-90.00	2,646.2	-130.7	612.8	498.2	114.63	5.346		
10,700.0	7,472.1	10,697.3	7,472.0	59.5	59.0	-90.00	2,746.2	-130.5	613.3	495.0	118.29	5.185		
10,800.0	7,471.7	10,797.3	7,471.6	61.4	60.8	-90.00	2,846.2	-130.3	613.8	491.9	121.97	5.033		
10,900.0	7,471.3	10,897.3	7,471.2	63.2	62.7	-90.00	2,946.2	-130.1	614.3	488.7	125.66	4.889		
11,000.0	7,470.9	10,997.3	7,470.8	65.0	64.5	-90.00	3,046.2	-130.0	614.8	485.5	129.35	4.753		
11,100.0	7,470.5	11,097.3	7,470.4	66.9	66.4	-90.00	3,146.2	-129.8	615.4	482.3	133.06	4.625		
11,200.0	7,470.0	11,197.3	7,470.0	68.7	68.3	-90.00	3,246.2	-129.6	615.9	479.1	136.77	4.503		
11,300.0	7,469.6	11,297.3	7,469.6	70.6	70.1	-90.00	3,346.2	-129.5	616.4	475.9	140.50	4.387		
11,400.0	7,469.2	11,397.3	7,469.2	72.5	72.0	-90.00	3,446.2	-129.3	616.9	472.7	144.22	4.277		
11,500.0	7,468.8	11,497.3	7,468.8	74.3	73.9	-90.00	3,546.2	-129.1	617.4	469.4	147.96	4.173		
11,600.0	7,468.4	11,597.3	7,468.4	76.2	75.7	-90.00	3,646.2	-129.0	617.9	466.2	151.70	4.073		
11,700.0	7,468.0	11,697.3	7,468.0	78.0	77.6	-90.00	3,746.2	-128.8	618.4	463.0	155.45	3.978		
11,800.0	7,467.6	11,797.3	7,467.6	79.9	79.5	-90.00	3,846.2	-128.6	618.9	459.7	159.20	3.888		
11,900.0	7,467.2	11,897.3	7,467.2	81.8	81.4	-90.00	3,946.2	-128.4	619.4	456.5	162.95	3.801		
12,000.0	7,466.8	11,997.3	7,466.8	83.7	83.3	-90.00	4,046.2	-128.3	619.9	453.2	166.71	3.719		
12,100.0	7,466.4	12,097.3	7,466.4	85.5	85.1	-90.00	4,146.2	-128.1	620.4	450.0	170.48	3.639		
12,200.0	7,466.0	12,197.3	7,466.0	87.4	87.0	-90.00	4,246.2	-127.9	621.0	446.7	174.25	3.564		
12,300.0	7,465.6	12,297.3	7,465.6	89.3	88.9	-90.00	4,346.2	-127.8	621.5	443.4	178.02	3.491		
12,400.0	7,465.2	12,397.3	7,465.2	91.2	90.8	-90.00	4,446.2	-127.6	622.0	440.2	181.80	3.421		
12,500.0	7,464.8	12,497.3	7,464.8	93.1	92.7	-90.00	4,546.2	-127.4	622.5	436.9	185.57	3.354		
12,600.0	7,464.4	12,597.3	7,464.4	94.9	94.6	-90.00	4,646.2	-127.3	623.0	433.6	189.36	3.290		
12,700.0	7,464.0	12,697.3	7,464.0	96.8	96.5	-90.00	4,746.2	-127.1	623.5	430.4	193.14	3.228		
12,800.0	7,463.6	12,797.3	7,463.6	98.7	98.4	-90.00	4,846.2	-126.9	624.0	427.1	196.93	3.169		
12,900.0	7,463.2	12,897.3	7,463.2	100.6	100.3	-90.00	4,946.2	-126.8	624.5	423.8	200.72	3.111		
13,000.0	7,462.8	12,997.3	7,462.8	102.5	102.2	-90.00	5,046.2	-126.6	625.0	420.5	204.51	3.056		
13,100.0	7,462.4	13,097.3	7,462.4	104.4	104.1	-90.00	5,146.2	-126.4	625.5	417.2	208.30	3.003		
13,200.0	7,462.0	13,197.3	7,462.0	106.3	106.0	-90.00	5,246.2	-126.2	626.0	413.9	212.10	2.952		
13,300.0	7,461.6	13,297.3	7,461.6	108.2	107.9	-90.00	5,346.2	-126.1	626.5	410.6	215.90	2.902		
13,400.0	7,461.2	13,397.3	7,461.2	110.1	109.8	-90.00	5,446.2	-125.9	627.1	407.4	219.70	2.854		
13,500.0	7,460.8	13,497.3	7,460.8	112.0	111.7	-90.00	5,546.2	-125.7	627.6	404.1	223.50	2.808		
13,600.0	7,460.4	13,597.3	7,460.4	113.9	113.6	-90.00	5,646.2	-125.6	628.1	400.8	227.30	2.763		
13,700.0	7,460.0	13,697.3	7,460.0	115.8	115.5	-90.00	5,746.2	-125.4	628.6	397.5	231.11	2.720		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
13,800.0	7,459.6	13,797.3	7,459.6	117.7	117.4	-90.00	5,846.2	-125.2	629.1	394.2	234.92	2.678		
13,900.0	7,459.2	13,897.3	7,459.2	119.6	119.3	-90.00	5,946.2	-125.1	629.6	390.9	238.72	2.637		
14,000.0	7,458.8	13,997.3	7,458.8	121.5	121.2	-90.00	6,046.2	-124.9	630.1	387.6	242.53	2.598		
14,100.0	7,458.4	14,097.3	7,458.4	123.4	123.1	-90.00	6,146.2	-124.7	630.6	384.3	246.35	2.560		
14,200.0	7,458.0	14,197.3	7,458.0	125.3	125.0	-90.00	6,246.2	-124.6	631.1	381.0	250.16	2.523		
14,300.0	7,457.6	14,297.3	7,457.6	127.2	126.9	-90.00	6,346.2	-124.4	631.6	377.7	253.97	2.487		
14,400.0	7,457.2	14,397.3	7,457.2	129.1	128.8	-90.00	6,446.2	-124.2	632.1	374.4	257.79	2.452		
14,500.0	7,456.8	14,497.3	7,456.8	131.0	130.8	-90.00	6,546.2	-124.0	632.6	371.0	261.60	2.418		
14,600.0	7,456.4	14,597.3	7,456.4	132.9	132.7	-90.00	6,646.2	-123.9	633.2	367.7	265.42	2.385		
14,700.0	7,456.0	14,697.3	7,456.0	134.8	134.6	-90.00	6,746.2	-123.7	633.7	364.4	269.24	2.354		
14,800.0	7,455.6	14,797.3	7,455.6	136.7	136.5	-90.00	6,846.2	-123.5	634.2	361.1	273.06	2.322		
14,900.0	7,455.2	14,897.3	7,455.1	138.6	138.4	-90.00	6,946.2	-123.4	634.7	357.8	276.88	2.292		
15,000.0	7,454.8	14,997.3	7,454.7	140.5	140.3	-90.00	7,046.1	-123.2	635.2	354.5	280.70	2.263		
15,100.0	7,454.4	15,097.3	7,454.3	142.4	142.2	-90.00	7,146.1	-123.0	635.7	351.2	284.52	2.234		
15,200.0	7,454.0	15,197.3	7,453.9	144.3	144.1	-90.00	7,246.1	-122.9	636.2	347.9	288.34	2.206		
15,300.0	7,453.6	15,297.3	7,453.5	146.2	146.0	-90.00	7,346.1	-122.7	636.7	344.5	292.16	2.179		
15,400.0	7,453.2	15,397.3	7,453.1	148.2	148.0	-90.00	7,446.1	-122.5	637.2	341.2	295.99	2.153		
15,500.0	7,452.8	15,497.3	7,452.7	150.1	149.9	-90.00	7,546.1	-122.3	637.7	337.9	299.81	2.127		
15,600.0	7,452.4	15,597.3	7,452.3	152.0	151.8	-90.00	7,646.1	-122.2	638.2	334.6	303.64	2.102		
15,700.0	7,451.9	15,697.3	7,451.9	153.9	153.7	-90.00	7,746.1	-122.0	638.7	331.3	307.47	2.077		
15,800.0	7,451.5	15,797.3	7,451.5	155.8	155.6	-90.00	7,846.1	-121.8	639.3	328.0	311.29	2.054		
15,900.0	7,451.1	15,897.3	7,451.1	157.7	157.5	-90.00	7,946.1	-121.7	639.8	324.6	315.12	2.030		
16,000.0	7,450.7	15,997.3	7,450.7	159.6	159.4	-90.00	8,046.1	-121.5	640.3	321.3	318.95	2.007		
16,100.0	7,450.3	16,097.3	7,450.3	161.5	161.4	-90.00	8,146.1	-121.3	640.8	318.0	322.78	1.985		
16,200.0	7,449.9	16,197.3	7,449.9	163.4	163.3	-90.00	8,246.1	-121.2	641.3	314.7	326.61	1.963		
16,300.0	7,449.5	16,297.3	7,449.5	165.4	165.2	-90.00	8,346.1	-121.0	641.8	311.4	330.44	1.942		
16,400.0	7,449.1	16,397.3	7,449.1	167.3	167.1	-90.00	8,446.1	-120.8	642.3	308.0	334.27	1.922		
16,500.0	7,448.7	16,497.3	7,448.7	169.2	169.0	-90.00	8,546.1	-120.7	642.8	304.7	338.10	1.901		
16,600.0	7,448.3	16,597.3	7,448.3	171.1	170.9	-90.00	8,646.1	-120.5	643.3	301.4	341.93	1.881		
16,700.0	7,447.9	16,697.3	7,447.9	173.0	172.9	-90.00	8,746.1	-120.3	643.8	298.1	345.76	1.862		
16,800.0	7,447.5	16,797.3	7,447.5	174.9	174.8	-90.00	8,846.1	-120.1	644.3	294.7	349.59	1.843		
16,900.0	7,447.1	16,897.3	7,447.1	176.8	176.7	-90.00	8,946.1	-120.0	644.8	291.4	353.42	1.825		
17,000.0	7,446.7	16,997.3	7,446.7	178.8	178.6	-90.00	9,046.1	-119.8	645.4	288.1	357.26	1.806		
17,100.0	7,446.3	17,097.2	7,446.3	180.7	180.5	-90.00	9,146.1	-119.6	645.9	284.8	361.09	1.789		
17,200.0	7,445.9	17,197.2	7,445.9	182.6	182.5	-90.00	9,246.1	-119.5	646.4	281.4	364.93	1.771		
17,300.0	7,445.5	17,297.2	7,445.5	184.5	184.4	-90.00	9,346.1	-119.3	646.9	278.1	368.76	1.754		
17,400.0	7,445.1	17,397.2	7,445.1	186.4	186.3	-90.00	9,446.1	-119.1	647.4	274.8	372.59	1.738		
17,500.0	7,444.7	17,497.2	7,444.7	188.3	188.2	-90.00	9,546.1	-119.0	647.9	271.5	376.43	1.721		
17,600.0	7,444.3	17,597.2	7,444.3	190.2	190.1	-90.00	9,646.1	-118.8	648.4	268.1	380.27	1.705		
17,700.0	7,443.9	17,697.2	7,443.9	192.2	192.0	-90.00	9,746.1	-118.6	648.9	264.8	384.10	1.689		
17,800.0	7,443.5	17,797.2	7,443.5	194.1	194.0	-90.00	9,846.1	-118.4	649.4	261.5	387.94	1.674		
17,900.0	7,443.1	17,897.2	7,443.1	196.0	195.9	-90.00	9,946.1	-118.3	649.9	258.2	391.77	1.659		
17,925.0	7,443.0	17,918.2	7,443.0	196.5	196.3	-90.00	9,967.1	-118.2	650.1	257.4	392.66	1.656 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	1.0	1.0	0.0	0.0	-90.43	-5.8	-774.7	774.7					
100.0	100.0	101.0	101.0	0.1	0.1	-90.43	-5.8	-774.7	774.7	774.5	0.23	3,412.691		
200.0	200.0	201.0	201.0	0.3	0.3	-90.43	-5.8	-774.7	774.7	774.1	0.68	1,145.122		
300.0	300.0	301.0	301.0	0.6	0.6	-90.43	-5.8	-774.7	774.7	773.6	1.13	687.988		
400.0	400.0	401.0	401.0	0.8	0.8	-90.43	-5.8	-774.7	774.7	773.2	1.58	491.700		
500.0	500.0	501.0	501.0	1.0	1.0	-90.43	-5.8	-774.7	774.7	772.7	2.03	382.555		
600.0	600.0	601.0	601.0	1.2	1.2	-90.43	-5.8	-774.7	774.7	772.3	2.47	313.062		
700.0	700.0	701.0	701.0	1.5	1.5	-90.43	-5.8	-774.7	774.7	771.8	2.92	264.936		
800.0	800.0	801.0	801.0	1.7	1.7	-90.43	-5.8	-774.7	774.7	771.4	3.37	229.635		
900.0	900.0	901.0	901.0	1.9	1.9	-90.43	-5.8	-774.7	774.7	770.9	3.82	202.635		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.43	-5.8	-774.7	774.7	770.5	4.27	181.316		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.43	-5.8	-774.7	774.7	770.0	4.72	164.056		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.43	-5.8	-774.7	774.7	769.6	5.17	149.797		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.43	-5.8	-774.7	774.7	769.1	5.62	137.818		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.43	-5.8	-774.7	774.7	768.7	6.07	127.613		
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-90.43	-5.8	-774.7	774.7	768.2	6.52	118.815 CC, ES		
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	123.18	-5.8	-774.7	775.4	768.5	6.94	111.689		
1,700.0	1,699.9	1,700.9	1,700.9	3.6	3.7	123.39	-5.8	-774.7	777.6	770.3	7.34	105.908		
1,800.0	1,799.7	1,800.7	1,800.7	3.8	3.9	123.75	-5.8	-774.7	781.2	773.5	7.75	100.836		
1,900.0	1,899.3	1,900.3	1,900.3	4.0	4.2	124.24	-5.8	-774.7	786.4	778.2	8.16	96.362		
2,000.0	1,998.6	1,999.6	1,999.6	4.2	4.4	124.85	-5.8	-774.7	793.0	784.5	8.58	92.393 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	-90.34	-0.8	-125.2	125.2					
100.0	100.0	100.0	100.0	0.1	0.1	-90.34	-0.8	-125.2	125.2	125.0	0.22	557.043		
200.0	200.0	200.0	200.0	0.3	0.3	-90.34	-0.8	-125.2	125.2	124.5	0.67	185.681		
300.0	300.0	300.0	300.0	0.6	0.6	-90.34	-0.8	-125.2	125.2	124.1	1.12	111.409		
400.0	400.0	400.0	400.0	0.8	0.8	-90.34	-0.8	-125.2	125.2	123.6	1.57	79.578		
500.0	500.0	500.0	500.0	1.0	1.0	-90.34	-0.8	-125.2	125.2	123.2	2.02	61.894		
600.0	600.0	600.0	600.0	1.2	1.2	-90.34	-0.8	-125.2	125.2	122.7	2.47	50.640		
700.0	700.0	700.0	700.0	1.5	1.5	-90.34	-0.8	-125.2	125.2	122.3	2.92	42.849		
800.0	800.0	800.0	800.0	1.7	1.7	-90.34	-0.8	-125.2	125.2	121.8	3.37	37.136		
900.0	900.0	900.0	900.0	1.9	1.9	-90.34	-0.8	-125.2	125.2	121.4	3.82	32.767		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.34	-0.8	-125.2	125.2	120.9	4.27	29.318		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.34	-0.8	-125.2	125.2	120.5	4.72	26.526		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.34	-0.8	-125.2	125.2	120.0	5.17	24.219		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.34	-0.8	-125.2	125.2	119.6	5.62	22.282		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.34	-0.8	-125.2	125.2	119.1	6.07	20.631		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.34	-0.8	-125.2	125.2	118.7	6.52	19.208 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	123.68	-0.8	-125.2	125.9	119.0	6.94	18.143		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	125.12	-0.8	-125.2	128.1	120.8	7.34	17.459		
1,800.0	1,799.7	1,799.7	1,799.7	3.8	3.9	127.39	-0.8	-125.2	132.0	124.3	7.74	17.048		
1,900.0	1,899.3	1,899.3	1,899.3	4.0	4.2	130.34	-0.8	-125.2	137.8	129.6	8.15	16.898		
2,000.0	1,998.6	1,998.6	1,998.6	4.2	4.4	133.77	-0.8	-125.2	145.7	137.1	8.57	17.002		
2,100.0	2,097.5	2,097.5	2,097.5	4.5	4.6	137.45	-0.8	-125.2	156.0	147.0	8.99	17.358		
2,200.0	2,196.1	2,196.1	2,196.1	4.7	4.8	141.19	-0.8	-125.2	168.9	159.5	9.41	17.957		
2,300.0	2,294.2	2,294.2	2,294.2	5.0	5.0	144.83	-0.8	-125.2	184.6	174.8	9.83	18.789		
2,330.1	2,323.6	2,323.6	2,323.6	5.1	5.1	145.88	-0.8	-125.2	189.9	180.0	9.95	19.082		
2,400.0	2,391.8	2,391.8	2,391.8	5.4	5.3	148.26	-0.8	-125.2	202.6	192.4	10.26	19.747		
2,500.0	2,489.5	2,489.5	2,489.5	5.7	5.5	151.18	-0.8	-125.2	221.4	210.7	10.71	20.674		
2,600.0	2,587.1	2,587.3	2,587.3	6.1	5.7	153.89	0.1	-124.7	240.6	229.4	11.15	21.571		
2,700.0	2,684.8	2,684.6	2,684.6	6.5	5.9	156.74	3.0	-122.8	260.2	248.6	11.59	22.456		
2,800.0	2,782.4	2,781.8	2,781.6	6.9	6.1	159.41	6.8	-120.3	280.5	268.4	12.02	23.329		
2,900.0	2,880.1	2,878.9	2,878.6	7.3	6.3	161.73	10.7	-117.9	301.2	288.8	12.46	24.178		
3,000.0	2,977.7	2,976.0	2,975.7	7.7	6.6	163.74	14.5	-115.4	322.4	309.5	12.90	24.994		
3,100.0	3,075.4	3,073.2	3,072.7	8.1	6.8	165.51	18.3	-112.9	343.9	330.6	13.34	25.777		
3,200.0	3,173.0	3,170.3	3,169.7	8.6	7.0	167.07	22.2	-110.5	365.7	352.0	13.79	26.524		
3,300.0	3,270.7	3,267.4	3,266.7	9.0	7.2	168.46	26.0	-108.0	387.8	373.5	14.24	27.234		
3,400.0	3,368.3	3,364.6	3,363.8	9.4	7.4	169.70	29.8	-105.5	410.0	395.3	14.69	27.909		
3,500.0	3,466.0	3,461.7	3,460.8	9.9	7.7	170.81	33.7	-103.1	432.4	417.3	15.15	28.549		
3,600.0	3,563.6	3,558.8	3,557.8	10.3	7.9	171.81	37.5	-100.6	454.9	439.3	15.60	29.156		
3,700.0	3,661.3	3,656.0	3,654.8	10.8	8.1	172.72	41.3	-98.1	477.6	461.5	16.06	29.732		
3,800.0	3,758.9	3,753.1	3,751.9	11.2	8.3	173.54	45.2	-95.7	500.3	483.8	16.53	30.277		
3,900.0	3,856.6	3,850.2	3,848.9	11.7	8.6	174.30	49.0	-93.2	523.2	506.2	16.99	30.794		
4,000.0	3,954.2	3,947.4	3,945.9	12.1	8.8	174.99	52.8	-90.8	546.1	528.7	17.46	31.285		
4,100.0	4,051.9	4,044.5	4,042.9	12.6	9.0	175.62	56.7	-88.3	569.1	551.2	17.92	31.750		
4,200.0	4,149.5	4,141.6	4,140.0	13.1	9.2	176.21	60.5	-85.8	592.2	573.8	18.39	32.193		
4,300.0	4,247.1	4,238.8	4,237.0	13.5	9.4	176.75	64.3	-83.4	615.3	596.4	18.87	32.613		
4,400.0	4,344.8	4,335.9	4,334.0	14.0	9.7	177.25	68.2	-80.9	638.4	619.1	19.34	33.012		
4,500.0	4,442.4	4,433.0	4,431.0	14.4	9.9	177.72	72.0	-78.4	661.6	641.8	19.81	33.393		
4,600.0	4,540.1	4,530.2	4,528.1	14.9	10.1	178.16	75.8	-76.0	684.9	664.6	20.29	33.755		
4,700.0	4,637.7	4,627.3	4,625.1	15.4	10.3	178.57	79.7	-73.5	708.2	687.4	20.77	34.100		
4,800.0	4,735.4	4,724.4	4,722.1	15.8	10.6	178.95	83.5	-71.0	731.5	710.2	21.25	34.429		
4,900.0	4,833.0	4,821.6	4,819.2	16.3	10.8	179.31	87.3	-68.6	754.8	733.1	21.73	34.743		
5,000.0	4,930.7	4,918.7	4,916.2	16.8	11.0	179.64	91.2	-66.1	778.2	756.0	22.21	35.044		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
6,950.0	6,864.6	8,010.6	7,482.5	21.5	21.2	-100.59	-691.9	-31.6	789.7	747.9	41.81	18.886		
7,000.0	6,913.9	8,001.9	7,482.6	21.5	21.1	-104.15	-683.1	-31.7	751.9	710.0	41.84	17.972		
7,050.0	6,962.4	7,989.7	7,482.6	21.5	20.9	-106.85	-670.9	-31.7	716.0	674.3	41.68	17.179		
7,100.0	7,010.0	7,974.2	7,482.7	21.4	20.7	-108.76	-655.4	-31.8	682.3	641.0	41.37	16.492		
7,150.0	7,056.4	7,955.4	7,482.8	21.3	20.5	-109.95	-636.6	-31.9	651.2	610.3	40.96	15.900		
7,200.0	7,101.4	7,933.4	7,482.9	21.2	20.3	-110.50	-614.7	-32.0	623.0	582.5	40.46	15.395		
7,250.0	7,144.7	7,908.4	7,483.0	21.1	20.0	-110.47	-589.6	-32.1	597.7	557.7	39.91	14.975		
7,300.0	7,186.2	7,867.7	7,482.5	20.9	19.5	-108.84	-548.9	-32.2	575.3	536.0	39.25	14.658		
7,350.0	7,225.7	7,822.4	7,479.3	20.8	19.1	-106.53	-503.8	-32.4	555.3	516.7	38.57	14.396		
7,400.0	7,263.0	7,780.6	7,473.8	20.6	18.6	-104.21	-462.3	-32.6	537.9	500.0	37.95	14.175		
7,450.0	7,297.8	7,741.2	7,466.4	20.5	18.3	-101.85	-423.6	-32.8	523.4	486.0	37.37	14.004		
7,500.0	7,330.0	7,703.9	7,457.5	20.3	17.9	-99.39	-387.4	-32.9	511.8	475.0	36.85	13.890		
7,550.0	7,359.5	7,668.1	7,447.2	20.1	17.7	-96.83	-353.2	-33.1	503.4	467.0	36.37	13.840 SF		
7,600.0	7,386.1	7,633.7	7,435.6	20.0	17.4	-94.14	-320.7	-33.2	498.2	462.2	35.93	13.864		
7,650.0	7,409.7	7,600.3	7,423.0	19.8	17.2	-91.34	-289.8	-33.4	496.0	460.5	35.51	13.970		
7,661.0	7,414.4	7,593.1	7,420.1	19.8	17.1	-90.72	-283.2	-33.4	495.9	460.5	35.42	14.001		
7,700.0	7,430.1	7,567.7	7,409.3	19.7	16.9	-88.44	-260.3	-33.5	496.8	461.7	35.10	14.155		
7,750.0	7,447.4	7,535.9	7,394.6	19.5	16.8	-85.45	-232.1	-33.6	500.4	465.7	34.68	14.429		
7,800.0	7,461.3	7,504.7	7,378.9	19.4	16.6	-82.39	-205.1	-33.7	506.5	472.2	34.24	14.791		
7,850.0	7,471.8	7,474.0	7,362.5	19.3	16.4	-79.31	-179.2	-33.8	514.8	481.0	33.79	15.237		
7,900.0	7,478.9	7,443.8	7,345.1	19.2	16.3	-76.22	-154.4	-33.9	525.1	491.8	33.31	15.766		
7,950.0	7,482.5	7,413.9	7,327.0	19.2	16.2	-73.17	-130.7	-34.0	536.9	504.1	32.81	16.365		
7,979.8	7,483.0	7,400.0	7,318.3	19.2	16.1	-71.62	-119.9	-34.1	544.6	512.1	32.57	16.721		
7,980.2	7,483.0	7,400.0	7,318.3	19.2	16.1	-71.62	-119.9	-34.1	544.8	512.2	32.57	16.724		
7,982.1	7,483.0	7,400.0	7,318.3	19.2	16.1	-71.62	-119.9	-34.1	545.3	512.7	32.58	16.739		
8,000.0	7,482.9	7,384.6	7,308.3	19.2	16.1	-70.60	-108.1	-34.1	550.2	517.8	32.34	17.010		
8,100.0	7,482.5	7,331.0	7,271.7	19.4	16.0	-66.98	-68.9	-34.3	583.0	551.1	31.84	18.308		
8,200.0	7,482.1	7,284.4	7,237.6	20.1	15.9	-63.76	-37.2	-34.4	624.4	592.9	31.54	19.795		
8,300.0	7,481.7	7,250.0	7,211.2	21.0	15.8	-61.39	-15.2	-34.5	674.0	642.4	31.59	21.338		
8,400.0	7,481.3	7,200.0	7,170.9	22.1	15.7	-57.97	14.4	-34.7	730.7	699.3	31.34	23.317		
8,500.0	7,480.9	7,177.2	7,151.9	23.2	15.7	-56.44	27.0	-34.7	793.4	761.6	31.79	24.958		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2017)													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	-90.02	0.0	-25.4	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	0.0	-25.4	25.4	25.2	0.22	113.128		
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-25.4	25.4	24.8	0.67	37.709		
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	0.0	-25.4	25.4	24.3	1.12	22.626		
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	0.0	-25.4	25.4	23.9	1.57	16.161		
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	0.0	-25.4	25.4	23.4	2.02	12.570		
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	0.0	-25.4	25.4	23.0	2.47	10.284		
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	0.0	-25.4	25.4	22.5	2.92	8.702		
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	0.0	-25.4	25.4	22.1	3.37	7.542		
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	0.0	-25.4	25.4	21.6	3.82	6.655		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.02	0.0	-25.4	25.4	21.2	4.27	5.954		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.02	0.0	-25.4	25.4	20.7	4.72	5.387		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.02	0.0	-25.4	25.4	20.3	5.17	4.919		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.02	0.0	-25.4	25.4	19.8	5.62	4.525		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.02	0.0	-25.4	25.4	19.4	6.07	4.190		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.02	0.0	-25.4	25.4	18.9	6.52	3.901 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	125.90	0.0	-25.4	26.2	19.2	6.94	3.771		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	132.24	0.0	-25.4	28.7	21.3	7.34	3.904		
1,800.0	1,799.7	1,800.4	1,800.4	3.8	3.9	141.79	0.3	-24.1	32.3	24.6	7.73	4.177		
1,900.0	1,899.3	1,900.8	1,900.7	4.0	4.1	153.92	1.3	-20.3	37.0	28.9	8.11	4.559		
2,000.0	1,998.6	2,000.8	2,000.5	4.2	4.3	166.73	2.8	-13.9	43.9	35.5	8.49	5.175		
2,100.0	2,097.5	2,100.3	2,099.6	4.5	4.6	178.44	5.0	-5.1	54.1	45.2	8.88	6.087		
2,200.0	2,196.1	2,199.3	2,197.9	4.7	4.8	-171.85	7.8	6.2	67.7	58.4	9.30	7.284		
2,300.0	2,294.2	2,297.5	2,295.1	5.0	5.1	-164.24	11.2	19.8	84.9	75.2	9.75	8.714		
2,330.1	2,323.6	2,326.9	2,324.2	5.1	5.1	-162.48	12.2	24.0	90.8	80.9	9.89	9.181		
2,400.0	2,391.8	2,395.2	2,391.7	5.4	5.3	-159.25	14.7	33.9	104.9	94.7	10.25	10.238		
2,500.0	2,489.5	2,492.8	2,488.2	5.7	5.6	-155.91	18.2	48.1	125.5	114.7	10.78	11.643		
2,600.0	2,587.1	2,590.4	2,584.7	6.1	5.9	-153.51	21.7	62.2	146.4	135.1	11.33	12.921		
2,700.0	2,684.8	2,688.1	2,681.3	6.5	6.2	-151.71	25.2	76.4	167.5	155.6	11.90	14.076		
2,800.0	2,782.4	2,785.7	2,777.8	6.9	6.4	-150.31	28.7	90.5	188.7	176.2	12.48	15.119		
2,900.0	2,880.1	2,883.4	2,874.4	7.3	6.7	-149.20	32.2	104.7	210.0	196.9	13.07	16.061		
3,000.0	2,977.7	2,981.0	2,970.9	7.7	7.0	-148.29	35.7	118.9	231.3	217.6	13.68	16.912		
3,100.0	3,075.4	3,078.6	3,067.4	8.1	7.4	-147.53	39.2	133.0	252.7	238.4	14.29	17.682		
3,200.0	3,173.0	3,176.3	3,164.0	8.6	7.7	-146.89	42.7	147.2	274.1	259.2	14.91	18.381		
3,300.0	3,270.7	3,273.9	3,260.5	9.0	8.0	-146.35	46.2	161.3	295.6	280.0	15.54	19.017		
3,400.0	3,368.3	3,371.5	3,357.1	9.4	8.3	-145.87	49.7	175.5	317.1	300.9	16.18	19.597		
3,500.0	3,466.0	3,469.2	3,453.6	9.9	8.6	-145.46	53.2	189.6	338.6	321.7	16.82	20.128		
3,600.0	3,563.6	3,566.8	3,550.1	10.3	9.0	-145.10	56.7	203.8	360.1	342.6	17.47	20.614		
3,700.0	3,661.3	3,664.4	3,646.7	10.8	9.3	-144.78	60.2	217.9	381.6	363.5	18.12	21.061		
3,800.0	3,758.9	3,762.1	3,743.2	11.2	9.6	-144.49	63.7	232.1	403.1	384.3	18.77	21.473		
3,900.0	3,856.6	3,859.7	3,839.8	11.7	9.9	-144.23	67.2	246.3	424.7	405.2	19.43	21.853		
4,000.0	3,954.2	3,957.3	3,936.3	12.1	10.3	-144.00	70.7	260.4	446.2	426.1	20.09	22.205		
4,100.0	4,051.9	4,055.0	4,032.8	12.6	10.6	-143.79	74.2	274.6	467.8	447.0	20.76	22.532		
4,200.0	4,149.5	4,152.6	4,129.4	13.1	10.9	-143.59	77.7	288.7	489.3	467.9	21.43	22.836		
4,300.0	4,247.1	4,250.2	4,225.9	13.5	11.3	-143.42	81.2	302.9	510.9	488.8	22.10	23.119		
4,400.0	4,344.8	4,347.9	4,322.5	14.0	11.6	-143.26	84.7	317.0	532.5	509.7	22.77	23.383		
4,500.0	4,442.4	4,445.5	4,419.0	14.4	11.9	-143.11	88.2	331.2	554.0	530.6	23.45	23.630		
4,600.0	4,540.1	4,543.2	4,515.5	14.9	12.3	-142.97	91.7	345.3	575.6	551.5	24.12	23.862		
4,700.0	4,637.7	4,640.8	4,612.1	15.4	12.6	-142.84	95.2	359.5	597.2	572.4	24.80	24.079		
4,800.0	4,735.4	4,738.4	4,708.6	15.8	13.0	-142.72	98.7	373.6	618.8	593.3	25.48	24.283		
4,900.0	4,833.0	4,836.1	4,805.2	16.3	13.3	-142.61	102.2	387.8	640.4	614.2	26.16	24.476		
5,000.0	4,930.7	4,933.7	4,901.7	16.8	13.6	-142.50	105.7	402.0	661.9	635.1	26.85	24.657		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design		Crittter Creek Pad 15-11N-63W - Crittter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2017)											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			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,100.0	5,028.3	5,031.3	4,998.2	17.2	14.0	-142.40	109.2	416.1	683.5	656.0	27.53	24.829			
5,200.0	5,126.0	5,129.0	5,094.8	17.7	14.3	-142.31	112.7	430.3	705.1	676.9	28.22	24.991			
5,300.0	5,223.6	5,226.6	5,191.3	18.2	14.7	-142.23	116.2	444.4	726.7	697.8	28.90	25.145			
5,400.0	5,321.3	5,324.2	5,287.9	18.7	15.0	-142.15	119.7	458.6	748.3	718.7	29.59	25.290			
5,462.5	5,382.3	5,385.3	5,348.2	18.9	15.2	-142.10	121.9	467.4	761.8	731.8	30.02	25.377			
5,500.0	5,419.0	5,421.9	5,384.4	19.1	15.4	-142.16	123.2	472.7	769.7	739.4	30.29	25.410			
5,600.0	5,517.2	5,520.0	5,481.4	19.4	15.7	-142.19	126.7	487.0	789.0	758.0	30.97	25.471			
6,800.0	6,714.9	8,060.2	7,482.5	21.3	23.4	91.10	-696.1	568.6	775.2	734.3	40.96	18.929			
6,851.9	6,766.8	8,060.0	7,482.5	21.4	23.4	90.99	-695.9	568.6	723.9	682.8	41.05	17.635			
6,900.0	6,814.9	8,058.2	7,482.5	21.5	23.4	112.89	-694.1	568.5	676.4	640.2	36.23	18.670			
6,950.0	6,864.6	8,052.9	7,482.5	21.5	23.4	128.15	-688.8	568.5	627.4	594.1	33.25	18.866			
7,000.0	6,913.9	8,044.1	7,482.6	21.5	23.3	137.30	-680.0	568.4	578.9	547.0	31.89	18.155			
7,050.0	6,962.4	8,032.0	7,482.6	21.5	23.1	142.80	-667.9	568.3	531.3	500.3	31.09	17.088			
7,100.0	7,010.0	8,016.5	7,482.7	21.4	23.0	146.13	-652.4	568.2	484.9	454.5	30.40	15.950			
7,150.0	7,056.4	7,997.7	7,482.8	21.3	22.8	148.04	-633.6	568.0	439.7	410.1	29.64	14.835			
7,200.0	7,101.4	7,975.7	7,482.9	21.2	22.5	148.94	-611.6	567.8	396.3	367.5	28.80	13.759			
7,250.0	7,144.7	7,950.6	7,483.0	21.1	22.3	149.05	-586.5	567.5	354.7	326.8	27.87	12.725			
7,300.0	7,186.2	7,911.7	7,482.6	20.9	21.9	147.11	-547.6	567.2	315.1	288.0	27.04	11.650			
7,350.0	7,225.7	7,866.0	7,479.7	20.8	21.5	143.48	-502.1	566.8	276.3	249.7	26.52	10.416			
7,400.0	7,263.0	7,823.8	7,474.4	20.6	21.2	139.15	-460.2	566.4	238.6	212.1	26.41	9.033			
7,450.0	7,297.8	7,784.2	7,467.1	20.5	20.9	133.82	-421.2	566.0	202.5	175.6	26.90	7.528			
7,500.0	7,330.0	7,746.6	7,458.3	20.3	20.6	127.11	-384.7	565.7	168.9	140.8	28.16	6.000			
7,550.0	7,359.5	7,710.6	7,448.1	20.1	20.4	118.59	-350.2	565.4	139.4	109.1	30.23	4.610			
7,600.0	7,386.1	7,675.9	7,436.6	20.0	20.2	107.93	-317.5	565.1	116.3	83.5	32.80	3.546			
7,650.0	7,409.7	7,642.3	7,423.9	19.8	20.0	95.23	-286.4	564.8	103.5	68.5	35.03	2.956			
7,673.0	7,419.5	7,627.2	7,417.8	19.7	20.0	88.94	-272.5	564.6	102.1	66.4	35.65	2.863 SF			
7,700.0	7,430.1	7,609.6	7,410.2	19.7	19.9	81.42	-256.6	564.5	104.1	68.2	35.86	2.902			
7,750.0	7,447.4	7,577.7	7,395.6	19.5	19.8	68.02	-228.2	564.2	116.9	82.2	34.77	3.363			
7,800.0	7,461.3	7,546.3	7,380.0	19.4	19.7	56.34	-201.1	564.0	138.1	105.9	32.21	4.286			
7,850.0	7,471.8	7,515.5	7,363.5	19.3	19.6	46.86	-175.0	563.7	163.7	134.6	29.09	5.627			
7,900.0	7,478.9	7,485.1	7,346.1	19.2	19.5	39.44	-150.1	563.5	191.5	165.4	26.10	7.336			
7,950.0	7,482.5	7,450.0	7,324.8	19.2	19.4	33.07	-122.2	563.2	220.2	196.9	23.34	9.436			
7,979.8	7,483.0	7,437.5	7,316.9	19.2	19.4	30.86	-112.5	563.2	237.2	214.8	22.44	10.572			
7,980.2	7,483.0	7,437.2	7,316.7	19.2	19.4	30.84	-112.3	563.2	237.5	215.1	22.43	10.588			
7,982.1	7,483.0	7,436.1	7,316.0	19.2	19.4	30.75	-111.5	563.1	238.6	216.2	22.40	10.653			
8,000.0	7,482.9	7,425.7	7,309.2	19.2	19.3	29.74	-103.5	563.1	249.0	227.0	22.00	11.319			
8,100.0	7,482.5	7,371.9	7,272.6	19.4	19.2	25.15	-64.2	562.7	312.1	291.7	20.40	15.301			
8,200.0	7,482.1	7,325.2	7,238.5	20.1	19.2	21.90	-32.2	562.4	381.7	362.2	19.48	19.598			
8,300.0	7,481.7	7,284.4	7,207.1	21.0	19.1	19.54	-6.3	562.2	456.3	437.2	19.02	23.988			
8,400.0	7,481.3	7,250.0	7,179.4	22.1	19.1	17.83	14.2	562.0	534.7	515.8	18.91	28.284			
8,500.0	7,480.9	7,217.6	7,152.5	23.2	19.1	16.42	32.3	561.8	616.3	597.4	18.96	32.509			
8,600.0	7,480.5	7,200.0	7,137.6	24.5	19.0	15.72	41.6	561.7	700.5	681.2	19.36	36.175			
8,700.0	7,480.1	7,165.7	7,107.8	25.8	19.0	14.49	58.6	561.6	786.5	767.0	19.53	40.270			

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	-90.85	-0.7	-49.7	49.8					
100.0	100.0	100.0	100.0	0.1	0.1	-90.85	-0.7	-49.7	49.8	49.5	0.22	221.362		
200.0	200.0	200.0	200.0	0.3	0.3	-90.85	-0.7	-49.7	49.8	49.1	0.67	73.787		
300.0	300.0	300.0	300.0	0.6	0.6	-90.85	-0.7	-49.7	49.8	48.6	1.12	44.272		
400.0	400.0	400.0	400.0	0.8	0.8	-90.85	-0.7	-49.7	49.8	48.2	1.57	31.623		
500.0	500.0	500.0	500.0	1.0	1.0	-90.85	-0.7	-49.7	49.8	47.7	2.02	24.596		
600.0	600.0	600.0	600.0	1.2	1.2	-90.85	-0.7	-49.7	49.8	47.3	2.47	20.124		
700.0	700.0	700.0	700.0	1.5	1.5	-90.85	-0.7	-49.7	49.8	46.8	2.92	17.028		
800.0	800.0	800.0	800.0	1.7	1.7	-90.85	-0.7	-49.7	49.8	46.4	3.37	14.757		
900.0	900.0	900.0	900.0	1.9	1.9	-90.85	-0.7	-49.7	49.8	45.9	3.82	13.021		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.85	-0.7	-49.7	49.8	45.5	4.27	11.651		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.85	-0.7	-49.7	49.8	45.0	4.72	10.541		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.85	-0.7	-49.7	49.8	44.6	5.17	9.624		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.85	-0.7	-49.7	49.8	44.1	5.62	8.854		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.85	-0.7	-49.7	49.8	43.7	6.07	8.199		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.85	-0.7	-49.7	49.8	43.2	6.52	7.633 CC		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	123.93	-0.7	-49.7	50.5	43.5	6.94	7.272		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	127.44	-0.7	-49.7	52.8	45.4	7.34	7.189		
1,800.0	1,799.7	1,799.7	1,799.7	3.8	3.9	132.62	-0.7	-49.7	57.0	49.2	7.74	7.360		
1,900.0	1,899.3	1,899.3	1,899.3	4.0	4.2	138.62	-0.7	-49.7	63.5	55.4	8.15	7.799		
2,000.0	1,998.6	1,999.7	1,999.7	4.2	4.4	143.91	-2.0	-49.4	72.0	63.5	8.53	8.444		
2,100.0	2,097.5	2,100.4	2,100.4	4.5	4.5	147.64	-5.8	-48.2	81.4	72.5	8.88	9.165		
2,200.0	2,196.1	2,201.4	2,201.1	4.7	4.7	150.20	-12.1	-46.3	91.6	82.3	9.25	9.897		
2,300.0	2,294.2	2,302.6	2,301.9	5.0	4.9	151.89	-21.0	-43.5	102.3	92.6	9.63	10.618		
2,330.1	2,323.6	2,333.1	2,332.2	5.1	5.0	152.26	-24.2	-42.6	105.6	95.8	9.75	10.829		
2,400.0	2,391.8	2,404.1	2,402.6	5.4	5.1	152.82	-32.5	-40.0	112.9	102.8	10.05	11.231		
2,500.0	2,489.5	2,506.0	2,503.4	5.7	5.3	152.77	-46.6	-35.7	121.6	111.1	10.50	11.580		
2,600.0	2,587.1	2,607.1	2,603.1	6.1	5.6	151.97	-62.9	-30.7	128.7	117.7	10.99	11.705		
2,700.0	2,684.8	2,706.9	2,701.4	6.5	5.8	151.13	-79.5	-25.6	135.4	123.9	11.51	11.770		
2,800.0	2,782.4	2,806.6	2,799.6	6.9	6.1	150.36	-96.0	-20.5	142.2	130.1	12.04	11.808		
2,900.0	2,880.1	2,906.4	2,897.8	7.3	6.4	149.67	-112.5	-15.4	149.0	136.4	12.60	11.827		
3,000.0	2,977.7	3,006.1	2,996.1	7.7	6.7	149.03	-129.1	-10.4	155.8	142.6	13.17	11.830		
3,100.0	3,075.4	3,105.9	3,094.3	8.1	7.0	148.45	-145.6	-5.3	162.6	148.8	13.76	11.819		
3,200.0	3,173.0	3,205.6	3,192.6	8.6	7.4	147.92	-162.2	-0.2	169.4	155.1	14.36	11.799		
3,300.0	3,270.7	3,305.4	3,290.8	9.0	7.7	147.42	-178.7	4.8	176.3	161.3	14.98	11.771		
3,400.0	3,368.3	3,405.1	3,389.1	9.4	8.0	146.97	-195.3	9.9	183.2	167.5	15.60	11.737		
3,500.0	3,466.0	3,504.9	3,487.3	9.9	8.4	146.54	-211.8	15.0	190.0	173.8	16.24	11.699		
3,600.0	3,563.6	3,604.7	3,585.5	10.3	8.7	146.15	-228.3	20.1	196.9	180.0	16.89	11.657		
3,700.0	3,661.3	3,704.4	3,683.8	10.8	9.1	145.78	-244.9	25.1	203.8	186.3	17.55	11.614		
3,800.0	3,758.9	3,804.2	3,782.0	11.2	9.4	145.44	-261.4	30.2	210.7	192.5	18.21	11.569		
3,900.0	3,856.6	3,903.9	3,880.3	11.7	9.8	145.12	-278.0	35.3	217.6	198.7	18.89	11.523		
4,000.0	3,954.2	4,003.7	3,978.5	12.1	10.2	144.82	-294.5	40.4	224.5	205.0	19.56	11.477		
4,100.0	4,051.9	4,103.4	4,076.8	12.6	10.5	144.53	-311.0	45.4	231.4	211.2	20.25	11.431		
4,200.0	4,149.5	4,203.2	4,175.0	13.1	10.9	144.27	-327.6	50.5	238.4	217.4	20.94	11.385		
4,300.0	4,247.1	4,302.9	4,273.2	13.5	11.3	144.02	-344.1	55.6	245.3	223.7	21.63	11.340		
4,400.0	4,344.8	4,402.7	4,371.5	14.0	11.6	143.78	-360.7	60.7	252.2	229.9	22.33	11.296		
4,500.0	4,442.4	4,502.4	4,469.7	14.4	12.0	143.55	-377.2	65.7	259.2	236.1	23.03	11.252		
4,600.0	4,540.1	4,602.2	4,568.0	14.9	12.4	143.34	-393.7	70.8	266.1	242.4	23.74	11.210		
4,700.0	4,637.7	4,701.9	4,666.2	15.4	12.8	143.14	-410.3	75.9	273.1	248.6	24.45	11.168		
4,800.0	4,735.4	4,801.7	4,764.4	15.8	13.2	142.94	-426.8	81.0	280.0	254.8	25.16	11.128		
4,900.0	4,833.0	4,901.5	4,862.7	16.3	13.6	142.76	-443.4	86.0	287.0	261.1	25.88	11.089		
5,000.0	4,930.7	5,001.2	4,960.9	16.8	13.9	142.59	-459.9	91.1	293.9	267.3	26.60	11.051		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design		Crittter Creek Pad 15-11N-63W - Crittler Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)											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 +N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
5,100.0	5,028.3	5,101.0	5,059.2	17.2	14.3	142.42	-476.5	96.2	300.9	273.6	27.32	11.013			
5,200.0	5,126.0	5,200.7	5,157.4	17.7	14.7	142.26	-493.0	101.3	307.8	279.8	28.04	10.977			
5,300.0	5,223.6	5,300.5	5,255.7	18.2	15.1	142.11	-509.5	106.3	314.8	286.0	28.77	10.942			
5,400.0	5,321.3	5,400.2	5,353.9	18.7	15.5	141.96	-526.1	111.4	321.8	292.3	29.50	10.909			
5,462.5	5,382.3	5,462.6	5,415.3	18.9	15.7	141.87	-536.4	114.6	326.1	296.2	29.95	10.888			
5,500.0	5,419.0	5,500.0	5,452.2	19.1	15.9	141.83	-542.6	116.5	328.5	298.3	30.23	10.869			
5,600.0	5,517.2	5,599.8	5,550.5	19.4	16.3	141.42	-559.2	121.6	333.1	302.2	30.94	10.766			
5,700.0	5,616.1	5,699.7	5,648.8	19.7	16.7	140.63	-575.7	126.6	335.0	303.3	31.69	10.571			
5,800.0	5,715.4	5,799.5	5,747.1	19.9	17.1	139.42	-592.3	131.7	334.3	301.8	32.48	10.293			
5,900.0	5,815.0	5,899.0	5,845.1	20.1	17.4	137.78	-608.8	136.8	331.2	297.9	33.31	9.943			
6,000.0	5,914.9	5,998.1	5,942.7	20.3	17.8	135.67	-625.2	141.8	325.8	291.6	34.18	9.531			
6,085.1	6,000.0	6,082.1	6,025.4	20.4	18.2	-80.09	-639.1	146.1	319.7	284.6	35.04	9.124			
6,100.0	6,014.9	6,096.8	6,039.9	20.4	18.2	-80.50	-641.6	146.9	318.5	283.3	35.18	9.052			
6,200.0	6,114.9	6,193.8	6,135.5	20.6	18.6	-83.25	-657.5	151.7	311.1	275.0	36.12	8.612			
6,300.0	6,214.9	6,288.8	6,229.5	20.7	18.8	-85.63	-670.7	155.8	305.4	268.6	36.89	8.281			
6,400.0	6,314.9	6,384.6	6,324.6	20.8	19.1	-87.54	-681.1	159.0	301.5	263.9	37.54	8.032			
6,500.0	6,414.9	6,481.0	6,420.7	21.0	19.3	-88.92	-688.4	161.2	298.9	260.8	38.07	7.851			
6,600.0	6,514.9	6,577.8	6,517.5	21.1	19.5	-89.73	-692.6	162.5	297.5	259.0	38.49	7.729			
6,700.0	6,614.9	6,675.3	6,614.9	21.2	19.6	-89.95	-693.7	162.8	297.2	258.3	38.82	7.655			
6,800.0	6,714.9	6,775.3	6,714.9	21.3	19.8	-89.95	-693.7	162.8	297.2	258.0	39.10	7.599			
6,851.9	6,766.8	6,827.2	6,766.8	21.4	19.8	-89.95	-693.7	162.8	297.2	257.9	39.25	7.571			
6,900.0	6,814.9	6,875.3	6,814.9	21.5	19.9	-90.61	-693.7	162.8	297.2	257.8	39.37	7.548			
6,950.0	6,864.6	6,925.0	6,864.6	21.5	20.0	-91.58	-693.7	162.8	297.3	257.7	39.59	7.509			
7,000.0	6,913.9	6,975.2	6,914.8	21.5	20.0	-92.89	-692.1	162.9	297.5	257.7	39.80	7.477			
7,050.0	6,962.4	7,026.0	6,965.3	21.5	20.0	-94.20	-686.8	162.9	298.0	258.1	39.93	7.464			
7,100.0	7,010.0	7,077.3	7,015.8	21.4	20.0	-95.48	-677.9	162.9	298.6	258.6	39.97	7.470			
7,150.0	7,056.4	7,129.0	7,066.0	21.3	20.0	-96.74	-665.2	162.9	299.4	259.4	39.94	7.496			
7,200.0	7,101.4	7,181.4	7,115.6	21.2	19.9	-97.97	-648.8	162.9	300.3	260.5	39.82	7.541			
7,250.0	7,144.7	7,234.2	7,164.4	21.1	19.8	-99.15	-628.5	163.0	301.3	261.7	39.63	7.604			
7,300.0	7,186.2	7,287.6	7,212.0	20.9	19.7	-100.29	-604.5	163.0	302.5	263.1	39.36	7.685			
7,350.0	7,225.7	7,341.5	7,258.2	20.8	19.6	-101.37	-576.7	163.1	303.7	264.7	39.03	7.782			
7,400.0	7,263.0	7,395.9	7,302.5	20.6	19.4	-102.39	-545.2	163.1	305.0	266.4	38.64	7.893			
7,450.0	7,297.8	7,450.7	7,344.7	20.5	19.3	-103.35	-510.1	163.2	306.3	268.1	38.22	8.014			
7,500.0	7,330.0	7,506.1	7,384.4	20.3	19.1	-104.23	-471.5	163.3	307.6	269.9	37.78	8.142			
7,550.0	7,359.5	7,562.0	7,421.3	20.1	18.9	-105.03	-429.6	163.3	309.0	271.6	37.35	8.272			
7,600.0	7,386.1	7,618.2	7,455.1	20.0	18.8	-105.75	-384.6	163.4	310.2	273.3	36.94	8.398			
7,650.0	7,409.7	7,674.8	7,485.4	19.8	18.7	-106.39	-336.8	163.5	311.4	274.8	36.57	8.515			
7,700.0	7,430.1	7,731.8	7,512.0	19.7	18.6	-106.94	-286.4	163.6	312.5	276.2	36.28	8.614			
7,750.0	7,447.4	7,789.1	7,534.6	19.5	18.5	-107.39	-233.8	163.7	313.5	277.4	36.08	8.689			
7,800.0	7,461.3	7,846.7	7,553.0	19.4	18.5	-107.75	-179.3	163.8	314.4	278.4	35.99	8.735			
7,850.0	7,471.8	7,904.4	7,567.0	19.3	18.5	-108.02	-123.3	163.9	315.1	279.0	36.02	8.746			
7,900.0	7,478.9	7,962.3	7,576.5	19.2	18.6	-108.18	-66.2	164.0	315.6	279.4	36.20	8.719			
7,950.0	7,482.5	8,020.3	7,581.3	19.2	18.7	-108.25	-8.4	164.1	316.0	279.5	36.51	8.655			
7,979.8	7,483.0	8,054.3	7,582.0	19.2	18.9	-108.25	25.6	164.2	316.1	279.4	36.75	8.602			
7,980.2	7,483.0	8,054.8	7,582.0	19.2	18.9	-108.25	26.0	164.2	316.1	279.4	36.75	8.602			
7,982.1	7,483.0	8,056.7	7,582.0	19.2	18.9	-108.25	27.9	164.2	316.2	279.4	36.76	8.599			
8,000.0	7,482.9	8,074.6	7,582.0	19.2	18.9	-108.26	45.8	164.2	316.3	279.4	36.88	8.576			
8,100.0	7,482.5	8,174.6	7,582.0	19.4	19.4	-108.30	145.8	164.4	316.9	278.9	37.97	8.345			
8,200.0	7,482.1	8,274.6	7,582.0	20.1	20.2	-108.34	245.8	164.5	317.5	278.1	39.40	8.058			
8,300.0	7,481.7	8,374.6	7,582.0	21.0	21.0	-108.38	345.8	164.7	318.1	277.0	41.11	7.738			
8,400.0	7,481.3	8,474.6	7,582.0	22.1	22.1	-108.42	445.8	164.9	318.7	275.6	43.06	7.400			
8,500.0	7,480.9	8,574.6	7,582.0	23.2	23.2	-108.46	545.8	165.1	319.3	274.0	45.23	7.058			

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
8,600.0	7,480.5	8,674.6	7,582.0	24.5	24.4	-108.50	645.8	165.3	319.9	272.3	47.59	6.722		
8,700.0	7,480.1	8,774.6	7,582.0	25.8	25.8	-108.54	745.8	165.4	320.5	270.4	50.10	6.396		
8,800.0	7,479.7	8,874.6	7,582.0	27.2	27.2	-108.58	845.8	165.6	321.1	268.3	52.76	6.086		
8,900.0	7,479.3	8,974.6	7,582.0	28.7	28.6	-108.62	945.8	165.8	321.7	266.2	55.52	5.794		
9,000.0	7,478.9	9,074.5	7,582.0	30.2	30.1	-108.66	1,045.8	166.0	322.3	263.9	58.39	5.520		
9,100.0	7,478.5	9,174.5	7,582.0	31.8	31.7	-108.70	1,145.8	166.1	322.9	261.5	61.34	5.264		
9,200.0	7,478.1	9,274.5	7,582.0	33.3	33.3	-108.73	1,245.8	166.3	323.5	259.1	64.37	5.026		
9,300.0	7,477.7	9,374.5	7,582.0	35.0	34.9	-108.77	1,345.8	166.5	324.1	256.6	67.45	4.805		
9,400.0	7,477.3	9,474.5	7,582.0	36.6	36.5	-108.81	1,445.8	166.7	324.7	254.1	70.60	4.599		
9,500.0	7,476.9	9,574.5	7,582.0	38.3	38.2	-108.85	1,545.8	166.9	325.3	251.5	73.79	4.409		
9,600.0	7,476.5	9,674.5	7,582.0	40.0	39.9	-108.89	1,645.8	167.0	325.9	248.9	77.02	4.231		
9,700.0	7,476.1	9,774.5	7,582.0	41.7	41.6	-108.93	1,745.8	167.2	326.5	246.2	80.29	4.067		
9,800.0	7,475.7	9,874.5	7,582.0	43.4	43.4	-108.97	1,845.8	167.4	327.1	243.5	83.59	3.913		
9,900.0	7,475.3	9,974.5	7,582.0	45.2	45.1	-109.00	1,945.8	167.6	327.7	240.8	86.91	3.771		
10,000.0	7,474.9	10,074.5	7,582.0	46.9	46.9	-109.04	2,045.8	167.7	328.3	238.1	90.27	3.637		
10,100.0	7,474.5	10,174.5	7,582.0	48.7	48.7	-109.08	2,145.8	167.9	328.9	235.3	93.64	3.513		
10,200.0	7,474.1	10,274.5	7,582.0	50.5	50.5	-109.12	2,245.8	168.1	329.5	232.5	97.03	3.396		
10,300.0	7,473.7	10,374.5	7,582.0	52.3	52.3	-109.15	2,345.8	168.3	330.1	229.7	100.45	3.287		
10,400.0	7,473.3	10,474.5	7,582.0	54.1	54.1	-109.19	2,445.8	168.4	330.7	226.9	103.87	3.184		
10,500.0	7,472.9	10,574.5	7,582.0	55.9	55.9	-109.23	2,545.8	168.6	331.3	224.0	107.31	3.088		
10,600.0	7,472.5	10,674.5	7,582.0	57.7	57.7	-109.27	2,645.8	168.8	332.0	221.2	110.77	2.997		
10,700.0	7,472.1	10,774.5	7,582.0	59.5	59.6	-109.30	2,745.8	169.0	332.6	218.3	114.23	2.911		
10,800.0	7,471.7	10,874.5	7,582.0	61.4	61.4	-109.34	2,845.8	169.2	333.2	215.5	117.70	2.831		
10,900.0	7,471.3	10,974.5	7,582.0	63.2	63.2	-109.38	2,945.8	169.3	333.8	212.6	121.19	2.754		
11,000.0	7,470.9	11,074.5	7,582.0	65.0	65.1	-109.41	3,045.8	169.5	334.4	209.7	124.68	2.682		
11,100.0	7,470.5	11,174.5	7,582.0	66.9	66.9	-109.45	3,145.8	169.7	335.0	206.8	128.18	2.613		
11,200.0	7,470.0	11,274.5	7,582.0	68.7	68.8	-109.49	3,245.8	169.9	335.6	203.9	131.68	2.548		
11,300.0	7,469.6	11,374.5	7,582.0	70.6	70.6	-109.52	3,345.7	170.0	336.2	201.0	135.19	2.487		
11,400.0	7,469.2	11,474.5	7,582.0	72.5	72.5	-109.56	3,445.7	170.2	336.8	198.1	138.71	2.428		
11,500.0	7,468.8	11,574.5	7,582.0	74.3	74.4	-109.59	3,545.7	170.4	337.4	195.2	142.23	2.372		
11,600.0	7,468.4	11,674.5	7,582.0	76.2	76.2	-109.63	3,645.7	170.6	338.0	192.3	145.76	2.319		
11,700.0	7,468.0	11,774.5	7,582.0	78.0	78.1	-109.67	3,745.7	170.8	338.6	189.3	149.29	2.268		
11,800.0	7,467.6	11,874.5	7,582.0	79.9	80.0	-109.70	3,845.7	170.9	339.2	186.4	152.82	2.220		
11,900.0	7,467.2	11,974.5	7,582.0	81.8	81.9	-109.74	3,945.7	171.1	339.8	183.5	156.36	2.173		
12,000.0	7,466.8	12,074.5	7,582.0	83.7	83.7	-109.77	4,045.7	171.3	340.4	180.5	159.90	2.129		
12,100.0	7,466.4	12,174.5	7,582.0	85.5	85.6	-109.81	4,145.7	171.5	341.0	177.6	163.45	2.087		
12,200.0	7,466.0	12,274.5	7,582.0	87.4	87.5	-109.84	4,245.7	171.6	341.7	174.7	166.99	2.046		
12,300.0	7,465.6	12,374.5	7,582.0	89.3	89.4	-109.88	4,345.7	171.8	342.3	171.7	170.54	2.007		
12,400.0	7,465.2	12,474.5	7,582.0	91.2	91.3	-109.91	4,445.7	172.0	342.9	168.8	174.09	1.969		
12,500.0	7,464.8	12,574.5	7,582.0	93.1	93.2	-109.95	4,545.7	172.2	343.5	165.8	177.65	1.934		
12,600.0	7,464.4	12,674.5	7,582.0	94.9	95.1	-109.98	4,645.7	172.3	344.1	162.9	181.20	1.899		
12,700.0	7,464.0	12,774.5	7,582.0	96.8	96.9	-110.02	4,745.7	172.5	344.7	159.9	184.76	1.866		
12,800.0	7,463.6	12,874.5	7,582.0	98.7	98.8	-110.05	4,845.7	172.7	345.3	157.0	188.31	1.834		
12,900.0	7,463.2	12,974.5	7,582.0	100.6	100.7	-110.08	4,945.7	172.9	345.9	154.0	191.87	1.803		
13,000.0	7,462.8	13,074.5	7,582.0	102.5	102.6	-110.12	5,045.7	173.1	346.5	151.1	195.43	1.773		
13,100.0	7,462.4	13,174.5	7,582.0	104.4	104.5	-110.15	5,145.7	173.2	347.1	148.1	198.99	1.744		
13,200.0	7,462.0	13,274.5	7,582.0	106.3	106.4	-110.19	5,245.7	173.4	347.7	145.2	202.55	1.717		
13,300.0	7,461.6	13,374.5	7,582.0	108.2	108.3	-110.22	5,345.7	173.6	348.3	142.2	206.12	1.690		
13,400.0	7,461.2	13,474.5	7,582.0	110.1	110.2	-110.25	5,445.7	173.8	349.0	139.3	209.68	1.664		
13,500.0	7,460.8	13,574.5	7,582.0	112.0	112.1	-110.29	5,545.7	173.9	349.6	136.3	213.24	1.639		
13,600.0	7,460.4	13,674.5	7,582.0	113.9	114.0	-110.32	5,645.7	174.1	350.2	133.4	216.81	1.615		
13,700.0	7,460.0	13,774.5	7,582.0	115.8	115.9	-110.35	5,745.7	174.3	350.8	130.4	220.37	1.592		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
13,800.0	7,459.6	13,874.4	7,582.0	117.7	117.8	-110.39	5,845.7	174.5	351.4	127.5	223.94	1.569		
13,900.0	7,459.2	13,974.4	7,582.0	119.6	119.7	-110.42	5,945.7	174.7	352.0	124.5	227.50	1.547		
14,000.0	7,458.8	14,074.4	7,582.0	121.5	121.6	-110.45	6,045.7	174.8	352.6	121.5	231.07	1.526		
14,100.0	7,458.4	14,174.4	7,582.0	123.4	123.5	-110.48	6,145.7	175.0	353.2	118.6	234.63	1.505		
14,200.0	7,458.0	14,274.4	7,582.0	125.3	125.4	-110.52	6,245.7	175.2	353.8	115.6	238.20	1.485 Level 3		
14,300.0	7,457.6	14,374.4	7,582.0	127.2	127.4	-110.55	6,345.7	175.4	354.4	112.7	241.76	1.466 Level 3		
14,400.0	7,457.2	14,474.4	7,582.0	129.1	129.3	-110.58	6,445.7	175.5	355.1	109.7	245.33	1.447 Level 3		
14,500.0	7,456.8	14,574.4	7,582.0	131.0	131.2	-110.61	6,545.7	175.7	355.7	106.8	248.89	1.429 Level 3		
14,600.0	7,456.4	14,674.4	7,582.0	132.9	133.1	-110.65	6,645.7	175.9	356.3	103.8	252.46	1.411 Level 3		
14,700.0	7,456.0	14,774.4	7,582.0	134.8	135.0	-110.68	6,745.7	176.1	356.9	100.9	256.03	1.394 Level 3		
14,800.0	7,455.6	14,874.4	7,582.0	136.7	136.9	-110.71	6,845.7	176.2	357.5	97.9	259.59	1.377 Level 3		
14,900.0	7,455.2	14,974.4	7,582.0	138.6	138.8	-110.74	6,945.7	176.4	358.1	94.9	263.15	1.361 Level 3		
15,000.0	7,454.8	15,074.4	7,582.0	140.5	140.7	-110.77	7,045.7	176.6	358.7	92.0	266.72	1.345 Level 3		
15,100.0	7,454.4	15,174.4	7,582.0	142.4	142.6	-110.81	7,145.7	176.8	359.3	89.0	270.28	1.329 Level 3		
15,200.0	7,454.0	15,274.4	7,582.0	144.3	144.5	-110.84	7,245.7	177.0	359.9	86.1	273.85	1.314 Level 3		
15,300.0	7,453.6	15,374.4	7,582.0	146.2	146.4	-110.87	7,345.7	177.1	360.5	83.1	277.41	1.300 Level 3		
15,400.0	7,453.2	15,474.4	7,582.0	148.2	148.4	-110.90	7,445.7	177.3	361.2	80.2	280.97	1.285 Level 3		
15,500.0	7,452.8	15,574.4	7,582.0	150.1	150.3	-110.93	7,545.7	177.5	361.8	77.2	284.53	1.271 Level 3		
15,600.0	7,452.4	15,674.4	7,582.0	152.0	152.2	-110.96	7,645.7	177.7	362.4	74.3	288.10	1.258 Level 3		
15,700.0	7,451.9	15,774.4	7,582.0	153.9	154.1	-110.99	7,745.7	177.8	363.0	71.3	291.66	1.245 Level 2		
15,800.0	7,451.5	15,874.4	7,582.0	155.8	156.0	-111.02	7,845.6	178.0	363.6	68.4	295.22	1.232 Level 2		
15,900.0	7,451.1	15,974.4	7,582.0	157.7	157.9	-111.06	7,945.6	178.2	364.2	65.4	298.78	1.219 Level 2		
16,000.0	7,450.7	16,074.4	7,582.0	159.6	159.8	-111.09	8,045.6	178.4	364.8	62.5	302.34	1.207 Level 2		
16,100.0	7,450.3	16,174.4	7,582.0	161.5	161.8	-111.12	8,145.6	178.6	365.4	59.5	305.90	1.195 Level 2		
16,200.0	7,449.9	16,274.4	7,582.0	163.4	163.7	-111.15	8,245.6	178.7	366.1	56.6	309.46	1.183 Level 2		
16,300.0	7,449.5	16,374.4	7,582.0	165.4	165.6	-111.18	8,345.6	178.9	366.7	53.6	313.02	1.171 Level 2		
16,400.0	7,449.1	16,474.4	7,582.0	167.3	167.5	-111.21	8,445.6	179.1	367.3	50.7	316.57	1.160 Level 2		
16,500.0	7,448.7	16,574.4	7,582.0	169.2	169.4	-111.24	8,545.6	179.3	367.9	47.8	320.13	1.149 Level 2		
16,600.0	7,448.3	16,674.4	7,582.0	171.1	171.3	-111.27	8,645.6	179.4	368.5	44.8	323.69	1.138 Level 2		
16,700.0	7,447.9	16,774.4	7,582.0	173.0	173.2	-111.30	8,745.6	179.6	369.1	41.9	327.24	1.128 Level 2		
16,800.0	7,447.5	16,874.4	7,582.0	174.9	175.2	-111.33	8,845.6	179.8	369.7	38.9	330.80	1.118 Level 2		
16,900.0	7,447.1	16,974.4	7,582.0	176.8	177.1	-111.36	8,945.6	180.0	370.3	36.0	334.35	1.108 Level 2		
17,000.0	7,446.7	17,074.4	7,582.0	178.8	179.0	-111.39	9,045.6	180.1	371.0	33.0	337.91	1.098 Level 2		
17,100.0	7,446.3	17,174.4	7,582.0	180.7	180.9	-111.42	9,145.6	180.3	371.6	30.1	341.46	1.088 Level 2		
17,200.0	7,445.9	17,274.4	7,582.0	182.6	182.8	-111.45	9,245.6	180.5	372.2	27.2	345.01	1.079 Level 2		
17,300.0	7,445.5	17,374.4	7,582.0	184.5	184.7	-111.48	9,345.6	180.7	372.8	24.2	348.56	1.070 Level 2		
17,400.0	7,445.1	17,474.4	7,582.0	186.4	186.7	-111.51	9,445.6	180.9	373.4	21.3	352.11	1.060 Level 2		
17,500.0	7,444.7	17,574.4	7,582.0	188.3	188.6	-111.53	9,545.6	181.0	374.0	18.4	355.66	1.052 Level 2		
17,600.0	7,444.3	17,674.4	7,582.0	190.2	190.5	-111.56	9,645.6	181.2	374.6	15.4	359.21	1.043 Level 2		
17,700.0	7,443.9	17,774.4	7,582.0	192.2	192.4	-111.59	9,745.6	181.4	375.2	12.5	362.76	1.034 Level 2		
17,800.0	7,443.5	17,874.4	7,582.0	194.1	194.3	-111.62	9,845.6	181.6	375.9	9.5	366.31	1.026 Level 2		
17,900.0	7,443.1	17,974.4	7,582.0	196.0	196.3	-111.65	9,945.6	181.7	376.5	6.6	369.86	1.018 Level 2		
17,925.0	7,443.0	17,998.8	7,582.0	196.5	196.7	-111.66	9,970.1	181.8	376.6	5.9	370.73	1.016 Level 2, ES, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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)	Semi Major Axis 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	-90.39	-4.7	-700.1	700.1					
100.0	100.0	100.0	100.0	0.1	0.1	-90.39	-4.7	-700.1	700.1	699.9	0.22	3,114.784		
200.0	200.0	200.0	200.0	0.3	0.3	-90.39	-4.7	-700.1	700.1	699.4	0.67	1,038.261		
300.0	300.0	300.0	300.0	0.6	0.6	-90.39	-4.7	-700.1	700.1	699.0	1.12	622.957		
400.0	400.0	400.0	400.0	0.8	0.8	-90.39	-4.7	-700.1	700.1	698.5	1.57	444.969		
500.0	500.0	500.0	500.0	1.0	1.0	-90.39	-4.7	-700.1	700.1	698.1	2.02	346.087		
600.0	600.0	600.0	600.0	1.2	1.2	-90.39	-4.7	-700.1	700.1	697.6	2.47	283.162		
700.0	700.0	700.0	700.0	1.5	1.5	-90.39	-4.7	-700.1	700.1	697.2	2.92	239.599		
800.0	800.0	800.0	800.0	1.7	1.7	-90.39	-4.7	-700.1	700.1	696.7	3.37	207.652		
900.0	900.0	900.0	900.0	1.9	1.9	-90.39	-4.7	-700.1	700.1	696.3	3.82	183.223		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.39	-4.7	-700.1	700.1	695.8	4.27	163.936		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.39	-4.7	-700.1	700.1	695.4	4.72	148.323		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.39	-4.7	-700.1	700.1	694.9	5.17	135.425		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.39	-4.7	-700.1	700.1	694.5	5.62	124.591		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.39	-4.7	-700.1	700.1	694.0	6.07	115.362		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.39	-4.7	-700.1	700.1	693.6	6.52	107.406 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	123.23	-4.7	-700.1	700.8	693.9	6.94	100.973		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	123.47	-4.7	-700.1	703.0	695.6	7.34	95.774		
1,800.0	1,799.7	1,802.7	1,802.7	3.8	3.9	123.77	-6.2	-699.9	706.4	698.7	7.72	91.491		
1,900.0	1,899.3	1,905.6	1,905.5	4.0	4.1	124.00	-10.4	-699.2	710.9	702.8	8.09	87.914		
2,000.0	1,998.6	2,008.6	2,008.3	4.2	4.3	124.17	-17.6	-698.2	716.4	707.9	8.47	84.569		
2,100.0	2,097.5	2,111.7	2,110.8	4.5	4.5	124.27	-27.5	-696.7	722.9	714.0	8.88	81.375		
2,200.0	2,196.1	2,214.8	2,213.1	4.7	4.7	124.31	-40.4	-694.8	730.4	721.1	9.33	78.265		
2,300.0	2,294.2	2,316.8	2,313.9	5.0	4.9	124.29	-55.7	-692.5	739.0	729.2	9.83	75.211		
2,330.1	2,323.6	2,346.7	2,343.5	5.1	5.0	124.30	-60.4	-691.8	741.8	731.8	9.98	74.313		
2,400.0	2,391.8	2,416.3	2,412.2	5.4	5.2	124.41	-71.4	-690.2	748.6	738.2	10.36	72.228		
2,500.0	2,489.5	2,515.8	2,510.4	5.7	5.4	124.57	-87.0	-687.8	758.2	747.3	10.94	69.324		
2,600.0	2,587.1	2,615.3	2,608.6	6.1	5.7	124.73	-102.7	-685.5	767.9	756.3	11.54	66.556		
2,700.0	2,684.8	2,714.8	2,706.9	6.5	6.0	124.89	-118.3	-683.2	777.5	765.4	12.16	63.944		
2,800.0	2,782.4	2,814.3	2,805.1	6.9	6.3	125.04	-133.9	-680.8	787.2	774.4	12.80	61.495		
2,900.0	2,880.1	2,913.8	2,903.4	7.3	6.6	125.19	-149.6	-678.5	796.8	783.4	13.46	59.210 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Crittter Creek Pad 15-11N-63W - Crittler Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	2.0	2.0	0.0	0.0	-90.42	-5.8	-799.9	799.9					
100.0	100.0	102.0	102.0	0.1	0.1	-90.42	-5.8	-799.9	799.9	799.6	0.23	3,488.934		
200.0	200.0	202.0	202.0	0.3	0.3	-90.42	-5.8	-799.9	799.9	799.2	0.68	1,178.382		
300.0	300.0	302.0	302.0	0.6	0.6	-90.42	-5.8	-799.9	799.9	798.7	1.13	708.907		
400.0	400.0	402.0	402.0	0.8	0.8	-90.42	-5.8	-799.9	799.9	798.3	1.58	506.939		
500.0	500.0	502.0	502.0	1.0	1.0	-90.42	-5.8	-799.9	799.9	797.9	2.03	394.536		
600.0	600.0	602.0	602.0	1.2	1.2	-90.42	-5.8	-799.9	799.9	797.4	2.48	322.932		
700.0	700.0	702.0	702.0	1.5	1.5	-90.42	-5.8	-799.9	799.9	797.0	2.93	273.327		
800.0	800.0	802.0	802.0	1.7	1.7	-90.42	-5.8	-799.9	799.9	796.5	3.38	236.932		
900.0	900.0	902.0	902.0	1.9	1.9	-90.42	-5.8	-799.9	799.9	796.1	3.83	209.090		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-90.42	-5.8	-799.9	799.9	795.6	4.28	187.104		
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-90.42	-5.8	-799.9	799.9	795.2	4.72	169.301		
1,200.0	1,200.0	1,202.0	1,202.0	2.6	2.6	-90.42	-5.8	-799.9	799.9	794.7	5.17	154.592		
1,300.0	1,300.0	1,302.0	1,302.0	2.8	2.8	-90.42	-5.8	-799.9	799.9	794.3	5.62	142.235		
1,400.0	1,400.0	1,402.0	1,402.0	3.0	3.0	-90.42	-5.8	-799.9	799.9	793.8	6.07	131.707		
1,500.0	1,500.0	1,502.0	1,502.0	3.3	3.3	-90.42	-5.8	-799.9	799.9	793.4	6.52	122.630	CC, ES, SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	1.0	1.0	0.0	0.0	-90.37	-4.7	-724.7	724.7					
100.0	100.0	101.0	101.0	0.1	0.1	-90.37	-4.7	-724.7	724.7	724.5	0.23	3,192.298		
200.0	200.0	201.0	201.0	0.3	0.3	-90.37	-4.7	-724.7	724.7	724.0	0.68	1,071.170		
300.0	300.0	301.0	301.0	0.6	0.6	-90.37	-4.7	-724.7	724.7	723.6	1.13	643.557		
400.0	400.0	401.0	401.0	0.8	0.8	-90.37	-4.7	-724.7	724.7	723.1	1.58	459.946		
500.0	500.0	501.0	501.0	1.0	1.0	-90.37	-4.7	-724.7	724.7	722.7	2.03	357.849		
600.0	600.0	601.0	601.0	1.2	1.2	-90.37	-4.7	-724.7	724.7	722.2	2.47	292.845		
700.0	700.0	701.0	701.0	1.5	1.5	-90.37	-4.7	-724.7	724.7	721.8	2.92	247.826		
800.0	800.0	801.0	801.0	1.7	1.7	-90.37	-4.7	-724.7	724.7	721.3	3.37	214.805		
900.0	900.0	901.0	901.0	1.9	1.9	-90.37	-4.7	-724.7	724.7	720.9	3.82	189.549		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.37	-4.7	-724.7	724.7	720.4	4.27	169.607		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.37	-4.7	-724.7	724.7	720.0	4.72	153.461		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.37	-4.7	-724.7	724.7	719.5	5.17	140.123		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.37	-4.7	-724.7	724.7	719.1	5.62	128.917		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.37	-4.7	-724.7	724.7	718.6	6.07	119.371		
1,500.0	1,500.0	1,501.2	1,501.2	3.3	3.3	-90.37	-4.7	-724.7	724.7	718.2	6.52	111.136		
1,600.0	1,600.0	1,620.7	1,620.6	3.5	3.5	123.35	-3.8	-723.0	724.0	717.1	6.98	103.773		
1,700.0	1,699.9	1,737.8	1,737.7	3.6	3.8	123.90	-0.9	-718.3	722.2	714.8	7.40	97.588		
1,800.0	1,799.7	1,837.4	1,837.1	3.8	4.0	124.59	2.1	-713.3	720.8	713.0	7.79	92.480		
1,836.8	1,836.4	1,874.0	1,873.6	3.9	4.1	124.88	3.2	-711.4	720.7	712.7	7.94	90.738 CC, ES		
1,900.0	1,899.3	1,936.9	1,936.4	4.0	4.2	125.43	5.2	-708.2	721.0	712.8	8.20	87.957		
2,000.0	1,998.6	2,036.0	2,035.3	4.2	4.4	126.41	8.2	-703.1	722.9	714.3	8.61	83.941		
2,100.0	2,097.5	2,134.8	2,134.0	4.5	4.7	127.53	11.2	-698.1	726.7	717.7	9.04	80.375		
2,200.0	2,196.1	2,233.3	2,232.2	4.7	4.9	128.76	14.2	-693.1	732.4	722.9	9.49	77.211		
2,300.0	2,294.2	2,331.2	2,330.0	5.0	5.1	130.09	17.2	-688.1	740.1	730.2	9.95	74.413		
2,330.1	2,323.6	2,360.6	2,359.3	5.1	5.2	130.51	18.1	-686.6	742.9	732.8	10.09	73.640		
2,400.0	2,391.8	2,428.8	2,427.4	5.4	5.3	131.56	20.2	-683.1	749.6	739.2	10.43	71.855		
2,500.0	2,489.5	2,526.3	2,524.8	5.7	5.6	133.03	23.2	-678.1	759.8	748.8	10.93	69.483		
2,600.0	2,587.1	2,623.8	2,622.1	6.1	5.8	134.46	26.2	-673.1	770.4	758.9	11.44	67.320		
2,700.0	2,684.8	2,721.4	2,719.5	6.5	6.0	135.85	29.2	-668.2	781.5	769.5	11.96	65.356		
2,800.0	2,782.4	2,818.9	2,816.8	6.9	6.3	137.20	32.1	-663.2	793.0	780.5	12.47	63.576 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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	-90.56	-0.7	-75.2	75.2					
100.0	100.0	100.0	100.0	0.1	0.1	-90.56	-0.7	-75.2	75.2	75.0	0.22	334.482		
200.0	200.0	200.0	200.0	0.3	0.3	-90.56	-0.7	-75.2	75.2	74.5	0.67	111.494		
300.0	300.0	300.0	300.0	0.6	0.6	-90.56	-0.7	-75.2	75.2	74.1	1.12	66.896		
400.0	400.0	400.0	400.0	0.8	0.8	-90.56	-0.7	-75.2	75.2	73.6	1.57	47.783		
500.0	500.0	500.0	500.0	1.0	1.0	-90.56	-0.7	-75.2	75.2	73.2	2.02	37.165		
600.0	600.0	600.0	600.0	1.2	1.2	-90.56	-0.7	-75.2	75.2	72.7	2.47	30.407		
700.0	700.0	700.0	700.0	1.5	1.5	-90.56	-0.7	-75.2	75.2	72.3	2.92	25.729		
800.0	800.0	800.0	800.0	1.7	1.7	-90.56	-0.7	-75.2	75.2	71.8	3.37	22.299		
900.0	900.0	900.0	900.0	1.9	1.9	-90.56	-0.7	-75.2	75.2	71.4	3.82	19.675		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.56	-0.7	-75.2	75.2	70.9	4.27	17.604		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.56	-0.7	-75.2	75.2	70.5	4.72	15.928		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.56	-0.7	-75.2	75.2	70.0	5.17	14.543		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.56	-0.7	-75.2	75.2	69.6	5.62	13.379		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.56	-0.7	-75.2	75.2	69.1	6.07	12.388		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.56	-0.7	-75.2	75.2	68.7	6.52	11.534 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	123.80	-0.7	-75.2	75.9	69.0	6.94	10.936		
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	126.16	-0.7	-75.2	78.2	70.8	7.34	10.648		
1,800.0	1,799.7	1,799.7	1,799.7	3.8	3.9	129.79	-0.7	-75.2	82.2	74.4	7.74	10.614		
1,900.0	1,899.3	1,899.3	1,899.3	4.0	4.2	134.28	-0.7	-75.2	88.3	80.2	8.15	10.837		
2,000.0	1,998.6	1,998.6	1,998.6	4.2	4.4	139.16	-0.7	-75.2	96.9	88.4	8.56	11.322		
2,100.0	2,097.5	2,097.5	2,097.5	4.5	4.6	144.02	-0.7	-75.2	108.2	99.3	8.97	12.064		
2,200.0	2,196.1	2,196.2	2,196.2	4.7	4.8	149.09	-0.3	-74.0	121.6	112.2	9.37	12.971		
2,300.0	2,294.2	2,298.5	2,298.4	5.0	5.0	154.49	1.2	-70.4	136.4	126.6	9.76	13.982		
2,330.1	2,323.6	2,328.5	2,328.4	5.1	5.1	156.14	1.9	-68.8	141.2	131.4	9.87	14.311		
2,400.0	2,391.8	2,398.3	2,398.0	5.4	5.2	159.95	3.7	-64.4	152.7	142.5	10.16	15.034		
2,500.0	2,489.5	2,497.4	2,496.7	5.7	5.5	165.08	7.0	-56.1	169.1	158.5	10.57	15.991		
2,600.0	2,587.1	2,595.0	2,593.8	6.1	5.7	169.43	10.6	-47.4	186.3	175.3	11.00	16.934		
2,700.0	2,684.8	2,692.6	2,691.0	6.5	5.9	173.03	14.2	-38.7	204.3	192.9	11.44	17.862		
2,800.0	2,782.4	2,790.2	2,788.1	6.9	6.2	176.04	17.8	-29.9	223.1	211.2	11.89	18.761		
2,900.0	2,880.1	2,887.8	2,885.3	7.3	6.4	178.59	21.3	-21.2	242.3	230.0	12.35	19.615		
3,000.0	2,977.7	2,985.4	2,982.4	7.7	6.6	-179.24	24.9	-12.4	262.0	249.1	12.83	20.422		
3,100.0	3,075.4	3,083.0	3,079.5	8.1	6.9	-177.37	28.5	-3.7	281.9	268.6	13.31	21.180		
3,200.0	3,173.0	3,180.6	3,176.7	8.6	7.1	-175.74	32.1	5.1	302.2	288.3	13.80	21.889		
3,300.0	3,270.7	3,278.2	3,273.8	9.0	7.4	-174.32	35.7	13.8	322.6	308.3	14.30	22.552		
3,400.0	3,368.3	3,375.8	3,370.9	9.4	7.6	-173.07	39.2	22.6	343.2	328.3	14.81	23.170		
3,500.0	3,466.0	3,473.4	3,468.1	9.9	7.9	-171.96	42.8	31.3	363.9	348.6	15.32	23.746		
3,600.0	3,563.6	3,571.0	3,565.2	10.3	8.1	-170.97	46.4	40.1	384.7	368.9	15.84	24.284		
3,700.0	3,661.3	3,668.6	3,662.4	10.8	8.4	-170.08	50.0	48.8	405.7	389.3	16.37	24.785		
3,800.0	3,758.9	3,766.2	3,759.5	11.2	8.6	-169.28	53.5	57.6	426.7	409.8	16.90	25.254		
3,900.0	3,856.6	3,863.8	3,856.6	11.7	8.9	-168.56	57.1	66.3	447.8	430.4	17.43	25.692		
4,000.0	3,954.2	3,961.4	3,953.8	12.1	9.2	-167.90	60.7	75.1	469.0	451.0	17.97	26.102		
4,100.0	4,051.9	4,059.0	4,050.9	12.6	9.4	-167.29	64.3	83.8	490.2	471.7	18.51	26.486		
4,200.0	4,149.5	4,156.6	4,148.1	13.1	9.7	-166.74	67.8	92.6	511.4	492.4	19.05	26.846		
4,300.0	4,247.1	4,254.2	4,245.2	13.5	9.9	-166.23	71.4	101.3	532.7	513.1	19.60	27.184		
4,400.0	4,344.8	4,351.8	4,342.3	14.0	10.2	-165.76	75.0	110.1	554.1	533.9	20.15	27.502		
4,500.0	4,442.4	4,449.4	4,439.5	14.4	10.5	-165.32	78.6	118.8	575.5	554.8	20.70	27.802		
4,600.0	4,540.1	4,547.0	4,536.6	14.9	10.7	-164.92	82.1	127.6	596.9	575.6	21.25	28.084		
4,700.0	4,637.7	4,644.6	4,633.8	15.4	11.0	-164.54	85.7	136.3	618.3	596.5	21.81	28.351		
4,800.0	4,735.4	4,742.2	4,730.9	15.8	11.3	-164.19	89.3	145.0	639.8	617.4	22.37	28.602		
4,900.0	4,833.0	4,839.8	4,828.0	16.3	11.5	-163.86	92.9	153.8	661.2	638.3	22.93	28.841		
5,000.0	4,930.7	4,937.4	4,925.2	16.8	11.8	-163.55	96.4	162.5	682.7	659.2	23.49	29.066		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													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		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.0	5,028.3	5,035.0	5,022.3	17.2	12.1	-163.26	100.0	171.3	704.2	680.2	24.05	29.280		
5,200.0	5,126.0	5,132.6	5,119.5	17.7	12.4	-162.99	103.6	180.0	725.8	701.2	24.62	29.484		
5,300.0	5,223.6	5,230.2	5,216.6	18.2	12.6	-162.74	107.2	188.8	747.3	722.1	25.18	29.677		
5,400.0	5,321.3	5,327.7	5,313.7	18.7	12.9	-162.49	110.8	197.5	768.9	743.1	25.75	29.860		
5,462.5	5,382.3	5,388.8	5,374.5	18.9	13.1	-162.35	113.0	203.0	782.4	756.3	26.10	29.971		
5,500.0	5,419.0	5,425.4	5,410.9	19.1	13.2	-162.31	114.3	206.3	790.2	763.9	26.35	29.992		
6,900.0	6,814.9	8,125.4	7,582.0	21.5	21.9	-105.60	-693.2	268.6	790.6	747.9	42.77	18.487		
6,950.0	6,864.6	8,120.3	7,582.0	21.5	21.8	-117.56	-688.1	268.6	742.5	699.3	43.17	17.200		
7,000.0	6,913.9	8,111.8	7,582.0	21.5	21.7	-125.99	-679.5	268.5	695.1	652.3	42.75	16.260		
7,050.0	6,962.4	8,099.8	7,582.0	21.5	21.6	-131.76	-667.6	268.5	648.6	606.6	41.96	15.458		
7,100.0	7,010.0	8,084.5	7,582.0	21.4	21.4	-135.63	-652.3	268.4	603.3	562.3	41.03	14.705		
7,150.0	7,056.4	8,065.9	7,582.0	21.3	21.2	-138.14	-633.7	268.4	559.6	519.6	40.04	13.977		
7,200.0	7,101.4	8,044.1	7,582.0	21.2	21.0	-139.65	-611.9	268.3	517.7	478.6	39.01	13.269		
7,250.0	7,144.7	8,019.2	7,582.0	21.1	20.7	-140.37	-587.0	268.2	477.8	439.8	37.98	12.580		
7,300.0	7,186.2	8,009.1	7,582.0	20.9	20.6	-142.14	-576.8	268.1	440.6	403.8	36.74	11.992		
7,350.0	7,225.7	7,911.3	7,576.3	20.8	19.6	-134.35	-480.4	267.7	403.2	366.5	36.64	11.004		
7,400.0	7,263.0	7,861.8	7,567.9	20.6	19.2	-130.68	-431.6	267.4	366.7	330.6	36.12	10.154		
7,450.0	7,297.8	7,816.9	7,557.4	20.5	18.8	-126.86	-387.9	267.2	331.8	296.1	35.69	9.295		
7,500.0	7,330.0	7,775.4	7,545.2	20.3	18.5	-122.77	-348.3	267.1	298.9	263.5	35.40	8.445		
7,550.0	7,359.5	7,736.5	7,531.8	20.1	18.3	-118.26	-311.8	266.9	269.0	233.7	35.25	7.630		
7,600.0	7,386.1	7,699.7	7,517.2	20.0	18.0	-113.23	-278.0	266.7	242.8	207.5	35.22	6.892		
7,650.0	7,409.7	7,664.4	7,501.6	19.8	17.9	-107.62	-246.3	266.6	221.4	186.2	35.27	6.278		
7,700.0	7,430.1	7,630.4	7,485.2	19.7	17.7	-101.41	-216.6	266.5	206.2	171.0	35.28	5.846		
7,750.0	7,447.4	7,597.4	7,467.9	19.5	17.6	-94.66	-188.5	266.3	198.1	163.0	35.10	5.645 SF		
7,778.2	7,455.6	7,579.2	7,457.8	19.5	17.5	-90.66	-173.3	266.3	196.9	162.0	34.89	5.645		
7,800.0	7,461.3	7,565.3	7,449.9	19.4	17.5	-87.51	-162.0	266.2	197.6	163.0	34.63	5.708		
7,850.0	7,471.8	7,533.9	7,431.1	19.3	17.4	-80.19	-136.8	266.1	204.3	170.6	33.75	6.054		
7,900.0	7,478.9	7,503.1	7,411.6	19.2	17.3	-72.96	-112.9	266.0	217.1	184.6	32.48	6.684		
7,950.0	7,482.5	7,472.8	7,391.4	19.2	17.2	-66.07	-90.3	265.9	234.4	203.5	30.91	7.584		
7,979.8	7,483.0	7,454.9	7,379.1	19.2	17.2	-62.21	-77.4	265.8	246.4	216.5	29.90	8.241		
7,980.2	7,483.0	7,454.7	7,378.9	19.2	17.2	-62.17	-77.2	265.8	246.6	216.7	29.89	8.250		
7,982.1	7,483.0	7,450.0	7,375.6	19.2	17.2	-61.43	-73.9	265.8	247.5	217.8	29.66	8.343		
8,000.0	7,482.9	7,443.1	7,370.7	19.2	17.2	-60.36	-69.0	265.8	255.2	225.9	29.34	8.698		
8,100.0	7,482.5	7,389.7	7,331.4	19.4	17.1	-52.58	-32.9	265.6	307.3	280.2	27.06	11.356		
8,200.0	7,482.1	7,350.0	7,300.5	20.1	17.0	-47.41	-8.0	265.5	370.5	344.9	25.63	14.455		
8,300.0	7,481.7	7,300.0	7,259.7	21.0	17.0	-41.71	20.9	265.4	441.6	417.6	23.94	18.443		
8,400.0	7,481.3	7,271.8	7,235.8	22.1	16.9	-38.86	35.9	265.3	518.3	494.8	23.50	22.058		
8,500.0	7,480.9	7,250.0	7,217.0	23.2	16.9	-36.85	46.8	265.2	599.3	575.8	23.45	25.552		
8,600.0	7,480.5	7,217.4	7,188.2	24.5	16.9	-34.10	62.1	265.2	683.3	660.2	23.10	29.584		
8,700.0	7,480.1	7,200.0	7,172.5	25.8	16.9	-32.75	69.8	265.1	769.8	746.4	23.40	32.897		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.15 (Fifth Creek) - Critter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1377-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
13,000.0	7,462.8	7,098.0	7,078.9	102.5	13.6	-30.19	5,588.6	261.4	724.3	655.1	69.12	10.479		
13,100.0	7,462.4	7,117.2	7,094.2	104.4	13.7	-31.85	5,598.0	254.7	651.9	579.5	72.37	9.007		
13,200.0	7,462.0	7,139.1	7,111.1	106.3	13.7	-33.85	5,609.2	246.5	585.9	509.8	76.13	7.697		
13,300.0	7,461.6	7,162.0	7,128.1	108.2	13.8	-36.04	5,621.5	237.2	528.5	448.3	80.23	6.587		
13,400.0	7,461.2	7,194.0	7,150.6	110.1	14.0	-39.25	5,639.4	223.1	482.1	396.4	85.75	5.622		
13,500.0	7,460.8	7,226.0	7,171.6	112.0	14.1	-42.60	5,657.9	207.6	450.0	358.5	91.50	4.917		
13,600.0	7,460.4	7,249.7	7,186.1	113.9	14.3	-45.11	5,672.0	195.2	434.7	338.5	96.19	4.519		
13,631.0	7,460.3	7,258.0	7,190.9	114.5	14.3	-45.99	5,677.0	190.8	433.7	336.0	97.77	4.436 CC, ES		
13,700.0	7,460.0	7,280.7	7,203.6	115.8	14.5	-48.38	5,690.9	178.0	438.0	336.2	101.84	4.301		
13,800.0	7,459.6	7,313.2	7,220.1	117.7	14.7	-51.70	5,710.9	158.5	459.3	351.8	107.51	4.272 SF		
13,900.0	7,459.2	7,353.0	7,237.9	119.6	15.1	-55.50	5,736.1	133.3	495.7	382.1	113.65	4.362		
14,000.0	7,458.8	7,396.6	7,254.5	121.5	15.5	-59.23	5,764.4	104.7	543.2	423.6	119.53	4.544		
14,100.0	7,458.4	7,439.0	7,268.3	123.4	16.0	-62.41	5,792.3	75.8	599.0	474.3	124.66	4.805		
14,200.0	7,458.0	7,488.9	7,281.4	125.3	16.7	-65.57	5,825.3	40.8	660.8	531.1	129.65	5.097		
14,300.0	7,457.6	7,550.4	7,292.8	127.2	17.6	-68.59	5,867.4	-2.6	725.9	591.4	134.43	5.399		
14,400.0	7,457.2	7,609.2	7,299.0	129.1	18.5	-70.68	5,908.4	-44.2	793.1	654.7	138.35	5.732		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.15 (Fifth Creek) - Critter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1367-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	12.0	12.0	0.0	0.0	46.81	245.2	261.2	358.2	358.2	0.01	N/A		
100.0	100.0	112.0	112.0	0.1	0.1	46.81	245.2	261.2	358.2	358.0	0.24	1,502.468		
200.0	200.0	212.0	212.0	0.3	0.2	46.81	245.2	261.2	358.2	357.7	0.58	622.412		
300.0	300.0	312.0	312.0	0.6	0.4	46.81	245.2	261.2	358.2	357.3	0.91	392.506		
400.0	400.0	412.0	412.0	0.8	0.5	46.81	245.2	261.2	358.2	357.0	1.25	286.630		
500.0	500.0	512.0	512.0	1.0	0.6	46.81	245.2	261.2	358.2	356.7	1.59	225.739		
600.0	600.0	612.0	612.0	1.2	0.7	46.81	245.2	261.2	358.2	356.3	1.92	186.186		
700.0	700.0	712.0	712.0	1.5	0.8	46.81	245.2	261.2	358.2	356.0	2.26	158.427		
800.0	800.0	812.0	812.0	1.7	0.9	46.81	245.2	261.2	358.2	355.6	2.60	137.871		
900.0	900.0	912.0	912.0	1.9	1.0	46.81	245.2	261.2	358.2	355.3	2.94	122.037		
1,000.0	1,000.0	1,012.0	1,012.0	2.1	1.1	46.81	245.2	261.2	358.2	355.0	3.27	109.466		
1,100.0	1,100.0	1,112.0	1,112.0	2.4	1.2	46.81	245.2	261.2	358.2	354.6	3.61	99.242		
1,200.0	1,200.0	1,212.0	1,212.0	2.6	1.4	46.81	245.2	261.2	358.2	354.3	3.95	90.765		
1,300.0	1,300.0	1,312.0	1,312.0	2.8	1.5	46.81	245.2	261.2	358.2	354.0	4.28	83.622		
1,339.4	1,339.4	1,351.4	1,351.4	2.9	1.5	46.81	245.2	261.2	358.2	353.8	4.42	81.106 CC		
1,400.0	1,400.0	1,411.5	1,411.5	3.0	1.6	46.79	245.3	261.1	358.3	353.6	4.67	76.721		
1,500.0	1,500.0	1,511.6	1,511.6	3.3	1.8	46.67	246.0	260.7	358.4	353.3	5.10	70.230		
1,600.0	1,600.0	1,611.8	1,611.8	3.5	2.1	-100.13	246.6	260.2	358.7	353.2	5.51	65.124 ES		
1,700.0	1,699.9	1,712.0	1,712.0	3.6	2.3	-100.87	247.2	259.7	359.5	353.6	5.89	61.007		
1,800.0	1,799.7	1,811.0	1,811.0	3.8	2.5	-101.99	247.9	259.1	360.9	354.6	6.28	57.451		
1,900.0	1,899.3	1,909.8	1,909.7	4.0	2.7	-103.47	248.6	258.8	363.2	356.5	6.68	54.359		
2,000.0	1,998.6	2,008.3	2,008.2	4.2	2.9	-105.30	249.5	258.5	366.7	359.6	7.10	51.669		
2,100.0	2,097.5	2,107.8	2,107.8	4.5	3.1	-107.48	250.4	258.3	371.3	363.8	7.53	49.309		
2,200.0	2,196.1	2,206.9	2,206.9	4.7	3.3	-109.93	251.1	258.1	377.2	369.2	7.99	47.240		
2,300.0	2,294.2	2,305.4	2,305.4	5.0	3.5	-112.62	251.7	257.7	384.7	376.2	8.46	45.463		
2,330.1	2,323.6	2,334.7	2,334.7	5.1	3.5	-113.46	251.8	257.6	387.3	378.7	8.61	44.993		
2,400.0	2,391.8	2,402.8	2,402.7	5.4	3.7	-115.47	252.1	257.4	393.8	384.9	8.95	43.981		
2,500.0	2,489.5	2,500.1	2,500.1	5.7	3.8	-118.22	252.6	257.3	404.1	394.6	9.46	42.727		
2,600.0	2,587.1	2,597.3	2,597.2	6.1	4.0	-120.81	253.0	257.3	415.3	405.3	9.97	41.670		
2,700.0	2,684.8	2,693.4	2,693.4	6.5	4.3	-123.25	253.6	257.3	427.5	417.1	10.48	40.787		
2,800.0	2,782.4	2,789.5	2,789.5	6.9	4.5	-125.57	254.6	257.3	440.9	429.9	11.00	40.095		
2,900.0	2,880.1	2,886.1	2,886.0	7.3	4.7	-127.79	255.9	257.3	455.3	443.8	11.51	39.566		
3,000.0	2,977.7	2,984.4	2,984.4	7.7	4.9	-129.88	257.1	257.5	470.2	458.2	12.01	39.137		
3,100.0	3,075.4	3,083.0	3,083.0	8.1	5.1	-131.80	258.0	258.0	485.5	473.0	12.52	38.782		
3,200.0	3,173.0	3,181.5	3,181.4	8.6	5.3	-133.55	258.6	258.9	501.1	488.1	13.02	38.492		
3,300.0	3,270.7	3,279.5	3,279.4	9.0	5.5	-135.19	259.2	259.7	517.1	503.6	13.51	38.273		
3,400.0	3,368.3	3,377.5	3,377.4	9.4	5.7	-136.76	259.6	260.3	533.3	519.3	14.00	38.106		
3,500.0	3,466.0	3,475.1	3,475.0	9.9	5.9	-138.25	260.1	260.7	549.9	535.5	14.48	37.980		
3,600.0	3,563.6	3,572.2	3,572.2	10.3	6.1	-139.63	260.6	261.2	566.9	552.0	14.96	37.892		
3,700.0	3,661.3	3,669.4	3,669.3	10.8	6.3	-140.93	261.2	261.9	584.3	568.9	15.44	37.842		
3,800.0	3,758.9	3,767.4	3,767.3	11.2	6.5	-142.14	261.7	262.7	602.0	586.1	15.92	37.814		
3,900.0	3,856.6	3,866.2	3,866.1	11.7	6.7	-143.25	262.2	264.0	619.8	603.4	16.40	37.791		
4,000.0	3,954.2	3,965.1	3,965.0	12.1	6.9	-144.26	262.4	265.8	637.6	620.8	16.88	37.770		
4,100.0	4,051.9	4,066.2	4,066.0	12.6	7.1	-145.18	262.3	268.1	655.3	638.0	17.37	37.739		
4,200.0	4,149.5	4,168.3	4,168.2	13.1	7.3	-146.04	261.6	270.7	672.6	654.8	17.85	37.682		
4,300.0	4,247.1	4,270.8	4,270.6	13.5	7.5	-146.84	260.3	273.6	689.4	671.1	18.34	37.600		
4,400.0	4,344.8	4,368.3	4,368.0	14.0	7.7	-147.55	258.8	276.6	706.0	687.2	18.81	37.527		
4,500.0	4,442.4	4,465.1	4,464.7	14.4	8.0	-148.23	257.4	279.3	722.9	703.6	19.29	37.477		
4,600.0	4,540.1	4,561.8	4,561.4	14.9	8.2	-148.89	256.2	282.0	740.1	720.3	19.76	37.448		
4,700.0	4,637.7	4,660.7	4,660.3	15.4	8.4	-149.53	255.1	284.7	757.4	737.2	20.24	37.419		
4,800.0	4,735.4	4,759.7	4,759.3	15.8	8.6	-150.14	253.8	287.6	774.7	754.0	20.72	37.389		
4,900.0	4,833.0	4,858.5	4,858.0	16.3	8.8	-150.70	252.5	290.6	792.0	770.8	21.20	37.360		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.15 (Fifth Creek) - Critter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1367-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		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
7,550.0	7,359.5	7,035.0	7,024.1	20.1	13.4	-16.50	297.7	268.4	785.6	768.5	17.20	45.689		
7,600.0	7,386.1	7,055.5	7,041.9	20.0	13.4	-18.05	304.7	260.8	761.5	745.5	16.06	47.412		
7,650.0	7,409.7	7,067.0	7,051.6	19.8	13.4	-19.36	308.8	256.3	736.4	721.3	15.06	48.880		
7,700.0	7,430.1	7,082.3	7,064.3	19.7	13.5	-21.04	314.6	250.1	710.2	695.8	14.40	49.330		
7,750.0	7,447.4	7,098.0	7,077.0	19.5	13.5	-22.96	321.1	243.5	683.3	669.2	14.13	48.351		
7,800.0	7,461.3	7,098.0	7,077.0	19.4	13.5	-24.02	321.1	243.5	655.8	641.9	13.91	47.157		
7,850.0	7,471.8	7,119.9	7,094.2	19.3	13.6	-26.81	330.7	233.9	627.3	612.6	14.71	42.660		
7,900.0	7,478.9	7,130.0	7,101.9	19.2	13.6	-28.95	335.3	229.3	598.6	583.1	15.57	38.440		
7,950.0	7,482.5	7,142.5	7,111.2	19.2	13.7	-31.53	341.2	223.4	569.7	552.8	16.88	33.760		
7,979.8	7,483.0	7,148.6	7,115.6	19.2	13.7	-33.03	344.2	220.5	552.5	534.8	17.72	31.173		
7,980.2	7,483.0	7,148.7	7,115.7	19.2	13.7	-33.04	344.2	220.5	552.2	534.5	17.73	31.149		
7,982.1	7,483.0	7,149.1	7,116.0	19.2	13.7	-33.10	344.4	220.3	551.1	533.4	17.76	31.034		
8,000.0	7,482.9	7,161.0	7,124.5	19.2	13.8	-34.34	350.4	214.4	541.2	522.8	18.34	29.509		
8,100.0	7,482.5	7,175.4	7,134.4	19.4	13.8	-35.85	357.7	207.1	491.4	471.9	19.47	25.244		
8,200.0	7,482.1	7,201.4	7,151.5	20.1	14.0	-38.64	371.7	193.2	455.7	434.5	21.26	21.437		
8,300.0	7,481.7	7,225.0	7,166.0	21.0	14.1	-41.19	384.9	180.2	437.0	413.9	23.06	18.951		
8,353.1	7,481.5	7,249.5	7,180.2	21.6	14.2	-43.83	399.2	166.1	434.3	409.7	24.63	17.637		
8,400.0	7,481.3	7,266.5	7,189.5	22.1	14.4	-45.64	409.3	156.1	436.3	410.5	25.79	16.915		
8,500.0	7,480.9	7,305.6	7,209.4	23.2	14.7	-49.68	433.2	132.5	453.2	424.8	28.46	15.927		
8,600.0	7,480.5	7,345.2	7,227.3	24.5	15.0	-53.51	458.3	107.7	485.3	454.2	31.13	15.592 SF		
8,700.0	7,480.1	7,384.0	7,242.6	25.8	15.4	-56.96	483.3	82.3	529.8	496.0	33.73	15.705		
8,800.0	7,479.7	7,429.0	7,257.7	27.2	16.0	-60.50	512.7	51.7	583.4	546.9	36.48	15.994		
8,900.0	7,479.3	7,479.0	7,270.8	28.7	16.6	-63.79	545.8	16.7	643.6	604.4	39.22	16.411		
9,000.0	7,478.9	7,523.2	7,279.3	30.2	17.3	-66.15	575.5	-14.9	708.4	666.8	41.69	16.994		
9,100.0	7,478.5	7,576.7	7,285.4	31.8	18.1	-68.34	612.0	-53.6	776.3	732.1	44.24	17.550		

Reference Depths are relative to WELL @ 5239.0ft (Original Well Elev)	Coordinates are relative to: Critter Creek 232-1510H
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: 0.70°



Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 232-1510H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5239.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5239.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 232-1510H	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 13, 2017)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5239.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Critter Creek 232-1510H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.70°

