

Fifth Creek Energy Company, LLC

Well Name: **Critter Creek 511-1510H**

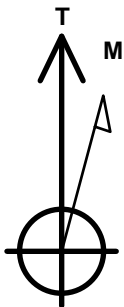
Surface Location: Critter Creek Pad 15-11N-63W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5226.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1578368.16	3299780.35	40.915956	-104.415347	

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

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 279'FSL & 1615'FEL, SEC.15	1.0	0.0	0.0	Point
BHL 300'FNL & 1460'FEL, SEC.10	7582.0	9969.6	121.8	Point
LP 300'FSL & 1510'FEL, SEC.15	7582.0	22.2	105.1	Point



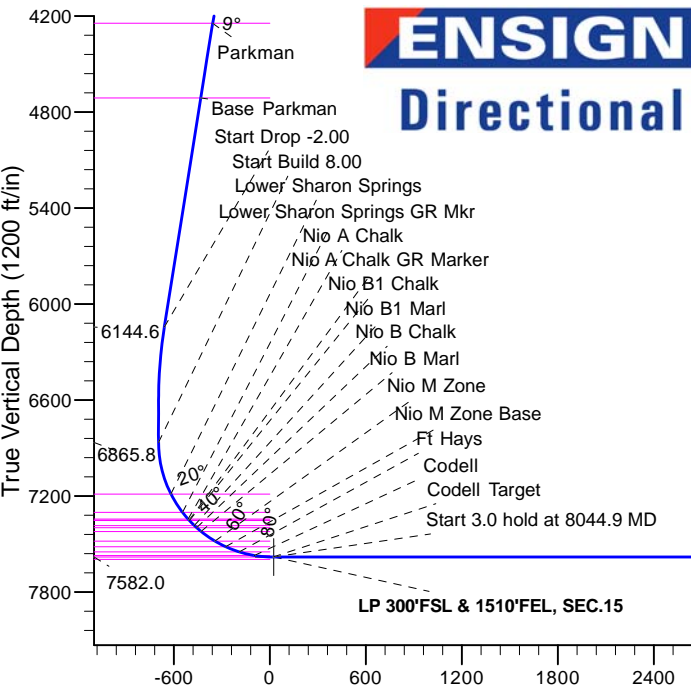
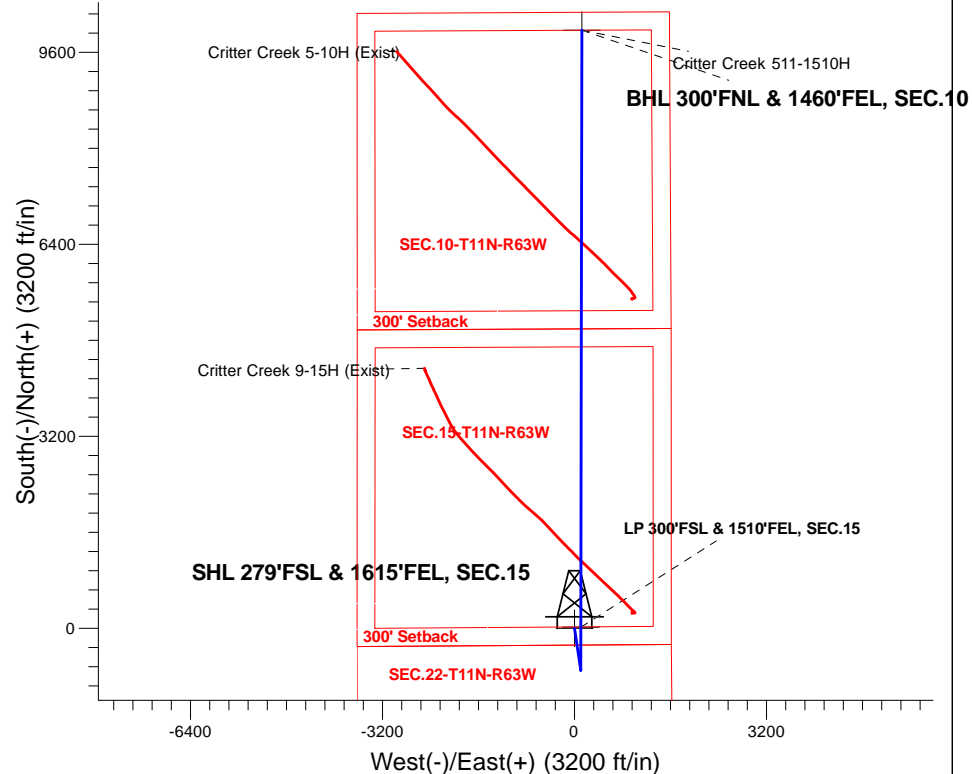
Azimuths to True North
Magnetic North: 7.94°

Magnetic Field
Strength: 52830.9snT
Dip Angle: 67.32°
Date: 2/21/2017
Model: IGRF2010

Critter Creek Pad 15-11N-63W
Critter Creek 511-1510H
Plan 1 (Feb 14, 2017)
12:39, February 21 2017

ANNOTATIONS

TVD	MD	Annotation
1700.0	1700.0	KOP - Start Build 1.56
6144.6	6196.8	Start Drop -2.00
6865.8	6919.9	Start Build 8.00
7582.0	8044.9	Start 3.0 hold at 8044.9 MD
7582.0	8048.0	Start 9947.4 hold at 8048.0 MD
7582.0	17995.4	TD at 17995.4



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	1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
3	2286.3	9.15	171.52	2283.8	-46.2	6.9	1.56	171.52	-46.1	
4	6196.8	9.15	171.52	6144.6	-661.0	98.5	0.00	0.00	-659.7	
5	6654.1	0.00	0.00	6600.0	-697.0	103.9	2.00	180.00	-695.7	
6	6919.9	0.00	0.00	6865.8	-697.0	103.9	0.00	0.00	-695.7	
7	8044.9	90.00	0.10	7582.0	19.2	105.1	8.00	0.10	20.5	
8	8048.0	90.00	0.10	7582.0	22.2	105.1	0.00	0.00	23.5	LP 300'FSL & 1510'FEL, SEC.15
9	17995.4	90.00	0.10	7582.0	9969.6	121.7	0.00	0.00	9970.4	BHL 300'FNL & 1460'FEL, SEC.10

Vertical Section at 0.70° (1200 ft/in)



Fifth Creek Energy Company, LLC

Sec.15-T11N-R63W

Critter Creek Pad 15-11N-63W

Critter Creek 511-1510H

Wellbore #1

Plan: Plan 1 (Feb 14, 2017)

Standard Planning Report

21 February, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 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 511-1510H					
Well Position	+N/-S	-4.7 ft	Northing:	1,578,368.15 usft	Latitude:	40.915956
	+E/-W	-700.1 ft	Easting:	3,299,780.36 usft	Longitude:	-104.415347
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 14, 2017)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.70

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	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,286.3	9.15	171.52	2,283.8	-46.2	6.9	1.56	1.56	0.00	171.52	
6,196.8	9.15	171.52	6,144.6	-661.0	98.5	0.00	0.00	0.00	0.00	
6,654.1	0.00	0.00	6,600.0	-697.0	103.9	2.00	-2.00	0.00	180.00	
6,919.9	0.00	0.00	6,865.8	-697.0	103.9	0.00	0.00	0.00	0.00	
8,044.9	90.00	0.10	7,582.0	19.2	105.1	8.00	8.00	0.00	0.10	
8,048.0	90.00	0.10	7,582.0	22.2	105.1	0.00	0.00	0.00	0.00	LP 300'FSL & 1510'FI
17,995.4	90.00	0.10	7,582.0	9,969.6	121.7	0.00	0.00	0.00	0.00	BHL 300'FNL & 1460'

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Well:	Critter Creek 511-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 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
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.56									
1,800.0	1.56	171.52	1,800.0	-1.3	0.2	-1.3	1.56	1.56	0.00
1,900.0	3.12	171.52	1,899.9	-5.4	0.8	-5.4	1.56	1.56	0.00
2,000.0	4.68	171.52	1,999.7	-12.1	1.8	-12.1	1.56	1.56	0.00
2,100.0	6.24	171.52	2,099.2	-21.5	3.2	-21.5	1.56	1.56	0.00
2,200.0	7.80	171.52	2,198.5	-33.6	5.0	-33.5	1.56	1.56	0.00
2,286.3	9.15	171.52	2,283.8	-46.2	6.9	-46.1	1.56	1.56	0.00
2,300.0	9.15	171.52	2,297.3	-48.3	7.2	-48.2	0.00	0.00	0.00
2,400.0	9.15	171.52	2,396.1	-64.1	9.5	-63.9	0.00	0.00	0.00
2,500.0	9.15	171.52	2,494.8	-79.8	11.9	-79.6	0.00	0.00	0.00
2,600.0	9.15	171.52	2,593.5	-95.5	14.2	-95.3	0.00	0.00	0.00
2,700.0	9.15	171.52	2,692.3	-111.2	16.6	-111.0	0.00	0.00	0.00
2,800.0	9.15	171.52	2,791.0	-126.9	18.9	-126.7	0.00	0.00	0.00
2,900.0	9.15	171.52	2,889.7	-142.7	21.3	-142.4	0.00	0.00	0.00
3,000.0	9.15	171.52	2,988.4	-158.4	23.6	-158.1	0.00	0.00	0.00
3,100.0	9.15	171.52	3,087.2	-174.1	26.0	-173.8	0.00	0.00	0.00
3,200.0	9.15	171.52	3,185.9	-189.8	28.3	-189.5	0.00	0.00	0.00
3,300.0	9.15	171.52	3,284.6	-205.6	30.6	-205.2	0.00	0.00	0.00
3,400.0	9.15	171.52	3,383.4	-221.3	33.0	-220.9	0.00	0.00	0.00
3,500.0	9.15	171.52	3,482.1	-237.0	35.3	-236.5	0.00	0.00	0.00
3,600.0	9.15	171.52	3,580.8	-252.7	37.7	-252.2	0.00	0.00	0.00
3,700.0	9.15	171.52	3,679.5	-268.4	40.0	-267.9	0.00	0.00	0.00
3,800.0	9.15	171.52	3,778.3	-284.2	42.4	-283.6	0.00	0.00	0.00
3,900.0	9.15	171.52	3,877.0	-299.9	44.7	-299.3	0.00	0.00	0.00
4,000.0	9.15	171.52	3,975.7	-315.6	47.0	-315.0	0.00	0.00	0.00
4,100.0	9.15	171.52	4,074.5	-331.3	49.4	-330.7	0.00	0.00	0.00
4,200.0	9.15	171.52	4,173.2	-347.0	51.7	-346.4	0.00	0.00	0.00
4,273.8	9.15	171.52	4,246.0	-358.6	53.5	-358.0	0.00	0.00	0.00
Parkman									
4,300.0	9.15	171.52	4,271.9	-362.8	54.1	-362.1	0.00	0.00	0.00
4,400.0	9.15	171.52	4,370.6	-378.5	56.4	-377.8	0.00	0.00	0.00
4,500.0	9.15	171.52	4,469.4	-394.2	58.8	-393.5	0.00	0.00	0.00
4,600.0	9.15	171.52	4,568.1	-409.9	61.1	-409.2	0.00	0.00	0.00
4,700.0	9.15	171.52	4,666.8	-425.7	63.5	-424.8	0.00	0.00	0.00
4,746.8	9.15	171.52	4,713.0	-433.0	64.5	-432.2	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 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	9.15	171.52	4,765.6	-441.4	65.8	-440.5	0.00	0.00	0.00
4,900.0	9.15	171.52	4,864.3	-457.1	68.1	-456.2	0.00	0.00	0.00
5,000.0	9.15	171.52	4,963.0	-472.8	70.5	-471.9	0.00	0.00	0.00
5,100.0	9.15	171.52	5,061.7	-488.5	72.8	-487.6	0.00	0.00	0.00
5,200.0	9.15	171.52	5,160.5	-504.3	75.2	-503.3	0.00	0.00	0.00
5,300.0	9.15	171.52	5,259.2	-520.0	77.5	-519.0	0.00	0.00	0.00
5,400.0	9.15	171.52	5,357.9	-535.7	79.9	-534.7	0.00	0.00	0.00
5,500.0	9.15	171.52	5,456.7	-551.4	82.2	-550.4	0.00	0.00	0.00
5,600.0	9.15	171.52	5,555.4	-567.1	84.5	-566.1	0.00	0.00	0.00
5,700.0	9.15	171.52	5,654.1	-582.9	86.9	-581.8	0.00	0.00	0.00
5,800.0	9.15	171.52	5,752.8	-598.6	89.2	-597.5	0.00	0.00	0.00
5,900.0	9.15	171.52	5,851.6	-614.3	91.6	-613.1	0.00	0.00	0.00
6,000.0	9.15	171.52	5,950.3	-630.0	93.9	-628.8	0.00	0.00	0.00
6,100.0	9.15	171.52	6,049.0	-645.8	96.3	-644.5	0.00	0.00	0.00
6,196.8	9.15	171.52	6,144.6	-661.0	98.5	-659.7	0.00	0.00	0.00
Start Drop -2.00									
6,200.0	9.08	171.52	6,147.8	-661.5	98.6	-660.2	1.97	-1.97	0.00
6,300.0	7.08	171.52	6,246.8	-675.4	100.7	-674.1	2.00	-2.00	0.00
6,400.0	5.08	171.52	6,346.2	-685.9	102.2	-684.6	2.00	-2.00	0.00
6,500.0	3.08	171.52	6,445.9	-692.9	103.3	-691.6	2.00	-2.00	0.00
6,600.0	1.08	171.52	6,545.9	-696.5	103.8	-695.2	2.00	-2.00	0.00
6,654.1	0.00	0.00	6,600.0	-697.0	103.9	-695.7	2.00	-2.00	0.00
6,700.0	0.00	0.00	6,645.9	-697.0	103.9	-695.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,745.9	-697.0	103.9	-695.7	0.00	0.00	0.00
6,900.0	0.00	0.00	6,845.9	-697.0	103.9	-695.7	0.00	0.00	0.00
6,919.9	0.00	0.00	6,865.8	-697.0	103.9	-695.7	0.00	0.00	0.00
Start Build 8.00									
7,000.0	6.40	0.10	6,945.7	-692.5	103.9	-691.2	8.00	8.00	0.00
7,100.0	14.40	0.10	7,044.0	-674.5	103.9	-673.2	8.00	8.00	0.00
7,200.0	22.40	0.10	7,138.8	-642.9	104.0	-641.6	8.00	8.00	0.00
7,254.1	26.74	0.10	7,188.0	-620.4	104.0	-619.1	8.00	8.00	0.00
Lower Sharon Springs									
7,300.0	30.40	0.10	7,228.3	-598.5	104.1	-597.2	8.00	8.00	0.00
7,390.2	37.62	0.10	7,303.0	-548.1	104.1	-546.8	8.00	8.00	0.00
Lower Sharon Springs GR Mkr									
7,400.0	38.40	0.10	7,310.7	-542.0	104.2	-540.7	8.00	8.00	0.00
7,444.9	42.00	0.10	7,345.0	-513.1	104.2	-511.8	8.00	8.00	0.00
Nio A Chalk									
7,454.4	42.75	0.10	7,352.0	-506.7	104.2	-505.4	8.00	8.00	0.00
Nio A Chalk GR Marker									
7,457.1	42.97	0.10	7,354.0	-504.8	104.2	-503.5	8.00	8.00	0.00
Nio B1 Chalk									
7,500.0	46.40	0.10	7,384.5	-474.7	104.3	-473.4	8.00	8.00	0.00
7,500.7	46.46	0.10	7,385.0	-474.1	104.3	-472.8	8.00	8.00	0.00
Nio B1 Marl									
7,519.9	48.00	0.10	7,398.0	-460.1	104.3	-458.8	8.00	8.00	0.00
Nio B Chalk									
7,556.8	50.95	0.10	7,422.0	-432.0	104.3	-430.7	8.00	8.00	0.00
Nio B Marl									
7,600.0	54.40	0.10	7,448.2	-397.7	104.4	-396.4	8.00	8.00	0.00
7,661.9	59.36	0.10	7,482.0	-345.8	104.5	-344.5	8.00	8.00	0.00

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Wellbore:	Wellbore #1		
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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)
Nio M Zone									
7,700.0	62.40	0.10	7,500.5	-312.6	104.5	-311.3	8.00	8.00	0.00
7,737.5	65.40	0.10	7,517.0	-278.9	104.6	-277.6	8.00	8.00	0.00
Nio M Zone Base									
7,800.0	70.40	0.10	7,540.5	-221.0	104.7	-219.7	8.00	8.00	0.00
7,830.0	72.81	0.10	7,550.0	-192.5	104.7	-191.2	8.00	8.00	0.00
Ft Hays									
7,900.0	78.40	0.10	7,567.4	-124.8	104.9	-123.5	8.00	8.00	0.00
7,925.1	80.41	0.10	7,572.0	-100.1	104.9	-98.8	8.00	8.00	0.00
Codell									
8,000.0	86.40	0.10	7,580.6	-25.7	105.0	-24.4	8.00	8.00	0.00
8,044.9	90.00	0.10	7,582.0	19.2	105.1	20.5	8.00	8.00	0.00
Start 3.0 hold at 8044.9 MD - Codell Target									
8,048.0	90.00	0.10	7,582.0	22.3	105.1	23.5	0.00	0.00	0.00
Start 9947.4 hold at 8048.0 MD									
8,100.0	90.00	0.10	7,582.0	74.3	105.2	75.5	0.00	0.00	0.00
8,200.0	90.00	0.10	7,582.0	174.3	105.4	175.5	0.00	0.00	0.00
8,300.0	90.00	0.10	7,582.0	274.3	105.5	275.5	0.00	0.00	0.00
8,400.0	90.00	0.10	7,582.0	374.3	105.7	375.5	0.00	0.00	0.00
8,500.0	90.00	0.10	7,582.0	474.3	105.9	475.5	0.00	0.00	0.00
8,600.0	90.00	0.10	7,582.0	574.3	106.0	575.5	0.00	0.00	0.00
8,700.0	90.00	0.10	7,582.0	674.3	106.2	675.5	0.00	0.00	0.00
8,800.0	90.00	0.10	7,582.0	774.3	106.4	775.5	0.00	0.00	0.00
8,900.0	90.00	0.10	7,582.0	874.2	106.5	875.5	0.00	0.00	0.00
9,000.0	90.00	0.10	7,582.0	974.2	106.7	975.5	0.00	0.00	0.00
9,100.0	90.00	0.10	7,582.0	1,074.2	106.9	1,075.5	0.00	0.00	0.00
9,200.0	90.00	0.10	7,582.0	1,174.2	107.0	1,175.5	0.00	0.00	0.00
9,300.0	90.00	0.10	7,582.0	1,274.2	107.2	1,275.5	0.00	0.00	0.00
9,400.0	90.00	0.10	7,582.0	1,374.2	107.4	1,375.5	0.00	0.00	0.00
9,500.0	90.00	0.10	7,582.0	1,474.2	107.5	1,475.5	0.00	0.00	0.00
9,600.0	90.00	0.10	7,582.0	1,574.2	107.7	1,575.4	0.00	0.00	0.00
9,700.0	90.00	0.10	7,582.0	1,674.2	107.9	1,675.4	0.00	0.00	0.00
9,800.0	90.00	0.10	7,582.0	1,774.2	108.0	1,775.4	0.00	0.00	0.00
9,900.0	90.00	0.10	7,582.0	1,874.2	108.2	1,875.4	0.00	0.00	0.00
10,000.0	90.00	0.10	7,582.0	1,974.2	108.4	1,975.4	0.00	0.00	0.00
10,100.0	90.00	0.10	7,582.0	2,074.2	108.5	2,075.4	0.00	0.00	0.00
10,200.0	90.00	0.10	7,582.0	2,174.2	108.7	2,175.4	0.00	0.00	0.00
10,300.0	90.00	0.10	7,582.0	2,274.2	108.9	2,275.4	0.00	0.00	0.00
10,400.0	90.00	0.10	7,582.0	2,374.2	109.0	2,375.4	0.00	0.00	0.00
10,500.0	90.00	0.10	7,582.0	2,474.2	109.2	2,475.4	0.00	0.00	0.00
10,600.0	90.00	0.10	7,582.0	2,574.2	109.4	2,575.4	0.00	0.00	0.00
10,700.0	90.00	0.10	7,582.0	2,674.2	109.5	2,675.4	0.00	0.00	0.00
10,800.0	90.00	0.10	7,582.0	2,774.2	109.7	2,775.4	0.00	0.00	0.00
10,900.0	90.00	0.10	7,582.0	2,874.2	109.9	2,875.4	0.00	0.00	0.00
11,000.0	90.00	0.10	7,582.0	2,974.2	110.0	2,975.4	0.00	0.00	0.00
11,100.0	90.00	0.10	7,582.0	3,074.2	110.2	3,075.4	0.00	0.00	0.00
11,200.0	90.00	0.10	7,582.0	3,174.2	110.4	3,175.4	0.00	0.00	0.00
11,300.0	90.00	0.10	7,582.0	3,274.2	110.5	3,275.4	0.00	0.00	0.00
11,400.0	90.00	0.10	7,582.0	3,374.2	110.7	3,375.3	0.00	0.00	0.00
11,500.0	90.00	0.10	7,582.0	3,474.2	110.9	3,475.3	0.00	0.00	0.00
11,600.0	90.00	0.10	7,582.0	3,574.2	111.0	3,575.3	0.00	0.00	0.00
11,700.0	90.00	0.10	7,582.0	3,674.2	111.2	3,675.3	0.00	0.00	0.00
11,800.0	90.00	0.10	7,582.0	3,774.2	111.4	3,775.3	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 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)
11,900.0	90.00	0.10	7,582.0	3,874.2	111.5	3,875.3	0.00	0.00	0.00
12,000.0	90.00	0.10	7,582.0	3,974.2	111.7	3,975.3	0.00	0.00	0.00
12,100.0	90.00	0.10	7,582.0	4,074.2	111.9	4,075.3	0.00	0.00	0.00
12,200.0	90.00	0.10	7,582.0	4,174.2	112.0	4,175.3	0.00	0.00	0.00
12,300.0	90.00	0.10	7,582.0	4,274.2	112.2	4,275.3	0.00	0.00	0.00
12,400.0	90.00	0.10	7,582.0	4,374.2	112.4	4,375.3	0.00	0.00	0.00
12,500.0	90.00	0.10	7,582.0	4,474.2	112.5	4,475.3	0.00	0.00	0.00
12,600.0	90.00	0.10	7,582.0	4,574.2	112.7	4,575.3	0.00	0.00	0.00
12,700.0	90.00	0.10	7,582.0	4,674.2	112.9	4,675.3	0.00	0.00	0.00
12,800.0	90.00	0.10	7,582.0	4,774.2	113.0	4,775.3	0.00	0.00	0.00
12,900.0	90.00	0.10	7,582.0	4,874.2	113.2	4,875.3	0.00	0.00	0.00
13,000.0	90.00	0.10	7,582.0	4,974.2	113.4	4,975.3	0.00	0.00	0.00
13,100.0	90.00	0.10	7,582.0	5,074.2	113.5	5,075.3	0.00	0.00	0.00
13,200.0	90.00	0.10	7,582.0	5,174.2	113.7	5,175.2	0.00	0.00	0.00
13,300.0	90.00	0.10	7,582.0	5,274.2	113.9	5,275.2	0.00	0.00	0.00
13,400.0	90.00	0.10	7,582.0	5,374.2	114.0	5,375.2	0.00	0.00	0.00
13,500.0	90.00	0.10	7,582.0	5,474.2	114.2	5,475.2	0.00	0.00	0.00
13,600.0	90.00	0.10	7,582.0	5,574.2	114.4	5,575.2	0.00	0.00	0.00
13,700.0	90.00	0.10	7,582.0	5,674.2	114.5	5,675.2	0.00	0.00	0.00
13,800.0	90.00	0.10	7,582.0	5,774.2	114.7	5,775.2	0.00	0.00	0.00
13,900.0	90.00	0.10	7,582.0	5,874.2	114.9	5,875.2	0.00	0.00	0.00
14,000.0	90.00	0.10	7,582.0	5,974.2	115.0	5,975.2	0.00	0.00	0.00
14,100.0	90.00	0.10	7,582.0	6,074.2	115.2	6,075.2	0.00	0.00	0.00
14,200.0	90.00	0.10	7,582.0	6,174.2	115.4	6,175.2	0.00	0.00	0.00
14,300.0	90.00	0.10	7,582.0	6,274.2	115.5	6,275.2	0.00	0.00	0.00
14,400.0	90.00	0.10	7,582.0	6,374.2	115.7	6,375.2	0.00	0.00	0.00
14,500.0	90.00	0.10	7,582.0	6,474.2	115.9	6,475.2	0.00	0.00	0.00
14,600.0	90.00	0.10	7,582.0	6,574.2	116.0	6,575.2	0.00	0.00	0.00
14,700.0	90.00	0.10	7,582.0	6,674.2	116.2	6,675.2	0.00	0.00	0.00
14,800.0	90.00	0.10	7,582.0	6,774.2	116.4	6,775.2	0.00	0.00	0.00
14,900.0	90.00	0.10	7,582.0	6,874.2	116.5	6,875.2	0.00	0.00	0.00
15,000.0	90.00	0.10	7,582.0	6,974.2	116.7	6,975.1	0.00	0.00	0.00
15,100.0	90.00	0.10	7,582.0	7,074.2	116.9	7,075.1	0.00	0.00	0.00
15,200.0	90.00	0.10	7,582.0	7,174.2	117.0	7,175.1	0.00	0.00	0.00
15,300.0	90.00	0.10	7,582.0	7,274.2	117.2	7,275.1	0.00	0.00	0.00
15,400.0	90.00	0.10	7,582.0	7,374.2	117.4	7,375.1	0.00	0.00	0.00
15,500.0	90.00	0.10	7,582.0	7,474.2	117.5	7,475.1	0.00	0.00	0.00
15,600.0	90.00	0.10	7,582.0	7,574.2	117.7	7,575.1	0.00	0.00	0.00
15,700.0	90.00	0.10	7,582.0	7,674.2	117.9	7,675.1	0.00	0.00	0.00
15,800.0	90.00	0.10	7,582.0	7,774.2	118.0	7,775.1	0.00	0.00	0.00
15,900.0	90.00	0.10	7,582.0	7,874.2	118.2	7,875.1	0.00	0.00	0.00
16,000.0	90.00	0.10	7,582.0	7,974.2	118.4	7,975.1	0.00	0.00	0.00
16,100.0	90.00	0.10	7,582.0	8,074.2	118.5	8,075.1	0.00	0.00	0.00
16,200.0	90.00	0.10	7,582.0	8,174.2	118.7	8,175.1	0.00	0.00	0.00
16,300.0	90.00	0.10	7,582.0	8,274.2	118.9	8,275.1	0.00	0.00	0.00
16,400.0	90.00	0.10	7,582.0	8,374.2	119.0	8,375.1	0.00	0.00	0.00
16,500.0	90.00	0.10	7,582.0	8,474.2	119.2	8,475.1	0.00	0.00	0.00
16,600.0	90.00	0.10	7,582.0	8,574.2	119.4	8,575.1	0.00	0.00	0.00
16,700.0	90.00	0.10	7,582.0	8,674.2	119.5	8,675.1	0.00	0.00	0.00
16,800.0	90.00	0.10	7,582.0	8,774.2	119.7	8,775.0	0.00	0.00	0.00
16,900.0	90.00	0.10	7,582.0	8,874.2	119.9	8,875.0	0.00	0.00	0.00
17,000.0	90.00	0.10	7,582.0	8,974.2	120.0	8,975.0	0.00	0.00	0.00
17,100.0	90.00	0.10	7,582.0	9,074.2	120.2	9,075.0	0.00	0.00	0.00
17,200.0	90.00	0.10	7,582.0	9,174.2	120.4	9,175.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 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)
17,300.0	90.00	0.10	7,582.0	9,274.2	120.5	9,275.0	0.00	0.00	0.00
17,400.0	90.00	0.10	7,582.0	9,374.2	120.7	9,375.0	0.00	0.00	0.00
17,500.0	90.00	0.10	7,582.0	9,474.2	120.9	9,475.0	0.00	0.00	0.00
17,600.0	90.00	0.10	7,582.0	9,574.2	121.0	9,575.0	0.00	0.00	0.00
17,700.0	90.00	0.10	7,582.0	9,674.2	121.2	9,675.0	0.00	0.00	0.00
17,800.0	90.00	0.10	7,582.0	9,774.2	121.4	9,775.0	0.00	0.00	0.00
17,900.0	90.00	0.10	7,582.0	9,874.2	121.5	9,875.0	0.00	0.00	0.00
17,995.4	90.00	0.10	7,582.0	9,969.6	121.7	9,970.4	0.00	0.00	0.00
TD at 17995.4									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 279'FSL & 1615'FE - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,578,368.16	3,299,780.36	40.915956	-104.415347
BHL 300'FNL & 1460'FE - plan misses target center by 0.1ft at 17995.4ft MD (7582.0 TVD, 9969.6 N, 121.7 E) - Point	0.00	0.00	7,582.0	9,969.6	121.8	1,588,338.75	3,299,780.24	40.943319	-104.414906
LP 300'FSL & 1510'FEL, - plan hits target center - Point	0.00	0.00	7,582.0	22.2	105.1	1,578,391.67	3,299,885.18	40.916017	-104.414967

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

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 (Feb 14, 2017)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,273.8	4,246.0	Parkman		0.00	
4,746.8	4,713.0	Base Parkman		0.00	
7,254.1	7,188.0	Lower Sharon Springs		0.00	
7,390.2	7,303.0	Lower Sharon Springs GR Mkr		0.00	
7,444.9	7,345.0	Nio A Chalk		0.00	
7,454.4	7,352.0	Nio A Chalk GR Marker		0.00	
7,457.1	7,354.0	Nio B1 Chalk		0.00	
7,500.7	7,385.0	Nio B1 Marl		0.00	
7,519.9	7,398.0	Nio B Chalk		0.00	
7,556.8	7,422.0	Nio B Marl		0.00	
7,661.9	7,482.0	Nio M Zone		0.00	
7,737.5	7,517.0	Nio M Zone Base		0.00	
7,830.0	7,550.0	Ft Hays		0.00	
7,925.1	7,572.0	Codell		0.00	
8,044.9	7,582.0	Codell Target		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,700.0	1,700.0	0.0	0.0	KOP - Start Build 1.56	
6,196.8	6,144.6	-46.2	6.9	Start Drop -2.00	
6,919.9	6,865.8	-661.0	98.5	Start Build 8.00	
8,044.9	7,582.0	-697.0	103.9	Start 3.0 hold at 8044.9 MD	
8,048.0	7,582.0	-697.0	103.9	Start 9947.4 hold at 8048.0 MD	
17,995.4	7,582.0	19.2	105.1	TD at 17995.4	



Fifth Creek Energy Company, LLC

**Sec.15-T11N-R63W
Crittter Creek Pad 15-11N-63W
Crittter Creek 511-1510H**

**Wellbore #1
Plan 1 (Feb 14, 2017)**

Anticollision Report

21 February, 2017

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Reference	Plan 1 (Feb 14, 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	17,995.4	Plan 1 (Feb 14, 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						
Critter Creek Pad 15-11N-63W						
Critter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,700.0	1,701.0	50.0	42.6	6.744	CC
Critter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,996.0	17,917.2	235.5	-93.8	0.715	Level 1, ES, SF
Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	6,819.7	6,841.3	459.6	421.0	11.918	CC
Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,996.0	17,915.4	480.4	101.3	1.267	Level 3, ES, SF
Critter Creek 232-1510H - Wellbore #1 - Plan 1 (Feb 13,	1,500.0	1,500.0	700.1	693.6	107.406	CC, ES
Critter Creek 232-1510H - Wellbore #1 - Plan 1 (Feb 13,	2,900.0	2,809.2	791.8	778.6	60.276	SF
Critter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,700.0	1,701.0	74.6	67.2	10.059	CC
Critter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	7,613.9	7,705.4	86.8	50.4	2.388	ES, SF
Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	7,550.0	7,746.8	565.4	528.6	15.378	SF
Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	7,620.9	7,700.2	562.7	526.4	15.497	CC, ES
Critter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2	1,700.0	1,700.0	674.7	667.3	90.959	CC, ES
Critter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2	2,900.0	2,778.5	797.1	784.5	63.347	SF
Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	2,087.5	2,078.9	648.9	640.0	72.863	CC
Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,996.0	17,993.0	759.9	366.4	1.931	ES, SF
Critter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,666.0	1,668.0	99.8	92.5	13.727	CC
Critter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,700.0	1,702.0	99.8	92.4	13.445	ES
Critter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	17,996.0	18,019.3	759.6	366.1	1.930	SF
Critter Creek 562-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,466.0	1,468.0	125.2	118.8	19.656	CC
Critter Creek 562-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,501.9	125.2	118.7	19.197	ES
Critter Creek 562-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,800.0	1,792.1	136.6	128.9	17.572	SF
Critter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,834.9	1,836.6	16.5	8.5	2.071	CC, ES, SF
Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	2,157.2	2,148.6	621.9	612.6	67.078	CC, ES
Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	3,800.0	3,708.2	791.1	773.6	45.079	SF
Existing Wells Sec.15 (Fifth Creek)						
Critter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1	14,462.5	8,364.5	300.6	239.5	4.922	CC
Critter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1	14,500.0	8,391.2	301.8	239.3	4.827	ES
Critter Creek 5-10H (Exist) - Wellbore #1 - Wellbore #1	14,900.0	8,660.0	443.4	329.6	3.896	SF
Critter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1	9,156.5	8,325.1	293.5	271.3	13.229	CC, ES
Critter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1	9,700.0	8,713.1	484.5	430.8	9.016	SF

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-91.25	-1.1	-50.0	50.0	50.0	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-91.25	-1.1	-50.0	50.0	49.8	0.23	220.416		
200.0	200.0	201.0	201.0	0.3	0.3	-91.25	-1.1	-50.0	50.0	49.4	0.68	73.960		
300.0	300.0	301.0	301.0	0.6	0.6	-91.25	-1.1	-50.0	50.0	48.9	1.13	44.435		
400.0	400.0	401.0	401.0	0.8	0.8	-91.25	-1.1	-50.0	50.0	48.5	1.58	31.758		
500.0	500.0	501.0	501.0	1.0	1.0	-91.25	-1.1	-50.0	50.0	48.0	2.03	24.708		
600.0	600.0	601.0	601.0	1.2	1.2	-91.25	-1.1	-50.0	50.0	47.6	2.47	20.220		
700.0	700.0	701.0	701.0	1.5	1.5	-91.25	-1.1	-50.0	50.0	47.1	2.92	17.111		
800.0	800.0	801.0	801.0	1.7	1.7	-91.25	-1.1	-50.0	50.0	46.7	3.37	14.831		
900.0	900.0	901.0	901.0	1.9	1.9	-91.25	-1.1	-50.0	50.0	46.2	3.82	13.088		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-91.25	-1.1	-50.0	50.0	45.8	4.27	11.711		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-91.25	-1.1	-50.0	50.0	45.3	4.72	10.596		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-91.25	-1.1	-50.0	50.0	44.9	5.17	9.675		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-91.25	-1.1	-50.0	50.0	44.4	5.62	8.901		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-91.25	-1.1	-50.0	50.0	44.0	6.07	8.242		
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-91.25	-1.1	-50.0	50.0	43.5	6.52	7.674		
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	-91.25	-1.1	-50.0	50.0	43.1	6.97	7.179		
1,700.0	1,700.0	1,701.0	1,701.0	3.7	3.7	-91.25	-1.1	-50.0	50.0	42.6	7.42	6.744 CC		
1,800.0	1,800.0	1,801.0	1,801.0	3.9	3.9	98.76	-1.1	-50.0	50.2	42.4	7.84	6.407		
1,900.0	1,899.9	1,900.9	1,900.9	4.1	4.2	103.29	-1.1	-50.0	51.0	42.8	8.23	6.195		
2,000.0	1,999.7	2,000.7	2,000.7	4.3	4.4	110.42	-1.1	-50.0	53.0	44.4	8.63	6.137		
2,100.0	2,099.2	2,100.2	2,100.2	4.4	4.6	119.33	-1.1	-50.0	57.0	48.0	9.04	6.309		
2,200.0	2,198.5	2,199.5	2,199.5	4.6	4.8	128.79	-1.1	-50.0	63.9	54.5	9.44	6.769		
2,286.3	2,283.8	2,284.8	2,284.8	4.8	5.0	136.50	-1.1	-50.0	72.6	62.8	9.79	7.417		
2,300.0	2,297.3	2,298.3	2,298.3	4.9	5.1	137.66	-1.1	-50.0	74.2	64.4	9.85	7.538		
2,400.0	2,396.1	2,398.1	2,398.1	5.1	5.2	144.36	-2.0	-50.1	86.1	75.8	10.24	8.410		
2,500.0	2,494.8	2,498.4	2,498.4	5.4	5.4	148.68	-4.7	-50.2	97.5	86.9	10.61	9.189		
2,600.0	2,593.5	2,599.2	2,599.1	5.7	5.6	151.47	-9.3	-50.5	107.9	96.9	10.99	9.815		
2,700.0	2,692.3	2,700.4	2,700.0	6.0	5.8	153.21	-15.8	-50.8	117.1	105.7	11.39	10.278		
2,800.0	2,791.0	2,801.8	2,801.1	6.3	6.0	154.17	-24.1	-51.2	124.8	113.0	11.80	10.581		
2,900.0	2,889.7	2,903.5	2,902.3	6.6	6.2	154.54	-34.4	-51.8	131.1	118.9	12.22	10.732		
3,000.0	2,988.4	3,005.4	3,003.4	6.9	6.4	154.39	-46.6	-52.4	136.0	123.3	12.66	10.741		
3,100.0	3,087.2	3,107.4	3,104.4	7.2	6.6	153.77	-60.6	-53.2	139.3	126.2	13.11	10.623		
3,200.0	3,185.9	3,209.4	3,205.2	7.5	6.8	152.71	-76.6	-54.0	141.2	127.6	13.59	10.388		
3,300.0	3,284.6	3,311.4	3,305.6	7.9	7.1	151.19	-94.4	-55.0	141.7	127.6	14.10	10.051		
3,400.0	3,383.4	3,413.2	3,405.5	8.2	7.4	149.16	-114.1	-56.0	140.9	126.3	14.64	9.625		
3,500.0	3,482.1	3,514.9	3,504.9	8.5	7.7	146.58	-135.6	-57.2	139.0	123.7	15.23	9.126		
3,600.0	3,580.8	3,615.8	3,603.1	8.9	8.0	143.39	-158.7	-58.4	136.1	120.2	15.87	8.576		
3,700.0	3,679.5	3,715.4	3,700.0	9.2	8.4	139.99	-181.8	-59.6	133.4	116.9	16.56	8.056		
3,800.0	3,778.3	3,815.1	3,796.9	9.6	8.8	136.45	-205.0	-60.8	131.2	113.9	17.30	7.585		
3,900.0	3,877.0	3,914.7	3,893.8	9.9	9.1	132.81	-228.2	-62.1	129.6	111.5	18.08	7.164		
4,000.0	3,975.7	4,014.4	3,990.7	10.3	9.5	129.09	-251.4	-63.3	128.4	109.5	18.91	6.792		
4,100.0	4,074.5	4,114.0	4,087.6	10.6	9.9	125.32	-274.6	-64.5	127.8	108.1	19.77	6.467		
4,154.1	4,127.8	4,167.9	4,140.0	10.8	10.1	123.28	-287.1	-65.2	127.8	107.5	20.24	6.311		
4,200.0	4,173.2	4,213.6	4,184.5	11.0	10.3	121.54	-297.8	-65.8	127.8	107.2	20.65	6.189		
4,300.0	4,271.9	4,313.3	4,281.4	11.4	10.7	117.76	-321.0	-67.0	128.4	106.8	21.55	5.955		
4,400.0	4,370.6	4,412.9	4,378.3	11.7	11.2	114.04	-344.1	-68.2	129.4	107.0	22.46	5.763		
4,500.0	4,469.4	4,512.6	4,475.2	12.1	11.6	110.39	-367.3	-69.4	131.1	107.7	23.37	5.609		
4,600.0	4,568.1	4,612.2	4,572.1	12.4	12.0	106.85	-390.5	-70.7	133.2	109.0	24.27	5.490		
4,700.0	4,666.8	4,711.8	4,669.0	12.8	12.5	103.43	-413.7	-71.9	135.9	110.7	25.15	5.403		
4,800.0	4,765.6	4,811.5	4,765.9	13.2	12.9	100.15	-436.9	-73.1	139.0	113.0	26.01	5.344		
4,900.0	4,864.3	4,911.1	4,862.8	13.5	13.4	97.02	-460.1	-74.4	142.5	115.7	26.85	5.309		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,963.0	5,010.8	4,959.7	13.9	13.8	94.06	-483.3	-75.6	146.5	118.8	27.67	5.296		
5,100.0	5,061.7	5,110.4	5,056.6	14.3	14.3	91.25	-506.5	-76.8	150.8	122.4	28.46	5.301		
5,200.0	5,160.5	5,210.0	5,153.5	14.6	14.7	88.61	-529.6	-78.0	155.5	126.3	29.22	5.322		
5,300.0	5,259.2	5,309.7	5,250.3	15.0	15.2	86.13	-552.8	-79.3	160.5	130.5	29.97	5.356		
5,400.0	5,357.9	5,409.3	5,347.2	15.4	15.7	83.80	-576.0	-80.5	165.8	135.1	30.69	5.402		
5,500.0	5,456.7	5,509.0	5,444.1	15.8	16.1	81.61	-599.2	-81.7	171.3	139.9	31.39	5.457		
5,600.0	5,555.4	5,608.8	5,541.2	16.1	16.6	79.57	-622.4	-83.0	177.0	145.0	32.07	5.520		
5,700.0	5,654.1	5,711.0	5,641.1	16.5	17.0	78.22	-644.1	-84.1	182.2	149.5	32.73	5.567		
5,800.0	5,752.8	5,813.6	5,742.0	16.9	17.3	77.98	-662.3	-85.1	186.0	152.6	33.38	5.571		
5,900.0	5,851.6	5,916.1	5,843.6	17.2	17.6	78.76	-676.9	-85.8	188.3	154.3	34.09	5.525		
6,000.0	5,950.3	6,018.5	5,945.3	17.6	17.8	80.56	-687.8	-86.4	189.5	154.6	34.84	5.438		
6,100.0	6,049.0	6,120.3	6,046.9	18.0	18.1	83.35	-695.0	-86.8	189.6	154.0	35.60	5.326		
6,196.8	6,144.6	6,218.2	6,144.7	18.4	18.2	87.02	-698.6	-87.0	189.3	153.0	36.32	5.212		
6,200.0	6,147.8	6,221.4	6,147.9	18.4	18.2	87.16	-698.6	-87.0	189.3	152.9	36.34	5.209		
6,267.3	6,214.3	6,288.8	6,215.3	18.5	18.3	90.00	-699.1	-87.0	189.1	152.4	36.72	5.151		
6,300.0	6,246.8	6,321.3	6,247.8	18.6	18.4	91.27	-699.1	-87.0	189.2	152.3	36.89	5.129		
6,400.0	6,346.2	6,420.7	6,347.2	18.9	18.5	94.46	-699.1	-87.0	189.7	152.4	37.31	5.086		
6,500.0	6,445.9	6,520.4	6,446.9	19.1	18.7	96.61	-699.1	-87.0	190.4	152.8	37.65	5.057		
6,600.0	6,545.9	6,620.4	6,546.9	19.2	18.8	97.70	-699.1	-87.0	190.9	152.9	37.96	5.028		
6,654.1	6,600.0	6,674.5	6,601.0	19.3	18.9	-90.63	-699.1	-87.0	190.9	152.8	38.13	5.008		
6,700.0	6,645.9	6,720.4	6,646.9	19.4	19.0	-90.63	-699.1	-87.0	190.9	152.7	38.26	4.990		
6,800.0	6,745.9	6,820.4	6,746.9	19.5	19.1	-90.63	-699.1	-87.0	190.9	152.4	38.55	4.953		
6,875.1	6,821.0	6,895.6	6,822.0	19.6	19.2	-89.99	-697.0	-87.0	190.9	152.2	38.74	4.929		
6,900.0	6,845.9	6,920.3	6,846.6	19.7	19.2	-89.29	-694.6	-87.0	190.9	152.2	38.77	4.924		
6,919.9	6,865.8	6,940.0	6,866.2	19.7	19.2	-88.55	-692.2	-87.0	191.0	152.2	38.80	4.922		
6,950.0	6,895.8	6,969.5	6,895.3	19.7	19.2	-87.41	-687.5	-87.0	191.1	152.3	38.80	4.926		
7,000.0	6,945.7	7,018.2	6,942.9	19.8	19.2	-85.38	-677.1	-87.0	191.5	152.8	38.75	4.943		
7,050.0	6,995.1	7,066.5	6,989.2	19.8	19.1	-83.39	-663.7	-86.9	192.2	153.6	38.61	4.977		
7,100.0	7,044.0	7,114.3	7,034.2	19.7	19.1	-81.45	-647.3	-86.9	193.1	154.7	38.41	5.027		
7,150.0	7,091.9	7,161.8	7,077.6	19.7	19.0	-79.58	-628.1	-86.9	194.1	156.0	38.13	5.092		
7,200.0	7,138.8	7,208.9	7,119.3	19.6	18.8	-77.78	-606.3	-86.8	195.4	157.6	37.78	5.171		
7,250.0	7,184.3	7,255.6	7,159.2	19.5	18.7	-76.06	-582.0	-86.8	196.7	159.3	37.38	5.263		
7,300.0	7,228.3	7,302.0	7,197.2	19.4	18.6	-74.43	-555.4	-86.7	198.2	161.3	36.93	5.367		
7,350.0	7,270.5	7,348.1	7,233.1	19.3	18.4	-72.90	-526.5	-86.6	199.8	163.3	36.43	5.483		
7,400.0	7,310.7	7,393.8	7,266.9	19.1	18.3	-71.46	-495.6	-86.6	201.4	165.5	35.90	5.608		
7,450.0	7,348.8	7,439.4	7,298.4	19.0	18.1	-70.13	-462.8	-86.5	203.0	167.6	35.36	5.740		
7,500.0	7,384.5	7,484.6	7,327.7	18.8	18.0	-68.89	-428.3	-86.4	204.6	169.8	34.81	5.877		
7,550.0	7,417.7	7,529.6	7,354.5	18.7	17.9	-67.77	-392.2	-86.3	206.2	171.9	34.28	6.015		
7,600.0	7,448.2	7,574.5	7,379.0	18.6	17.8	-66.75	-354.6	-86.3	207.7	173.9	33.77	6.150		
7,650.0	7,475.8	7,619.1	7,400.9	18.5	17.7	-65.84	-315.8	-86.2	209.1	175.8	33.31	6.278		
7,700.0	7,500.5	7,663.6	7,420.4	18.4	17.6	-65.03	-275.8	-86.1	210.4	177.5	32.91	6.394		
7,750.0	7,522.1	7,707.9	7,437.2	18.3	17.6	-64.33	-234.8	-86.0	211.6	179.0	32.59	6.493		
7,800.0	7,540.5	7,750.0	7,450.9	18.3	17.6	-63.75	-195.0	-85.9	212.6	180.3	32.37	6.570		
7,850.0	7,555.6	7,796.2	7,463.1	18.3	17.6	-63.24	-150.4	-85.8	213.5	181.3	32.25	6.621		
7,900.0	7,567.4	7,840.2	7,472.1	18.4	17.7	-62.85	-107.3	-85.7	214.2	182.0	32.25	6.642		
7,950.0	7,575.7	7,884.2	7,478.4	18.5	17.8	-62.56	-63.9	-85.6	214.7	182.3	32.38	6.631		
8,000.0	7,580.6	7,928.1	7,482.0	18.6	17.9	-62.38	-20.1	-85.5	215.0	182.4	32.64	6.588		
8,044.9	7,582.0	7,968.2	7,483.0	18.8	18.1	-62.31	20.0	-85.4	215.2	182.2	32.98	6.525		
8,045.4	7,582.0	7,968.2	7,483.0	18.8	18.1	-62.31	20.0	-85.4	215.2	182.2	32.98	6.525		
8,048.0	7,582.0	7,970.4	7,483.0	18.8	18.1	-62.30	22.2	-85.4	215.2	182.2	32.99	6.522		
8,100.0	7,582.0	8,022.4	7,482.8	19.1	18.3	-62.25	74.2	-85.3	215.3	181.8	33.44	6.438		
8,200.0	7,582.0	8,122.4	7,482.4	19.7	18.9	-62.16	174.2	-85.2	215.4	180.9	34.59	6.229		

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

Offset Design													Critter Creek Pad 15-11N-63W - Critter 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)						
8,300.0	7,582.0	8,222.4	7,482.0	20.5	19.7	-62.06	274.2	-85.0	215.6	179.6	36.03	5.984					
8,400.0	7,582.0	8,322.4	7,481.6	21.4	20.6	-61.97	374.2	-84.8	215.8	178.1	37.74	5.718					
8,500.0	7,582.0	8,422.4	7,481.2	22.5	21.7	-61.87	474.2	-84.6	216.0	176.3	39.68	5.444					
8,600.0	7,582.0	8,522.4	7,480.8	23.6	22.9	-61.78	574.2	-84.4	216.2	174.4	41.80	5.171					
8,700.0	7,582.0	8,622.4	7,480.4	24.9	24.1	-61.68	674.2	-84.3	216.3	172.2	44.10	4.906					
8,800.0	7,582.0	8,722.4	7,480.0	26.3	25.5	-61.59	774.2	-84.1	216.5	170.0	46.53	4.654					
8,900.0	7,582.0	8,822.4	7,479.6	27.7	26.9	-61.49	874.2	-83.9	216.7	167.6	49.08	4.416					
9,000.0	7,582.0	8,922.4	7,479.2	29.1	28.4	-61.40	974.2	-83.7	216.9	165.2	51.72	4.193					
9,100.0	7,582.0	9,022.4	7,478.8	30.7	29.9	-61.30	1,074.2	-83.5	217.1	162.6	54.46	3.986					
9,200.0	7,582.0	9,122.4	7,478.4	32.2	31.5	-61.21	1,174.2	-83.4	217.3	160.0	57.26	3.794					
9,300.0	7,582.0	9,222.4	7,478.0	33.8	33.1	-61.11	1,274.2	-83.2	217.4	157.3	60.12	3.617					
9,400.0	7,582.0	9,322.4	7,477.6	35.5	34.8	-61.02	1,374.2	-83.0	217.6	154.6	63.03	3.453					
9,500.0	7,582.0	9,422.4	7,477.2	37.1	36.5	-60.92	1,474.2	-82.8	217.8	151.8	65.99	3.301					
9,600.0	7,582.0	9,522.4	7,476.8	38.8	38.2	-60.83	1,574.2	-82.7	218.0	149.0	68.98	3.160					
9,700.0	7,582.0	9,622.4	7,476.3	40.5	39.9	-60.74	1,674.2	-82.5	218.2	146.2	72.00	3.030					
9,800.0	7,582.0	9,722.4	7,475.9	42.3	41.6	-60.64	1,774.2	-82.3	218.4	143.3	75.06	2.909					
9,900.0	7,582.0	9,822.4	7,475.5	44.0	43.4	-60.55	1,874.2	-82.1	218.5	140.4	78.13	2.797					
10,000.0	7,582.0	9,922.4	7,475.1	45.8	45.1	-60.46	1,974.2	-81.9	218.7	137.5	81.23	2.693					
10,100.0	7,582.0	10,022.4	7,474.7	47.5	46.9	-60.36	2,074.2	-81.8	218.9	134.6	84.34	2.596					
10,200.0	7,582.0	10,122.4	7,474.3	49.3	48.7	-60.27	2,174.2	-81.6	219.1	131.7	87.46	2.505					
10,300.0	7,582.0	10,222.4	7,473.9	51.1	50.5	-60.18	2,274.1	-81.4	219.3	128.7	90.60	2.421					
10,400.0	7,582.0	10,322.4	7,473.5	52.9	52.3	-60.09	2,374.1	-81.2	219.5	125.7	93.75	2.341					
10,500.0	7,582.0	10,422.4	7,473.1	54.7	54.1	-59.99	2,474.1	-81.0	219.7	122.8	96.91	2.267					
10,600.0	7,582.0	10,522.4	7,472.7	56.5	56.0	-59.90	2,574.1	-80.9	219.9	119.8	100.08	2.197					
10,700.0	7,582.0	10,622.4	7,472.3	58.4	57.8	-59.81	2,674.1	-80.7	220.1	116.8	103.25	2.131					
10,800.0	7,582.0	10,722.4	7,471.9	60.2	59.6	-59.72	2,774.1	-80.5	220.3	113.8	106.43	2.070					
10,900.0	7,582.0	10,822.4	7,471.5	62.0	61.5	-59.62	2,874.1	-80.3	220.5	110.8	109.61	2.011					
11,000.0	7,582.0	10,922.4	7,471.1	63.9	63.3	-59.53	2,974.1	-80.2	220.6	107.8	112.80	1.956					
11,100.0	7,582.0	11,022.4	7,470.7	65.7	65.2	-59.44	3,074.1	-80.0	220.8	104.9	115.99	1.904					
11,200.0	7,582.0	11,122.4	7,470.3	67.6	67.0	-59.35	3,174.1	-79.8	221.0	101.9	119.18	1.855					
11,300.0	7,582.0	11,222.4	7,469.9	69.4	68.9	-59.26	3,274.1	-79.6	221.2	98.9	122.37	1.808					
11,400.0	7,582.0	11,322.4	7,469.5	71.3	70.8	-59.17	3,374.1	-79.4	221.4	95.9	125.57	1.763					
11,500.0	7,582.0	11,422.4	7,469.1	73.2	72.6	-59.08	3,474.1	-79.3	221.6	92.9	128.76	1.721					
11,600.0	7,582.0	11,522.4	7,468.7	75.0	74.5	-58.99	3,574.1	-79.1	221.8	89.9	131.96	1.681					
11,700.0	7,582.0	11,622.4	7,468.3	76.9	76.4	-58.90	3,674.1	-78.9	222.0	86.9	135.15	1.643					
11,800.0	7,582.0	11,722.4	7,467.9	78.8	78.3	-58.81	3,774.1	-78.7	222.2	83.9	138.35	1.606					
11,900.0	7,582.0	11,822.4	7,467.5	80.6	80.1	-58.72	3,874.1	-78.6	222.4	80.9	141.54	1.571					
12,000.0	7,582.0	11,922.4	7,467.1	82.5	82.0	-58.63	3,974.1	-78.4	222.6	77.9	144.73	1.538					
12,100.0	7,582.0	12,022.4	7,466.7	84.4	83.9	-58.54	4,074.1	-78.2	222.8	74.9	147.92	1.506					
12,200.0	7,582.0	12,122.4	7,466.3	86.3	85.8	-58.45	4,174.1	-78.0	223.0	71.9	151.11	1.476 Level 3					
12,300.0	7,582.0	12,222.4	7,465.9	88.2	87.7	-58.36	4,274.1	-77.8	223.2	68.9	154.30	1.447 Level 3					
12,400.0	7,582.0	12,322.4	7,465.5	90.1	89.6	-58.27	4,374.1	-77.7	223.4	65.9	157.48	1.419 Level 3					
12,500.0	7,582.0	12,422.4	7,465.1	91.9	91.4	-58.18	4,474.1	-77.5	223.6	63.0	160.66	1.392 Level 3					
12,600.0	7,582.0	12,522.4	7,464.7	93.8	93.3	-58.09	4,574.1	-77.3	223.8	60.0	163.84	1.366 Level 3					
12,700.0	7,582.0	12,622.4	7,464.3	95.7	95.2	-58.00	4,674.1	-77.1	224.0	57.0	167.02	1.341 Level 3					
12,800.0	7,582.0	12,722.4	7,463.9	97.6	97.1	-57.91	4,774.1	-76.9	224.2	54.0	170.19	1.318 Level 3					
12,900.0	7,582.0	12,822.4	7,463.5	99.5	99.0	-57.82	4,874.1	-76.8	224.4	51.1	173.36	1.295 Level 3					
13,000.0	7,582.0	12,922.4	7,463.1	101.4	100.9	-57.74	4,974.1	-76.6	224.6	48.1	176.53	1.273 Level 3					
13,100.0	7,582.0	13,022.4	7,462.7	103.3	102.8	-57.65	5,074.1	-76.4	224.8	45.2	179.69	1.251 Level 3					
13,200.0	7,582.0	13,122.4	7,462.3	105.2	104.7	-57.56	5,174.1	-76.2	225.1	42.2	182.85	1.231 Level 2					
13,300.0	7,582.0	13,222.4	7,461.9	107.1	106.6	-57.47	5,274.1	-76.1	225.3	39.2	186.01	1.211 Level 2					
13,400.0	7,582.0	13,322.4	7,461.5	109.0	108.5	-57.38	5,374.1	-75.9	225.5	36.3	189.16	1.192 Level 2					

COMPASS 5000.1 Build 74

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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 (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		
13,500.0	7,582.0	13,422.4	7,461.1	110.9	110.4	-57.30	5,474.1	-75.7	225.7	33.4	192.31	1.173 Level 2		
13,600.0	7,582.0	13,522.4	7,460.7	112.8	112.3	-57.21	5,574.1	-75.5	225.9	30.4	195.46	1.156 Level 2		
13,700.0	7,582.0	13,622.4	7,460.3	114.7	114.2	-57.12	5,674.1	-75.3	226.1	27.5	198.60	1.138 Level 2		
13,800.0	7,582.0	13,722.4	7,459.9	116.6	116.1	-57.03	5,774.1	-75.2	226.3	24.6	201.74	1.122 Level 2		
13,900.0	7,582.0	13,822.4	7,459.5	118.5	118.0	-56.95	5,874.1	-75.0	226.5	21.6	204.87	1.106 Level 2		
14,000.0	7,582.0	13,922.4	7,459.1	120.4	119.9	-56.86	5,974.1	-74.8	226.7	18.7	208.00	1.090 Level 2		
14,100.0	7,582.0	14,022.4	7,458.7	122.3	121.9	-56.77	6,074.1	-74.6	226.9	15.8	211.13	1.075 Level 2		
14,200.0	7,582.0	14,122.4	7,458.3	124.2	123.8	-56.69	6,174.1	-74.5	227.1	12.9	214.25	1.060 Level 2		
14,300.0	7,582.0	14,222.4	7,457.9	126.1	125.7	-56.60	6,274.1	-74.3	227.3	10.0	217.37	1.046 Level 2		
14,400.0	7,582.0	14,322.4	7,457.5	128.0	127.6	-56.52	6,374.1	-74.1	227.6	7.1	220.48	1.032 Level 2		
14,500.0	7,582.0	14,422.4	7,457.1	129.9	129.5	-56.43	6,474.1	-73.9	227.8	4.2	223.59	1.019 Level 2		
14,600.0	7,582.0	14,522.3	7,456.6	131.8	131.4	-56.34	6,574.1	-73.7	228.0	1.3	226.70	1.006 Level 2		
14,700.0	7,582.0	14,622.3	7,456.2	133.8	133.3	-56.26	6,674.1	-73.6	228.2	-1.6	229.80	0.993 Level 1		
14,800.0	7,582.0	14,722.3	7,455.8	135.7	135.2	-56.17	6,774.1	-73.4	228.4	-4.5	232.89	0.981 Level 1		
14,900.0	7,582.0	14,822.3	7,455.4	137.6	137.1	-56.09	6,874.1	-73.2	228.6	-7.4	235.98	0.969 Level 1		
15,000.0	7,582.0	14,922.3	7,455.0	139.5	139.0	-56.00	6,974.1	-73.0	228.8	-10.2	239.07	0.957 Level 1		
15,100.0	7,582.0	15,022.3	7,454.6	141.4	140.9	-55.92	7,074.1	-72.8	229.1	-13.1	242.15	0.946 Level 1		
15,200.0	7,582.0	15,122.3	7,454.2	143.3	142.9	-55.83	7,174.1	-72.7	229.3	-16.0	245.23	0.935 Level 1		
15,300.0	7,582.0	15,222.3	7,453.8	145.2	144.8	-55.75	7,274.1	-72.5	229.5	-18.8	248.30	0.924 Level 1		
15,400.0	7,582.0	15,322.3	7,453.4	147.1	146.7	-55.66	7,374.1	-72.3	229.7	-21.7	251.37	0.914 Level 1		
15,500.0	7,582.0	15,422.3	7,453.0	149.0	148.6	-55.58	7,474.1	-72.1	229.9	-24.5	254.44	0.904 Level 1		
15,600.0	7,582.0	15,522.3	7,452.6	151.0	150.5	-55.49	7,574.1	-72.0	230.1	-27.4	257.49	0.894 Level 1		
15,700.0	7,582.0	15,622.3	7,452.2	152.9	152.4	-55.41	7,674.1	-71.8	230.4	-30.2	260.55	0.884 Level 1		
15,800.0	7,582.0	15,722.3	7,451.8	154.8	154.3	-55.33	7,774.1	-71.6	230.6	-33.0	263.60	0.875 Level 1		
15,900.0	7,582.0	15,822.3	7,451.4	156.7	156.3	-55.24	7,874.0	-71.4	230.8	-35.8	266.64	0.866 Level 1		
16,000.0	7,582.0	15,922.3	7,451.0	158.6	158.2	-55.16	7,974.0	-71.2	231.0	-38.7	269.68	0.857 Level 1		
16,100.0	7,582.0	16,022.3	7,450.6	160.5	160.1	-55.08	8,074.0	-71.1	231.2	-41.5	272.72	0.848 Level 1		
16,200.0	7,582.0	16,122.3	7,450.2	162.4	162.0	-54.99	8,174.0	-70.9	231.5	-44.3	275.75	0.839 Level 1		
16,300.0	7,582.0	16,222.3	7,449.8	164.4	163.9	-54.91	8,274.0	-70.7	231.7	-47.1	278.78	0.831 Level 1		
16,400.0	7,582.0	16,322.3	7,449.4	166.3	165.8	-54.83	8,374.0	-70.5	231.9	-49.9	281.80	0.823 Level 1		
16,500.0	7,582.0	16,422.3	7,449.0	168.2	167.8	-54.74	8,474.0	-70.4	232.1	-52.7	284.81	0.815 Level 1		
16,600.0	7,582.0	16,522.3	7,448.6	170.1	169.7	-54.66	8,574.0	-70.2	232.4	-55.5	287.82	0.807 Level 1		
16,700.0	7,582.0	16,622.3	7,448.2	172.0	171.6	-54.58	8,674.0	-70.0	232.6	-58.3	290.83	0.800 Level 1		
16,800.0	7,582.0	16,722.3	7,447.8	173.9	173.5	-54.50	8,774.0	-69.8	232.8	-61.0	293.83	0.792 Level 1		
16,900.0	7,582.0	16,822.3	7,447.4	175.9	175.4	-54.42	8,874.0	-69.6	233.0	-63.8	296.83	0.785 Level 1		
17,000.0	7,582.0	16,922.3	7,447.0	177.8	177.3	-54.33	8,974.0	-69.5	233.2	-66.6	299.82	0.778 Level 1		
17,100.0	7,582.0	17,022.3	7,446.6	179.7	179.3	-54.25	9,074.0	-69.3	233.5	-69.3	302.81	0.771 Level 1		
17,200.0	7,582.0	17,122.3	7,446.2	181.6	181.2	-54.17	9,174.0	-69.1	233.7	-72.1	305.79	0.764 Level 1		
17,300.0	7,582.0	17,222.3	7,445.8	183.5	183.1	-54.09	9,274.0	-68.9	233.9	-74.8	308.77	0.758 Level 1		
17,400.0	7,582.0	17,322.3	7,445.4	185.4	185.0	-54.01	9,374.0	-68.7	234.2	-77.6	311.74	0.751 Level 1		
17,500.0	7,582.0	17,422.3	7,445.0	187.4	186.9	-53.93	9,474.0	-68.6	234.4	-80.3	314.71	0.745 Level 1		
17,600.0	7,582.0	17,522.3	7,444.6	189.3	188.8	-53.84	9,574.0	-68.4	234.6	-83.1	317.67	0.739 Level 1		
17,700.0	7,582.0	17,622.3	7,444.2	191.2	190.8	-53.76	9,674.0	-68.2	234.8	-85.8	320.63	0.732 Level 1		
17,800.0	7,582.0	17,722.3	7,443.8	193.1	192.7	-53.68	9,774.0	-68.0	235.1	-88.5	323.58	0.726 Level 1		
17,900.0	7,582.0	17,822.3	7,443.4	195.0	194.6	-53.60	9,874.0	-67.9	235.3	-91.2	326.53	0.721 Level 1		
17,995.4	7,582.0	17,917.2	7,443.0	196.9	196.4	-53.53	9,968.9	-67.7	235.5	-93.8	329.33	0.715 Level 1		
17,996.0	7,582.0	17,917.2	7,443.0	196.9	196.4	-53.53	9,968.9	-67.7	235.5	-93.8	329.33	0.715 Level 1, ES, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Criticr Creek Pad 15-11N-63W - Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													Offset Site Error:	
Survey Program: 0-MWD													Offset Well Error:	
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	0.0	0.0	0.0	0.0	89.62	4.0	599.5	599.5					
100.0	100.0	100.0	100.0	0.1	0.1	89.62	4.0	599.5	599.5	599.3	0.22	2,667.178		
200.0	200.0	200.0	200.0	0.3	0.3	89.62	4.0	599.5	599.5	598.8	0.67	889.059		
300.0	300.0	300.0	300.0	0.6	0.6	89.62	4.0	599.5	599.5	598.4	1.12	533.436		
400.0	400.0	400.0	400.0	0.8	0.8	89.62	4.0	599.5	599.5	597.9	1.57	381.025		
500.0	500.0	500.0	500.0	1.0	1.0	89.62	4.0	599.5	599.5	597.5	2.02	296.353		
600.0	600.0	600.0	600.0	1.2	1.2	89.62	4.0	599.5	599.5	597.0	2.47	242.471		
700.0	700.0	700.0	700.0	1.5	1.5	89.62	4.0	599.5	599.5	596.6	2.92	205.168		
800.0	800.0	800.0	800.0	1.7	1.7	89.62	4.0	599.5	599.5	596.1	3.37	177.812		
900.0	900.0	900.0	900.0	1.9	1.9	89.62	4.0	599.5	599.5	595.7	3.82	156.893		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.62	4.0	599.5	599.5	595.2	4.27	140.378		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.62	4.0	599.5	599.5	594.8	4.72	127.008		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.62	4.0	599.5	599.5	594.3	5.17	115.964		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.62	4.0	599.5	599.5	593.9	5.62	106.687		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.62	4.0	599.5	599.5	593.4	6.07	98.784		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.62	4.0	599.5	599.5	593.0	6.52	91.972		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.62	4.0	599.5	599.5	592.5	6.97	86.038		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.62	4.0	599.5	599.5	592.1	7.42	80.824		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-82.04	4.0	599.5	599.3	591.5	7.84	76.468		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-82.43	4.0	599.5	598.7	590.5	8.23	72.734		
2,000.0	1,999.7	1,999.7	1,999.7	4.3	4.4	-83.09	4.0	599.5	597.9	589.3	8.63	69.248		
2,100.0	2,099.2	2,099.2	2,099.2	4.4	4.6	-84.01	4.0	599.5	596.8	587.8	9.05	65.968		
2,200.0	2,198.5	2,198.5	2,198.5	4.6	4.8	-85.19	4.0	599.5	595.7	586.2	9.48	62.862		
2,286.3	2,283.8	2,283.8	2,283.8	4.8	5.0	-86.41	4.0	599.5	594.7	584.9	9.86	60.303		
2,300.0	2,297.3	2,297.3	2,297.3	4.9	5.1	-86.62	4.0	599.5	594.6	584.7	9.93	59.906		
2,400.0	2,396.1	2,398.6	2,398.6	5.1	5.3	-88.05	2.7	599.4	593.6	583.3	10.37	57.238		
2,500.0	2,494.8	2,500.6	2,500.5	5.4	5.4	-89.24	-1.3	599.2	592.6	581.8	10.81	54.831		
2,600.0	2,593.5	2,603.2	2,602.9	5.7	5.6	-90.18	-8.0	598.9	591.2	579.9	11.26	52.493		
2,700.0	2,692.3	2,706.2	2,705.4	6.0	5.8	-90.86	-17.5	598.4	589.4	577.7	11.74	50.212		
2,800.0	2,791.0	2,809.5	2,808.0	6.3	6.0	-91.29	-29.9	597.7	587.1	574.9	12.24	47.976		
2,900.0	2,889.7	2,912.9	2,910.3	6.6	6.2	-91.46	-45.0	597.0	584.3	571.5	12.76	45.778		
3,000.0	2,988.4	3,016.3	3,012.1	6.9	6.4	-91.35	-62.9	596.0	580.8	567.5	13.32	43.612		
3,100.0	3,087.2	3,119.5	3,113.3	7.2	6.7	-90.98	-83.5	595.0	576.8	562.9	13.91	41.476		
3,200.0	3,185.9	3,221.9	3,212.9	7.5	7.0	-90.34	-106.5	593.8	572.2	557.7	14.53	39.386		
3,300.0	3,284.6	3,321.5	3,309.8	7.9	7.3	-89.61	-129.8	592.6	567.6	552.4	15.18	37.400		
3,400.0	3,383.4	3,421.1	3,406.7	8.2	7.7	-88.88	-153.1	591.4	563.0	547.2	15.85	35.529		
3,500.0	3,482.1	3,520.7	3,503.5	8.5	8.0	-88.13	-176.4	590.2	558.6	542.0	16.54	33.772		
3,600.0	3,580.8	3,620.4	3,600.4	8.9	8.4	-87.38	-199.7	589.0	554.2	537.0	17.25	32.127		
3,700.0	3,679.5	3,720.0	3,697.3	9.2	8.8	-86.61	-223.0	587.8	549.9	532.0	17.98	30.590		
3,800.0	3,778.3	3,819.6	3,794.1	9.6	9.2	-85.82	-246.3	586.6	545.8	527.1	18.72	29.155		
3,900.0	3,877.0	3,919.3	3,891.0	9.9	9.6	-85.03	-269.6	585.4	541.7	522.2	19.47	27.818		
4,000.0	3,975.7	4,018.9	3,987.8	10.3	10.0	-84.23	-292.9	584.2	537.8	517.5	20.24	26.572		
4,100.0	4,074.5	4,118.5	4,084.7	10.6	10.4	-83.41	-316.2	583.0	533.9	512.9	21.01	25.411		
4,200.0	4,173.2	4,218.2	4,181.6	11.0	10.8	-82.58	-339.5	581.8	530.2	508.4	21.79	24.329		
4,300.0	4,271.9	4,317.8	4,278.4	11.4	11.3	-81.74	-362.7	580.6	526.6	504.0	22.58	23.320		
4,400.0	4,370.6	4,417.4	4,375.3	11.7	11.7	-80.89	-386.0	579.4	523.1	499.7	23.37	22.380		
4,500.0	4,469.4	4,517.1	4,472.2	12.1	12.2	-80.03	-409.3	578.2	519.7	495.5	24.17	21.503		
4,600.0	4,568.1	4,616.7	4,569.0	12.4	12.6	-79.15	-432.6	577.0	516.4	491.4	24.97	20.684		
4,700.0	4,666.8	4,716.3	4,665.9	12.8	13.1	-78.27	-455.9	575.8	513.2	487.5	25.77	19.920		
4,800.0	4,765.6	4,816.0	4,762.8	13.2	13.5	-77.37	-479.2	574.6	510.2	483.7	26.57	19.205		
4,900.0	4,864.3	4,915.6	4,859.6	13.5	14.0	-76.47	-502.5	573.4	507.3	480.0	27.37	18.538		
5,000.0	4,963.0	5,015.2	4,956.5	13.9	14.4	-75.55	-525.8	572.2	504.6	476.4	28.17	17.913		

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 511-1510H
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 511-1510H	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 14, 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		
5,100.0	5,061.7	5,114.9	5,053.3	14.3	14.9	-74.63	-549.1	571.0	501.9	473.0	28.96	17.329		
5,200.0	5,160.5	5,214.5	5,150.2	14.6	15.4	-73.69	-572.4	569.8	499.4	469.7	29.76	16.782		
5,300.0	5,259.2	5,314.1	5,247.1	15.0	15.8	-72.75	-595.7	568.6	497.0	466.5	30.55	16.270		
5,400.0	5,357.9	5,414.1	5,344.3	15.4	16.3	-71.80	-619.0	567.4	494.8	463.5	31.32	15.798		
5,500.0	5,456.7	5,516.1	5,444.0	15.8	16.6	-71.09	-640.6	566.3	492.4	460.4	31.99	15.390		
5,600.0	5,555.4	5,618.4	5,544.7	16.1	17.0	-70.79	-658.6	565.4	489.6	456.9	32.66	14.990		
5,700.0	5,654.1	5,720.7	5,646.0	16.5	17.3	-70.91	-673.1	564.6	486.2	452.9	33.31	14.596		
5,800.0	5,752.8	5,822.8	5,747.5	16.9	17.5	-71.47	-683.9	564.1	482.5	448.5	33.96	14.207		
5,900.0	5,851.6	5,924.4	5,848.8	17.2	17.7	-72.46	-691.0	563.7	478.3	443.7	34.59	13.829		
6,000.0	5,950.3	6,025.3	5,949.6	17.6	17.9	-73.88	-694.6	563.5	474.0	438.8	35.20	13.465		
6,100.0	6,049.0	6,124.7	6,049.0	18.0	18.1	-75.68	-695.0	563.5	469.8	434.0	35.80	13.124		
6,196.8	6,144.6	6,220.3	6,144.6	18.4	18.2	-77.49	-695.0	563.5	466.2	429.9	36.36	12.824		
6,200.0	6,147.8	6,223.5	6,147.8	18.4	18.2	-77.55	-695.0	563.5	466.1	429.7	36.37	12.815		
6,300.0	6,246.8	6,322.5	6,246.8	18.6	18.3	-79.18	-695.0	563.5	463.2	426.4	36.82	12.580		
6,400.0	6,346.2	6,421.9	6,346.2	18.9	18.5	-80.42	-695.0	563.5	461.3	424.1	37.23	12.393		
6,500.0	6,445.9	6,521.6	6,445.9	19.1	18.6	-81.27	-695.0	563.5	460.2	422.6	37.59	12.243		
6,600.0	6,545.9	6,621.6	6,545.9	19.2	18.8	-81.71	-695.0	563.5	459.7	421.8	37.91	12.125		
6,654.1	6,600.0	6,675.7	6,600.0	19.3	18.9	89.75	-695.0	563.5	459.6	421.5	38.08	12.069		
6,700.0	6,645.9	6,721.6	6,645.9	19.4	18.9	89.75	-695.0	563.5	459.6	421.4	38.22	12.026		
6,800.0	6,745.9	6,821.6	6,745.9	19.5	19.1	89.75	-695.0	563.5	459.6	421.1	38.51	11.936		
6,819.7	6,765.6	6,841.3	6,765.6	19.6	19.1	89.75	-695.0	563.5	459.6	421.0	38.56	11.918 CC		
6,900.0	6,845.9	6,920.9	6,845.1	19.7	19.2	89.22	-690.7	563.5	459.6	420.9	38.76	11.860		
6,919.9	6,865.8	6,940.5	6,864.5	19.7	19.2	88.92	-688.3	563.5	459.7	420.9	38.79	11.850		
6,950.0	6,895.8	6,969.8	6,893.4	19.7	19.2	88.32	-683.7	563.5	459.8	421.0	38.83	11.841		
7,000.0	6,945.7	7,018.2	6,940.7	19.8	19.2	87.49	-673.6	563.5	460.0	421.2	38.84	11.843		
7,050.0	6,995.1	7,066.1	6,986.8	19.8	19.1	86.67	-660.4	563.6	460.4	421.6	38.80	11.867		
7,100.0	7,044.0	7,113.7	7,031.6	19.7	19.0	85.88	-644.3	563.6	460.8	422.1	38.69	11.912		
7,150.0	7,091.9	7,160.9	7,074.8	19.7	18.9	85.11	-625.4	563.6	461.3	422.8	38.52	11.976		
7,200.0	7,138.8	7,207.7	7,116.4	19.6	18.8	84.37	-603.9	563.7	461.9	423.6	38.31	12.057		
7,250.0	7,184.3	7,254.2	7,156.2	19.5	18.7	83.65	-579.9	563.7	462.5	424.5	38.05	12.154		
7,300.0	7,228.3	7,300.0	7,193.8	19.4	18.5	82.97	-553.8	563.8	463.2	425.4	37.77	12.265		
7,350.0	7,270.5	7,346.3	7,230.1	19.3	18.4	82.32	-525.0	563.8	463.9	426.4	37.45	12.387		
7,400.0	7,310.7	7,391.9	7,263.9	19.1	18.2	81.70	-494.4	563.9	464.6	427.5	37.11	12.518		
7,450.0	7,348.8	7,437.2	7,295.5	19.0	18.1	81.13	-461.9	564.0	465.3	428.5	36.77	12.652		
7,500.0	7,384.5	7,482.4	7,324.9	18.8	18.0	80.60	-427.7	564.0	466.0	429.6	36.44	12.788		
7,550.0	7,417.7	7,527.3	7,351.9	18.7	17.8	80.11	-391.8	564.1	466.7	430.6	36.12	12.919		
7,600.0	7,448.2	7,572.0	7,376.6	18.6	17.7	79.67	-354.5	564.2	467.3	431.5	35.83	13.042		
7,650.0	7,475.8	7,616.6	7,398.7	18.5	17.6	79.27	-315.9	564.3	468.0	432.4	35.58	13.151		
7,700.0	7,500.5	7,661.0	7,418.4	18.4	17.6	78.92	-276.1	564.4	468.5	433.1	35.39	13.240		
7,750.0	7,522.1	7,705.3	7,435.5	18.3	17.5	78.62	-235.2	564.4	469.0	433.8	35.25	13.306		
7,800.0	7,540.5	7,750.0	7,450.2	18.3	17.5	78.36	-193.0	564.5	469.5	434.3	35.18	13.344		
7,850.0	7,555.6	7,793.5	7,462.0	18.3	17.5	78.16	-151.1	564.6	469.8	434.6	35.20	13.347		
7,900.0	7,567.4	7,837.5	7,471.2	18.4	17.6	78.01	-108.1	564.7	470.1	434.8	35.30	13.317		
7,950.0	7,575.7	7,881.5	7,477.9	18.5	17.7	77.90	-64.6	564.8	470.3	434.8	35.49	13.251		
8,000.0	7,580.6	7,925.4	7,481.8	18.6	17.8	77.85	-20.9	564.9	470.4	434.6	35.77	13.151		
8,044.9	7,582.0	7,964.9	7,483.0	18.8	18.0	77.85	18.6	565.0	470.4	434.3	36.09	13.035		
8,046.4	7,582.0	7,966.2	7,483.0	18.8	18.0	77.85	19.9	565.0	470.4	434.3	36.10	13.031		
8,048.0	7,582.0	7,967.6	7,483.0	18.8	18.0	77.85	21.3	565.0	470.4	434.3	36.11	13.027		
8,100.0	7,582.0	8,019.4	7,482.8	19.1	18.2	77.83	73.1	565.1	470.4	433.9	36.57	12.865		
8,200.0	7,582.0	8,119.4	7,482.4	19.7	18.8	77.78	173.1	565.2	470.5	432.8	37.77	12.458		
8,300.0	7,582.0	8,219.4	7,482.0	20.5	19.5	77.73	273.1	565.4	470.6	431.3	39.30	11.976		
8,400.0	7,582.0	8,319.4	7,481.6	21.4	20.4	77.68	373.1	565.6	470.7	429.6	41.12	11.447		

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 511-1510H
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 511-1510H	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 14, 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		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)						
8,500.0	7,582.0	8,419.4	7,481.2	22.5	21.5	77.64	473.1	565.7	470.8	427.6	43.19	10.900		
8,600.0	7,582.0	8,519.4	7,480.8	23.6	22.7	77.59	573.1	565.9	470.9	425.4	45.49	10.352		
8,700.0	7,582.0	8,619.4	7,480.4	24.9	23.9	77.54	673.1	566.1	471.0	423.0	47.97	9.818		
8,800.0	7,582.0	8,719.4	7,480.0	26.3	25.3	77.49	773.1	566.2	471.0	420.4	50.61	9.308		
8,900.0	7,582.0	8,819.4	7,479.6	27.7	26.7	77.45	873.1	566.4	471.1	417.8	53.38	8.826		
9,000.0	7,582.0	8,919.4	7,479.2	29.1	28.2	77.40	973.1	566.6	471.2	415.0	56.27	8.374		
9,100.0	7,582.0	9,019.4	7,478.8	30.7	29.7	77.35	1,073.1	566.7	471.3	412.0	59.26	7.953		
9,200.0	7,582.0	9,119.4	7,478.4	32.2	31.3	77.30	1,173.1	566.9	471.4	409.1	62.33	7.563		
9,300.0	7,582.0	9,219.4	7,478.0	33.8	32.9	77.25	1,273.1	567.1	471.5	406.0	65.48	7.201		
9,400.0	7,582.0	9,319.4	7,477.6	35.5	34.6	77.21	1,373.1	567.2	471.6	402.9	68.68	6.866		
9,500.0	7,582.0	9,419.4	7,477.2	37.1	36.2	77.16	1,473.1	567.4	471.7	399.7	71.94	6.556		
9,600.0	7,582.0	9,519.4	7,476.8	38.8	37.9	77.11	1,573.1	567.6	471.8	396.5	75.25	6.269		
9,700.0	7,582.0	9,619.4	7,476.4	40.5	39.6	77.06	1,673.1	567.7	471.8	393.3	78.59	6.004		
9,800.0	7,582.0	9,719.4	7,476.0	42.3	41.4	77.02	1,773.1	567.9	471.9	390.0	81.97	5.757		
9,900.0	7,582.0	9,819.4	7,475.6	44.0	43.1	76.97	1,873.1	568.1	472.0	386.6	85.38	5.528		
10,000.0	7,582.0	9,919.4	7,475.2	45.8	44.9	76.92	1,973.1	568.2	472.1	383.3	88.82	5.315		
10,100.0	7,582.0	10,019.4	7,474.8	47.5	46.7	76.87	2,073.1	568.4	472.2	379.9	92.28	5.117		
10,200.0	7,582.0	10,119.4	7,474.4	49.3	48.5	76.83	2,173.0	568.6	472.3	376.5	95.77	4.932		
10,300.0	7,582.0	10,219.4	7,474.0	51.1	50.3	76.78	2,273.0	568.7	472.4	373.1	99.27	4.759		
10,400.0	7,582.0	10,319.4	7,473.6	52.9	52.1	76.73	2,373.0	568.9	472.5	369.7	102.78	4.597		
10,500.0	7,582.0	10,419.4	7,473.2	54.7	53.9	76.68	2,473.0	569.1	472.6	366.3	106.32	4.445		
10,600.0	7,582.0	10,519.4	7,472.8	56.5	55.7	76.64	2,573.0	569.2	472.7	362.8	109.86	4.302		
10,700.0	7,582.0	10,619.4	7,472.4	58.4	57.6	76.59	2,673.0	569.4	472.8	359.3	113.42	4.168		
10,800.0	7,582.0	10,719.4	7,471.9	60.2	59.4	76.54	2,773.0	569.6	472.9	355.9	116.99	4.042		
10,900.0	7,582.0	10,819.4	7,471.5	62.0	61.3	76.49	2,873.0	569.7	472.9	352.4	120.57	3.923		
11,000.0	7,582.0	10,919.4	7,471.1	63.9	63.1	76.45	2,973.0	569.9	473.0	348.9	124.16	3.810		
11,100.0	7,582.0	11,019.4	7,470.7	65.7	65.0	76.40	3,073.0	570.1	473.1	345.4	127.75	3.704		
11,200.0	7,582.0	11,119.4	7,470.3	67.6	66.8	76.35	3,173.0	570.2	473.2	341.9	131.35	3.603		
11,300.0	7,582.0	11,219.4	7,469.9	69.4	68.7	76.30	3,273.0	570.4	473.3	338.4	134.96	3.507		
11,400.0	7,582.0	11,319.4	7,469.5	71.3	70.5	76.26	3,373.0	570.6	473.4	334.8	138.57	3.416		
11,500.0	7,582.0	11,419.4	7,469.1	73.2	72.4	76.21	3,473.0	570.7	473.5	331.3	142.19	3.330		
11,600.0	7,582.0	11,519.4	7,468.7	75.0	74.3	76.16	3,573.0	570.9	473.6	327.8	145.82	3.248		
11,700.0	7,582.0	11,619.4	7,468.3	76.9	76.2	76.12	3,673.0	571.1	473.7	324.3	149.45	3.170		
11,800.0	7,582.0	11,719.4	7,467.9	78.8	78.0	76.07	3,773.0	571.2	473.8	320.7	153.08	3.095		
11,900.0	7,582.0	11,819.4	7,467.5	80.6	79.9	76.02	3,873.0	571.4	473.9	317.2	156.71	3.024		
12,000.0	7,582.0	11,919.4	7,467.1	82.5	81.8	75.97	3,973.0	571.6	474.0	313.6	160.35	2.956		
12,100.0	7,582.0	12,019.4	7,466.7	84.4	83.7	75.93	4,073.0	571.7	474.1	310.1	163.99	2.891		
12,200.0	7,582.0	12,119.4	7,466.3	86.3	85.6	75.88	4,173.0	571.9	474.2	306.6	167.64	2.829		
12,300.0	7,582.0	12,219.4	7,465.9	88.2	87.4	75.83	4,273.0	572.1	474.3	303.0	171.28	2.769		
12,400.0	7,582.0	12,319.4	7,465.5	90.1	89.3	75.79	4,373.0	572.2	474.4	299.5	174.93	2.712		
12,500.0	7,582.0	12,419.4	7,465.1	91.9	91.2	75.74	4,473.0	572.4	474.5	295.9	178.58	2.657		
12,600.0	7,582.0	12,519.4	7,464.7	93.8	93.1	75.69	4,573.0	572.6	474.6	292.4	182.23	2.604		
12,700.0	7,582.0	12,619.4	7,464.3	95.7	95.0	75.64	4,673.0	572.7	474.7	288.8	185.89	2.554		
12,800.0	7,582.0	12,719.4	7,463.9	97.6	96.9	75.60	4,773.0	572.9	474.8	285.2	189.54	2.505		
12,900.0	7,582.0	12,819.4	7,463.5	99.5	98.8	75.55	4,873.0	573.1	474.9	281.7	193.20	2.458		
13,000.0	7,582.0	12,919.4	7,463.1	101.4	100.7	75.50	4,973.0	573.2	475.0	278.1	196.85	2.413		
13,100.0	7,582.0	13,019.4	7,462.7	103.3	102.6	75.46	5,073.0	573.4	475.1	274.6	200.51	2.369		
13,200.0	7,582.0	13,119.4	7,462.3	105.2	104.5	75.41	5,173.0	573.6	475.2	271.0	204.17	2.327		
13,300.0	7,582.0	13,219.4	7,461.9	107.1	106.4	75.36	5,273.0	573.7	475.3	267.5	207.83	2.287		
13,400.0	7,582.0	13,319.4	7,461.5	109.0	108.3	75.32	5,373.0	573.9	475.4	263.9	211.49	2.248		
13,500.0	7,582.0	13,419.4	7,461.1	110.9	110.2	75.27	5,473.0	574.1	475.5	260.3	215.15	2.210		
13,600.0	7,582.0	13,519.4	7,460.7	112.8	112.1	75.22	5,573.0	574.2	475.6	256.8	218.81	2.174		

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 511-1510H
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 511-1510H	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 14, 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		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)						
13,700.0	7,582.0	13,619.3	7,460.3	114.7	114.0	75.18	5,673.0	574.4	475.7	253.2	222.47	2.138		
13,800.0	7,582.0	13,719.3	7,459.9	116.6	115.9	75.13	5,773.0	574.6	475.8	249.7	226.13	2.104		
13,900.0	7,582.0	13,819.3	7,459.5	118.5	117.8	75.08	5,873.0	574.7	475.9	246.1	229.79	2.071		
14,000.0	7,582.0	13,919.3	7,459.1	120.4	119.7	75.03	5,973.0	574.9	476.0	242.6	233.45	2.039		
14,100.0	7,582.0	14,019.3	7,458.7	122.3	121.6	74.99	6,073.0	575.1	476.1	239.0	237.11	2.008		
14,200.0	7,582.0	14,119.3	7,458.3	124.2	123.5	74.94	6,173.0	575.2	476.2	235.4	240.77	1.978		
14,300.0	7,582.0	14,219.3	7,457.9	126.1	125.4	74.89	6,273.0	575.4	476.3	231.9	244.43	1.949		
14,400.0	7,582.0	14,319.3	7,457.5	128.0	127.4	74.85	6,373.0	575.6	476.4	228.3	248.09	1.920		
14,500.0	7,582.0	14,419.3	7,457.1	129.9	129.3	74.80	6,473.0	575.7	476.5	224.8	251.74	1.893		
14,600.0	7,582.0	14,519.3	7,456.7	131.8	131.2	74.75	6,573.0	575.9	476.6	221.2	255.40	1.866		
14,700.0	7,582.0	14,619.3	7,456.3	133.8	133.1	74.71	6,673.0	576.1	476.7	217.7	259.06	1.840		
14,800.0	7,582.0	14,719.3	7,455.9	135.7	135.0	74.66	6,773.0	576.2	476.8	214.1	262.72	1.815		
14,900.0	7,582.0	14,819.3	7,455.5	137.6	136.9	74.61	6,873.0	576.4	477.0	210.6	266.37	1.791		
15,000.0	7,582.0	14,919.3	7,455.1	139.5	138.8	74.57	6,973.0	576.6	477.1	207.0	270.03	1.767		
15,100.0	7,582.0	15,019.3	7,454.7	141.4	140.7	74.52	7,073.0	576.7	477.2	203.5	273.69	1.743		
15,200.0	7,582.0	15,119.3	7,454.3	143.3	142.6	74.48	7,173.0	576.9	477.3	199.9	277.34	1.721		
15,300.0	7,582.0	15,219.3	7,453.9	145.2	144.6	74.43	7,273.0	577.1	477.4	196.4	280.99	1.699		
15,400.0	7,582.0	15,319.3	7,453.5	147.1	146.5	74.38	7,373.0	577.2	477.5	192.8	284.65	1.677		
15,500.0	7,582.0	15,419.3	7,453.0	149.0	148.4	74.34	7,473.0	577.4	477.6	189.3	288.30	1.657		
15,600.0	7,582.0	15,519.3	7,452.6	151.0	150.3	74.29	7,573.0	577.6	477.7	185.8	291.95	1.636		
15,700.0	7,582.0	15,619.3	7,452.2	152.9	152.2	74.24	7,673.0	577.7	477.8	182.2	295.60	1.616		
15,800.0	7,582.0	15,719.3	7,451.8	154.8	154.1	74.20	7,773.0	577.9	477.9	178.7	299.25	1.597		
15,900.0	7,582.0	15,819.3	7,451.4	156.7	156.0	74.15	7,872.9	578.1	478.0	175.1	302.90	1.578		
16,000.0	7,582.0	15,919.3	7,451.0	158.6	158.0	74.10	7,972.9	578.2	478.1	171.6	306.55	1.560		
16,100.0	7,582.0	16,019.3	7,450.6	160.5	159.9	74.06	8,072.9	578.4	478.3	168.1	310.20	1.542		
16,200.0	7,582.0	16,119.3	7,450.2	162.4	161.8	74.01	8,172.9	578.6	478.4	164.5	313.84	1.524		
16,300.0	7,582.0	16,219.3	7,449.8	164.4	163.7	73.96	8,272.9	578.7	478.5	161.0	317.49	1.507		
16,400.0	7,582.0	16,319.3	7,449.4	166.3	165.6	73.92	8,372.9	578.9	478.6	157.5	321.13	1.490 Level 3		
16,500.0	7,582.0	16,419.3	7,449.0	168.2	167.5	73.87	8,472.9	579.1	478.7	153.9	324.77	1.474 Level 3		
16,600.0	7,582.0	16,519.3	7,448.6	170.1	169.5	73.83	8,572.9	579.2	478.8	150.4	328.41	1.458 Level 3		
16,700.0	7,582.0	16,619.3	7,448.2	172.0	171.4	73.78	8,672.9	579.4	478.9	146.9	332.05	1.442 Level 3		
16,800.0	7,582.0	16,719.3	7,447.8	173.9	173.3	73.73	8,772.9	579.6	479.0	143.3	335.69	1.427 Level 3		
16,900.0	7,582.0	16,819.3	7,447.4	175.9	175.2	73.69	8,872.9	579.7	479.1	139.8	339.33	1.412 Level 3		
17,000.0	7,582.0	16,919.3	7,447.0	177.8	177.1	73.64	8,972.9	579.9	479.3	136.3	342.97	1.397 Level 3		
17,100.0	7,582.0	17,019.3	7,446.6	179.7	179.0	73.60	9,072.9	580.1	479.4	132.8	346.60	1.383 Level 3		
17,200.0	7,582.0	17,119.3	7,446.2	181.6	181.0	73.55	9,172.9	580.2	479.5	129.2	350.24	1.369 Level 3		
17,300.0	7,582.0	17,219.3	7,445.8	183.5	182.9	73.50	9,272.9	580.4	479.6	125.7	353.87	1.355 Level 3		
17,400.0	7,582.0	17,319.3	7,445.4	185.4	184.8	73.46	9,372.9	580.6	479.7	122.2	357.50	1.342 Level 3		
17,500.0	7,582.0	17,419.3	7,445.0	187.4	186.7	73.41	9,472.9	580.7	479.8	118.7	361.13	1.329 Level 3		
17,600.0	7,582.0	17,519.3	7,444.6	189.3	188.6	73.36	9,572.9	580.9	479.9	115.2	364.76	1.316 Level 3		
17,700.0	7,582.0	17,619.3	7,444.2	191.2	190.5	73.32	9,672.9	581.1	480.1	111.7	368.39	1.303 Level 3		
17,800.0	7,582.0	17,719.3	7,443.8	193.1	192.5	73.27	9,772.9	581.2	480.2	108.2	372.02	1.291 Level 3		
17,900.0	7,582.0	17,819.3	7,443.4	195.0	194.4	73.23	9,872.9	581.4	480.3	104.6	375.64	1.279 Level 3		
17,995.4	7,582.0	17,914.7	7,443.0	196.9	196.2	73.18	9,968.3	581.5	480.4	101.3	379.10	1.267 Level 3		
17,996.0	7,582.0	17,915.4	7,443.0	196.9	196.2	73.18	9,969.0	581.5	480.4	101.3	379.12	1.267 Level 3, ES, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter Creek 232-1510H - Wellbore #1 - Plan 1 (Feb 13, 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 Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	89.61	4.8	700.1	700.1					
100.0	100.0	100.0	100.0	0.1	0.1	89.61	4.8	700.1	700.1	699.9	0.22	3,114.784		
200.0	200.0	200.0	200.0	0.3	0.3	89.61	4.8	700.1	700.1	699.4	0.67	1,038.261		
300.0	300.0	300.0	300.0	0.6	0.6	89.61	4.8	700.1	700.1	699.0	1.12	622.957		
400.0	400.0	400.0	400.0	0.8	0.8	89.61	4.8	700.1	700.1	698.5	1.57	444.969		
500.0	500.0	500.0	500.0	1.0	1.0	89.61	4.8	700.1	700.1	698.1	2.02	346.087		
600.0	600.0	600.0	600.0	1.2	1.2	89.61	4.8	700.1	700.1	697.6	2.47	283.162		
700.0	700.0	700.0	700.0	1.5	1.5	89.61	4.8	700.1	700.1	697.2	2.92	239.599		
800.0	800.0	800.0	800.0	1.7	1.7	89.61	4.8	700.1	700.1	696.7	3.37	207.652		
900.0	900.0	900.0	900.0	1.9	1.9	89.61	4.8	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	89.61	4.8	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	89.61	4.8	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	89.61	4.8	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	89.61	4.8	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	89.61	4.8	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	89.61	4.8	700.1	700.1	693.6	6.52	107.406 CC, ES		
1,600.0	1,600.0	1,590.9	1,590.9	3.5	3.4	89.68	3.9	700.7	700.7	693.8	6.92	101.222		
1,700.0	1,700.0	1,681.6	1,681.6	3.7	3.6	89.91	1.2	702.5	702.7	695.4	7.31	96.135		
1,800.0	1,800.0	1,772.3	1,772.0	3.9	3.8	-81.30	-3.3	705.4	705.8	698.1	7.67	92.022		
1,900.0	1,899.9	1,862.8	1,862.3	4.1	3.9	-81.03	-9.6	709.6	709.8	701.8	8.01	88.587		
2,000.0	1,999.7	1,953.2	1,952.1	4.3	4.1	-80.80	-17.6	714.9	714.7	706.3	8.37	85.369		
2,100.0	2,099.2	2,043.5	2,041.7	4.4	4.3	-80.61	-27.4	721.4	720.5	711.8	8.75	82.302		
2,200.0	2,198.5	2,133.6	2,130.7	4.6	4.6	-80.46	-38.9	729.1	727.2	718.1	9.17	79.325		
2,286.3	2,283.8	2,211.3	2,207.2	4.8	4.8	-80.37	-50.3	736.6	733.7	724.2	9.55	76.801		
2,300.0	2,297.3	2,223.6	2,219.3	4.9	4.8	-80.37	-52.2	737.8	734.8	725.2	9.62	76.390		
2,400.0	2,396.1	2,313.4	2,307.3	5.1	5.1	-80.31	-67.2	747.8	743.5	733.4	10.11	73.544		
2,500.0	2,494.8	2,411.1	2,402.7	5.4	5.4	-80.15	-84.7	759.4	753.1	742.5	10.66	70.640		
2,600.0	2,593.5	2,510.6	2,499.9	5.7	5.8	-79.99	-102.6	771.2	762.8	751.5	11.25	67.823		
2,700.0	2,692.3	2,610.2	2,597.0	6.0	6.1	-79.83	-120.5	783.1	772.4	760.6	11.86	65.148		
2,800.0	2,791.0	2,709.7	2,694.2	6.3	6.5	-79.68	-138.3	794.9	782.1	769.6	12.49	62.631		
2,900.0	2,889.7	2,809.2	2,791.4	6.6	6.9	-79.53	-156.2	806.8	791.8	778.6	13.14	60.276 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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	-90.85	-1.1	-74.6	74.6	74.6	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.85	-1.1	-74.6	74.6	74.4	0.23	328.755		
200.0	200.0	201.0	201.0	0.3	0.3	-90.85	-1.1	-74.6	74.6	74.0	0.68	110.313		
300.0	300.0	301.0	301.0	0.6	0.6	-90.85	-1.1	-74.6	74.6	73.5	1.13	66.276		
400.0	400.0	401.0	401.0	0.8	0.8	-90.85	-1.1	-74.6	74.6	73.1	1.58	47.367		
500.0	500.0	501.0	501.0	1.0	1.0	-90.85	-1.1	-74.6	74.6	72.6	2.03	36.853		
600.0	600.0	601.0	601.0	1.2	1.2	-90.85	-1.1	-74.6	74.6	72.2	2.47	30.158		
700.0	700.0	701.0	701.0	1.5	1.5	-90.85	-1.1	-74.6	74.6	71.7	2.92	25.522		
800.0	800.0	801.0	801.0	1.7	1.7	-90.85	-1.1	-74.6	74.6	71.3	3.37	22.121		
900.0	900.0	901.0	901.0	1.9	1.9	-90.85	-1.1	-74.6	74.6	70.8	3.82	19.520		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.85	-1.1	-74.6	74.6	70.4	4.27	17.467		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.85	-1.1	-74.6	74.6	69.9	4.72	15.804		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.85	-1.1	-74.6	74.6	69.5	5.17	14.430		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.85	-1.1	-74.6	74.6	69.0	5.62	13.276		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.85	-1.1	-74.6	74.6	68.6	6.07	12.293		
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-90.85	-1.1	-74.6	74.6	68.1	6.52	11.446		
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	-90.85	-1.1	-74.6	74.6	67.7	6.97	10.708		
1,700.0	1,700.0	1,701.0	1,701.0	3.7	3.7	-90.85	-1.1	-74.6	74.6	67.2	7.42	10.059 CC		
1,800.0	1,800.0	1,801.0	1,801.0	3.9	3.9	98.66	-1.1	-74.6	74.8	67.0	7.84	9.545		
1,900.0	1,899.9	1,900.9	1,900.9	4.1	4.2	101.71	-1.1	-74.6	75.5	67.3	8.23	9.175		
2,000.0	1,999.7	2,000.7	2,000.7	4.3	4.4	106.62	-1.1	-74.6	77.2	68.6	8.63	8.943		
2,100.0	2,099.2	2,100.2	2,100.2	4.4	4.6	113.06	-1.1	-74.6	80.5	71.4	9.04	8.899		
2,200.0	2,198.5	2,199.5	2,199.5	4.6	4.8	120.45	-1.1	-74.6	86.0	76.6	9.45	9.097		
2,286.3	2,283.8	2,284.8	2,284.8	4.8	5.0	127.07	-1.1	-74.6	93.1	83.3	9.81	9.494		
2,300.0	2,297.3	2,298.3	2,298.3	4.9	5.1	128.12	-1.1	-74.6	94.5	84.6	9.87	9.574		
2,400.0	2,396.1	2,396.8	2,396.8	5.1	5.3	135.56	-0.1	-74.0	105.2	94.9	10.29	10.226		
2,500.0	2,494.8	2,494.6	2,494.5	5.4	5.5	142.72	3.1	-72.0	117.9	107.2	10.70	11.016		
2,600.0	2,593.5	2,592.4	2,592.2	5.7	5.7	149.15	7.6	-69.1	132.6	121.5	11.12	11.929		
2,700.0	2,692.3	2,690.3	2,689.9	6.0	5.9	154.28	12.3	-66.2	148.7	137.1	11.53	12.891		
2,800.0	2,791.0	2,788.2	2,787.7	6.3	6.1	158.40	16.9	-63.2	165.7	153.7	11.95	13.860		
2,900.0	2,889.7	2,886.1	2,885.4	6.6	6.4	161.75	21.5	-60.3	183.4	171.0	12.38	14.814		
3,000.0	2,988.4	2,984.0	2,983.2	6.9	6.6	164.50	26.1	-57.4	201.6	188.8	12.81	15.739		
3,100.0	3,087.2	3,081.9	3,080.9	7.2	6.8	166.80	30.7	-54.5	220.1	206.9	13.24	16.628		
3,200.0	3,185.9	3,179.8	3,178.7	7.5	7.0	168.75	35.3	-51.6	239.0	225.3	13.67	17.479		
3,300.0	3,284.6	3,277.7	3,276.4	7.9	7.3	170.40	39.9	-48.6	258.1	244.0	14.11	18.289		
3,400.0	3,383.4	3,375.6	3,374.2	8.2	7.5	171.83	44.5	-45.7	277.4	262.8	14.55	19.059		
3,500.0	3,482.1	3,473.5	3,471.9	8.5	7.7	173.08	49.1	-42.8	296.8	281.8	15.00	19.790		
3,600.0	3,580.8	3,571.4	3,569.7	8.9	7.9	174.17	53.7	-39.9	316.3	300.9	15.44	20.484		
3,700.0	3,679.5	3,669.3	3,667.4	9.2	8.2	175.13	58.3	-37.0	336.0	320.1	15.89	21.142		
3,800.0	3,778.3	3,767.3	3,765.2	9.6	8.4	175.99	62.9	-34.0	355.7	339.3	16.34	21.767		
3,900.0	3,877.0	3,865.2	3,863.0	9.9	8.6	176.76	67.5	-31.1	375.5	358.7	16.79	22.360		
4,000.0	3,975.7	3,963.1	3,960.7	10.3	8.9	177.45	72.1	-28.2	395.3	378.1	17.24	22.923		
4,100.0	4,074.5	4,061.0	4,058.5	10.6	9.1	178.07	76.7	-25.3	415.2	397.5	17.70	23.458		
4,200.0	4,173.2	4,158.9	4,156.2	11.0	9.3	178.64	81.3	-22.4	435.1	417.0	18.16	23.966		
4,300.0	4,271.9	4,256.8	4,254.0	11.4	9.6	179.16	86.0	-19.5	455.1	436.5	18.61	24.450		
4,400.0	4,370.6	4,354.7	4,351.7	11.7	9.8	179.63	90.6	-16.5	475.1	456.0	19.07	24.911		
4,500.0	4,469.4	4,452.6	4,449.5	12.1	10.0	-179.93	95.2	-13.6	495.1	475.6	19.53	25.351		
4,600.0	4,568.1	4,550.5	4,547.2	12.4	10.3	-179.53	99.8	-10.7	515.2	495.2	19.99	25.770		
4,700.0	4,666.8	4,648.4	4,645.0	12.8	10.5	-179.16	104.4	-7.8	535.3	514.8	20.45	26.170		
4,800.0	4,765.6	4,746.3	4,742.7	13.2	10.7	-178.81	109.0	-4.9	555.4	534.5	20.92	26.552		
4,900.0	4,864.3	4,844.2	4,840.5	13.5	11.0	-178.49	113.6	-1.9	575.5	554.1	21.38	26.918		
5,000.0	4,963.0	4,942.1	4,938.2	13.9	11.2	-178.19	118.2	1.0	595.6	573.8	21.84	27.268		

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 511-1510H
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 511-1510H	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 14, 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							
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)			
5,100.0	5,061.7	5,040.0	5,036.0	14.3	11.4	-177.91	122.8	3.9	615.8	593.5	22.31	27.603		
5,200.0	5,160.5	5,137.9	5,133.7	14.6	11.7	-177.65	127.4	6.8	636.0	613.2	22.77	27.924		
5,300.0	5,259.2	5,235.8	5,231.5	15.0	11.9	-177.40	132.0	9.7	656.1	632.9	23.24	28.232		
5,400.0	5,357.9	5,333.7	5,329.3	15.4	12.1	-177.17	136.6	12.7	676.3	652.6	23.71	28.527		
5,500.0	5,456.7	5,452.2	5,447.6	15.8	12.4	-177.01	140.5	15.1	695.2	671.1	24.17	28.760		
5,600.0	5,555.4	5,561.0	5,556.4	16.1	12.6	-177.06	140.9	15.4	711.4	686.8	24.61	28.905		
5,700.0	5,654.1	5,659.7	5,655.1	16.5	12.8	-177.13	140.9	15.4	727.3	702.2	25.06	29.021		
5,800.0	5,752.8	5,758.4	5,753.8	16.9	13.0	-177.19	140.9	15.4	743.2	717.6	25.52	29.120		
5,900.0	5,851.6	5,857.2	5,852.6	17.2	13.2	-177.25	140.9	15.4	759.0	733.1	25.98	29.216		
6,000.0	5,950.3	5,955.9	5,951.3	17.6	13.4	-177.30	140.9	15.4	774.9	748.5	26.44	29.308		
6,100.0	6,049.0	6,054.6	6,050.0	18.0	13.6	-177.36	140.9	15.4	790.8	763.9	26.90	29.396		
6,800.0	6,745.9	8,021.4	7,482.5	19.5	21.2	-92.23	-700.3	19.0	740.5	699.9	40.65	18.216		
6,900.0	6,845.9	8,021.0	7,482.5	19.7	21.2	-91.96	-699.9	19.0	641.3	600.5	40.78	15.725		
6,919.9	6,865.8	8,020.9	7,482.5	19.7	21.2	-91.91	-699.8	19.0	621.5	580.7	40.81	15.231		
6,950.0	6,895.8	8,020.2	7,482.5	19.7	21.2	-107.89	-699.1	19.0	591.8	551.2	40.60	14.578		
7,000.0	6,945.7	8,016.1	7,482.5	19.8	21.1	-126.30	-695.0	19.0	542.5	503.8	38.76	13.997		
7,050.0	6,995.1	8,008.6	7,482.6	19.8	21.0	-136.72	-687.5	18.9	493.8	456.8	36.98	13.353		
7,100.0	7,044.0	7,997.7	7,482.6	19.7	20.9	-142.55	-676.6	18.9	445.8	410.2	35.62	12.517		
7,150.0	7,091.9	7,983.4	7,482.7	19.7	20.7	-145.74	-662.3	18.8	398.9	364.4	34.55	11.548		
7,200.0	7,138.8	7,965.8	7,482.7	19.6	20.5	-147.24	-644.7	18.7	353.4	319.8	33.65	10.503		
7,250.0	7,184.3	7,944.9	7,482.8	19.5	20.3	-147.47	-623.8	18.7	309.5	276.7	32.87	9.416		
7,300.0	7,228.3	7,921.0	7,482.9	19.4	20.1	-146.60	-599.9	18.6	267.7	235.4	32.24	8.303		
7,350.0	7,270.5	7,891.8	7,483.0	19.3	19.8	-144.21	-570.7	18.4	228.2	196.3	31.89	7.157		
7,400.0	7,310.7	7,853.2	7,481.7	19.1	19.3	-138.75	-532.2	18.3	190.7	158.5	32.22	5.919		
7,450.0	7,348.8	7,816.5	7,478.6	19.0	19.0	-131.64	-495.6	18.1	155.5	122.5	33.03	4.710		
7,500.0	7,384.5	7,781.3	7,473.8	18.8	18.6	-122.23	-460.7	18.0	124.3	89.9	34.32	3.621		
7,550.0	7,417.7	7,747.4	7,467.6	18.7	18.3	-109.96	-427.3	17.8	99.9	64.1	35.77	2.792		
7,600.0	7,448.2	7,714.4	7,460.0	18.6	18.0	-94.92	-395.2	17.7	87.4	51.0	36.45	2.398		
7,613.9	7,456.1	7,705.4	7,457.7	18.5	17.9	-90.43	-386.5	17.6	86.8	50.4	36.34	2.388 ES, SF		
7,650.0	7,475.8	7,682.2	7,451.2	18.5	17.7	-78.67	-364.3	17.6	91.0	55.7	35.28	2.579		
7,700.0	7,500.5	7,650.0	7,441.0	18.4	17.5	-63.33	-333.7	17.4	108.2	76.0	32.13	3.366		
7,750.0	7,522.1	7,619.9	7,430.3	18.3	17.3	-51.36	-305.6	17.3	133.0	104.7	28.30	4.701		
7,800.0	7,540.5	7,589.5	7,418.2	18.3	17.1	-42.01	-277.7	17.2	161.5	137.0	24.48	6.594		
7,850.0	7,555.6	7,559.5	7,405.2	18.3	16.9	-35.02	-250.7	17.1	191.3	170.1	21.19	9.027		
7,900.0	7,567.4	7,529.9	7,391.3	18.4	16.7	-29.77	-224.6	16.9	221.5	203.0	18.53	11.955		
7,950.0	7,575.7	7,500.0	7,376.1	18.5	16.5	-25.71	-198.8	16.8	251.5	235.0	16.46	15.280		
8,000.0	7,580.6	7,471.6	7,360.7	18.6	16.4	-22.64	-175.0	16.7	280.8	265.8	15.05	18.660		
8,044.9	7,582.0	7,450.0	7,348.3	18.8	16.3	-20.59	-157.2	16.7	306.6	292.3	14.37	21.338		
8,048.0	7,582.0	7,450.0	7,348.3	18.8	16.3	-20.59	-157.2	16.7	308.4	294.0	14.39	21.438		
8,100.0	7,582.0	7,415.2	7,327.3	19.1	16.2	-19.05	-129.5	16.5	338.7	324.8	13.93	24.313		
8,200.0	7,582.0	7,364.5	7,294.4	19.7	16.0	-17.06	-91.0	16.4	401.9	388.3	13.61	29.522		
8,300.0	7,582.0	7,319.7	7,263.1	20.5	15.9	-15.50	-58.9	16.2	470.4	456.8	13.60	34.592		
8,400.0	7,582.0	7,280.1	7,233.8	21.4	15.9	-14.28	-32.3	16.1	543.4	529.6	13.79	39.391		
8,500.0	7,582.0	7,250.0	7,210.6	22.5	15.8	-13.44	-13.1	16.0	619.9	605.8	14.18	43.717		
8,600.0	7,582.0	7,213.7	7,181.5	23.6	15.8	-12.52	8.6	15.9	699.5	684.9	14.57	48.002		
8,700.0	7,582.0	7,185.9	7,158.6	24.9	15.7	-11.87	24.3	15.9	781.5	766.4	15.08	51.822		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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		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	0.0	0.0	0.0	0.0	89.60	4.0	574.9	574.9					
100.0	100.0	100.0	100.0	0.1	0.1	89.60	4.0	574.9	574.9	574.7	0.22	2,557.741		
200.0	200.0	200.0	200.0	0.3	0.3	89.60	4.0	574.9	574.9	574.2	0.67	852.580		
300.0	300.0	300.0	300.0	0.6	0.6	89.60	4.0	574.9	574.9	573.8	1.12	511.548		
400.0	400.0	400.0	400.0	0.8	0.8	89.60	4.0	574.9	574.9	573.3	1.57	365.392		
500.0	500.0	500.0	500.0	1.0	1.0	89.60	4.0	574.9	574.9	572.9	2.02	284.193		
600.0	600.0	600.0	600.0	1.2	1.2	89.60	4.0	574.9	574.9	572.4	2.47	232.522		
700.0	700.0	700.0	700.0	1.5	1.5	89.60	4.0	574.9	574.9	572.0	2.92	196.749		
800.0	800.0	800.0	800.0	1.7	1.7	89.60	4.0	574.9	574.9	571.5	3.37	170.516		
900.0	900.0	900.0	900.0	1.9	1.9	89.60	4.0	574.9	574.9	571.1	3.82	150.455		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.60	4.0	574.9	574.9	570.6	4.27	134.618		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.60	4.0	574.9	574.9	570.2	4.72	121.797		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.60	4.0	574.9	574.9	569.7	5.17	111.206		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.60	4.0	574.9	574.9	569.3	5.62	102.310		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.60	4.0	574.9	574.9	568.8	6.07	94.731		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.60	4.0	574.9	574.9	568.4	6.52	88.198		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.60	4.0	574.9	574.9	567.9	6.97	82.508		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.60	4.0	574.9	574.9	567.5	7.42	77.507		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-82.06	4.0	574.9	574.7	566.9	7.84	73.330		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-82.47	4.0	574.9	574.2	565.9	8.23	69.746		
2,000.0	1,999.7	1,999.7	1,999.7	4.3	4.4	-83.15	4.0	574.9	573.3	564.7	8.63	66.400		
2,100.0	2,099.2	2,099.2	2,099.2	4.4	4.6	-84.11	4.0	574.9	572.2	563.2	9.05	63.252		
2,200.0	2,198.5	2,198.5	2,198.5	4.6	4.8	-85.34	4.0	574.9	571.1	561.6	9.48	60.271		
2,286.3	2,283.8	2,283.8	2,283.8	4.8	5.0	-86.61	4.0	574.9	570.2	560.3	9.86	57.817		
2,300.0	2,297.3	2,297.3	2,297.3	4.9	5.1	-86.83	4.0	574.9	570.1	560.2	9.93	57.437		
2,400.0	2,396.1	2,396.1	2,396.1	5.1	5.3	-88.41	4.0	574.9	569.4	559.0	10.40	54.776		
2,500.0	2,494.8	2,494.8	2,494.8	5.4	5.5	-89.99	4.0	574.9	569.2	558.3	10.88	52.310		
2,500.9	2,495.6	2,495.6	2,495.6	5.4	5.5	-90.00	4.0	574.9	569.2	558.3	10.89	52.289		
2,600.0	2,593.5	2,584.9	2,584.9	5.7	5.7	-91.50	4.8	575.4	570.1	558.8	11.36	50.193		
2,700.0	2,692.3	2,674.0	2,673.9	6.0	5.9	-93.13	7.3	577.0	573.1	561.3	11.84	48.398		
2,800.0	2,791.0	2,771.5	2,771.3	6.3	6.1	-94.99	11.2	579.5	577.7	565.3	12.35	46.764		
2,900.0	2,889.7	2,869.5	2,869.2	6.6	6.3	-96.82	15.0	582.0	582.8	570.0	12.87	45.278		
3,000.0	2,988.4	2,967.6	2,967.2	6.9	6.5	-98.63	18.9	584.5	588.6	575.2	13.40	43.935		
3,100.0	3,087.2	3,065.6	3,065.1	7.2	6.8	-100.39	22.8	587.0	595.0	581.0	13.93	42.723		
3,200.0	3,185.9	3,163.7	3,163.1	7.5	7.0	-102.13	26.7	589.4	601.9	587.4	14.46	41.632		
3,300.0	3,284.6	3,261.7	3,261.0	7.9	7.2	-103.82	30.5	591.9	609.4	594.4	14.99	40.650		
3,400.0	3,383.4	3,359.8	3,359.0	8.2	7.4	-105.47	34.4	594.4	617.4	601.9	15.52	39.769		
3,500.0	3,482.1	3,457.9	3,456.9	8.5	7.7	-107.07	38.3	596.9	625.9	609.9	16.06	38.979		
3,600.0	3,580.8	3,555.9	3,554.9	8.9	7.9	-108.64	42.1	599.4	634.9	618.4	16.59	38.272		
3,700.0	3,679.5	3,654.0	3,652.8	9.2	8.1	-110.16	46.0	601.9	644.4	627.3	17.12	37.639		
3,800.0	3,778.3	3,752.0	3,750.8	9.6	8.3	-111.64	49.9	604.4	654.4	636.7	17.65	37.074		
3,900.0	3,877.0	3,850.1	3,848.7	9.9	8.6	-113.07	53.8	606.9	664.7	646.6	18.18	36.570		
4,000.0	3,975.7	3,948.2	3,946.7	10.3	8.8	-114.46	57.6	609.3	675.5	656.8	18.70	36.120		
4,100.0	4,074.5	4,046.2	4,044.6	10.6	9.0	-115.80	61.5	611.8	686.7	667.5	19.22	35.721		
4,200.0	4,173.2	4,144.3	4,142.6	11.0	9.2	-117.11	65.4	614.3	698.2	678.5	19.74	35.366		
4,300.0	4,271.9	4,242.3	4,240.5	11.4	9.5	-118.37	69.2	616.8	710.1	689.9	20.26	35.052		
4,400.0	4,370.6	4,340.4	4,338.5	11.7	9.7	-119.59	73.1	619.3	722.4	701.6	20.77	34.774		
4,500.0	4,469.4	4,438.5	4,436.4	12.1	9.9	-120.77	77.0	621.8	734.9	713.6	21.28	34.529		
4,600.0	4,568.1	4,536.5	4,534.4	12.4	10.1	-121.91	80.8	624.3	747.8	726.0	21.79	34.314		
4,700.0	4,666.8	4,634.6	4,632.4	12.8	10.4	-123.01	84.7	626.8	760.9	738.6	22.30	34.125		
4,800.0	4,765.6	4,732.6	4,730.3	13.2	10.6	-124.08	88.6	629.3	774.3	751.5	22.80	33.960		
4,900.0	4,864.3	4,830.7	4,828.3	13.5	10.8	-125.11	92.5	631.7	788.0	764.7	23.30	33.818		

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 511-1510H
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 511-1510H	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 14, 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		
7,000.0	6,945.7	8,015.8	7,482.5	19.8	21.2	95.94	-692.3	668.5	779.1	738.5	40.57	19.203		
7,050.0	6,995.1	8,008.3	7,482.6	19.8	21.2	98.73	-684.8	668.5	745.8	705.6	40.27	18.523		
7,100.0	7,044.0	7,997.4	7,482.6	19.7	21.0	100.79	-673.8	668.4	714.9	675.0	39.92	17.909		
7,150.0	7,091.9	7,983.1	7,482.7	19.7	20.8	102.17	-659.5	668.4	686.5	646.9	39.55	17.355		
7,200.0	7,138.8	7,965.5	7,482.7	19.6	20.6	102.90	-641.9	668.3	660.9	621.7	39.18	16.867		
7,250.0	7,184.3	7,944.6	7,482.8	19.5	20.4	103.06	-621.1	668.2	638.3	599.5	38.81	16.446		
7,300.0	7,228.3	7,920.7	7,482.9	19.4	20.1	102.68	-597.1	668.1	618.8	580.4	38.44	16.097		
7,350.0	7,270.5	7,891.6	7,483.0	19.3	19.8	101.66	-568.1	668.0	602.6	564.5	38.09	15.822		
7,400.0	7,310.7	7,852.9	7,481.7	19.1	19.4	99.63	-529.4	667.8	589.1	551.4	37.73	15.613		
7,450.0	7,348.8	7,816.1	7,478.6	19.0	19.0	97.52	-492.7	667.6	578.4	541.0	37.40	15.465		
7,500.0	7,384.5	7,780.8	7,473.8	18.8	18.6	95.32	-457.8	667.5	570.5	533.4	37.08	15.385		
7,550.0	7,417.7	7,746.8	7,467.6	18.7	18.3	93.01	-424.3	667.3	565.4	528.6	36.76	15.378 SF		
7,600.0	7,448.2	7,713.7	7,460.0	18.6	18.0	90.60	-392.2	667.2	563.0	526.5	36.45	15.445		
7,620.9	7,460.1	7,700.2	7,456.5	18.5	17.9	89.56	-379.1	667.1	562.7	526.4	36.31	15.497 CC, ES		
7,650.0	7,475.8	7,681.5	7,451.3	18.5	17.8	88.09	-361.2	667.1	563.2	527.0	36.12	15.591		
7,700.0	7,500.5	7,650.0	7,441.3	18.4	17.5	85.50	-331.3	666.9	565.8	530.0	35.77	15.819		
7,750.0	7,522.1	7,619.1	7,430.3	18.3	17.3	82.85	-302.4	666.8	570.7	535.3	35.40	16.123		
7,800.0	7,540.5	7,588.7	7,418.2	18.3	17.1	80.15	-274.4	666.7	577.6	542.6	34.99	16.508		
7,850.0	7,555.6	7,558.7	7,405.2	18.3	16.9	77.44	-247.4	666.6	586.3	551.7	34.55	16.967		
7,900.0	7,567.4	7,529.0	7,391.2	18.4	16.7	74.73	-221.3	666.5	596.5	562.4	34.10	17.491		
7,950.0	7,575.7	7,500.0	7,376.5	18.5	16.6	72.08	-196.3	666.4	607.8	574.2	33.63	18.074		
8,000.0	7,580.6	7,470.7	7,360.6	18.6	16.4	69.45	-171.7	666.2	620.2	587.0	33.17	18.697		
8,044.9	7,582.0	7,450.0	7,348.8	18.8	16.3	67.44	-154.7	666.2	632.0	599.2	32.85	19.239		
8,048.0	7,582.0	7,450.0	7,348.8	18.8	16.3	67.44	-154.7	666.2	632.8	600.0	32.86	19.256		
8,100.0	7,582.0	7,414.2	7,327.2	19.1	16.2	65.58	-126.1	666.0	647.8	615.2	32.58	19.881		
8,200.0	7,582.0	7,363.5	7,294.3	19.7	16.0	62.85	-87.6	665.9	682.3	649.9	32.38	21.071		
8,300.0	7,582.0	7,318.7	7,262.9	20.5	15.9	60.36	-55.6	665.7	724.2	691.8	32.36	22.377		
8,400.0	7,582.0	7,279.0	7,233.6	21.4	15.9	58.14	-28.9	665.6	773.0	740.5	32.51	23.777		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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	89.60	4.7	674.7	674.7					
100.0	100.0	100.0	100.0	0.1	0.1	89.60	4.7	674.7	674.7	674.4	0.22	3,001.659		
200.0	200.0	200.0	200.0	0.3	0.3	89.60	4.7	674.7	674.7	674.0	0.67	1,000.553		
300.0	300.0	300.0	300.0	0.6	0.6	89.60	4.7	674.7	674.7	673.5	1.12	600.332		
400.0	400.0	400.0	400.0	0.8	0.8	89.60	4.7	674.7	674.7	673.1	1.57	428.808		
500.0	500.0	500.0	500.0	1.0	1.0	89.60	4.7	674.7	674.7	672.6	2.02	333.518		
600.0	600.0	600.0	600.0	1.2	1.2	89.60	4.7	674.7	674.7	672.2	2.47	272.878		
700.0	700.0	700.0	700.0	1.5	1.5	89.60	4.7	674.7	674.7	671.7	2.92	230.897		
800.0	800.0	800.0	800.0	1.7	1.7	89.60	4.7	674.7	674.7	671.3	3.37	200.111		
900.0	900.0	900.0	900.0	1.9	1.9	89.60	4.7	674.7	674.7	670.8	3.82	176.568		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.60	4.7	674.7	674.7	670.4	4.27	157.982		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.60	4.7	674.7	674.7	670.0	4.72	142.936		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.60	4.7	674.7	674.7	669.5	5.17	130.507		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.60	4.7	674.7	674.7	669.1	5.62	120.066		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.60	4.7	674.7	674.7	668.6	6.07	111.173		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.60	4.7	674.7	674.7	668.2	6.52	103.505		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.60	4.7	674.7	674.7	667.7	6.97	96.828		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.60	4.7	674.7	674.7	667.3	7.42	90.959 CC, ES		
1,800.0	1,800.0	1,785.3	1,785.3	3.9	3.9	-82.03	5.0	675.6	675.6	667.8	7.79	86.667		
1,900.0	1,899.9	1,870.5	1,870.4	4.1	4.1	-82.33	5.7	678.3	678.3	670.1	8.14	83.314		
2,000.0	1,999.7	1,955.3	1,955.1	4.3	4.2	-82.83	6.8	682.9	682.8	674.4	8.49	80.388		
2,100.0	2,099.2	2,039.6	2,039.2	4.4	4.4	-83.51	8.4	689.3	689.4	680.5	8.86	77.808		
2,200.0	2,198.5	2,123.3	2,122.5	4.6	4.6	-84.35	10.4	697.4	697.9	688.7	9.24	75.519		
2,286.3	2,283.8	2,200.0	2,198.6	4.8	4.8	-85.27	12.6	706.4	707.1	697.5	9.60	73.658		
2,300.0	2,297.3	2,206.3	2,204.8	4.9	4.8	-85.36	12.8	707.2	708.7	699.1	9.65	73.471		
2,400.0	2,396.1	2,291.5	2,289.2	5.1	5.0	-86.60	15.7	719.0	721.9	711.8	10.08	71.620		
2,500.0	2,494.8	2,388.9	2,385.5	5.4	5.3	-87.98	19.2	733.1	736.1	725.6	10.55	69.755		
2,600.0	2,593.5	2,486.3	2,481.8	5.7	5.6	-89.30	22.7	747.2	750.8	739.8	11.04	67.994		
2,700.0	2,692.3	2,583.7	2,578.1	6.0	5.8	-90.58	26.2	761.3	765.9	754.3	11.55	66.339		
2,800.0	2,791.0	2,681.1	2,674.4	6.3	6.1	-91.80	29.7	775.5	781.3	769.3	12.06	64.791		
2,900.0	2,889.7	2,778.5	2,770.7	6.6	6.4	-92.98	33.2	789.6	797.1	784.5	12.58	63.347 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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		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	0.0	0.0	0.0	0.0	89.65	4.0	650.3	650.3					
100.0	100.0	100.0	100.0	0.1	0.1	89.65	4.0	650.3	650.3	650.1	0.22	2,893.430		
200.0	200.0	200.0	200.0	0.3	0.3	89.65	4.0	650.3	650.3	649.7	0.67	964.477		
300.0	300.0	300.0	300.0	0.6	0.6	89.65	4.0	650.3	650.3	649.2	1.12	578.686		
400.0	400.0	400.0	400.0	0.8	0.8	89.65	4.0	650.3	650.3	648.8	1.57	413.347		
500.0	500.0	500.0	500.0	1.0	1.0	89.65	4.0	650.3	650.3	648.3	2.02	321.492		
600.0	600.0	600.0	600.0	1.2	1.2	89.65	4.0	650.3	650.3	647.9	2.47	263.039		
700.0	700.0	700.0	700.0	1.5	1.5	89.65	4.0	650.3	650.3	647.4	2.92	222.572		
800.0	800.0	800.0	800.0	1.7	1.7	89.65	4.0	650.3	650.3	647.0	3.37	192.895		
900.0	900.0	900.0	900.0	1.9	1.9	89.65	4.0	650.3	650.3	646.5	3.82	170.202		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.65	4.0	650.3	650.3	646.1	4.27	152.286		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.65	4.0	650.3	650.3	645.6	4.72	137.782		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.65	4.0	650.3	650.3	645.2	5.17	125.801		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.65	4.0	650.3	650.3	644.7	5.62	115.737		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.65	4.0	650.3	650.3	644.3	6.07	107.164		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.65	4.0	650.3	650.3	643.8	6.52	99.773		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.65	4.0	650.3	650.3	643.4	6.97	93.336		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.65	4.0	650.3	650.3	642.9	7.42	87.680		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-82.00	4.0	650.3	650.2	642.3	7.84	82.957		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-82.36	4.0	650.3	649.6	641.4	8.23	78.911		
2,000.0	1,999.7	1,995.3	1,995.3	4.3	4.3	-82.84	2.9	650.7	649.1	640.5	8.60	75.503		
2,087.5	2,086.8	2,078.9	2,078.8	4.4	4.5	-83.27	0.0	651.6	648.9	640.0	8.91	72.863 CC		
2,100.0	2,099.2	2,090.8	2,090.7	4.4	4.5	-83.33	-0.5	651.7	648.9	640.0	8.95	72.506		
2,200.0	2,198.5	2,186.4	2,186.1	4.6	4.7	-83.85	-6.2	653.5	649.2	639.8	9.32	69.625		
2,286.3	2,283.8	2,269.0	2,268.4	4.8	4.8	-84.31	-13.0	655.6	649.7	640.0	9.67	67.181		
2,300.0	2,297.3	2,282.1	2,281.5	4.9	4.9	-84.38	-14.2	655.9	649.8	640.1	9.73	66.799		
2,400.0	2,396.1	2,378.1	2,376.8	5.1	5.0	-84.80	-24.5	659.1	651.0	640.9	10.17	64.046		
2,500.0	2,494.8	2,474.2	2,472.0	5.4	5.3	-85.01	-37.2	663.0	652.9	642.2	10.63	61.394		
2,600.0	2,593.5	2,570.5	2,567.1	5.7	5.5	-85.02	-52.1	667.5	655.3	644.2	11.13	58.851		
2,700.0	2,692.3	2,670.5	2,665.5	6.0	5.7	-84.92	-68.7	672.6	658.0	646.3	11.68	56.340		
2,800.0	2,791.0	2,770.4	2,764.0	6.3	6.0	-84.83	-85.2	677.7	660.7	648.4	12.25	53.946		
2,900.0	2,889.7	2,870.4	2,862.4	6.6	6.3	-84.74	-101.8	682.8	663.4	650.5	12.84	51.673		
3,000.0	2,988.4	2,970.4	2,960.9	6.9	6.6	-84.65	-118.4	687.9	666.1	652.6	13.45	49.529		
3,100.0	3,087.2	3,070.3	3,059.3	7.2	6.9	-84.57	-135.0	693.0	668.8	654.7	14.07	47.515		
3,200.0	3,185.9	3,170.3	3,157.7	7.5	7.2	-84.48	-151.5	698.1	671.4	656.7	14.72	45.626		
3,300.0	3,284.6	3,270.2	3,256.2	7.9	7.6	-84.39	-168.1	703.1	674.1	658.8	15.37	43.859		
3,400.0	3,383.4	3,370.2	3,354.6	8.2	7.9	-84.31	-184.7	708.2	676.8	660.8	16.04	42.207		
3,500.0	3,482.1	3,470.1	3,453.1	8.5	8.3	-84.22	-201.3	713.3	679.5	662.8	16.71	40.663		
3,600.0	3,580.8	3,570.1	3,551.5	8.9	8.6	-84.13	-217.8	718.4	682.3	664.9	17.40	39.219		
3,700.0	3,679.5	3,670.1	3,650.0	9.2	9.0	-84.05	-234.4	723.5	685.0	666.9	18.09	37.868		
3,800.0	3,778.3	3,770.0	3,748.4	9.6	9.3	-83.97	-251.0	728.6	687.7	668.9	18.79	36.604		
3,900.0	3,877.0	3,870.0	3,846.8	9.9	9.7	-83.88	-267.6	733.7	690.4	670.9	19.49	35.420		
4,000.0	3,975.7	3,969.9	3,945.3	10.3	10.0	-83.80	-284.1	738.7	693.1	672.9	20.20	34.310		
4,100.0	4,074.5	4,069.9	4,043.7	10.6	10.4	-83.72	-300.7	743.8	695.8	674.9	20.92	33.267		
4,200.0	4,173.2	4,169.9	4,142.2	11.0	10.8	-83.64	-317.3	748.9	698.5	676.9	21.63	32.287		
4,300.0	4,271.9	4,269.8	4,240.6	11.4	11.1	-83.56	-333.9	754.0	701.2	678.9	22.36	31.364		
4,400.0	4,370.6	4,369.8	4,339.1	11.7	11.5	-83.48	-350.4	759.1	703.9	680.9	23.08	30.495		
4,500.0	4,469.4	4,469.7	4,437.5	12.1	11.9	-83.40	-367.0	764.2	706.7	682.8	23.81	29.675		
4,600.0	4,568.1	4,569.7	4,535.9	12.4	12.3	-83.32	-383.6	769.3	709.4	684.8	24.54	28.901		
4,700.0	4,666.8	4,669.6	4,634.4	12.8	12.7	-83.24	-400.2	774.3	712.1	686.8	25.28	28.169		
4,800.0	4,765.6	4,769.6	4,732.8	13.2	13.0	-83.17	-416.7	779.4	714.8	688.8	26.02	27.475		
4,900.0	4,864.3	4,869.6	4,831.3	13.5	13.4	-83.09	-433.3	784.5	717.5	690.8	26.76	26.818		

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 511-1510H
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 511-1510H	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 14, 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		
5,000.0	4,963.0	4,969.5	4,929.7	13.9	13.8	-83.01	-449.9	789.6	720.3	692.8	27.50	26.194		
5,100.0	5,061.7	5,069.5	5,028.2	14.3	14.2	-82.94	-466.5	794.7	723.0	694.7	28.24	25.602		
5,200.0	5,160.5	5,169.4	5,126.6	14.6	14.6	-82.86	-483.0	799.8	725.7	696.7	28.98	25.038		
5,300.0	5,259.2	5,269.4	5,225.1	15.0	15.0	-82.79	-499.6	804.9	728.4	698.7	29.73	24.502		
5,400.0	5,357.9	5,369.4	5,323.5	15.4	15.4	-82.71	-516.2	809.9	731.2	700.7	30.48	23.991		
5,500.0	5,456.7	5,469.3	5,421.9	15.8	15.8	-82.64	-532.8	815.0	733.9	702.7	31.22	23.503		
5,600.0	5,555.4	5,569.3	5,520.4	16.1	16.1	-82.57	-549.3	820.1	736.6	704.6	31.97	23.038		
5,700.0	5,654.1	5,669.2	5,618.8	16.5	16.5	-82.49	-565.9	825.2	739.3	706.6	32.72	22.593		
5,800.0	5,752.8	5,769.2	5,717.3	16.9	16.9	-82.42	-582.5	830.3	742.1	708.6	33.48	22.168		
5,900.0	5,851.6	5,869.1	5,815.7	17.2	17.3	-82.35	-599.1	835.4	744.8	710.6	34.23	21.760		
6,000.0	5,950.3	5,969.1	5,914.2	17.6	17.7	-82.28	-615.6	840.5	747.5	712.6	34.98	21.370		
6,100.0	6,049.0	6,069.1	6,012.6	18.0	18.1	-82.21	-632.2	845.5	750.3	714.6	35.73	20.996		
6,196.8	6,144.6	6,166.3	6,108.3	18.4	18.5	-82.14	-648.3	850.5	752.9	716.5	36.46	20.649		
6,200.0	6,147.8	6,169.7	6,111.7	18.4	18.5	-82.14	-648.9	850.7	753.0	716.5	36.49	20.639		
6,300.0	6,246.8	6,277.6	6,218.4	18.6	18.8	-82.14	-664.6	855.5	755.4	718.3	37.05	20.388		
6,400.0	6,346.2	6,385.7	6,325.7	18.9	19.1	-82.13	-676.4	859.1	757.2	719.6	37.54	20.170		
6,500.0	6,445.9	6,493.7	6,433.5	19.1	19.3	-82.13	-684.3	861.5	758.4	720.4	37.96	19.977		
6,600.0	6,545.9	6,601.8	6,541.5	19.2	19.5	-82.13	-688.4	862.8	759.0	720.7	38.32	19.808		
6,654.1	6,600.0	6,660.4	6,600.0	19.3	19.6	89.39	-689.0	863.0	759.1	720.6	38.50	19.717		
6,700.0	6,645.9	6,706.2	6,645.9	19.4	19.7	89.39	-689.0	863.0	759.1	720.5	38.64	19.647		
6,800.0	6,745.9	6,806.2	6,745.9	19.5	19.8	89.39	-689.0	863.0	759.1	720.2	38.91	19.507		
6,900.0	6,845.9	6,906.2	6,845.9	19.7	19.9	89.39	-689.0	863.0	759.1	719.9	39.20	19.367		
6,919.9	6,865.8	6,926.2	6,865.8	19.7	20.0	89.39	-689.0	863.0	759.1	719.8	39.25	19.339		
6,950.0	6,895.8	6,955.9	6,895.5	19.7	20.0	89.30	-688.4	863.0	759.1	719.8	39.32	19.307		
7,000.0	6,945.7	7,005.2	6,944.7	19.8	20.0	89.30	-684.6	863.0	759.1	719.7	39.39	19.272		
7,050.0	6,995.1	7,054.6	6,993.5	19.8	20.0	89.31	-677.5	863.0	759.1	719.7	39.40	19.268		
7,100.0	7,044.0	7,103.9	7,041.7	19.7	20.0	89.32	-667.0	863.0	759.1	719.7	39.35	19.292		
7,150.0	7,091.9	7,153.3	7,089.1	19.7	20.0	89.33	-653.3	863.0	759.1	719.9	39.24	19.345		
7,200.0	7,138.8	7,202.7	7,135.5	19.6	19.9	89.35	-636.3	863.0	759.1	720.0	39.08	19.422		
7,250.0	7,184.3	7,252.1	7,180.6	19.5	19.8	89.37	-616.1	863.1	759.1	720.2	38.88	19.522		
7,300.0	7,228.3	7,301.6	7,224.2	19.4	19.7	89.40	-592.9	863.1	759.1	720.4	38.65	19.641		
7,350.0	7,270.5	7,351.0	7,266.1	19.3	19.6	89.42	-566.7	863.2	759.1	720.7	38.38	19.777		
7,400.0	7,310.7	7,400.5	7,306.2	19.1	19.4	89.45	-537.6	863.2	759.1	721.0	38.10	19.923		
7,450.0	7,348.8	7,450.0	7,344.2	19.0	19.3	89.48	-505.8	863.3	759.1	721.3	37.81	20.076		
7,458.7	7,355.2	7,458.6	7,350.5	18.9	19.2	89.49	-500.1	863.3	759.1	721.3	37.76	20.102		
7,500.0	7,384.5	7,499.5	7,379.8	18.8	19.1	89.52	-471.5	863.3	759.1	721.6	37.52	20.229		
7,550.0	7,417.7	7,549.1	7,413.1	18.7	19.0	89.55	-434.8	863.4	759.1	721.8	37.25	20.376		
7,600.0	7,448.2	7,598.7	7,443.7	18.6	18.8	89.59	-395.8	863.5	759.1	722.1	37.01	20.511		
7,650.0	7,475.8	7,648.3	7,471.7	18.5	18.7	89.63	-354.8	863.5	759.1	722.3	36.80	20.625		
7,700.0	7,500.5	7,698.0	7,496.7	18.4	18.6	89.67	-311.9	863.6	759.1	722.4	36.65	20.712		
7,750.0	7,522.1	7,747.7	7,518.7	18.3	18.5	89.72	-267.3	863.7	759.1	722.5	36.55	20.766		
7,800.0	7,540.5	7,797.5	7,537.5	18.3	18.5	89.76	-221.3	863.8	759.1	722.6	36.53	20.781		
7,850.0	7,555.6	7,847.3	7,553.2	18.3	18.5	89.81	-174.0	863.9	759.1	722.5	36.58	20.752		
7,900.0	7,567.4	7,897.1	7,565.5	18.4	18.5	89.86	-125.7	864.0	759.1	722.4	36.71	20.676		
7,950.0	7,575.7	7,947.0	7,574.4	18.5	18.6	89.90	-76.6	864.0	759.1	722.2	36.93	20.554		
8,000.0	7,580.6	7,996.9	7,579.9	18.6	18.7	89.95	-27.0	864.1	759.1	721.9	37.24	20.386		
8,044.9	7,582.0	8,041.8	7,581.9	18.8	18.8	90.00	17.8	864.2	759.1	721.5	37.59	20.196		
8,048.0	7,582.0	8,044.9	7,582.0	18.8	18.8	90.00	20.9	864.2	759.1	721.5	37.61	20.183		
8,100.0	7,582.0	8,096.9	7,582.0	19.1	19.0	90.00	72.9	864.3	759.1	721.1	38.05	19.951		
8,200.0	7,582.0	8,196.9	7,582.0	19.7	19.6	90.00	172.9	864.5	759.1	719.9	39.27	19.332		
8,300.0	7,582.0	8,296.9	7,582.0	20.5	20.3	90.00	272.9	864.7	759.1	718.3	40.82	18.599		
8,400.0	7,582.0	8,396.9	7,582.0	21.4	21.2	90.00	372.9	864.8	759.1	716.5	42.66	17.796		

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 511-1510H
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 511-1510H	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 14, 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		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)						
8,500.0	7,582.0	8,496.9	7,582.0	22.5	22.3	90.00	472.9	865.0	759.2	714.4	44.76	16.962		
8,600.0	7,582.0	8,596.9	7,582.0	23.6	23.5	90.00	572.9	865.2	759.2	712.1	47.08	16.125		
8,700.0	7,582.0	8,696.9	7,582.0	24.9	24.7	90.00	672.9	865.4	759.2	709.6	49.59	15.308		
8,800.0	7,582.0	8,796.9	7,582.0	26.3	26.1	90.00	772.9	865.5	759.2	706.9	52.27	14.525		
8,900.0	7,582.0	8,896.9	7,582.0	27.7	27.5	90.00	872.9	865.7	759.2	704.1	55.08	13.782		
9,000.0	7,582.0	8,996.9	7,582.0	29.1	28.9	90.00	972.9	865.9	759.2	701.2	58.02	13.085		
9,100.0	7,582.0	9,096.9	7,582.0	30.7	30.5	90.00	1,072.9	866.1	759.2	698.1	61.06	12.434		
9,200.0	7,582.0	9,196.9	7,582.0	32.2	32.0	90.00	1,172.9	866.2	759.2	695.0	64.18	11.829		
9,300.0	7,582.0	9,296.9	7,582.0	33.8	33.6	90.00	1,272.9	866.4	759.2	691.8	67.39	11.267		
9,400.0	7,582.0	9,396.9	7,582.0	35.5	35.3	90.00	1,372.9	866.6	759.2	688.6	70.65	10.746		
9,500.0	7,582.0	9,496.9	7,582.0	37.1	36.9	90.00	1,472.9	866.8	759.2	685.3	73.98	10.263		
9,600.0	7,582.0	9,596.9	7,582.0	38.8	38.6	90.00	1,572.9	866.9	759.2	681.9	77.35	9.816		
9,700.0	7,582.0	9,696.9	7,582.0	40.5	40.3	90.00	1,672.9	867.1	759.2	678.5	80.76	9.401		
9,800.0	7,582.0	9,796.9	7,582.0	42.3	42.0	90.00	1,772.9	867.3	759.3	675.0	84.22	9.015		
9,900.0	7,582.0	9,896.9	7,582.0	44.0	43.8	90.00	1,872.9	867.5	759.3	671.6	87.70	8.657		
10,000.0	7,582.0	9,996.9	7,582.0	45.8	45.5	90.00	1,972.9	867.6	759.3	668.0	91.22	8.323		
10,100.0	7,582.0	10,096.9	7,582.0	47.5	47.3	90.00	2,072.9	867.8	759.3	664.5	94.76	8.012		
10,200.0	7,582.0	10,196.9	7,582.0	49.3	49.1	90.00	2,172.9	868.0	759.3	661.0	98.33	7.722		
10,300.0	7,582.0	10,296.9	7,582.0	51.1	50.9	90.00	2,272.9	868.1	759.3	657.4	101.92	7.450		
10,400.0	7,582.0	10,396.9	7,582.0	52.9	52.7	90.00	2,372.9	868.3	759.3	653.8	105.52	7.196		
10,500.0	7,582.0	10,496.9	7,582.0	54.7	54.5	90.00	2,472.9	868.5	759.3	650.2	109.15	6.957		
10,600.0	7,582.0	10,596.9	7,582.0	56.5	56.3	90.00	2,572.9	868.7	759.3	646.5	112.78	6.732		
10,700.0	7,582.0	10,696.9	7,582.0	58.4	58.1	90.00	2,672.9	868.8	759.3	642.9	116.44	6.521		
10,800.0	7,582.0	10,796.9	7,582.0	60.2	60.0	90.00	2,772.9	869.0	759.3	639.2	120.10	6.322		
10,900.0	7,582.0	10,896.9	7,582.0	62.0	61.8	90.00	2,872.9	869.2	759.3	635.6	123.78	6.135		
11,000.0	7,582.0	10,996.9	7,582.0	63.9	63.6	90.00	2,972.9	869.4	759.3	631.9	127.47	5.957		
11,100.0	7,582.0	11,096.9	7,582.0	65.7	65.5	90.00	3,072.9	869.5	759.4	628.2	131.16	5.789		
11,200.0	7,582.0	11,196.9	7,582.0	67.6	67.3	90.00	3,172.9	869.7	759.4	624.5	134.87	5.630		
11,300.0	7,582.0	11,296.9	7,582.0	69.4	69.2	90.00	3,272.9	869.9	759.4	620.8	138.58	5.480		
11,400.0	7,582.0	11,396.9	7,582.0	71.3	71.1	90.00	3,372.9	870.1	759.4	617.1	142.30	5.336		
11,500.0	7,582.0	11,496.9	7,582.0	73.2	72.9	90.00	3,472.9	870.2	759.4	613.4	146.03	5.200		
11,600.0	7,582.0	11,596.9	7,582.0	75.0	74.8	90.00	3,572.9	870.4	759.4	609.6	149.76	5.071		
11,700.0	7,582.0	11,696.9	7,582.0	76.9	76.7	90.00	3,672.9	870.6	759.4	605.9	153.50	4.947		
11,800.0	7,582.0	11,796.9	7,582.0	78.8	78.5	90.00	3,772.9	870.8	759.4	602.2	157.25	4.829		
11,900.0	7,582.0	11,896.9	7,582.0	80.6	80.4	90.00	3,872.9	870.9	759.4	598.4	161.00	4.717		
12,000.0	7,582.0	11,996.9	7,582.0	82.5	82.3	90.00	3,972.9	871.1	759.4	594.7	164.76	4.609		
12,100.0	7,582.0	12,096.9	7,582.0	84.4	84.2	90.00	4,072.9	871.3	759.4	590.9	168.52	4.507		
12,200.0	7,582.0	12,196.9	7,582.0	86.3	86.0	90.00	4,172.9	871.5	759.4	587.2	172.28	4.408		
12,300.0	7,582.0	12,296.9	7,582.0	88.2	87.9	90.00	4,272.9	871.6	759.4	583.4	176.05	4.314		
12,400.0	7,582.0	12,396.9	7,582.0	90.1	89.8	90.00	4,372.9	871.8	759.5	579.6	179.82	4.223		
12,500.0	7,582.0	12,496.9	7,582.0	91.9	91.7	90.00	4,472.9	872.0	759.5	575.9	183.60	4.137		
12,600.0	7,582.0	12,596.9	7,582.0	93.8	93.6	90.00	4,572.9	872.2	759.5	572.1	187.38	4.053		
12,700.0	7,582.0	12,696.9	7,582.0	95.7	95.5	90.00	4,672.9	872.3	759.5	568.3	191.16	3.973		
12,800.0	7,582.0	12,796.9	7,582.0	97.6	97.4	90.00	4,772.9	872.5	759.5	564.5	194.94	3.896		
12,900.0	7,582.0	12,896.9	7,582.0	99.5	99.3	90.00	4,872.9	872.7	759.5	560.8	198.73	3.822		
13,000.0	7,582.0	12,996.9	7,582.0	101.4	101.2	90.00	4,972.9	872.9	759.5	557.0	202.52	3.750		
13,100.0	7,582.0	13,096.9	7,582.0	103.3	103.1	90.00	5,072.9	873.0	759.5	553.2	206.31	3.681		
13,200.0	7,582.0	13,196.9	7,582.0	105.2	104.9	90.00	5,172.9	873.2	759.5	549.4	210.11	3.615		
13,300.0	7,582.0	13,296.9	7,582.0	107.1	106.8	90.00	5,272.9	873.4	759.5	545.6	213.90	3.551		
13,400.0	7,582.0	13,396.9	7,582.0	109.0	108.7	90.00	5,372.9	873.6	759.5	541.8	217.70	3.489		
13,500.0	7,582.0	13,496.9	7,582.0	110.9	110.6	90.00	5,472.9	873.7	759.5	538.0	221.50	3.429		
13,600.0	7,582.0	13,596.9	7,582.0	112.8	112.5	90.00	5,572.9	873.9	759.5	534.2	225.30	3.371		

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 511-1510H
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 511-1510H	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 14, 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		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)						
13,700.0	7,582.0	13,696.9	7,582.0	114.7	114.4	90.00	5,672.9	874.1	759.6	530.4	229.11	3.315		
13,800.0	7,582.0	13,796.9	7,582.0	116.6	116.3	90.00	5,772.9	874.3	759.6	526.6	232.91	3.261		
13,900.0	7,582.0	13,896.9	7,582.0	118.5	118.3	90.00	5,872.9	874.4	759.6	522.8	236.72	3.209		
14,000.0	7,582.0	13,996.9	7,582.0	120.4	120.2	90.00	5,972.9	874.6	759.6	519.0	240.53	3.158		
14,100.0	7,582.0	14,096.9	7,582.0	122.3	122.1	90.00	6,072.9	874.8	759.6	515.2	244.34	3.109		
14,200.0	7,582.0	14,196.9	7,582.0	124.2	124.0	90.00	6,172.9	875.0	759.6	511.4	248.15	3.061		
14,300.0	7,582.0	14,296.9	7,582.0	126.1	125.9	90.00	6,272.9	875.1	759.6	507.6	251.96	3.015		
14,400.0	7,582.0	14,396.9	7,582.0	128.0	127.8	90.00	6,372.9	875.3	759.6	503.8	255.78	2.970		
14,500.0	7,582.0	14,496.9	7,582.0	129.9	129.7	90.00	6,472.9	875.5	759.6	500.0	259.59	2.926		
14,600.0	7,582.0	14,596.9	7,582.0	131.8	131.6	90.00	6,572.9	875.7	759.6	496.2	263.41	2.884		
14,700.0	7,582.0	14,696.9	7,582.0	133.8	133.5	90.00	6,672.9	875.8	759.6	492.4	267.23	2.843		
14,800.0	7,582.0	14,796.9	7,582.0	135.7	135.4	90.00	6,772.9	876.0	759.6	488.6	271.05	2.803		
14,900.0	7,582.0	14,896.9	7,582.0	137.6	137.3	90.00	6,872.9	876.2	759.6	484.8	274.87	2.764		
15,000.0	7,582.0	14,996.9	7,582.0	139.5	139.2	90.00	6,972.9	876.3	759.7	481.0	278.69	2.726		
15,100.0	7,582.0	15,096.9	7,582.0	141.4	141.1	90.00	7,072.9	876.5	759.7	477.2	282.51	2.689		
15,200.0	7,582.0	15,196.9	7,582.0	143.3	143.1	90.00	7,172.9	876.7	759.7	473.3	286.33	2.653		
15,300.0	7,582.0	15,296.9	7,582.0	145.2	145.0	90.00	7,272.9	876.9	759.7	469.5	290.15	2.618		
15,400.0	7,582.0	15,396.9	7,582.0	147.1	146.9	90.00	7,372.9	877.0	759.7	465.7	293.98	2.584		
15,500.0	7,582.0	15,496.9	7,582.0	149.0	148.8	90.00	7,472.9	877.2	759.7	461.9	297.80	2.551		
15,600.0	7,582.0	15,596.9	7,582.0	151.0	150.7	90.00	7,572.9	877.4	759.7	458.1	301.63	2.519		
15,700.0	7,582.0	15,696.9	7,582.0	152.9	152.6	90.00	7,672.9	877.6	759.7	454.3	305.45	2.487		
15,800.0	7,582.0	15,796.9	7,582.0	154.8	154.5	90.00	7,772.9	877.7	759.7	450.4	309.28	2.456		
15,900.0	7,582.0	15,896.9	7,582.0	156.7	156.4	90.00	7,872.9	877.9	759.7	446.6	313.11	2.426		
16,000.0	7,582.0	15,996.9	7,582.0	158.6	158.4	90.00	7,972.9	878.1	759.7	442.8	316.94	2.397		
16,100.0	7,582.0	16,096.9	7,582.0	160.5	160.3	90.00	8,072.9	878.3	759.7	439.0	320.77	2.369		
16,200.0	7,582.0	16,196.9	7,582.0	162.4	162.2	90.00	8,172.9	878.4	759.7	435.1	324.59	2.341		
16,300.0	7,582.0	16,296.9	7,582.0	164.4	164.1	90.00	8,272.9	878.6	759.7	431.3	328.42	2.313		
16,400.0	7,582.0	16,396.9	7,582.0	166.3	166.0	90.00	8,372.9	878.8	759.8	427.5	332.26	2.287		
16,500.0	7,582.0	16,496.9	7,582.0	168.2	167.9	90.00	8,472.9	879.0	759.8	423.7	336.09	2.261		
16,600.0	7,582.0	16,596.9	7,582.0	170.1	169.8	90.00	8,572.9	879.1	759.8	419.9	339.92	2.235		
16,700.0	7,582.0	16,696.9	7,582.0	172.0	171.8	90.00	8,672.9	879.3	759.8	416.0	343.75	2.210		
16,800.0	7,582.0	16,796.9	7,582.0	173.9	173.7	90.00	8,772.9	879.5	759.8	412.2	347.58	2.186		
16,900.0	7,582.0	16,896.9	7,582.0	175.9	175.6	90.00	8,872.9	879.7	759.8	408.4	351.42	2.162		
17,000.0	7,582.0	16,996.9	7,582.0	177.8	177.5	90.00	8,972.9	879.8	759.8	404.6	355.25	2.139		
17,100.0	7,582.0	17,096.9	7,582.0	179.7	179.4	90.00	9,072.9	880.0	759.8	400.7	359.08	2.116		
17,200.0	7,582.0	17,196.9	7,582.0	181.6	181.3	90.00	9,172.9	880.2	759.8	396.9	362.92	2.094		
17,300.0	7,582.0	17,296.9	7,582.0	183.5	183.3	90.00	9,272.9	880.4	759.8	393.1	366.75	2.072		
17,400.0	7,582.0	17,396.9	7,582.0	185.4	185.2	90.00	9,372.9	880.5	759.8	389.2	370.59	2.050		
17,500.0	7,582.0	17,496.9	7,582.0	187.4	187.1	90.00	9,472.9	880.7	759.8	385.4	374.42	2.029		
17,600.0	7,582.0	17,596.9	7,582.0	189.3	189.0	90.00	9,572.9	880.9	759.8	381.6	378.26	2.009		
17,700.0	7,582.0	17,696.9	7,582.0	191.2	190.9	90.00	9,672.9	881.1	759.9	377.8	382.10	1.989		
17,800.0	7,582.0	17,796.9	7,582.0	193.1	192.8	90.00	9,772.9	881.2	759.9	373.9	385.93	1.969		
17,900.0	7,582.0	17,896.9	7,582.0	195.0	194.8	90.00	9,872.9	881.4	759.9	370.1	389.77	1.950		
17,995.4	7,582.0	17,992.3	7,582.0	196.9	196.6	90.00	9,968.3	881.6	759.9	366.4	393.43	1.931		
17,996.0	7,582.0	17,993.0	7,582.0	196.9	196.6	90.00	9,969.0	881.6	759.9	366.4	393.46	1.931 ES, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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							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	2.0	2.0	0.0	0.0	-90.63	-1.1	-99.8	99.8	99.8	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	-90.63	-1.1	-99.8	99.8	99.6	0.23	435.228		
200.0	200.0	202.0	202.0	0.3	0.3	-90.63	-1.1	-99.8	99.8	99.1	0.68	146.997		
300.0	300.0	302.0	302.0	0.6	0.6	-90.63	-1.1	-99.8	99.8	98.7	1.13	88.433		
400.0	400.0	402.0	402.0	0.8	0.8	-90.63	-1.1	-99.8	99.8	98.2	1.58	63.238		
500.0	500.0	502.0	502.0	1.0	1.0	-90.63	-1.1	-99.8	99.8	97.8	2.03	49.216		
600.0	600.0	602.0	602.0	1.2	1.2	-90.63	-1.1	-99.8	99.8	97.3	2.48	40.284		
700.0	700.0	702.0	702.0	1.5	1.5	-90.63	-1.1	-99.8	99.8	96.9	2.93	34.096		
800.0	800.0	802.0	802.0	1.7	1.7	-90.63	-1.1	-99.8	99.8	96.4	3.38	29.556		
900.0	900.0	902.0	902.0	1.9	1.9	-90.63	-1.1	-99.8	99.8	96.0	3.83	26.083		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-90.63	-1.1	-99.8	99.8	95.5	4.28	23.340		
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-90.63	-1.1	-99.8	99.8	95.1	4.72	21.120		
1,200.0	1,200.0	1,202.0	1,202.0	2.6	2.6	-90.63	-1.1	-99.8	99.8	94.6	5.17	19.285		
1,300.0	1,300.0	1,302.0	1,302.0	2.8	2.8	-90.63	-1.1	-99.8	99.8	94.2	5.62	17.743		
1,400.0	1,400.0	1,402.0	1,402.0	3.0	3.0	-90.63	-1.1	-99.8	99.8	93.7	6.07	16.430		
1,500.0	1,500.0	1,502.0	1,502.0	3.3	3.3	-90.63	-1.1	-99.8	99.8	93.3	6.52	15.297		
1,600.0	1,600.0	1,602.0	1,602.0	3.5	3.5	-90.63	-1.1	-99.8	99.8	92.8	6.97	14.311		
1,666.0	1,666.0	1,668.0	1,668.0	3.6	3.6	-90.63	-1.1	-99.8	99.8	92.5	7.27	13.727 CC		
1,700.0	1,700.0	1,702.0	1,702.0	3.7	3.7	-90.63	-1.1	-99.8	99.8	92.4	7.42	13.445 ES		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	97.96	-2.2	-100.5	100.7	92.9	7.81	12.894		
1,900.0	1,899.9	1,899.1	1,899.0	4.1	4.1	98.33	-5.5	-102.6	103.4	95.3	8.15	12.684		
2,000.0	1,999.7	1,997.5	1,997.2	4.3	4.3	98.93	-10.8	-106.0	107.9	99.4	8.51	12.684		
2,100.0	2,099.2	2,095.8	2,095.1	4.4	4.5	99.69	-18.3	-110.9	114.3	105.4	8.89	12.860		
2,200.0	2,198.5	2,193.9	2,192.5	4.6	4.7	100.55	-27.9	-117.0	122.4	113.1	9.29	13.180		
2,286.3	2,283.8	2,278.3	2,276.1	4.8	4.8	101.32	-37.9	-123.4	130.9	121.2	9.66	13.545		
2,300.0	2,297.3	2,291.7	2,289.4	4.9	4.9	101.46	-39.6	-124.5	132.4	122.7	9.73	13.610		
2,400.0	2,396.1	2,389.4	2,385.6	5.1	5.1	101.86	-53.3	-133.3	143.8	133.6	10.20	14.093		
2,500.0	2,494.8	2,487.3	2,481.7	5.4	5.4	101.43	-69.0	-143.4	156.4	145.7	10.72	14.592		
2,600.0	2,593.5	2,586.4	2,578.9	5.7	5.7	100.87	-85.5	-154.0	169.3	158.1	11.27	15.026		
2,700.0	2,692.3	2,685.6	2,676.2	6.0	6.0	100.39	-101.9	-164.5	182.3	170.4	11.84	15.390		
2,800.0	2,791.0	2,784.7	2,773.4	6.3	6.4	99.98	-118.3	-175.1	195.2	182.8	12.44	15.693		
2,900.0	2,889.7	2,883.9	2,870.6	6.6	6.7	99.62	-134.7	-185.7	208.2	195.1	13.05	15.947		
3,000.0	2,988.4	2,983.0	2,967.8	6.9	7.1	99.30	-151.2	-196.2	221.1	207.4	13.68	16.159		
3,100.0	3,087.2	3,082.2	3,065.0	7.2	7.4	99.02	-167.6	-206.8	234.1	219.7	14.33	16.337		
3,200.0	3,185.9	3,181.3	3,162.2	7.5	7.8	98.76	-184.0	-217.3	247.0	232.1	14.98	16.487		
3,300.0	3,284.6	3,280.5	3,259.4	7.9	8.2	98.53	-200.5	-227.9	260.0	244.4	15.65	16.614		
3,400.0	3,383.4	3,379.6	3,356.6	8.2	8.6	98.33	-216.9	-238.5	273.0	256.7	16.33	16.721		
3,500.0	3,482.1	3,478.8	3,453.8	8.5	9.0	98.14	-233.3	-249.0	286.0	269.0	17.01	16.812		
3,600.0	3,580.8	3,577.9	3,551.0	8.9	9.4	97.97	-249.8	-259.6	299.0	281.3	17.70	16.889		
3,700.0	3,679.5	3,677.1	3,648.2	9.2	9.8	97.81	-266.2	-270.1	311.9	293.5	18.40	16.955		
3,800.0	3,778.3	3,776.2	3,745.4	9.6	10.2	97.67	-282.6	-280.7	324.9	305.8	19.10	17.011		
3,900.0	3,877.0	3,875.4	3,842.6	9.9	10.6	97.53	-299.1	-291.3	337.9	318.1	19.81	17.059		
4,000.0	3,975.7	3,974.5	3,939.8	10.3	11.0	97.41	-315.5	-301.8	350.9	330.4	20.52	17.100		
4,100.0	4,074.5	4,073.7	4,037.1	10.6	11.4	97.29	-331.9	-312.4	363.9	342.7	21.24	17.135		
4,200.0	4,173.2	4,172.8	4,134.3	11.0	11.8	97.19	-348.4	-322.9	376.9	354.9	21.96	17.165		
4,300.0	4,271.9	4,272.0	4,231.5	11.4	12.2	97.09	-364.8	-333.5	389.9	367.2	22.68	17.190		
4,400.0	4,370.6	4,371.1	4,328.7	11.7	12.6	96.99	-381.2	-344.1	402.9	379.5	23.41	17.212		
4,500.0	4,469.4	4,470.3	4,425.9	12.1	13.0	96.90	-397.7	-354.6	415.9	391.8	24.14	17.231		
4,600.0	4,568.1	4,569.4	4,523.1	12.4	13.5	96.82	-414.1	-365.2	428.9	404.0	24.87	17.247		
4,700.0	4,666.8	4,668.6	4,620.3	12.8	13.9	96.74	-430.5	-375.7	441.9	416.3	25.60	17.261		
4,800.0	4,765.6	4,767.7	4,717.5	13.2	14.3	96.67	-447.0	-386.3	454.9	428.6	26.34	17.272		
4,900.0	4,864.3	4,866.9	4,814.7	13.5	14.7	96.60	-463.4	-396.9	467.9	440.8	27.07	17.282		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,963.0	4,966.0	4,911.9	13.9	15.2	96.54	-479.8	-407.4	480.9	453.1	27.81	17.290		
5,100.0	5,061.7	5,065.2	5,009.1	14.3	15.6	96.48	-496.3	-418.0	493.9	465.3	28.55	17.297		
5,200.0	5,160.5	5,164.3	5,106.3	14.6	16.0	96.42	-512.7	-428.5	506.9	477.6	29.30	17.303		
5,300.0	5,259.2	5,263.5	5,203.5	15.0	16.4	96.36	-529.1	-439.1	519.9	489.9	30.04	17.307		
5,400.0	5,357.9	5,362.6	5,300.7	15.4	16.9	96.31	-545.6	-449.7	532.9	502.1	30.78	17.311		
5,500.0	5,456.7	5,461.8	5,397.9	15.8	17.3	96.26	-562.0	-460.2	545.9	514.4	31.53	17.314		
5,600.0	5,555.4	5,560.9	5,495.2	16.1	17.7	96.21	-578.4	-470.8	558.9	526.6	32.28	17.316		
5,700.0	5,654.1	5,660.1	5,592.4	16.5	18.2	96.16	-594.8	-481.3	571.9	538.9	33.02	17.318		
5,800.0	5,752.8	5,759.2	5,689.6	16.9	18.6	96.12	-611.3	-491.9	584.9	551.1	33.77	17.319		
5,900.0	5,851.6	5,858.4	5,786.8	17.2	19.0	96.08	-627.7	-502.5	597.9	563.4	34.52	17.319		
6,000.0	5,950.3	5,957.5	5,884.0	17.6	19.4	96.04	-644.1	-513.0	610.9	575.7	35.27	17.319		
6,100.0	6,049.0	6,063.2	5,987.7	18.0	19.9	96.03	-661.3	-524.0	623.7	587.7	36.02	17.314		
6,196.8	6,144.6	6,173.1	6,096.2	18.4	20.2	96.30	-676.0	-533.5	634.2	597.5	36.71	17.278		
6,200.0	6,147.8	6,176.7	6,099.7	18.4	20.2	96.32	-676.5	-533.8	634.5	597.8	36.73	17.277		
6,300.0	6,246.8	6,290.5	6,212.7	18.6	20.5	96.91	-688.0	-541.2	643.0	605.7	37.31	17.236		
6,400.0	6,346.2	6,404.6	6,326.4	18.9	20.7	97.41	-695.7	-546.1	648.8	611.0	37.81	17.160		
6,500.0	6,445.9	6,518.8	6,440.5	19.1	20.9	97.85	-699.6	-548.6	652.0	613.8	38.24	17.051		
6,600.0	6,545.9	6,626.2	6,547.9	19.2	21.1	98.16	-700.1	-549.0	652.8	614.2	38.60	16.914		
6,654.1	6,600.0	6,680.3	6,602.0	19.3	21.1	-90.27	-700.1	-549.0	652.9	614.1	38.75	16.847		
6,700.0	6,645.9	6,726.1	6,647.9	19.4	21.2	-90.27	-700.1	-549.0	652.9	614.0	38.89	16.790		
6,800.0	6,745.9	6,826.1	6,747.9	19.5	21.3	-90.27	-700.1	-549.0	652.9	613.7	39.16	16.671		
6,900.0	6,845.9	6,926.1	6,847.9	19.7	21.4	-90.27	-700.1	-549.0	652.9	613.4	39.44	16.553		
6,913.0	6,858.8	6,939.1	6,860.8	19.7	21.5	-90.27	-700.1	-549.0	652.9	613.4	39.48	16.538		
6,919.9	6,865.8	6,946.1	6,867.8	19.7	21.5	-90.27	-700.1	-549.0	652.9	613.4	39.50	16.529		
6,950.0	6,895.8	6,976.0	6,897.7	19.7	21.5	-90.36	-699.4	-549.0	652.9	613.3	39.57	16.498		
7,000.0	6,945.7	7,025.9	6,947.4	19.8	21.5	-90.36	-695.6	-549.0	652.9	613.3	39.64	16.470		
7,050.0	6,995.1	7,075.7	6,996.7	19.8	21.5	-90.35	-688.2	-549.1	653.0	613.4	39.65	16.469		
7,100.0	7,044.0	7,125.5	7,045.3	19.7	21.5	-90.33	-677.5	-549.2	653.1	613.5	39.60	16.494		
7,150.0	7,091.9	7,175.3	7,093.1	19.7	21.5	-90.32	-663.4	-549.3	653.3	613.8	39.49	16.543		
7,200.0	7,138.8	7,225.2	7,139.8	19.6	21.4	-90.31	-646.0	-549.4	653.4	614.1	39.33	16.616		
7,250.0	7,184.3	7,275.0	7,185.1	19.5	21.3	-90.29	-625.5	-549.6	653.6	614.5	39.12	16.709		
7,300.0	7,228.3	7,324.8	7,229.0	19.4	21.2	-90.27	-601.8	-549.8	653.9	615.0	38.88	16.820		
7,350.0	7,270.5	7,374.6	7,271.0	19.3	21.0	-90.25	-575.1	-550.0	654.2	615.5	38.60	16.946		
7,400.0	7,310.7	7,424.4	7,311.2	19.1	20.9	-90.23	-545.6	-550.3	654.5	616.1	38.31	17.083		
7,450.0	7,348.8	7,474.3	7,349.1	19.0	20.7	-90.21	-513.4	-550.6	654.8	616.8	38.01	17.227		
7,500.0	7,384.5	7,524.1	7,384.8	18.8	20.6	-90.19	-478.6	-550.8	655.1	617.4	37.71	17.374		
7,550.0	7,417.7	7,573.9	7,417.9	18.7	20.4	-90.17	-441.3	-551.2	655.5	618.1	37.42	17.517		
7,600.0	7,448.2	7,623.8	7,448.4	18.6	20.2	-90.14	-401.9	-551.5	655.9	618.7	37.16	17.650		
7,650.0	7,475.8	7,673.6	7,476.0	18.5	20.0	-90.12	-360.5	-551.8	656.3	619.4	36.94	17.768		
7,700.0	7,500.5	7,723.5	7,500.7	18.4	19.9	-90.09	-317.2	-552.2	656.8	620.0	36.76	17.864		
7,750.0	7,522.1	7,773.3	7,522.4	18.3	19.7	-90.07	-272.3	-552.6	657.2	620.6	36.65	17.932		
7,800.0	7,540.5	7,823.2	7,540.9	18.3	19.5	-90.04	-226.0	-553.0	657.7	621.1	36.60	17.968		
7,850.0	7,555.6	7,873.1	7,556.1	18.3	19.4	-90.02	-178.5	-553.4	658.2	621.5	36.64	17.965		
7,900.0	7,567.4	7,923.0	7,567.9	18.4	19.3	-89.99	-130.0	-553.8	658.7	621.9	36.75	17.923		
7,950.0	7,575.7	7,972.9	7,576.4	18.5	19.2	-89.96	-80.9	-554.2	659.2	622.2	36.95	17.839		
8,000.0	7,580.6	8,022.8	7,581.4	18.6	19.1	-89.94	-31.2	-554.6	659.7	622.4	37.24	17.715		
8,044.9	7,582.0	8,067.6	7,582.1	18.8	19.1	-89.83	13.5	-555.0	660.1	622.6	37.57	17.572		
8,048.0	7,582.0	8,071.8	7,582.0	18.8	19.1	-89.83	16.7	-555.0	660.2	622.6	37.59	17.560		
8,100.0	7,582.0	8,123.8	7,582.0	19.1	19.1	-89.83	68.7	-555.5	660.7	622.6	38.05	17.362		
8,200.0	7,582.0	8,223.8	7,582.0	19.7	19.5	-89.83	168.7	-556.3	661.7	622.4	39.25	16.860		
8,300.0	7,582.0	8,323.8	7,582.0	20.5	20.3	-89.83	268.7	-557.1	662.7	621.9	40.77	16.254		
8,400.0	7,582.0	8,423.8	7,582.0	21.4	21.3	-89.83	368.7	-558.0	663.7	621.1	42.59	15.583		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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							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		
8,500.0	7,582.0	8,523.8	7,582.0	22.5	22.4	-89.83	468.7	-558.8	664.7	620.0	44.67	14.879		
8,600.0	7,582.0	8,623.8	7,582.0	23.6	23.5	-89.83	568.7	-559.6	665.7	618.7	46.98	14.170		
8,700.0	7,582.0	8,723.8	7,582.0	24.9	24.8	-89.83	668.7	-560.5	666.7	617.2	49.48	13.475		
8,800.0	7,582.0	8,823.7	7,582.0	26.3	26.2	-89.83	768.7	-561.3	667.7	615.5	52.14	12.805		
8,900.0	7,582.0	8,923.7	7,582.0	27.7	27.6	-89.83	868.7	-562.1	668.7	613.7	54.95	12.169		
9,000.0	7,582.0	9,023.7	7,582.0	29.1	29.1	-89.83	968.7	-563.0	669.7	611.8	57.88	11.571		
9,100.0	7,582.0	9,123.7	7,582.0	30.7	30.6	-89.83	1,068.7	-563.8	670.7	609.8	60.91	11.011		
9,200.0	7,582.0	9,223.7	7,582.0	32.2	32.2	-89.83	1,168.7	-564.6	671.7	607.6	64.03	10.490		
9,300.0	7,582.0	9,323.7	7,582.0	33.8	33.8	-89.83	1,268.6	-565.5	672.7	605.4	67.23	10.006		
9,400.0	7,582.0	9,423.7	7,582.0	35.5	35.4	-89.83	1,368.6	-566.3	673.7	603.2	70.49	9.557		
9,500.0	7,582.0	9,523.7	7,582.0	37.1	37.1	-89.83	1,468.6	-567.1	674.7	600.9	73.81	9.141		
9,600.0	7,582.0	9,623.7	7,582.0	38.8	38.7	-89.83	1,568.6	-568.0	675.7	598.5	77.18	8.754		
9,700.0	7,582.0	9,723.7	7,582.0	40.5	40.4	-89.83	1,668.6	-568.8	676.7	596.1	80.60	8.396		
9,800.0	7,582.0	9,823.7	7,582.0	42.3	42.2	-89.83	1,768.6	-569.6	677.7	593.6	84.05	8.063		
9,900.0	7,582.0	9,923.7	7,582.0	44.0	43.9	-89.83	1,868.6	-570.5	678.7	591.1	87.54	7.753		
10,000.0	7,582.0	10,023.7	7,582.0	45.8	45.7	-89.83	1,968.6	-571.3	679.7	588.6	91.05	7.465		
10,100.0	7,582.0	10,123.7	7,582.0	47.5	47.4	-89.83	2,068.6	-572.1	680.7	586.1	94.60	7.196		
10,200.0	7,582.0	10,223.7	7,582.0	49.3	49.2	-89.83	2,168.6	-573.0	681.7	583.5	98.16	6.944		
10,300.0	7,582.0	10,323.7	7,582.0	51.1	51.0	-89.83	2,268.6	-573.8	682.7	580.9	101.75	6.709		
10,400.0	7,582.0	10,423.7	7,582.0	52.9	52.8	-89.83	2,368.6	-574.6	683.7	578.3	105.36	6.489		
10,500.0	7,582.0	10,523.7	7,582.0	54.7	54.6	-89.83	2,468.5	-575.5	684.7	575.7	108.98	6.282		
10,600.0	7,582.0	10,623.7	7,582.0	56.5	56.4	-89.83	2,568.5	-576.3	685.7	573.0	112.62	6.088		
10,700.0	7,582.0	10,723.7	7,582.0	58.4	58.2	-89.83	2,668.5	-577.1	686.7	570.4	116.28	5.905		
10,800.0	7,582.0	10,823.6	7,582.0	60.2	60.1	-89.83	2,768.5	-578.0	687.7	567.7	119.94	5.733		
10,900.0	7,582.0	10,923.6	7,582.0	62.0	61.9	-89.83	2,868.5	-578.8	688.7	565.0	123.62	5.571		
11,000.0	7,582.0	11,023.6	7,582.0	63.9	63.7	-89.83	2,968.5	-579.6	689.7	562.4	127.31	5.417		
11,100.0	7,582.0	11,123.6	7,582.0	65.7	65.6	-89.83	3,068.5	-580.5	690.7	559.7	131.01	5.272		
11,200.0	7,582.0	11,223.6	7,582.0	67.6	67.4	-89.83	3,168.5	-581.3	691.7	557.0	134.72	5.134		
11,300.0	7,582.0	11,323.6	7,582.0	69.4	69.3	-89.83	3,268.5	-582.1	692.7	554.2	138.43	5.004		
11,400.0	7,582.0	11,423.6	7,582.0	71.3	71.1	-89.83	3,368.5	-582.9	693.7	551.5	142.16	4.880		
11,500.0	7,582.0	11,523.6	7,582.0	73.2	73.0	-89.84	3,468.5	-583.8	694.7	548.8	145.89	4.762		
11,600.0	7,582.0	11,623.6	7,582.0	75.0	74.9	-89.84	3,568.5	-584.6	695.7	546.0	149.62	4.649		
11,700.0	7,582.0	11,723.6	7,582.0	76.9	76.7	-89.84	3,668.4	-585.4	696.7	543.3	153.37	4.543		
11,800.0	7,582.0	11,823.6	7,582.0	78.8	78.6	-89.84	3,768.4	-586.3	697.7	540.6	157.11	4.441		
11,900.0	7,582.0	11,923.6	7,582.0	80.6	80.5	-89.84	3,868.4	-587.1	698.7	537.8	160.87	4.343		
12,000.0	7,582.0	12,023.6	7,582.0	82.5	82.4	-89.84	3,968.4	-587.9	699.7	535.0	164.63	4.250		
12,100.0	7,582.0	12,123.6	7,582.0	84.4	84.2	-89.84	4,068.4	-588.8	700.7	532.3	168.39	4.161		
12,200.0	7,582.0	12,223.6	7,582.0	86.3	86.1	-89.84	4,168.4	-589.6	701.7	529.5	172.16	4.076		
12,300.0	7,582.0	12,323.6	7,582.0	88.2	88.0	-89.84	4,268.4	-590.4	702.7	526.7	175.93	3.994		
12,400.0	7,582.0	12,423.6	7,582.0	90.1	89.9	-89.84	4,368.4	-591.3	703.7	524.0	179.70	3.916		
12,500.0	7,582.0	12,523.6	7,582.0	91.9	91.8	-89.84	4,468.4	-592.1	704.7	521.2	183.48	3.841		
12,600.0	7,582.0	12,623.6	7,582.0	93.8	93.7	-89.84	4,568.4	-592.9	705.7	518.4	187.26	3.768		
12,700.0	7,582.0	12,723.6	7,582.0	95.7	95.6	-89.84	4,668.4	-593.8	706.7	515.6	191.05	3.699		
12,800.0	7,582.0	12,823.5	7,582.0	97.6	97.5	-89.84	4,768.3	-594.6	707.7	512.8	194.83	3.632		
12,900.0	7,582.0	12,923.5	7,582.0	99.5	99.4	-89.84	4,868.3	-595.4	708.7	510.0	198.62	3.568		
13,000.0	7,582.0	13,023.5	7,582.0	101.4	101.2	-89.84	4,968.3	-596.3	709.7	507.3	202.41	3.506		
13,100.0	7,582.0	13,123.5	7,582.0	103.3	103.1	-89.84	5,068.3	-597.1	710.7	504.5	206.21	3.446		
13,200.0	7,582.0	13,223.5	7,582.0	105.2	105.0	-89.84	5,168.3	-597.9	711.7	501.7	210.01	3.389		
13,300.0	7,582.0	13,323.5	7,582.0	107.1	106.9	-89.84	5,268.3	-598.8	712.7	498.9	213.81	3.333		
13,400.0	7,582.0	13,423.5	7,582.0	109.0	108.8	-89.84	5,368.3	-599.6	713.7	496.1	217.61	3.280		
13,500.0	7,582.0	13,523.5	7,582.0	110.9	110.7	-89.84	5,468.3	-600.4	714.7	493.3	221.41	3.228		
13,600.0	7,582.0	13,623.5	7,582.0	112.8	112.6	-89.84	5,568.3	-601.3	715.7	490.4	225.22	3.178		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek Pad 15-11N-63W - Critter 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							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		
13,700.0	7,582.0	13,723.5	7,582.0	114.7	114.5	-89.84	5,668.3	-602.1	716.7	487.6	229.02	3.129		
13,800.0	7,582.0	13,823.5	7,582.0	116.6	116.5	-89.84	5,768.3	-602.9	717.7	484.8	232.83	3.082		
13,900.0	7,582.0	13,923.5	7,582.0	118.5	118.4	-89.84	5,868.3	-603.8	718.7	482.0	236.64	3.037		
14,000.0	7,582.0	14,023.5	7,582.0	120.4	120.3	-89.84	5,968.2	-604.6	719.7	479.2	240.45	2.993		
14,100.0	7,582.0	14,123.5	7,582.0	122.3	122.2	-89.84	6,068.2	-605.4	720.7	476.4	244.27	2.950		
14,200.0	7,582.0	14,223.5	7,582.0	124.2	124.1	-89.84	6,168.2	-606.3	721.7	473.6	248.08	2.909		
14,300.0	7,582.0	14,323.5	7,582.0	126.1	126.0	-89.84	6,268.2	-607.1	722.7	470.8	251.90	2.869		
14,400.0	7,582.0	14,423.5	7,582.0	128.0	127.9	-89.84	6,368.2	-607.9	723.7	467.9	255.71	2.830		
14,500.0	7,582.0	14,523.5	7,582.0	129.9	129.8	-89.84	6,468.2	-608.8	724.7	465.1	259.53	2.792		
14,600.0	7,582.0	14,623.5	7,582.0	131.8	131.7	-89.84	6,568.2	-609.6	725.7	462.3	263.35	2.755		
14,700.0	7,582.0	14,723.5	7,582.0	133.8	133.6	-89.84	6,668.2	-610.4	726.7	459.5	267.17	2.720		
14,800.0	7,582.0	14,823.4	7,582.0	135.7	135.5	-89.84	6,768.2	-611.3	727.7	456.7	270.99	2.685		
14,900.0	7,582.0	14,923.4	7,582.0	137.6	137.4	-89.84	6,868.2	-612.1	728.7	453.8	274.82	2.651		
15,000.0	7,582.0	15,023.4	7,582.0	139.5	139.4	-89.84	6,968.2	-612.9	729.7	451.0	278.64	2.619		
15,100.0	7,582.0	15,123.4	7,582.0	141.4	141.3	-89.84	7,068.2	-613.8	730.7	448.2	282.46	2.587		
15,200.0	7,582.0	15,223.4	7,582.0	143.3	143.2	-89.84	7,168.1	-614.6	731.7	445.4	286.29	2.556		
15,300.0	7,582.0	15,323.4	7,582.0	145.2	145.1	-89.84	7,268.1	-615.4	732.7	442.5	290.12	2.525		
15,400.0	7,582.0	15,423.4	7,582.0	147.1	147.0	-89.84	7,368.1	-616.3	733.7	439.7	293.94	2.496		
15,500.0	7,582.0	15,523.4	7,582.0	149.0	148.9	-89.84	7,468.1	-617.1	734.7	436.9	297.77	2.467		
15,600.0	7,582.0	15,623.4	7,582.0	151.0	150.8	-89.84	7,568.1	-617.9	735.7	434.1	301.60	2.439		
15,700.0	7,582.0	15,723.4	7,582.0	152.9	152.7	-89.84	7,668.1	-618.8	736.7	431.2	305.43	2.412		
15,800.0	7,582.0	15,823.4	7,582.0	154.8	154.7	-89.84	7,768.1	-619.6	737.7	428.4	309.26	2.385		
15,900.0	7,582.0	15,923.4	7,582.0	156.7	156.6	-89.84	7,868.1	-620.4	738.7	425.6	313.09	2.359		
16,000.0	7,582.0	16,023.4	7,582.0	158.6	158.5	-89.85	7,968.1	-621.3	739.7	422.7	316.92	2.334		
16,100.0	7,582.0	16,123.4	7,582.0	160.5	160.4	-89.85	8,068.1	-622.1	740.7	419.9	320.75	2.309		
16,200.0	7,582.0	16,223.4	7,582.0	162.4	162.3	-89.85	8,168.1	-622.9	741.7	417.1	324.59	2.285		
16,300.0	7,582.0	16,323.4	7,582.0	164.4	164.2	-89.85	8,268.1	-623.8	742.7	414.2	328.42	2.261		
16,400.0	7,582.0	16,423.4	7,582.0	166.3	166.2	-89.85	8,368.0	-624.6	743.7	411.4	332.25	2.238		
16,500.0	7,582.0	16,523.4	7,582.0	168.2	168.1	-89.85	8,468.0	-625.4	744.7	408.6	336.09	2.216		
16,600.0	7,582.0	16,623.4	7,582.0	170.1	170.0	-89.85	8,568.0	-626.3	745.7	405.7	339.92	2.194		
16,700.0	7,582.0	16,723.4	7,582.0	172.0	171.9	-89.85	8,668.0	-627.1	746.7	402.9	343.76	2.172		
16,800.0	7,582.0	16,823.3	7,582.0	173.9	173.8	-89.85	8,768.0	-627.9	747.7	400.1	347.59	2.151		
16,900.0	7,582.0	16,923.3	7,582.0	175.9	175.8	-89.85	8,868.0	-628.8	748.7	397.2	351.43	2.130		
17,000.0	7,582.0	17,023.3	7,582.0	177.8	177.7	-89.85	8,968.0	-629.6	749.7	394.4	355.27	2.110		
17,100.0	7,582.0	17,123.3	7,582.0	179.7	179.6	-89.85	9,068.0	-630.4	750.7	391.6	359.10	2.090		
17,200.0	7,582.0	17,223.3	7,582.0	181.6	181.5	-89.85	9,168.0	-631.3	751.7	388.7	362.94	2.071		
17,300.0	7,582.0	17,323.3	7,582.0	183.5	183.4	-89.85	9,268.0	-632.1	752.7	385.9	366.78	2.052		
17,400.0	7,582.0	17,423.3	7,582.0	185.4	185.4	-89.85	9,368.0	-632.9	753.7	383.0	370.62	2.034		
17,500.0	7,582.0	17,523.3	7,582.0	187.4	187.3	-89.85	9,468.0	-633.8	754.7	380.2	374.46	2.015		
17,600.0	7,582.0	17,623.3	7,582.0	189.3	189.2	-89.85	9,567.9	-634.6	755.7	377.4	378.29	1.998		
17,700.0	7,582.0	17,723.3	7,582.0	191.2	191.1	-89.85	9,667.9	-635.4	756.7	374.5	382.13	1.980		
17,800.0	7,582.0	17,823.3	7,582.0	193.1	193.0	-89.85	9,767.9	-636.3	757.7	371.7	385.97	1.963		
17,900.0	7,582.0	17,923.3	7,582.0	195.0	195.0	-89.85	9,867.9	-637.1	758.7	368.8	389.81	1.946		
17,995.4	7,582.0	18,018.7	7,582.0	196.9	196.8	-89.85	9,963.3	-637.9	759.6	366.1	393.48	1.930		
17,996.0	7,582.0	18,019.3	7,582.0	196.9	196.8	-89.85	9,964.0	-637.9	759.6	366.1	393.50	1.930 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Criticr Creek Pad 15-11N-63W - Critter Creek 562-1527H - 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)			
0.0	0.0	2.0	2.0	0.0	0.0	-90.51	-1.1	-125.2	125.2	125.2	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	-90.51	-1.1	-125.2	125.2	125.0	0.23	546.132		
200.0	200.0	202.0	202.0	0.3	0.3	-90.51	-1.1	-125.2	125.2	124.5	0.68	184.455		
300.0	300.0	302.0	302.0	0.6	0.6	-90.51	-1.1	-125.2	125.2	124.1	1.13	110.967		
400.0	400.0	402.0	402.0	0.8	0.8	-90.51	-1.1	-125.2	125.2	123.6	1.58	79.353		
500.0	500.0	502.0	502.0	1.0	1.0	-90.51	-1.1	-125.2	125.2	123.2	2.03	61.758		
600.0	600.0	602.0	602.0	1.2	1.2	-90.51	-1.1	-125.2	125.2	122.7	2.48	50.549		
700.0	700.0	702.0	702.0	1.5	1.5	-90.51	-1.1	-125.2	125.2	122.3	2.93	42.785		
800.0	800.0	802.0	802.0	1.7	1.7	-90.51	-1.1	-125.2	125.2	121.8	3.38	37.088		
900.0	900.0	902.0	902.0	1.9	1.9	-90.51	-1.1	-125.2	125.2	121.4	3.83	32.729		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-90.51	-1.1	-125.2	125.2	120.9	4.28	29.288		
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-90.51	-1.1	-125.2	125.2	120.5	4.72	26.501		
1,200.0	1,200.0	1,202.0	1,202.0	2.6	2.6	-90.51	-1.1	-125.2	125.2	120.0	5.17	24.199		
1,300.0	1,300.0	1,302.0	1,302.0	2.8	2.8	-90.51	-1.1	-125.2	125.2	119.6	5.62	22.264		
1,400.0	1,400.0	1,402.0	1,402.0	3.0	3.0	-90.51	-1.1	-125.2	125.2	119.1	6.07	20.616		
1,466.0	1,466.0	1,468.0	1,468.0	3.2	3.2	-90.51	-1.1	-125.2	125.2	118.8	6.37	19.656 CC		
1,500.0	1,500.0	1,501.9	1,501.9	3.3	3.3	-90.51	-1.1	-125.2	125.2	118.7	6.52	19.197 ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-90.36	-0.8	-126.5	126.5	119.5	6.96	18.181		
1,700.0	1,700.0	1,695.6	1,695.5	3.7	3.7	-89.95	0.1	-130.1	130.2	122.8	7.38	17.647		
1,800.0	1,800.0	1,792.1	1,791.8	3.9	3.9	99.60	1.6	-136.0	136.6	128.9	7.78	17.572 SF		
1,900.0	1,899.9	1,888.0	1,887.3	4.1	4.1	101.73	3.7	-144.3	146.1	138.0	8.15	17.929		
2,000.0	1,999.7	1,983.1	1,981.8	4.3	4.3	104.58	6.3	-154.8	158.9	150.4	8.53	18.629		
2,100.0	2,099.2	2,080.9	2,078.8	4.4	4.6	107.90	9.4	-167.0	174.4	165.5	8.93	19.536		
2,200.0	2,198.5	2,178.7	2,175.8	4.6	4.8	111.39	12.5	-179.2	191.5	182.1	9.34	20.507		
2,286.3	2,283.8	2,262.7	2,259.1	4.8	5.1	114.43	15.1	-189.7	207.6	197.9	9.70	21.400		
2,300.0	2,297.3	2,276.1	2,272.3	4.9	5.1	114.95	15.5	-191.3	210.3	200.5	9.76	21.545		
2,400.0	2,396.1	2,373.2	2,368.7	5.1	5.4	118.33	18.6	-203.4	230.3	220.1	10.20	22.576		
2,500.0	2,494.8	2,470.3	2,465.0	5.4	5.6	121.17	21.6	-215.6	251.1	240.4	10.66	23.554		
2,600.0	2,593.5	2,567.4	2,561.3	5.7	5.9	123.58	24.7	-227.7	272.3	261.2	11.13	24.473		
2,700.0	2,692.3	2,664.6	2,657.6	6.0	6.2	125.64	27.7	-239.8	293.9	282.3	11.60	25.332		
2,800.0	2,791.0	2,761.7	2,753.9	6.3	6.5	127.43	30.7	-251.9	315.8	303.7	12.09	26.133		
2,900.0	2,889.7	2,858.8	2,850.2	6.6	6.8	128.97	33.8	-264.0	338.0	325.4	12.58	26.878		
3,000.0	2,988.4	2,955.9	2,946.5	6.9	7.1	130.33	36.8	-276.2	360.4	347.3	13.07	27.570		
3,100.0	3,087.2	3,053.0	3,042.9	7.2	7.4	131.53	39.9	-288.3	383.0	369.4	13.57	28.213		
3,200.0	3,185.9	3,150.2	3,139.2	7.5	7.7	132.60	42.9	-300.4	405.7	391.6	14.08	28.812		
3,300.0	3,284.6	3,247.3	3,235.5	7.9	8.0	133.56	46.0	-312.5	428.5	413.9	14.59	29.369		
3,400.0	3,383.4	3,344.4	3,331.8	8.2	8.3	134.41	49.0	-324.6	451.5	436.4	15.11	29.888		
3,500.0	3,482.1	3,441.5	3,428.1	8.5	8.6	135.19	52.1	-336.7	474.5	458.9	15.62	30.372		
3,600.0	3,580.8	3,538.7	3,524.4	8.9	8.9	135.89	55.1	-348.9	497.6	481.4	16.14	30.825		
3,700.0	3,679.5	3,635.8	3,620.8	9.2	9.2	136.53	58.2	-361.0	520.7	504.1	16.66	31.248		
3,800.0	3,778.3	3,732.9	3,717.1	9.6	9.5	137.12	61.2	-373.1	543.9	526.8	17.19	31.644		
3,900.0	3,877.0	3,830.0	3,813.4	9.9	9.8	137.66	64.3	-385.2	567.2	549.5	17.72	32.016		
4,000.0	3,975.7	3,927.1	3,909.7	10.3	10.1	138.16	67.3	-397.3	590.5	572.3	18.25	32.366		
4,100.0	4,074.5	4,024.3	4,006.0	10.6	10.4	138.62	70.4	-409.5	613.9	595.1	18.78	32.695		
4,200.0	4,173.2	4,121.4	4,102.3	11.0	10.7	139.04	73.4	-421.6	637.3	617.9	19.31	33.004		
4,300.0	4,271.9	4,218.5	4,198.7	11.4	11.0	139.44	76.4	-433.7	660.7	640.8	19.84	33.296		
4,400.0	4,370.6	4,315.6	4,295.0	11.7	11.3	139.80	79.5	-445.8	684.1	663.7	20.38	33.572		
4,500.0	4,469.4	4,412.8	4,391.3	12.1	11.7	140.15	82.5	-457.9	707.6	686.7	20.91	33.833		
4,600.0	4,568.1	4,509.9	4,487.6	12.4	12.0	140.47	85.6	-470.0	731.1	709.6	21.45	34.080		
4,700.0	4,666.8	4,607.0	4,583.9	12.8	12.3	140.77	88.6	-482.2	754.6	732.6	21.99	34.314		
4,800.0	4,765.6	4,704.1	4,680.2	13.2	12.6	141.05	91.7	-494.3	778.1	755.6	22.53	34.536		
7,450.0	7,348.8	7,934.6	7,576.3	19.0	20.9	-100.45	-491.7	-653.3	790.6	753.4	37.20	21.252		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Crittter Creek Pad 15-11N-63W - Crittter Creek 562-1527H - 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							
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)			
7,500.0	7,384.5	7,893.7	7,569.9	18.8	20.6	-98.82	-451.3	-653.9	780.4	743.5	36.87	21.165		
7,550.0	7,417.7	7,855.1	7,561.9	18.7	20.3	-97.16	-413.6	-654.4	772.3	735.7	36.58	21.114		
7,600.0	7,448.2	7,818.4	7,552.3	18.6	20.1	-95.44	-378.1	-654.9	766.4	730.1	36.32	21.101		
7,650.0	7,475.8	7,783.0	7,541.4	18.5	19.9	-93.67	-344.5	-655.4	762.6	726.5	36.09	21.132		
7,700.0	7,500.5	7,748.8	7,529.3	18.4	19.7	-91.83	-312.5	-655.9	760.9	725.0	35.88	21.208		
7,719.1	7,509.1	7,736.0	7,524.3	18.4	19.7	-91.11	-300.7	-656.0	760.7	724.9	35.81	21.243		
7,750.0	7,522.1	7,715.6	7,516.0	18.3	19.6	-89.92	-282.0	-656.3	761.1	725.4	35.69	21.323		
7,800.0	7,540.5	7,683.2	7,501.8	18.3	19.4	-87.95	-252.9	-656.7	763.2	727.6	35.52	21.486		
7,850.0	7,555.6	7,650.0	7,485.9	18.3	19.3	-85.85	-223.8	-657.1	766.9	731.6	35.34	21.700		
7,900.0	7,567.4	7,620.3	7,470.4	18.4	19.2	-83.87	-198.4	-657.5	772.2	737.0	35.20	21.938		
7,950.0	7,575.7	7,589.6	7,453.5	18.5	19.2	-81.78	-172.9	-657.8	778.9	743.9	35.05	22.224		
8,000.0	7,580.6	7,559.3	7,435.7	18.6	19.1	-79.68	-148.4	-658.2	786.9	751.9	34.91	22.539		
8,044.9	7,582.0	7,532.5	7,419.0	18.8	19.0	-77.80	-127.4	-658.5	794.8	760.0	34.80	22.842		
8,048.0	7,582.0	7,530.7	7,417.8	18.8	19.0	-77.72	-126.0	-658.5	795.4	760.6	34.79	22.860		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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	-90.01	0.0	-24.6	24.6	24.6	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.01	0.0	-24.6	24.6	24.4	0.23	108.356		
200.0	200.0	201.0	201.0	0.3	0.3	-90.01	0.0	-24.6	24.6	23.9	0.68	36.359		
300.0	300.0	301.0	301.0	0.6	0.6	-90.01	0.0	-24.6	24.6	23.5	1.13	21.844		
400.0	400.0	401.0	401.0	0.8	0.8	-90.01	0.0	-24.6	24.6	23.0	1.58	15.612		
500.0	500.0	501.0	501.0	1.0	1.0	-90.01	0.0	-24.6	24.6	22.6	2.03	12.146		
600.0	600.0	601.0	601.0	1.2	1.2	-90.01	0.0	-24.6	24.6	22.1	2.47	9.940		
700.0	700.0	701.0	701.0	1.5	1.5	-90.01	0.0	-24.6	24.6	21.7	2.92	8.412		
800.0	800.0	801.0	801.0	1.7	1.7	-90.01	0.0	-24.6	24.6	21.2	3.37	7.291		
900.0	900.0	901.0	901.0	1.9	1.9	-90.01	0.0	-24.6	24.6	20.8	3.82	6.434		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.01	0.0	-24.6	24.6	20.3	4.27	5.757		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.01	0.0	-24.6	24.6	19.9	4.72	5.209		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.01	0.0	-24.6	24.6	19.4	5.17	4.756		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.01	0.0	-24.6	24.6	19.0	5.62	4.376		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.01	0.0	-24.6	24.6	18.5	6.07	4.052		
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-90.01	0.0	-24.6	24.6	18.1	6.52	3.772		
1,600.0	1,600.0	1,601.5	1,601.5	3.5	3.5	-88.31	0.7	-23.4	23.5	16.5	6.96	3.368		
1,700.0	1,700.0	1,701.9	1,701.8	3.7	3.7	-82.20	2.7	-20.0	20.2	12.8	7.40	2.733		
1,800.0	1,800.0	1,801.8	1,801.5	3.9	3.9	123.55	5.8	-15.0	16.8	9.0	7.81	2.149		
1,834.9	1,834.8	1,836.6	1,836.2	4.0	4.0	132.79	6.8	-13.2	16.5	8.5	7.95	2.071 CC, ES, SF		
1,900.0	1,899.9	1,901.5	1,901.0	4.1	4.1	151.38	8.8	-9.9	17.8	9.6	8.20	2.168		
2,000.0	1,999.7	2,000.9	2,000.3	4.3	4.4	172.93	11.8	-4.8	24.9	16.3	8.60	2.893		
2,100.0	2,099.2	2,100.0	2,099.2	4.4	4.6	-176.19	14.9	0.2	36.5	27.6	8.99	4.066		
2,200.0	2,198.5	2,198.8	2,197.9	4.6	4.8	-171.13	17.9	5.3	51.5	42.2	9.37	5.498		
2,286.3	2,283.8	2,283.7	2,282.6	4.8	5.0	-169.01	20.5	9.6	66.8	57.1	9.71	6.877		
2,300.0	2,297.3	2,297.2	2,296.1	4.9	5.0	-168.79	20.9	10.3	69.4	59.6	9.77	7.101		
2,400.0	2,396.1	2,395.4	2,394.1	5.1	5.3	-167.58	23.9	15.3	88.2	78.0	10.19	8.658		
2,500.0	2,494.8	2,493.6	2,492.1	5.4	5.5	-166.79	26.9	20.3	107.1	96.5	10.62	10.087		
2,600.0	2,593.5	2,591.8	2,590.1	5.7	5.7	-166.24	29.9	25.3	126.0	114.9	11.05	11.400		
2,700.0	2,692.3	2,690.0	2,688.1	6.0	6.0	-165.83	32.9	30.3	144.9	133.4	11.49	12.608		
2,800.0	2,791.0	2,788.2	2,786.2	6.3	6.2	-165.52	35.9	35.3	163.8	151.9	11.94	13.723		
2,900.0	2,889.7	2,886.4	2,884.2	6.6	6.4	-165.27	38.9	40.3	182.7	170.3	12.39	14.752		
3,000.0	2,988.4	2,984.5	2,982.2	6.9	6.7	-165.07	42.0	45.3	201.6	188.8	12.84	15.706		
3,100.0	3,087.2	3,082.7	3,080.2	7.2	6.9	-164.90	45.0	50.3	220.6	207.3	13.30	16.590		
3,200.0	3,185.9	3,180.9	3,178.2	7.5	7.1	-164.76	48.0	55.3	239.5	225.7	13.75	17.412		
3,300.0	3,284.6	3,279.1	3,276.2	7.9	7.4	-164.64	51.0	60.4	258.4	244.2	14.22	18.177		
3,400.0	3,383.4	3,377.3	3,374.3	8.2	7.6	-164.54	54.0	65.4	277.3	262.7	14.68	18.891		
3,500.0	3,482.1	3,475.5	3,472.3	8.5	7.9	-164.45	57.0	70.4	296.3	281.1	15.15	19.559		
3,600.0	3,580.8	3,573.7	3,570.3	8.9	8.1	-164.37	60.0	75.4	315.2	299.6	15.62	20.184		
3,700.0	3,679.5	3,671.9	3,668.3	9.2	8.3	-164.30	63.0	80.4	334.1	318.0	16.09	20.770		
3,800.0	3,778.3	3,770.1	3,766.3	9.6	8.6	-164.23	66.0	85.4	353.0	336.5	16.56	21.320		
3,900.0	3,877.0	3,868.3	3,864.4	9.9	8.8	-164.18	69.0	90.4	372.0	354.9	17.03	21.838		
4,000.0	3,975.7	3,966.5	3,962.4	10.3	9.0	-164.12	72.0	95.4	390.9	373.4	17.51	22.327		
4,100.0	4,074.5	4,064.7	4,060.4	10.6	9.3	-164.08	75.0	100.4	409.8	391.8	17.98	22.788		
4,200.0	4,173.2	4,162.9	4,158.4	11.0	9.5	-164.04	78.0	105.4	428.7	410.3	18.46	23.223		
4,300.0	4,271.9	4,261.0	4,256.4	11.4	9.8	-164.00	81.0	110.4	447.7	428.7	18.94	23.635		
4,400.0	4,370.6	4,359.2	4,354.4	11.7	10.0	-163.96	84.0	115.5	466.6	447.2	19.42	24.026		
4,500.0	4,469.4	4,457.4	4,452.5	12.1	10.2	-163.93	87.0	120.5	485.5	465.6	19.90	24.396		
4,600.0	4,568.1	4,555.6	4,550.5	12.4	10.5	-163.90	90.0	125.5	504.4	484.1	20.38	24.748		
4,700.0	4,666.8	4,653.8	4,648.5	12.8	10.7	-163.87	93.0	130.5	523.4	502.5	20.87	25.083		
4,800.0	4,765.6	4,752.0	4,746.5	13.2	11.0	-163.84	96.0	135.5	542.3	520.9	21.35	25.402		
4,900.0	4,864.3	4,850.2	4,844.5	13.5	11.2	-163.82	99.1	140.5	561.2	539.4	21.83	25.706		

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 511-1510H
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 511-1510H	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 14, 2017)	Offset TVD Reference:	Offset Datum

Offset Design		Crittter Creek Pad 15-11N-63W - Crittler 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,000.0	4,963.0	4,948.4	4,942.6	13.9	11.5	-163.80	102.1	145.5	580.1	557.8	22.32	25.995			
5,100.0	5,061.7	5,046.6	5,040.6	14.3	11.7	-163.78	105.1	150.5	599.1	576.3	22.80	26.272			
5,200.0	5,160.5	5,144.8	5,138.6	14.6	11.9	-163.76	108.1	155.5	618.0	594.7	23.29	26.537			
5,300.0	5,259.2	5,243.0	5,236.6	15.0	12.2	-163.74	111.1	160.5	636.9	613.2	23.78	26.790			
5,400.0	5,357.9	5,341.2	5,334.6	15.4	12.4	-163.72	114.1	165.5	655.9	631.6	24.26	27.032			
5,500.0	5,456.7	5,439.4	5,432.6	15.8	12.7	-163.70	117.1	170.5	674.8	650.0	24.75	27.264			
5,600.0	5,555.4	5,537.5	5,530.7	16.1	12.9	-163.69	120.1	175.6	693.7	668.5	25.24	27.487			
5,700.0	5,654.1	5,635.7	5,628.7	16.5	13.2	-163.67	123.1	180.6	712.6	686.9	25.73	27.701			
5,800.0	5,752.8	5,733.9	5,726.7	16.9	13.4	-163.66	126.1	185.6	731.6	705.4	26.21	27.907			
5,900.0	5,851.6	5,832.1	5,824.7	17.2	13.6	-163.64	129.1	190.6	750.5	723.8	26.70	28.104			
6,000.0	5,950.3	5,930.3	5,922.7	17.6	13.9	-163.63	132.1	195.6	769.4	742.2	27.19	28.294			
6,100.0	6,049.0	6,028.5	6,020.8	18.0	14.1	-163.62	135.1	200.6	788.4	760.7	27.68	28.477			
6,200.0	6,147.7	6,126.9	6,119.1	18.4	14.3	-163.61	138.1	205.6	807.3	779.5	28.17	28.659			
6,300.0	6,246.4	6,225.1	6,217.3	18.8	14.5	-163.60	141.1	210.6	826.2	798.4	28.66	28.841			
6,400.0	6,345.1	6,323.4	6,315.6	19.2	14.7	-163.59	144.1	215.6	845.1	817.3	29.15	29.023			
6,500.0	6,443.8	6,421.5	6,413.7	19.6	14.9	-163.58	147.1	220.6	864.0	836.2	29.64	29.205			
6,600.0	6,542.5	6,519.7	6,511.9	20.0	15.1	-163.57	150.1	225.6	882.9	855.1	30.13	29.387			
6,700.0	6,641.2	6,617.9	6,610.1	20.4	15.3	-163.56	153.1	230.6	901.8	874.0	30.62	29.569			
6,800.0	6,739.9	6,716.1	6,708.3	20.8	15.5	-163.55	156.1	235.6	920.7	892.9	31.11	29.751			
6,900.0	6,838.6	6,813.7	6,805.9	21.2	15.7	-163.54	159.1	240.6	939.6	911.8	31.60	29.933			
7,000.0	6,937.3	6,911.8	6,903.9	21.6	15.9	-163.53	162.1	245.6	958.5	930.7	32.09	30.115			
7,100.0	7,036.0	7,009.9	7,002.1	22.0	16.1	-163.52	165.1	250.6	977.4	949.6	32.58	30.297			
7,200.0	7,134.7	7,107.5	7,100.0	22.4	16.3	-163.51	168.1	255.6	996.3	968.5	33.07	30.479			
7,300.0	7,233.4	7,205.7	7,198.3	22.8	16.5	-163.50	171.1	260.6	1,015.2	987.4	33.56	30.661			
7,400.0	7,332.1	7,303.9	7,296.5	23.2	16.7	-163.49	174.1	265.6	1,034.1	1,006.3	34.05	30.843			
7,500.0	7,430.8	7,399.9	7,392.5	23.6	16.9	-163.48	177.1	270.6	1,053.0	1,025.2	34.54	31.025			
7,600.0	7,529.5	7,497.5	7,490.1	24.0	17.1	-163.47	180.1	275.6	1,071.9	1,044.1	35.03	31.207			
7,700.0	7,628.2	7,595.1	7,587.7	24.4	17.3	-163.46	183.1	280.6	1,090.8	1,063.0	35.52	31.389			
7,800.0	7,726.9	7,692.6	7,685.2	24.8	17.5	-163.45	186.1	285.6	1,109.7	1,081.9	36.01	31.571			
7,900.0	7,825.6	7,790.1	7,782.7	25.2	17.7	-163.44	189.1	290.6	1,128.6	1,100.8	36.50	31.753			
8,000.0	7,924.3	7,887.6	7,880.2	25.6	17.9	-163.43	192.1	295.6	1,147.5	1,119.7	36.99	31.935			
8,100.0	8,023.0	7,985.7	7,978.3	26.0	18.1	-163.42	195.1	300.6	1,166.4	1,138.6	37.48	32.117			
8,200.0	8,121.7	8,083.4	8,076.0	26.4	18.3	-163.41	198.1	305.6	1,185.3	1,157.5	37.97	32.299			
8,300.0	8,220.4	8,181.1	8,173.7	26.8	18.5	-163.40	201.1	310.6	1,204.2	1,176.4	38.46	32.481			
8,400.0	8,319.1	8,278.8	8,271.4	27.2	18.7	-163.39	204.1	315.6	1,223.1	1,195.3	38.95	32.663			
8,500.0	8,417.8	8,377.5	8,370.1	27.6	18.9	-163.38	207.1	320.6	1,242.0	1,214.2	39.44	32.845			
8,600.0	8,516.5	8,475.2	8,467.8	28.0	19.1	-163.37	210.1	325.6	1,260.9	1,233.1	39.93	33.027			
8,700.0	8,615.2	8,573.9	8,566.5	28.4	19.3	-163.36	213.1	330.6	1,279.8	1,252.0	40.42	33.209			
8,800.0	8,713.9	8,671.6	8,664.2	28.8	19.5	-163.35	216.1	335.6	1,298.7	1,270.9	40.91	33.391			
8,900.0	8,812.6	8,769.3	8,761.9	29.2	19.7	-163.34	219.1	340.6	1,317.6	1,289.8	41.40	33.573			
9,000.0	8,911.3	8,868.0	8,860.6	29.6	19.9	-163.33	222.1	345.6	1,336.5	1,308.7	41.89	33.755			
9,100.0	9,010.0	8,965.7	8,958.3	30.0	20.1	-163.32	225.1	350.6	1,355.4	1,327.6	42.38	33.937			
9,200.0	9,108.7	9,064.4	9,057.0	30.4	20.3	-163.31	228.1	355.6	1,374.3	1,346.5	42.87	34.119			
9,300.0	9,207.4	9,163.1	9,155.7	30.8	20.5	-163.30	231.1	360.6	1,393.2	1,365.4	43.36	34.301			
9,400.0	9,306.1	9,261.8	9,254.4	31.2	20.7	-163.29	234.1	365.6	1,412.1	1,384.3	43.85	34.483			
9,500.0	9,404.8	9,360.5	9,353.1	31.6	20.9	-163.28	237.1	370.6	1,431.0	1,403.2	44.34	34.665			
9,600.0	9,503.5	9,459.2	9,451.8	32.0	21.1	-163.27	240.1	375.6	1,449.9	1,422.1	44.83	34.847			
9,700.0	9,602.2	9,557.9	9,550.5	32.4	21.3	-163.26	243.1	380.6	1,468.8	1,441.0	45.32	35.029			
9,800.0	9,700.9	9,656.6	9,649.2	32.8	21.5	-163.25	246.1	385.6	1,487.7	1,459.9	45.81	35.211			
9,900.0	9,799.6	9,755.3	9,747.9	33.2	21.7	-163.24	249.1	390.6	1,506.6	1,478.8	46.30	35.393			
10,000.0	9,898.3	9,854.0	9,846.6	33.6	21.9	-163.23	252.1	395.6	1,525.5	1,497.7	46.79	35.575			
10,100.0	9,997.0	9,952.7	9,945.3	34.0	22.1	-163.22	255.1	400.6	1,544.4	1,516.6	47.28	35.757			
10,200.0	10,095.7	10,051.4	10,044.0	34.4	22.3	-163.21	258.1	405.6	1,563.3	1,535.5	47.77	35.939			
10,300.0	10,194.4	10,150.1	10,142.7	34.8	22.5	-163.20	261.1	410.6	1,582.2	1,554.4	48.26	36.121			
10,400.0	10,293.1	10,248.8	10,241.4	35.2	22.7	-163.19	264.1	415.6	1,601.1	1,573.3	48.75	36.303			
10,500.0	10,391.8	10,347.5	10,340.1	35.6	22.9	-163.18	267.1	420.6	1,620.0	1,592.2	49.24	36.485			
10,600.0	10,490.5	10,446.2	10,438.8	36.0	23.1	-163.17	270.1	425.6	1,638.9	1,611.1	49.73	36.667			
10,700.0	10,589.2	10,544.9	10,537.5	36.4	23.3	-163.16	273.1	430.6	1,657.8	1,630.0	50.22	36.849			
10,800.0	10,687.9	10,643.6	10,636.2	36.8	23.5	-163.15	276.1	435.6	1,676.7	1,648.9	50.71	37.031			
10,900.0	10,786.6	10,742.3	10,734.9	37.2	23.7	-163.14	279.1	440.6	1,695.6	1,667.8	51.20	37.213			
11,000.0	10,885.3	10,841.0	10,833.6	37.6	23.9	-163.13	282.1	445.6	1,714.5	1,686.7	51.69	37.395			
11,100.0	10,984.0	10,939.7	10,932.3	38.0	24.1	-163.12	285.1	450.6	1,733.4	1,705.6	52.18	37.577			
11,200.0	11,082.7	11,038.4	11,031.0	38.4	24.3	-163.11	288.1	455.6	1,752.3	1,724.5	52.67	37.759			
11,300.0	11,181.4	11,137.1	11,129.7	38.8	24.5	-163.10	291.1	460.6	1,771.2	1,743.4	53.16	37.941			
11,400.0	11,280.1	11,235.8	11,228.4	39.2	24.7	-163.09	294.1	465.6	1,790.1	1,762.3	53.65	38.123			
11,500.0	11,378.8	11,334.5	11,327.1	39.6	24.9	-163.08	297.1	470.6	1,809.0	1,781.2	54.14	38.305			
11,600.0	11,477.5	11,433.2	11,425.8	40.0	25.1	-163.07	300.1	475.6	1,827.9	1,800.1	54.63	38.487			
11,700.0	11,576.2	11,531.9	11,524.5	40.4	25.3	-163.06	303.1	480.6	1,846.8	1,819.0	55.12	38.669			
11,800.0	11,674.9	11,630.6	11,623.2	40.8	25.5	-163.05	306.1	485.6	1,865.7	1,838.0	55.61	38.851			
11,900.0	11,773.6	11,729.3	11,721.9	41.2	25.7	-163.04	309.1	490.6	1,884.6	1,857.0	56.10	39.033			
12,000.0	11,872.3	11,828.0	11,820.6	41.6	25.9	-163.03	312.1	495.6	1,903.5	1,876.0	56.59	39.215			
12,100.0	11,971.0	11,926.7	11,919.3	42.0	26.1	-163.02	315.1	500.6	1,922.4	1,895.0	57.08	39.397			
12,200.0	12,069.7	12,025.4	12,018.0	42.4	26.3	-163.01	318.1	505.6	1,941.3	1,914.0	57.57	39.579			
12,300.0	12,168.4	12,124.1	12,116.7	42.8	26.5	-163.00	321.1	510.6	1,960.2	1,933.0	58.06	39.761			
12,400.0	12,267.1	12,222.8	12,215.4	43.2	26.7	-162.99	324.1	515.6	1,979.1	1,952.0	58.55	39.943			
12,500.0	12,365.8	12,321.5	12,314.1	43.6	26.9	-162.98	327.1	520.6	1,998.0	1,971.0	59.04	40.125			
12,600.0	12,464.5	12,420.2	12,412.8	44.0	27.1	-162.97	330.1	525.6	2,016.9	1,990.0	59.53	40.307			
12,700.0	12,563.2	12,518.9	12,511.5	44.4	27.3	-162.96	333.1	530.6	2,035.8	2,009.0	60				

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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		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	0.0	0.0	0.0	0.0	89.63	4.0	624.9	624.9					
100.0	100.0	100.0	100.0	0.1	0.1	89.63	4.0	624.9	624.9	624.7	0.22	2,780.304		
200.0	200.0	200.0	200.0	0.3	0.3	89.63	4.0	624.9	624.9	624.2	0.67	926.768		
300.0	300.0	300.0	300.0	0.6	0.6	89.63	4.0	624.9	624.9	623.8	1.12	556.061		
400.0	400.0	400.0	400.0	0.8	0.8	89.63	4.0	624.9	624.9	623.3	1.57	397.186		
500.0	500.0	500.0	500.0	1.0	1.0	89.63	4.0	624.9	624.9	622.9	2.02	308.923		
600.0	600.0	600.0	600.0	1.2	1.2	89.63	4.0	624.9	624.9	622.4	2.47	252.755		
700.0	700.0	700.0	700.0	1.5	1.5	89.63	4.0	624.9	624.9	622.0	2.92	213.870		
800.0	800.0	800.0	800.0	1.7	1.7	89.63	4.0	624.9	624.9	621.5	3.37	185.354		
900.0	900.0	900.0	900.0	1.9	1.9	89.63	4.0	624.9	624.9	621.1	3.82	163.547		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.63	4.0	624.9	624.9	620.6	4.27	146.332		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.63	4.0	624.9	624.9	620.2	4.72	132.395		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.63	4.0	624.9	624.9	619.7	5.17	120.883		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.63	4.0	624.9	624.9	619.3	5.62	111.212		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.63	4.0	624.9	624.9	618.8	6.07	102.974		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.63	4.0	624.9	624.9	618.4	6.52	95.873		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.63	4.0	624.9	624.9	618.0	6.97	89.687		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.63	4.0	624.9	624.9	617.5	7.42	84.252		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-82.02	4.0	624.9	624.7	616.9	7.84	79.713		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-82.40	4.0	624.9	624.2	615.9	8.23	75.823		
2,000.0	1,999.7	1,999.7	1,999.7	4.3	4.4	-83.03	4.0	624.9	623.3	614.7	8.63	72.192		
2,100.0	2,099.2	2,099.2	2,099.2	4.4	4.6	-83.91	4.0	624.9	622.2	613.2	9.05	68.777		
2,157.2	2,156.0	2,148.6	2,148.6	4.6	4.7	-84.45	4.1	625.2	621.9	612.6	9.27	67.078 CC, ES		
2,200.0	2,198.5	2,185.3	2,185.3	4.6	4.8	-84.91	4.4	625.8	622.1	612.6	9.44	65.911		
2,286.3	2,283.8	2,259.1	2,259.0	4.8	4.9	-85.94	5.3	628.0	623.7	613.9	9.79	63.726		
2,300.0	2,297.3	2,270.8	2,270.7	4.9	5.0	-86.13	5.5	628.4	624.1	614.3	9.84	63.400		
2,400.0	2,396.1	2,355.8	2,355.6	5.1	5.2	-87.49	7.3	632.8	628.7	618.4	10.27	61.211		
2,500.0	2,494.8	2,440.4	2,439.9	5.4	5.3	-88.86	9.8	638.9	635.8	625.1	10.71	59.347		
2,600.0	2,593.5	2,533.4	2,532.5	5.7	5.5	-90.38	13.1	647.2	645.1	633.9	11.19	57.657		
2,700.0	2,692.3	2,631.3	2,630.0	6.0	5.8	-91.93	16.7	655.9	655.0	643.3	11.68	56.058		
2,800.0	2,791.0	2,729.2	2,727.4	6.3	6.0	-93.44	20.3	664.7	665.4	653.2	12.19	54.580		
2,900.0	2,889.7	2,827.1	2,824.8	6.6	6.2	-94.90	23.9	673.5	676.3	663.6	12.71	53.220		
3,000.0	2,988.4	2,925.0	2,922.3	6.9	6.5	-96.31	27.5	682.3	687.6	674.3	13.23	51.970		
3,100.0	3,087.2	3,022.9	3,019.7	7.2	6.7	-97.68	31.1	691.0	699.3	685.5	13.76	50.823		
3,200.0	3,185.9	3,120.8	3,117.2	7.5	7.0	-99.01	34.6	699.8	711.4	697.1	14.29	49.773		
3,300.0	3,284.6	3,218.7	3,214.6	7.9	7.2	-100.29	38.2	708.6	723.8	709.0	14.83	48.810		
3,400.0	3,383.4	3,316.6	3,312.0	8.2	7.5	-101.53	41.8	717.4	736.7	721.3	15.37	47.929		
3,500.0	3,482.1	3,414.5	3,409.5	8.5	7.7	-102.72	45.4	726.1	749.8	733.9	15.91	47.121		
3,600.0	3,580.8	3,512.4	3,506.9	8.9	8.0	-103.88	49.0	734.9	763.3	746.8	16.46	46.381		
3,700.0	3,679.5	3,610.3	3,604.4	9.2	8.2	-104.99	52.6	743.7	777.1	760.1	17.00	45.702		
3,800.0	3,778.3	3,708.2	3,701.8	9.6	8.5	-106.07	56.2	752.5	791.1	773.6	17.55	45.079 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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							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)			
13,500.0	7,582.0	7,676.7	7,302.4	110.9	19.6	57.72	5,961.2	608.4	760.6	648.8	111.78	6.804		
13,600.0	7,582.0	7,742.8	7,303.9	112.8	20.8	55.28	6,008.8	562.5	697.0	585.5	111.53	6.250		
13,700.0	7,582.0	7,837.2	7,308.0	114.7	22.5	51.28	6,076.3	496.8	633.6	524.0	109.54	5.784		
13,800.0	7,582.0	7,912.0	7,311.1	116.6	24.0	47.28	6,128.6	443.4	570.4	463.5	106.87	5.337		
13,900.0	7,582.0	7,979.3	7,312.8	118.5	25.5	42.85	6,175.2	394.8	509.5	406.5	103.03	4.946		
14,000.0	7,582.0	8,049.0	7,313.8	120.4	26.9	37.33	6,223.3	344.4	452.5	355.4	97.07	4.661		
14,100.0	7,582.0	8,118.5	7,314.9	122.3	28.4	30.74	6,270.5	293.4	399.7	310.8	88.90	4.496		
14,200.0	7,582.0	8,181.8	7,314.9	124.2	29.9	23.71	6,313.5	247.0	355.3	275.5	79.77	4.454		
14,300.0	7,582.0	8,248.5	7,314.2	126.1	31.4	15.34	6,358.8	197.9	322.2	252.6	69.59	4.629		
14,400.0	7,582.0	8,318.6	7,313.2	128.0	33.0	5.75	6,405.8	146.0	304.0	242.0	61.93	4.908		
14,462.5	7,582.0	8,364.5	7,313.4	129.2	34.0	-0.69	6,436.8	112.2	300.6	239.5	61.07	4.922 CC		
14,500.0	7,582.0	8,391.2	7,313.7	129.9	34.6	-4.47	6,454.8	92.4	301.8	239.3	62.52	4.827 ES		
14,600.0	7,582.0	8,451.3	7,313.8	131.8	36.0	-12.74	6,495.3	48.0	317.8	247.3	70.51	4.507		
14,700.0	7,582.0	8,525.1	7,313.6	133.8	37.7	-22.21	6,544.8	-6.7	349.4	264.2	85.26	4.098		
14,800.0	7,582.0	8,588.5	7,314.6	135.7	39.2	-29.60	6,587.0	-54.0	392.1	292.8	99.31	3.948		
14,900.0	7,582.0	8,660.0	7,315.0	137.6	40.9	-36.74	6,635.0	-107.0	443.4	329.6	113.80	3.896 SF		
15,000.0	7,582.0	8,732.4	7,315.5	139.5	42.6	-42.77	6,684.4	-159.9	499.6	373.2	126.44	3.951		
15,100.0	7,582.0	8,805.5	7,316.1	141.4	44.4	-47.85	6,734.8	-212.8	559.1	421.9	137.28	4.073		
15,200.0	7,582.0	8,880.0	7,316.8	143.3	46.1	-52.17	6,786.7	-266.3	620.9	474.3	146.61	4.235		
15,300.0	7,582.0	8,956.0	7,317.6	145.2	47.9	-55.84	6,840.1	-320.4	684.0	529.2	154.73	4.420		
15,400.0	7,582.0	9,033.4	7,318.5	147.1	49.8	-58.98	6,895.0	-374.9	747.9	586.0	161.88	4.620		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 511-1510H
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 511-1510H	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 14, 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 (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		
8,200.0	7,582.0	7,659.1	7,288.3	19.7	19.5	57.56	673.8	587.1	758.4	726.8	31.63	23.976		
8,300.0	7,582.0	7,725.0	7,288.3	20.5	20.7	54.83	720.1	540.1	693.6	661.5	32.08	21.618		
8,400.0	7,582.0	7,812.7	7,289.2	21.4	22.4	50.51	780.1	476.3	628.4	596.2	32.19	19.523		
8,500.0	7,582.0	7,874.6	7,289.0	22.5	23.6	46.76	822.1	430.8	565.4	533.2	32.18	17.570		
8,600.0	7,582.0	7,946.8	7,289.5	23.6	25.1	41.70	871.2	377.9	504.8	473.2	31.58	15.987		
8,700.0	7,582.0	8,032.1	7,292.7	24.9	26.9	34.75	929.4	315.6	446.9	417.0	29.92	14.937		
8,800.0	7,582.0	8,100.1	7,297.8	26.3	28.3	28.31	975.9	266.3	392.4	364.3	28.07	13.978		
8,900.0	7,582.0	8,155.0	7,300.7	27.7	29.5	22.27	1,014.1	226.9	346.5	320.3	26.22	13.214		
9,000.0	7,582.0	8,213.5	7,301.6	29.1	30.9	14.96	1,054.8	184.9	313.2	289.2	23.94	13.082		
9,100.0	7,582.0	8,277.2	7,300.8	30.7	32.3	6.14	1,098.3	138.4	295.9	273.7	22.13	13.368		
9,156.5	7,582.0	8,325.1	7,300.5	31.5	33.4	-0.73	1,130.8	103.2	293.5	271.3	22.19	13.229 CC, ES		
9,200.0	7,582.0	8,353.3	7,300.7	32.2	34.1	-4.73	1,150.1	82.7	295.3	272.2	23.12	12.776		
9,300.0	7,582.0	8,427.3	7,300.9	33.8	35.7	-14.66	1,202.4	30.4	311.4	283.6	27.80	11.202		
9,400.0	7,582.0	8,494.7	7,300.8	35.5	37.3	-22.89	1,250.8	-16.6	341.4	307.6	33.83	10.091		
9,500.0	7,582.0	8,564.9	7,301.1	37.1	38.9	-30.63	1,300.5	-66.2	382.3	341.7	40.62	9.412		
9,600.0	7,582.0	8,642.7	7,301.4	38.8	40.7	-37.93	1,355.9	-120.7	430.6	382.9	47.71	9.026		
9,700.0	7,582.0	8,713.1	7,301.7	40.5	42.4	-43.53	1,406.0	-170.3	484.5	430.8	53.74	9.016 SF		
9,800.0	7,582.0	8,793.2	7,302.0	42.3	44.2	-48.71	1,464.4	-225.1	540.6	480.9	59.70	9.055		
9,900.0	7,582.0	8,865.4	7,302.2	44.0	46.0	-52.62	1,517.1	-274.4	599.2	534.5	64.73	9.256		
10,000.0	7,582.0	8,937.3	7,302.4	45.8	47.7	-55.94	1,569.6	-323.6	659.8	590.4	69.39	9.508		
10,100.0	7,582.0	9,009.1	7,302.7	47.5	49.4	-58.77	1,621.8	-372.8	721.9	648.2	73.76	9.788		
10,200.0	7,582.0	9,080.6	7,302.9	49.3	51.0	-61.21	1,673.8	-421.9	785.3	707.4	77.88	10.083		

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 511-1510H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.70°



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