

Fifth Creek Energy Company, LLC

Well Name: **Critter Creek 562-1527H**

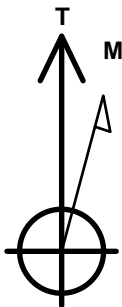
Surface Location: Critter Creek Pad 15-11N-63W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5228.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1578365.52	3299655.17	40.915953	-104.415800	

Original Well Elev WELL @ 5241.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 279' FSL & 1740' FEL, SEC.15	1.0	0.0	0.0	Point
BHL 300' FSL & 2220' FEL, SEC.27	7582.0	-10527.7	-384.1	Point
LP 300' FNL & 2270' FEL, SEC.22	7582.0	-581.8	-526.8	Point



Azimuths to True North
Magnetic North: 7.94°

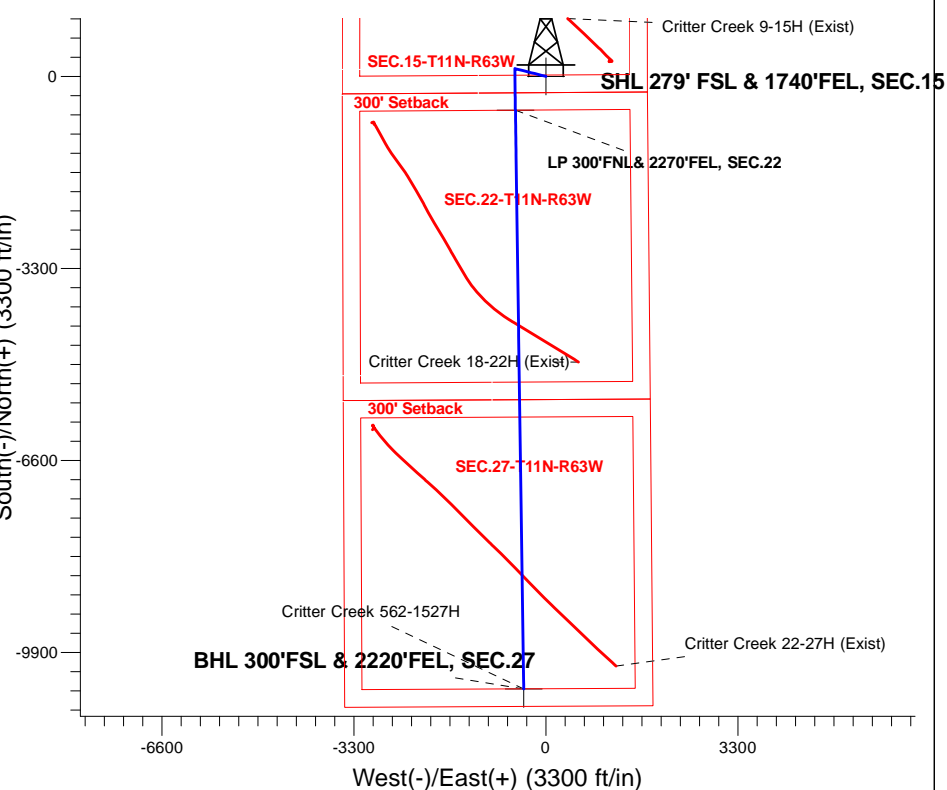
Magnetic Field
Strength: 52830.9snT
Dip Angle: 67.32°
Date: 2/21/2017
Model: IGRF2010

Critter Creek Pad 15-11N-63W
Critter Creek 562-1527H
Plan 1 (Feb 14, 2017)
15:17, February 21 2017

ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP - Start Build 1.50
5831.5	5865.0	Start Drop -2.00
6865.8	6900.4	Start Build 8.00
7582.0	8026.1	Start DLS 1.00 TFO -90.00
7582.0	8026.8	Start 9946.2 hold at 8026.8 MD
7582.0	17972.9	TD at 17972.9

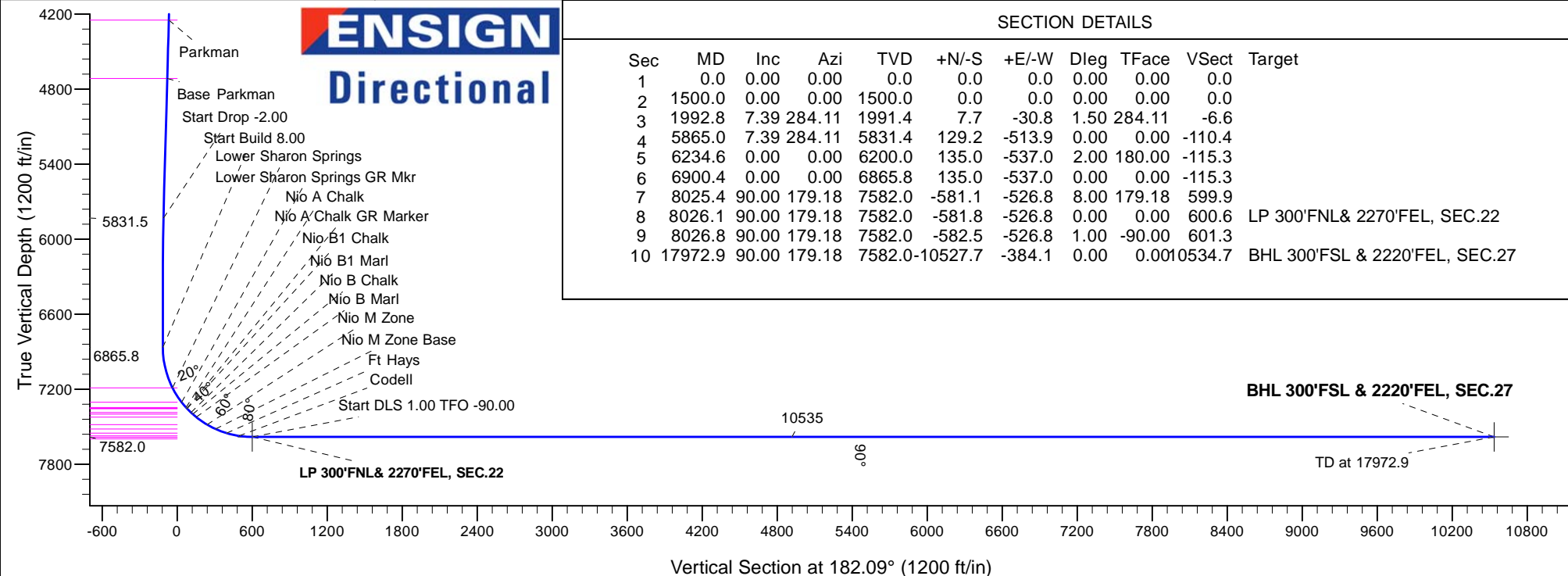
South(-)/North(+) (3300 ft/in)



ENSIGN
Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1992.8	7.39	284.11	1991.4	7.7	-30.8	1.50	284.11	-6.6	
4	5865.0	7.39	284.11	5831.4	129.2	-513.9	0.00	0.00	-110.4	
5	6234.6	0.00	0.00	6200.0	135.0	-537.0	2.00	180.00	-115.3	
6	6900.4	0.00	0.00	6865.8	135.0	-537.0	0.00	0.00	-115.3	
7	8025.4	90.00	179.18	7582.0	-581.1	-526.8	8.00	179.18	599.9	
8	8026.1	90.00	179.18	7582.0	-581.8	-526.8	0.00	0.00	600.6	LP 300' FNL & 2270' FEL, SEC.22
9	8026.8	90.00	179.18	7582.0	-582.5	-526.8	1.00	-90.00	601.3	
10	17972.9	90.00	179.18	7582.0-10527.7	-384.1	0.00	0.00	10534.7		BHL 300' FSL & 2220' FEL, SEC.27





Fifth Creek Energy Company, LLC

Sec.15-T11N-R63W

Critter Creek Pad 15-11N-63W

Critter Creek 562-1527H

Wellbore #1

Plan: Plan 1 (Feb 14, 2017)

Standard Planning Report

21 February, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 562-1527H	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 562-1527H					
Well Position	+N/-S	-5.8 ft	Northing:	1,578,365.51 usft	Latitude:	40.915953
	+E/-W	-825.3 ft	Easting:	3,299,655.18 usft	Longitude:	-104.415800
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,239.0 ft	Ground Level:	5,228.0 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)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	182.09

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,992.8	7.39	284.11	1,991.4	7.7	-30.8	1.50	1.50	0.00	284.11	
5,865.0	7.39	284.11	5,831.4	129.2	-513.9	0.00	0.00	0.00	0.00	
6,234.6	0.00	0.00	6,200.0	135.0	-537.0	2.00	-2.00	0.00	180.00	
6,900.4	0.00	0.00	6,865.8	135.0	-537.0	0.00	0.00	0.00	0.00	
8,025.4	90.00	179.18	7,582.0	-581.1	-526.8	8.00	8.00	0.00	179.18	
8,026.1	90.00	179.18	7,582.0	-581.8	-526.8	0.00	0.00	0.00	0.00	LP 300'FNL & 2270'FE
8,026.8	90.00	179.18	7,582.0	-582.5	-526.8	1.00	0.00	-1.00	-90.00	
17,972.9	90.00	179.18	7,582.0	-10,527.7	-384.1	0.00	0.00	0.00	0.00	BHL 300'FSL & 2220'FSL

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Well:	Critter Creek 562-1527H	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
KOP - Start Build 1.50									
1,600.0	1.50	284.11	1,600.0	0.3	-1.3	-0.3	1.50	1.50	0.00
1,700.0	3.00	284.11	1,699.9	1.3	-5.1	-1.1	1.50	1.50	0.00
1,800.0	4.50	284.11	1,799.7	2.9	-11.4	-2.5	1.50	1.50	0.00
1,900.0	6.00	284.11	1,899.3	5.1	-20.3	-4.4	1.50	1.50	0.00
1,992.8	7.39	284.11	1,991.4	7.7	-30.8	-6.6	1.50	1.50	0.00
2,000.0	7.39	284.11	1,998.6	8.0	-31.7	-6.8	0.00	0.00	0.00
2,100.0	7.39	284.11	2,097.7	11.1	-44.2	-9.5	0.00	0.00	0.00
2,200.0	7.39	284.11	2,196.9	14.2	-56.6	-12.2	0.00	0.00	0.00
2,300.0	7.39	284.11	2,296.1	17.4	-69.1	-14.8	0.00	0.00	0.00
2,400.0	7.39	284.11	2,395.3	20.5	-81.6	-17.5	0.00	0.00	0.00
2,500.0	7.39	284.11	2,494.4	23.6	-94.1	-20.2	0.00	0.00	0.00
2,600.0	7.39	284.11	2,593.6	26.8	-106.5	-22.9	0.00	0.00	0.00
2,700.0	7.39	284.11	2,692.8	29.9	-119.0	-25.6	0.00	0.00	0.00
2,800.0	7.39	284.11	2,791.9	33.1	-131.5	-28.2	0.00	0.00	0.00
2,900.0	7.39	284.11	2,891.1	36.2	-144.0	-30.9	0.00	0.00	0.00
3,000.0	7.39	284.11	2,990.3	39.3	-156.5	-33.6	0.00	0.00	0.00
3,100.0	7.39	284.11	3,089.4	42.5	-168.9	-36.3	0.00	0.00	0.00
3,200.0	7.39	284.11	3,188.6	45.6	-181.4	-39.0	0.00	0.00	0.00
3,300.0	7.39	284.11	3,287.8	48.7	-193.9	-41.6	0.00	0.00	0.00
3,400.0	7.39	284.11	3,386.9	51.9	-206.4	-44.3	0.00	0.00	0.00
3,500.0	7.39	284.11	3,486.1	55.0	-218.8	-47.0	0.00	0.00	0.00
3,600.0	7.39	284.11	3,585.3	58.2	-231.3	-49.7	0.00	0.00	0.00
3,700.0	7.39	284.11	3,684.4	61.3	-243.8	-52.4	0.00	0.00	0.00
3,800.0	7.39	284.11	3,783.6	64.4	-256.3	-55.0	0.00	0.00	0.00
3,900.0	7.39	284.11	3,882.8	67.6	-268.7	-57.7	0.00	0.00	0.00
4,000.0	7.39	284.11	3,982.0	70.7	-281.2	-60.4	0.00	0.00	0.00
4,100.0	7.39	284.11	4,081.1	73.8	-293.7	-63.1	0.00	0.00	0.00
4,200.0	7.39	284.11	4,180.3	77.0	-306.2	-65.8	0.00	0.00	0.00
4,268.3	7.39	284.11	4,248.0	79.1	-314.7	-67.6	0.00	0.00	0.00
Parkman									
4,300.0	7.39	284.11	4,279.5	80.1	-318.7	-68.4	0.00	0.00	0.00
4,400.0	7.39	284.11	4,378.6	83.2	-331.1	-71.1	0.00	0.00	0.00
4,500.0	7.39	284.11	4,477.8	86.4	-343.6	-73.8	0.00	0.00	0.00
4,600.0	7.39	284.11	4,577.0	89.5	-356.1	-76.5	0.00	0.00	0.00
4,700.0	7.39	284.11	4,676.1	92.7	-368.6	-79.2	0.00	0.00	0.00
4,739.2	7.39	284.11	4,715.0	93.9	-373.4	-80.2	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	7.39	284.11	4,775.3	95.8	-381.0	-81.8	0.00	0.00	0.00
4,900.0	7.39	284.11	4,874.5	98.9	-393.5	-84.5	0.00	0.00	0.00
5,000.0	7.39	284.11	4,973.6	102.1	-406.0	-87.2	0.00	0.00	0.00
5,100.0	7.39	284.11	5,072.8	105.2	-418.5	-89.9	0.00	0.00	0.00
5,200.0	7.39	284.11	5,172.0	108.3	-430.9	-92.6	0.00	0.00	0.00
5,300.0	7.39	284.11	5,271.2	111.5	-443.4	-95.2	0.00	0.00	0.00
5,400.0	7.39	284.11	5,370.3	114.6	-455.9	-97.9	0.00	0.00	0.00
5,500.0	7.39	284.11	5,469.5	117.7	-468.4	-100.6	0.00	0.00	0.00
5,600.0	7.39	284.11	5,568.7	120.9	-480.9	-103.3	0.00	0.00	0.00
5,700.0	7.39	284.11	5,667.8	124.0	-493.3	-106.0	0.00	0.00	0.00
5,800.0	7.39	284.11	5,767.0	127.2	-505.8	-108.6	0.00	0.00	0.00
5,865.0	7.39	284.11	5,831.5	129.2	-513.9	-110.4	0.00	0.00	0.00
Start Drop -2.00									
5,900.0	6.69	284.11	5,866.2	130.2	-518.1	-111.3	2.00	-2.00	0.00
6,000.0	4.69	284.11	5,965.7	132.7	-527.7	-113.3	2.00	-2.00	0.00
6,100.0	2.69	284.11	6,065.5	134.2	-533.9	-114.7	2.00	-2.00	0.00
6,200.0	0.69	284.11	6,165.4	134.9	-536.8	-115.3	2.00	-2.00	0.00
6,234.6	0.00	0.00	6,200.0	135.0	-537.0	-115.3	2.00	-2.00	0.00
6,300.0	0.00	0.00	6,265.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,365.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,465.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,565.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,665.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,765.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,865.4	135.0	-537.0	-115.3	0.00	0.00	0.00
6,900.4	0.00	0.00	6,865.8	135.0	-537.0	-115.3	0.00	0.00	0.00
Start Build 8.00									
7,000.0	7.97	179.18	6,965.1	128.1	-536.9	-108.4	8.00	8.00	0.00
7,100.0	15.97	179.18	7,062.9	107.4	-536.6	-87.7	8.00	8.00	0.00
7,200.0	23.97	179.18	7,156.8	73.2	-536.1	-53.6	8.00	8.00	0.00
7,236.8	26.91	179.18	7,190.0	57.4	-535.9	-37.9	8.00	8.00	0.00
Lower Sharon Springs									
7,300.0	31.97	179.18	7,245.0	26.4	-535.5	-6.8	8.00	8.00	0.00
7,373.2	37.82	179.18	7,305.0	-15.5	-534.9	34.9	8.00	8.00	0.00
Lower Sharon Springs GR Mkr									
7,400.0	39.97	179.18	7,325.9	-32.3	-534.6	51.8	8.00	8.00	0.00
7,428.0	42.21	179.18	7,347.0	-50.7	-534.4	70.2	8.00	8.00	0.00
Nio A Chalk									
7,437.5	42.97	179.18	7,354.0	-57.2	-534.3	76.6	8.00	8.00	0.00
Nio A Chalk GR Marker									
7,440.3	43.19	179.18	7,356.0	-59.0	-534.2	78.5	8.00	8.00	0.00
Nio B1 Chalk									
7,484.1	46.70	179.18	7,387.0	-90.0	-533.8	109.4	8.00	8.00	0.00
Nio B1 Marl									
7,500.0	47.97	179.18	7,397.8	-101.7	-533.6	121.1	8.00	8.00	0.00
7,503.3	48.23	179.18	7,400.0	-104.1	-533.6	123.5	8.00	8.00	0.00
Nio B Chalk									
7,540.4	51.20	179.18	7,424.0	-132.4	-533.2	151.8	8.00	8.00	0.00
Nio B Marl									
7,600.0	55.97	179.18	7,459.3	-180.4	-532.5	199.7	8.00	8.00	0.00
7,646.3	59.67	179.18	7,484.0	-219.5	-532.0	238.8	8.00	8.00	0.00

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Nio M Zone									
7,700.0	63.97	179.18	7,509.4	-266.9	-531.3	286.1	8.00	8.00	0.00
7,722.7	65.79	179.18	7,519.0	-287.4	-531.0	306.6	8.00	8.00	0.00
Nio M Zone Base									
7,800.0	71.97	179.18	7,546.8	-359.5	-530.0	378.6	8.00	8.00	0.00
7,817.3	73.36	179.18	7,552.0	-376.0	-529.7	395.1	8.00	8.00	0.00
Ft Hays									
7,900.0	79.97	179.18	7,571.1	-456.4	-528.6	475.4	8.00	8.00	0.00
7,918.2	81.43	179.18	7,574.0	-474.4	-528.3	493.3	8.00	8.00	0.00
Codell									
8,000.0	87.97	179.18	7,581.6	-555.8	-527.2	574.6	8.00	8.00	0.00
8,025.4	90.00	179.18	7,582.0	-581.1	-526.8	599.9	8.00	8.00	0.00
8,026.1	90.00	179.18	7,582.0	-581.9	-526.8	600.7	0.00	0.00	0.00
Start DLS 1.00 TFO -90.00									
8,026.8	90.00	179.18	7,582.0	-582.6	-526.8	601.4	1.00	0.00	-1.00
Start 9946.2 hold at 8026.8 MD									
8,100.0	90.00	179.18	7,582.0	-655.7	-525.7	674.5	0.00	0.00	0.00
8,200.0	90.00	179.18	7,582.0	-755.7	-524.3	774.3	0.00	0.00	0.00
8,300.0	90.00	179.18	7,582.0	-855.7	-522.9	874.2	0.00	0.00	0.00
8,400.0	90.00	179.18	7,582.0	-955.7	-521.4	974.1	0.00	0.00	0.00
8,500.0	90.00	179.18	7,582.0	-1,055.7	-520.0	1,074.0	0.00	0.00	0.00
8,600.0	90.00	179.18	7,582.0	-1,155.7	-518.6	1,173.8	0.00	0.00	0.00
8,700.0	90.00	179.18	7,582.0	-1,255.7	-517.1	1,273.7	0.00	0.00	0.00
8,800.0	90.00	179.18	7,582.0	-1,355.7	-515.7	1,373.6	0.00	0.00	0.00
8,900.0	90.00	179.18	7,582.0	-1,455.7	-514.3	1,473.4	0.00	0.00	0.00
9,000.0	90.00	179.18	7,582.0	-1,555.7	-512.8	1,573.3	0.00	0.00	0.00
9,100.0	90.00	179.18	7,582.0	-1,655.6	-511.4	1,673.2	0.00	0.00	0.00
9,200.0	90.00	179.18	7,582.0	-1,755.6	-510.0	1,773.1	0.00	0.00	0.00
9,300.0	90.00	179.18	7,582.0	-1,855.6	-508.5	1,872.9	0.00	0.00	0.00
9,400.0	90.00	179.18	7,582.0	-1,955.6	-507.1	1,972.8	0.00	0.00	0.00
9,500.0	90.00	179.18	7,582.0	-2,055.6	-505.6	2,072.7	0.00	0.00	0.00
9,600.0	90.00	179.18	7,582.0	-2,155.6	-504.2	2,172.5	0.00	0.00	0.00
9,700.0	90.00	179.18	7,582.0	-2,255.6	-502.8	2,272.4	0.00	0.00	0.00
9,800.0	90.00	179.18	7,582.0	-2,355.6	-501.3	2,372.3	0.00	0.00	0.00
9,900.0	90.00	179.18	7,582.0	-2,455.6	-499.9	2,472.2	0.00	0.00	0.00
10,000.0	90.00	179.18	7,582.0	-2,555.6	-498.5	2,572.0	0.00	0.00	0.00
10,100.0	90.00	179.18	7,582.0	-2,655.5	-497.0	2,671.9	0.00	0.00	0.00
10,200.0	90.00	179.18	7,582.0	-2,755.5	-495.6	2,771.8	0.00	0.00	0.00
10,300.0	90.00	179.18	7,582.0	-2,855.5	-494.2	2,871.6	0.00	0.00	0.00
10,400.0	90.00	179.18	7,582.0	-2,955.5	-492.7	2,971.5	0.00	0.00	0.00
10,500.0	90.00	179.18	7,582.0	-3,055.5	-491.3	3,071.4	0.00	0.00	0.00
10,600.0	90.00	179.18	7,582.0	-3,155.5	-489.9	3,171.3	0.00	0.00	0.00
10,700.0	90.00	179.18	7,582.0	-3,255.5	-488.4	3,271.1	0.00	0.00	0.00
10,800.0	90.00	179.18	7,582.0	-3,355.5	-487.0	3,371.0	0.00	0.00	0.00
10,900.0	90.00	179.18	7,582.0	-3,455.5	-485.6	3,470.9	0.00	0.00	0.00
11,000.0	90.00	179.18	7,582.0	-3,555.4	-484.1	3,570.7	0.00	0.00	0.00
11,100.0	90.00	179.18	7,582.0	-3,655.4	-482.7	3,670.6	0.00	0.00	0.00
11,200.0	90.00	179.18	7,582.0	-3,755.4	-481.3	3,770.5	0.00	0.00	0.00
11,300.0	90.00	179.18	7,582.0	-3,855.4	-479.8	3,870.3	0.00	0.00	0.00
11,400.0	90.00	179.18	7,582.0	-3,955.4	-478.4	3,970.2	0.00	0.00	0.00
11,500.0	90.00	179.18	7,582.0	-4,055.4	-476.9	4,070.1	0.00	0.00	0.00
11,600.0	90.00	179.18	7,582.0	-4,155.4	-475.5	4,170.0	0.00	0.00	0.00
11,700.0	90.00	179.18	7,582.0	-4,255.4	-474.1	4,269.8	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 562-1527H	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)
11,800.0	90.00	179.18	7,582.0	-4,355.4	-472.6	4,369.7	0.00	0.00	0.00
11,900.0	90.00	179.18	7,582.0	-4,455.4	-471.2	4,469.6	0.00	0.00	0.00
12,000.0	90.00	179.18	7,582.0	-4,555.3	-469.8	4,569.4	0.00	0.00	0.00
12,100.0	90.00	179.18	7,582.0	-4,655.3	-468.3	4,669.3	0.00	0.00	0.00
12,200.0	90.00	179.18	7,582.0	-4,755.3	-466.9	4,769.2	0.00	0.00	0.00
12,300.0	90.00	179.18	7,582.0	-4,855.3	-465.5	4,869.1	0.00	0.00	0.00
12,400.0	90.00	179.18	7,582.0	-4,955.3	-464.0	4,968.9	0.00	0.00	0.00
12,500.0	90.00	179.18	7,582.0	-5,055.3	-462.6	5,068.8	0.00	0.00	0.00
12,600.0	90.00	179.18	7,582.0	-5,155.3	-461.2	5,168.7	0.00	0.00	0.00
12,700.0	90.00	179.18	7,582.0	-5,255.3	-459.7	5,268.5	0.00	0.00	0.00
12,800.0	90.00	179.18	7,582.0	-5,355.3	-458.3	5,368.4	0.00	0.00	0.00
12,900.0	90.00	179.18	7,582.0	-5,455.3	-456.9	5,468.3	0.00	0.00	0.00
13,000.0	90.00	179.18	7,582.0	-5,555.2	-455.4	5,568.2	0.00	0.00	0.00
13,100.0	90.00	179.18	7,582.0	-5,655.2	-454.0	5,668.0	0.00	0.00	0.00
13,200.0	90.00	179.18	7,582.0	-5,755.2	-452.6	5,767.9	0.00	0.00	0.00
13,300.0	90.00	179.18	7,582.0	-5,855.2	-451.1	5,867.8	0.00	0.00	0.00
13,400.0	90.00	179.18	7,582.0	-5,955.2	-449.7	5,967.6	0.00	0.00	0.00
13,500.0	90.00	179.18	7,582.0	-6,055.2	-448.2	6,067.5	0.00	0.00	0.00
13,600.0	90.00	179.18	7,582.0	-6,155.2	-446.8	6,167.4	0.00	0.00	0.00
13,700.0	90.00	179.18	7,582.0	-6,255.2	-445.4	6,267.2	0.00	0.00	0.00
13,800.0	90.00	179.18	7,582.0	-6,355.2	-443.9	6,367.1	0.00	0.00	0.00
13,900.0	90.00	179.18	7,582.0	-6,455.1	-442.5	6,467.0	0.00	0.00	0.00
14,000.0	90.00	179.18	7,582.0	-6,555.1	-441.1	6,566.9	0.00	0.00	0.00
14,100.0	90.00	179.18	7,582.0	-6,655.1	-439.6	6,666.7	0.00	0.00	0.00
14,200.0	90.00	179.18	7,582.0	-6,755.1	-438.2	6,766.6	0.00	0.00	0.00
14,300.0	90.00	179.18	7,582.0	-6,855.1	-436.8	6,866.5	0.00	0.00	0.00
14,400.0	90.00	179.18	7,582.0	-6,955.1	-435.3	6,966.3	0.00	0.00	0.00
14,500.0	90.00	179.18	7,582.0	-7,055.1	-433.9	7,066.2	0.00	0.00	0.00
14,600.0	90.00	179.18	7,582.0	-7,155.1	-432.5	7,166.1	0.00	0.00	0.00
14,700.0	90.00	179.18	7,582.0	-7,255.1	-431.0	7,266.0	0.00	0.00	0.00
14,800.0	90.00	179.18	7,582.0	-7,355.1	-429.6	7,365.8	0.00	0.00	0.00
14,900.0	90.00	179.18	7,582.0	-7,455.0	-428.2	7,465.7	0.00	0.00	0.00
15,000.0	90.00	179.18	7,582.0	-7,555.0	-426.7	7,565.6	0.00	0.00	0.00
15,100.0	90.00	179.18	7,582.0	-7,655.0	-425.3	7,665.4	0.00	0.00	0.00
15,200.0	90.00	179.18	7,582.0	-7,755.0	-423.9	7,765.3	0.00	0.00	0.00
15,300.0	90.00	179.18	7,582.0	-7,855.0	-422.4	7,865.2	0.00	0.00	0.00
15,400.0	90.00	179.18	7,582.0	-7,955.0	-421.0	7,965.1	0.00	0.00	0.00
15,500.0	90.00	179.18	7,582.0	-8,055.0	-419.5	8,064.9	0.00	0.00	0.00
15,600.0	90.00	179.18	7,582.0	-8,155.0	-418.1	8,164.8	0.00	0.00	0.00
15,700.0	90.00	179.18	7,582.0	-8,255.0	-416.7	8,264.7	0.00	0.00	0.00
15,800.0	90.00	179.18	7,582.0	-8,355.0	-415.2	8,364.5	0.00	0.00	0.00
15,900.0	90.00	179.18	7,582.0	-8,454.9	-413.8	8,464.4	0.00	0.00	0.00
16,000.0	90.00	179.18	7,582.0	-8,554.9	-412.4	8,564.3	0.00	0.00	0.00
16,100.0	90.00	179.18	7,582.0	-8,654.9	-410.9	8,664.2	0.00	0.00	0.00
16,200.0	90.00	179.18	7,582.0	-8,754.9	-409.5	8,764.0	0.00	0.00	0.00
16,300.0	90.00	179.18	7,582.0	-8,854.9	-408.1	8,863.9	0.00	0.00	0.00
16,400.0	90.00	179.18	7,582.0	-8,954.9	-406.6	8,963.8	0.00	0.00	0.00
16,500.0	90.00	179.18	7,582.0	-9,054.9	-405.2	9,063.6	0.00	0.00	0.00
16,600.0	90.00	179.18	7,582.0	-9,154.9	-403.8	9,163.5	0.00	0.00	0.00
16,700.0	90.00	179.18	7,582.0	-9,254.9	-402.3	9,263.4	0.00	0.00	0.00
16,800.0	90.00	179.18	7,582.0	-9,354.9	-400.9	9,363.2	0.00	0.00	0.00
16,900.0	90.00	179.18	7,582.0	-9,454.8	-399.5	9,463.1	0.00	0.00	0.00
17,000.0	90.00	179.18	7,582.0	-9,554.8	-398.0	9,563.0	0.00	0.00	0.00
17,100.0	90.00	179.18	7,582.0	-9,654.8	-396.6	9,662.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 562-1527H	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)	
17,200.0	90.00	179.18	7,582.0	-9,754.8	-395.2	9,762.7	0.00	0.00	0.00	
17,300.0	90.00	179.18	7,582.0	-9,854.8	-393.7	9,862.6	0.00	0.00	0.00	
17,400.0	90.00	179.18	7,582.0	-9,954.8	-392.3	9,962.5	0.00	0.00	0.00	
17,500.0	90.00	179.18	7,582.0	-10,054.8	-390.8	10,062.3	0.00	0.00	0.00	
17,600.0	90.00	179.18	7,582.0	-10,154.8	-389.4	10,162.2	0.00	0.00	0.00	
17,700.0	90.00	179.18	7,582.0	-10,254.8	-388.0	10,262.1	0.00	0.00	0.00	
17,800.0	90.00	179.18	7,582.0	-10,354.7	-386.5	10,362.0	0.00	0.00	0.00	
17,900.0	90.00	179.18	7,582.0	-10,454.7	-385.1	10,461.8	0.00	0.00	0.00	
17,972.9	90.00	179.18	7,582.0	-10,527.6	-384.1	10,534.6	0.00	0.00	0.00	
TD at 17972.9										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		Longitude
SHL 279' FSL & 1740'FE - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,578,365.54	3,299,655.18	40.915953		-104.415800
LP 300'FNL & 2270'FEL, - plan hits target center - Point	0.00	0.00	7,582.0	-581.8	-526.8	1,577,777.27	3,299,135.52	40.914356		-104.417706
BHL 300'FSL & 2220'FE - plan hits target center - Point	0.00	0.00	7,582.0	-10,527.7	-384.1	1,567,833.71	3,299,399.85	40.887058		-104.417189

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 562-1527H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Project:	Sec.15-T11N-R63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site:	Critter Creek Pad 15-11N-63W	North Reference:	True
Well:	Critter Creek 562-1527H	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 (°)
4,268.3	4,248.0	Parkman		0.00	
4,739.2	4,715.0	Base Parkman		0.00	
7,236.8	7,190.0	Lower Sharon Springs		0.00	
7,373.2	7,305.0	Lower Sharon Springs GR Mkr		0.00	
7,428.0	7,347.0	Nio A Chalk		0.00	
7,437.5	7,354.0	Nio A Chalk GR Marker		0.00	
7,440.3	7,356.0	Nio B1 Chalk		0.00	
7,484.1	7,387.0	Nio B1 Marl		0.00	
7,503.3	7,400.0	Nio B Chalk		0.00	
7,540.4	7,424.0	Nio B Marl		0.00	
7,646.3	7,484.0	Nio M Zone		0.00	
7,722.7	7,519.0	Nio M Zone Base		0.00	
7,817.3	7,552.0	Ft Hays		0.00	
7,918.2	7,574.0	Codell		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 1.50	
5,865.0	5,831.4	7.7	-30.8	Start Drop -2.00	
6,900.4	6,865.8	129.2	-513.9	Start Build 8.00	
8,026.1	7,582.0	135.0	-537.0	Start DLS 1.00 TFO -90.00	
8,026.8	7,582.0	135.0	-537.0	Start 9946.2 hold at 8026.8 MD	
17,972.9	7,582.0	-581.1	-526.8	TD at 17972.9	



Fifth Creek Energy Company, LLC

**Sec.15-T11N-R63W
Crittter Creek Pad 15-11N-63W
Crittter Creek 562-1527H**

**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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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	17,972.9	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,	1,500.0	1,499.0	75.2	68.7	11.537	CC, ES
Critter Creek 230-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,700.0	1,698.9	80.3	72.9	10.876	SF
Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,498.0	724.7	718.2	111.257	CC, ES
Critter Creek 231-1510H - Wellbore #1 - Plan 1 (Feb 14,	2,300.0	2,294.1	793.9	783.9	79.681	SF
Critter Creek 232-1510H - Wellbore #1 - Plan 1 (Feb 13,						Out of range
Critter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,499.0	50.6	44.1	7.762	CC, ES
Critter Creek 278-1527H - Wellbore #1 - Plan 1 (Feb 14,	17,972.9	17,846.8	585.5	187.6	1.472	Level 3, SF
Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,498.0	700.1	693.6	107.481	CC, ES
Critter Creek 279-1527H - Wellbore #1 - Plan 1 (Feb 14,	2,500.0	2,492.4	794.4	783.5	73.189	SF
Critter Creek 280-1527H - Wellbore #1 - Plan 1 (Feb 14,2	1,500.0	1,498.0	799.9	793.4	122.799	CC, ES, SF
Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,498.0	775.6	769.0	119.064	CC, ES
Critter Creek 510-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,900.0	1,897.3	795.8	787.6	96.764	SF
Critter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,498.0	125.2	118.7	19.222	CC, ES
Critter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,800.0	1,797.1	136.8	129.1	17.607	SF
Critter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,500.0	25.4	18.9	3.901	CC, ES
Critter Creek 512-1510H - Wellbore #1 - Plan 1 (Feb 14,	7,719.4	7,760.1	103.8	68.0	2.902	SF
Critter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,499.0	100.6	94.1	15.441	CC, ES
Critter Creek 563-1527H - Wellbore #1 - Plan 1 (Feb 14,	17,972.9	17,945.3	759.6	351.5	1.862	SF
Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	1,500.0	1,498.0	750.1	743.6	115.161	CC, ES
Critter Creek 564-1527H - Wellbore #1 - Plan 1 (Feb 14,	2,100.0	2,095.7	794.3	785.2	87.461	SF
Existing Wells Sec.15 (Fifth Creek)						
Critter Creek 18-22H (Exist) - Wellbore #1 - Wellbore #1	11,700.0	11,372.0	291.6	228.2	4.599	ES
Critter Creek 18-22H (Exist) - Wellbore #1 - Wellbore #1	11,711.5	11,377.0	291.4	228.2	4.612	CC
Critter Creek 18-22H (Exist) - Wellbore #1 - Wellbore #1	12,100.0	11,600.0	435.5	330.1	4.131	SF
Critter Creek 22-27H (Exist) - Wellbore #1 - Wellbore #1	16,016.3	10,701.7	318.5	229.1	3.562	CC
Critter Creek 22-27H (Exist) - Wellbore #1 - Wellbore #1	16,100.0	10,765.0	323.2	228.5	3.413	ES
Critter Creek 22-27H (Exist) - Wellbore #1 - Wellbore #1	16,500.0	11,048.4	459.9	294.7	2.783	SF
Critter Creek 9-15H (Exist) - Wellbore #1 - Wellbore #1						Out of range

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
0.0	0.0	0.0	0.0	0.0	0.0	89.99	0.0	75.2	75.2					
100.0	100.0	99.0	99.0	0.1	0.1	89.99	0.0	75.2	75.2	75.0	0.22	336.144		
200.0	200.0	199.0	199.0	0.3	0.3	89.99	0.0	75.2	75.2	74.5	0.67	111.861		
300.0	300.0	299.0	299.0	0.6	0.6	89.99	0.0	75.2	75.2	74.1	1.12	67.027		
400.0	400.0	399.0	399.0	0.8	0.8	89.99	0.0	75.2	75.2	73.6	1.57	47.849		
500.0	500.0	499.0	499.0	1.0	1.0	89.99	0.0	75.2	75.2	73.2	2.02	37.204		
600.0	600.0	599.0	599.0	1.2	1.2	89.99	0.0	75.2	75.2	72.7	2.47	30.434		
700.0	700.0	699.0	699.0	1.5	1.5	89.99	0.0	75.2	75.2	72.3	2.92	25.748		
800.0	800.0	799.0	799.0	1.7	1.7	89.99	0.0	75.2	75.2	71.8	3.37	22.313		
900.0	900.0	899.0	899.0	1.9	1.9	89.99	0.0	75.2	75.2	71.4	3.82	19.686		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.99	0.0	75.2	75.2	70.9	4.27	17.613		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.99	0.0	75.2	75.2	70.5	4.72	15.935		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.99	0.0	75.2	75.2	70.0	5.17	14.548		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.99	0.0	75.2	75.2	69.6	5.62	13.384		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.99	0.0	75.2	75.2	69.1	6.07	12.392		
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	89.99	0.0	75.2	75.2	68.7	6.52	11.537 CC, ES		
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	166.11	0.0	75.2	76.4	69.5	6.95	10.994		
1,700.0	1,699.9	1,698.9	1,698.9	3.7	3.7	166.77	0.0	75.2	80.3	72.9	7.38	10.876 SF		
1,800.0	1,799.7	1,798.7	1,798.7	3.9	3.9	167.74	0.0	75.2	86.6	78.8	7.80	11.102		
1,900.0	1,899.3	1,898.3	1,898.3	4.1	4.2	168.88	0.0	75.2	95.6	87.4	8.23	11.623		
1,992.8	1,991.4	1,990.4	1,990.4	4.3	4.4	169.98	0.0	75.2	106.2	97.6	8.61	12.334		
2,000.0	1,998.6	1,997.6	1,997.6	4.4	4.4	170.06	0.0	75.2	107.2	98.5	8.65	12.395		
2,100.0	2,097.7	2,096.7	2,096.7	4.6	4.6	171.12	0.0	75.2	119.9	110.8	9.08	13.199		
2,200.0	2,196.9	2,195.9	2,195.9	4.9	4.8	171.98	0.0	75.2	132.6	123.1	9.52	13.928		
2,300.0	2,296.1	2,295.1	2,295.1	5.2	5.0	172.69	0.0	75.2	145.3	135.4	9.96	14.592		
2,400.0	2,395.3	2,394.0	2,394.0	5.4	5.2	173.58	-0.8	75.1	158.2	147.8	10.37	15.246		
2,500.0	2,494.4	2,492.8	2,492.8	5.7	5.4	174.93	-3.4	75.0	171.2	160.5	10.76	15.906		
2,600.0	2,593.6	2,591.4	2,591.3	6.0	5.6	176.64	-7.8	74.8	184.6	173.4	11.16	16.542		
2,700.0	2,692.8	2,689.7	2,689.4	6.3	5.8	178.63	-13.9	74.4	198.4	186.8	11.56	17.163		
2,800.0	2,791.9	2,787.6	2,787.0	6.6	5.9	-179.18	-21.7	74.0	212.7	200.8	11.97	17.775		
2,900.0	2,891.1	2,885.2	2,884.1	6.9	6.1	-176.84	-31.3	73.5	227.8	215.4	12.39	18.388		
3,000.0	2,990.3	2,982.3	2,980.5	7.2	6.3	-174.40	-42.5	72.9	243.7	230.9	12.82	19.005		
3,100.0	3,089.4	3,078.9	3,076.2	7.5	6.5	-171.91	-55.4	72.2	260.6	247.3	13.27	19.631		
3,200.0	3,188.6	3,174.9	3,171.1	7.8	6.8	-169.40	-69.9	71.5	278.5	264.7	13.74	20.270		
3,300.0	3,287.8	3,270.2	3,265.1	8.1	7.0	-166.91	-85.9	70.6	297.6	283.4	14.22	20.924		
3,400.0	3,386.9	3,364.9	3,358.2	8.4	7.3	-164.45	-103.4	69.7	318.0	303.2	14.72	21.595		
3,500.0	3,486.1	3,458.9	3,450.2	8.7	7.5	-162.06	-122.4	68.7	339.7	324.4	15.24	22.284		
3,600.0	3,585.3	3,552.1	3,541.1	9.1	7.8	-159.74	-142.8	67.6	362.8	347.0	15.78	22.994		
3,700.0	3,684.4	3,646.8	3,633.3	9.4	8.1	-157.49	-164.8	66.4	387.1	370.8	16.33	23.704		
3,800.0	3,783.6	3,742.7	3,726.5	9.7	8.5	-155.48	-187.1	65.3	412.0	395.1	16.90	24.386		
3,900.0	3,882.8	3,838.6	3,819.7	10.0	8.8	-153.69	-209.4	64.1	437.4	419.9	17.47	25.040		
4,000.0	3,982.0	3,934.4	3,913.0	10.3	9.2	-152.09	-231.7	62.9	463.1	445.1	18.04	25.666		
4,100.0	4,081.1	4,030.3	4,006.2	10.7	9.6	-150.67	-254.0	61.7	489.1	470.5	18.62	26.265		
4,200.0	4,180.3	4,126.1	4,099.4	11.0	10.0	-149.38	-276.3	60.5	515.4	496.2	19.21	26.837		
4,300.0	4,279.5	4,222.0	4,192.6	11.3	10.4	-148.22	-298.6	59.3	541.9	522.1	19.79	27.383		
4,400.0	4,378.6	4,317.9	4,285.9	11.6	10.8	-147.16	-320.9	58.2	568.6	548.2	20.38	27.904		
4,500.0	4,477.8	4,413.7	4,379.1	11.9	11.2	-146.20	-343.2	57.0	595.5	574.5	20.97	28.401		
4,600.0	4,577.0	4,509.6	4,472.3	12.3	11.6	-145.33	-365.5	55.8	622.5	600.9	21.56	28.876		
4,700.0	4,676.1	4,605.5	4,565.5	12.6	12.0	-144.52	-387.8	54.6	649.6	627.4	22.15	29.329		
4,800.0	4,775.3	4,701.3	4,658.7	12.9	12.4	-143.78	-410.2	53.4	676.8	654.1	22.74	29.761		
4,900.0	4,874.5	4,797.2	4,752.0	13.2	12.9	-143.10	-432.5	52.3	704.2	680.8	23.34	30.174		
5,000.0	4,973.6	4,893.0	4,845.2	13.6	13.3	-142.46	-454.8	51.1	731.6	707.7	23.93	30.569		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
5,100.0	5,072.8	4,988.9	4,938.4	13.9	13.7	-141.88	-477.1	49.9	759.1	734.6	24.53	30.947		
5,200.0	5,172.0	5,084.8	5,031.6	14.2	14.2	-141.33	-499.4	48.7	786.6	761.5	25.13	31.308		
7,000.0	6,965.1	8,076.2	7,482.6	18.4	18.6	-96.41	129.1	40.0	775.6	741.2	34.39	22.553		
7,050.0	7,014.3	8,067.4	7,482.6	18.5	18.6	-98.88	120.3	40.0	743.5	709.1	34.45	21.582		
7,100.0	7,062.9	8,055.1	7,482.7	18.5	18.5	-100.66	108.0	39.9	713.8	679.3	34.45	20.716		
7,150.0	7,110.4	8,039.5	7,482.7	18.6	18.4	-101.79	92.4	39.9	686.6	652.2	34.40	19.959		
7,200.0	7,156.8	8,020.6	7,482.8	18.6	18.3	-102.31	73.5	39.9	662.4	628.0	34.31	19.308		
7,250.0	7,201.7	7,998.6	7,482.9	18.7	18.2	-102.27	51.5	39.8	641.1	606.9	34.18	18.755		
7,300.0	7,245.0	7,973.4	7,483.0	18.7	18.1	-101.74	26.3	39.8	622.9	588.8	34.11	18.261		
7,350.0	7,286.5	7,936.3	7,482.4	18.8	18.0	-100.02	-10.8	39.7	607.6	573.6	34.01	17.865		
7,400.0	7,325.9	7,899.0	7,479.9	18.8	17.8	-98.07	-48.0	39.6	595.0	561.1	33.96	17.521		
7,450.0	7,363.0	7,863.5	7,475.8	18.9	17.8	-96.02	-83.3	39.5	585.1	551.1	33.98	17.219		
7,500.0	7,397.8	7,829.2	7,470.1	19.0	17.7	-93.87	-117.0	39.5	578.0	543.9	34.06	16.969		
7,550.0	7,429.9	7,796.1	7,463.1	19.1	17.6	-91.61	-149.4	39.4	573.6	539.4	34.19	16.778		
7,600.0	7,459.3	7,763.8	7,454.9	19.2	17.6	-89.24	-180.6	39.3	571.9	537.5	34.35	16.647		
7,608.7	7,464.1	7,758.3	7,453.3	19.2	17.6	-88.82	-185.9	39.3	571.8	537.4	34.38	16.630		
7,650.0	7,485.9	7,732.3	7,445.4	19.3	17.6	-86.78	-210.7	39.3	572.7	538.1	34.53	16.584		
7,700.0	7,509.4	7,700.0	7,434.4	19.5	17.6	-84.13	-241.1	39.2	575.8	541.1	34.69	16.597		
7,750.0	7,529.7	7,671.0	7,423.4	19.7	17.6	-81.63	-267.9	39.1	581.1	546.3	34.85	16.677		
7,800.0	7,546.8	7,641.1	7,410.8	20.0	17.7	-78.98	-295.1	39.1	588.4	553.4	34.94	16.840		
7,850.0	7,560.6	7,611.5	7,397.4	20.3	17.7	-76.33	-321.4	39.0	597.3	562.3	34.97	17.080		
7,900.0	7,571.1	7,582.3	7,383.0	20.7	17.8	-73.69	-346.8	39.0	607.5	572.6	34.92	17.396		
7,950.0	7,578.0	7,550.0	7,365.9	21.1	17.8	-70.89	-374.2	38.9	619.0	584.2	34.77	17.802		
8,000.0	7,581.6	7,524.6	7,351.6	21.5	17.9	-68.54	-395.2	38.9	631.3	596.7	34.62	18.236		
8,025.4	7,582.0	7,510.1	7,343.2	21.8	17.9	-67.28	-406.9	38.8	637.8	603.3	34.50	18.487		
8,026.1	7,582.0	7,509.7	7,342.9	21.8	17.9	-67.26	-407.3	38.8	638.0	603.5	34.50	18.491		
8,026.8	7,582.0	7,509.3	7,342.7	21.8	17.9	-67.24	-407.6	38.8	638.2	603.7	34.51	18.496		
8,100.0	7,582.0	7,469.5	7,318.1	22.5	18.1	-65.15	-439.0	38.8	659.4	624.6	34.73	18.987		
8,200.0	7,582.0	7,420.4	7,285.5	23.6	18.2	-62.47	-475.6	38.7	694.8	659.6	35.14	19.774		
8,300.0	7,582.0	7,377.0	7,254.6	24.9	18.3	-60.05	-506.2	38.6	737.5	701.9	35.60	20.716		
8,400.0	7,582.0	7,338.6	7,225.8	26.2	18.5	-57.89	-531.6	38.5	787.2	751.0	36.13	21.788		

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	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	89.60	5.1	724.7	724.7					
100.0	100.0	98.0	98.0	0.1	0.1	89.60	5.1	724.7	724.7	724.5	0.22	3,256.742		
200.0	200.0	198.0	198.0	0.3	0.3	89.60	5.1	724.7	724.7	724.0	0.67	1,081.957		
300.0	300.0	298.0	298.0	0.6	0.6	89.60	5.1	724.7	724.7	723.6	1.12	647.436		
400.0	400.0	398.0	398.0	0.8	0.8	89.60	5.1	724.7	724.7	723.1	1.57	461.924		
500.0	500.0	498.0	498.0	1.0	1.0	89.60	5.1	724.7	724.7	722.7	2.02	359.046		
600.0	600.0	598.0	598.0	1.2	1.2	89.60	5.1	724.7	724.7	722.2	2.47	293.646		
700.0	700.0	698.0	698.0	1.5	1.5	89.60	5.1	724.7	724.7	721.8	2.92	248.400		
800.0	800.0	798.0	798.0	1.7	1.7	89.60	5.1	724.7	724.7	721.3	3.37	215.236		
900.0	900.0	898.0	898.0	1.9	1.9	89.60	5.1	724.7	724.7	720.9	3.82	189.884		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.60	5.1	724.7	724.7	720.4	4.27	169.875		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.60	5.1	724.7	724.7	720.0	4.72	153.681		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.60	5.1	724.7	724.7	719.5	5.17	140.306		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.60	5.1	724.7	724.7	719.1	5.61	129.073		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.60	5.1	724.7	724.7	718.6	6.06	119.505		
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.60	5.1	724.7	724.7	718.2	6.51	111.257	CC, ES	
1,600.0	1,600.0	1,598.0	1,598.0	3.5	3.5	165.50	5.1	724.7	726.0	719.0	6.95	104.432		
1,700.0	1,699.9	1,697.9	1,697.9	3.7	3.7	165.57	5.1	724.7	729.8	722.4	7.38	98.915		
1,800.0	1,799.7	1,797.7	1,797.7	3.9	3.9	165.67	5.1	724.7	736.1	728.3	7.80	94.345		
1,900.0	1,899.3	1,897.3	1,897.3	4.1	4.2	165.81	5.1	724.7	745.0	736.7	8.22	90.581		
1,992.8	1,991.4	1,989.4	1,989.4	4.3	4.4	165.98	5.1	724.7	755.5	746.9	8.61	87.707		
2,000.0	1,998.6	1,996.6	1,996.6	4.4	4.4	165.99	5.1	724.7	756.4	747.7	8.64	87.492		
2,100.0	2,097.7	2,095.7	2,095.7	4.6	4.6	166.22	5.1	724.7	768.9	759.8	9.08	84.661		
2,200.0	2,196.9	2,194.9	2,194.9	4.9	4.8	166.45	5.1	724.7	781.4	771.9	9.52	82.066		
2,300.0	2,296.1	2,294.1	2,294.1	5.2	5.0	166.67	5.1	724.7	793.9	783.9	9.96	79.681	SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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	0.0	0.0	0.0	0.0	89.99	0.0	50.6	50.6					
100.0	100.0	99.0	99.0	0.1	0.1	89.99	0.0	50.6	50.6	50.4	0.22	226.155		
200.0	200.0	199.0	199.0	0.3	0.3	89.99	0.0	50.6	50.6	49.9	0.67	75.260		
300.0	300.0	299.0	299.0	0.6	0.6	89.99	0.0	50.6	50.6	49.5	1.12	45.096		
400.0	400.0	399.0	399.0	0.8	0.8	89.99	0.0	50.6	50.6	49.0	1.57	32.193		
500.0	500.0	499.0	499.0	1.0	1.0	89.99	0.0	50.6	50.6	48.6	2.02	25.031		
600.0	600.0	599.0	599.0	1.2	1.2	89.99	0.0	50.6	50.6	48.1	2.47	20.476		
700.0	700.0	699.0	699.0	1.5	1.5	89.99	0.0	50.6	50.6	47.7	2.92	17.323		
800.0	800.0	799.0	799.0	1.7	1.7	89.99	0.0	50.6	50.6	47.2	3.37	15.012		
900.0	900.0	899.0	899.0	1.9	1.9	89.99	0.0	50.6	50.6	46.8	3.82	13.245		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.99	0.0	50.6	50.6	46.3	4.27	11.850		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.99	0.0	50.6	50.6	45.9	4.72	10.721		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.99	0.0	50.6	50.6	45.4	5.17	9.788		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.99	0.0	50.6	50.6	45.0	5.62	9.005		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.99	0.0	50.6	50.6	44.5	6.07	8.337		
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	89.99	0.0	50.6	50.6	44.1	6.52	7.762 CC, ES		
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	166.23	0.0	50.6	51.8	44.9	6.95	7.456		
1,700.0	1,699.9	1,698.9	1,698.9	3.7	3.7	167.18	0.0	50.6	55.7	48.3	7.38	7.543		
1,800.0	1,799.7	1,798.7	1,798.7	3.9	3.9	168.50	0.0	50.6	62.1	54.3	7.80	7.953		
1,900.0	1,899.3	1,898.3	1,898.3	4.1	4.2	169.95	0.0	50.6	71.1	62.8	8.23	8.638		
1,992.8	1,991.4	1,990.4	1,990.4	4.3	4.4	171.24	0.0	50.6	81.7	73.1	8.61	9.489		
2,000.0	1,998.6	1,997.6	1,997.6	4.4	4.4	171.34	0.0	50.6	82.6	74.0	8.64	9.560		
2,100.0	2,097.7	2,096.7	2,096.7	4.6	4.6	172.51	0.0	50.6	95.4	86.3	9.08	10.505		
2,200.0	2,196.9	2,195.9	2,195.9	4.9	4.8	173.39	0.0	50.6	108.2	98.6	9.52	11.363		
2,300.0	2,296.1	2,295.1	2,295.1	5.2	5.0	174.10	0.0	50.6	120.9	111.0	9.96	12.145		
2,400.0	2,395.3	2,392.9	2,392.9	5.4	5.3	174.21	1.0	51.2	134.2	123.8	10.40	12.909		
2,500.0	2,494.4	2,490.4	2,490.3	5.7	5.5	173.41	4.0	53.1	148.5	137.7	10.83	13.710		
2,600.0	2,593.6	2,588.8	2,588.6	6.0	5.7	172.19	8.6	56.0	163.6	152.4	11.28	14.512		
2,700.0	2,692.8	2,687.6	2,687.2	6.3	5.9	171.14	13.2	59.0	178.8	167.1	11.72	15.259		
2,800.0	2,791.9	2,786.4	2,785.9	6.6	6.1	170.26	17.9	61.9	194.1	181.9	12.17	15.950		
2,900.0	2,891.1	2,885.2	2,884.5	6.9	6.4	169.51	22.5	64.9	209.4	196.7	12.62	16.592		
3,000.0	2,990.3	2,984.0	2,983.1	7.2	6.6	168.86	27.2	67.8	224.7	211.6	13.07	17.189		
3,100.0	3,089.4	3,082.8	3,081.8	7.5	6.8	168.29	31.8	70.7	240.0	226.5	13.53	17.744		
3,200.0	3,188.6	3,181.6	3,180.4	7.8	7.0	167.80	36.5	73.7	255.4	241.4	13.98	18.263		
3,300.0	3,287.8	3,280.4	3,279.1	8.1	7.3	167.35	41.1	76.6	270.7	256.3	14.44	18.747		
3,400.0	3,386.9	3,379.1	3,377.7	8.4	7.5	166.96	45.8	79.6	286.1	271.2	14.90	19.200		
3,500.0	3,486.1	3,477.9	3,476.3	8.7	7.7	166.61	50.4	82.5	301.5	286.2	15.36	19.625		
3,600.0	3,585.3	3,576.7	3,575.0	9.1	8.0	166.29	55.1	85.5	316.9	301.1	15.83	20.024		
3,700.0	3,684.4	3,675.5	3,673.6	9.4	8.2	166.00	59.7	88.4	332.4	316.1	16.29	20.399		
3,800.0	3,783.6	3,774.3	3,772.2	9.7	8.4	165.73	64.4	91.4	347.8	331.0	16.76	20.753		
3,900.0	3,882.8	3,873.1	3,870.9	10.0	8.7	165.49	69.0	94.3	363.2	346.0	17.23	21.086		
4,000.0	3,982.0	3,971.9	3,969.5	10.3	8.9	165.27	73.7	97.3	378.7	361.0	17.69	21.402		
4,100.0	4,081.1	4,070.7	4,068.1	10.7	9.1	165.06	78.3	100.2	394.1	375.9	18.16	21.700		
4,200.0	4,180.3	4,169.5	4,166.8	11.0	9.4	164.87	83.0	103.1	409.6	390.9	18.63	21.982		
4,300.0	4,279.5	4,268.3	4,265.4	11.3	9.6	164.70	87.6	106.1	425.0	405.9	19.10	22.250		
4,400.0	4,378.6	4,367.0	4,364.1	11.6	9.8	164.53	92.2	109.0	440.5	420.9	19.57	22.504		
4,500.0	4,477.8	4,465.8	4,462.7	11.9	10.1	164.38	96.9	112.0	455.9	435.9	20.04	22.746		
4,600.0	4,577.0	4,564.6	4,561.3	12.3	10.3	164.24	101.5	114.9	471.4	450.9	20.52	22.976		
4,700.0	4,676.1	4,663.4	4,660.0	12.6	10.5	164.11	106.2	117.9	486.9	465.9	20.99	23.195		
4,800.0	4,775.3	4,762.2	4,758.6	12.9	10.8	163.98	110.8	120.8	502.3	480.9	21.46	23.404		
4,900.0	4,874.5	4,861.0	4,857.2	13.2	11.0	163.86	115.5	123.8	517.8	495.9	21.94	23.604		
5,000.0	4,973.6	4,959.8	4,955.9	13.6	11.2	163.75	120.1	126.7	533.3	510.9	22.41	23.794		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
5,100.0	5,072.8	5,058.6	5,054.5	13.9	11.5	163.65	124.8	129.7	548.7	525.9	22.89	23.977		
5,200.0	5,172.0	5,157.4	5,153.2	14.2	11.7	163.55	129.4	132.6	564.2	540.9	23.36	24.152		
5,300.0	5,271.2	5,256.2	5,251.8	14.5	11.9	163.46	134.1	135.6	579.7	555.9	23.84	24.319		
5,400.0	5,370.3	5,356.3	5,351.8	14.9	12.2	163.37	138.8	138.5	595.2	570.9	24.31	24.479		
5,500.0	5,469.5	5,468.7	5,464.2	15.2	12.4	163.48	141.8	140.5	609.3	584.6	24.76	24.605		
5,600.0	5,568.7	5,572.2	5,567.7	15.5	12.6	163.81	142.0	140.6	621.8	596.6	25.19	24.680		
5,700.0	5,667.8	5,671.4	5,666.8	15.8	12.8	164.14	142.0	140.6	634.2	608.5	25.64	24.733		
5,800.0	5,767.0	5,770.6	5,766.0	16.2	13.0	164.45	142.0	140.6	646.6	620.5	26.09	24.778		
5,865.0	5,831.4	5,835.0	5,830.4	16.4	13.1	164.65	142.0	140.6	654.6	628.2	26.39	24.807		
5,900.0	5,866.2	5,869.8	5,865.2	16.5	13.2	164.77	142.0	140.6	658.8	632.2	26.56	24.800		
6,000.0	5,965.7	5,969.3	5,964.7	16.7	13.4	165.04	142.0	140.6	668.3	641.3	27.02	24.736		
6,100.0	6,065.5	6,069.1	6,064.5	16.9	13.7	165.21	142.0	140.6	674.6	647.1	27.44	24.582		
6,200.0	6,165.4	6,169.0	6,164.4	17.1	13.9	165.29	142.0	140.6	677.4	649.6	27.83	24.343		
6,234.6	6,200.0	6,203.6	6,199.0	17.1	13.9	89.41	142.0	140.6	677.6	649.7	27.94	24.254		
6,300.0	6,265.4	6,269.0	6,264.4	17.2	14.1	89.41	142.0	140.6	677.6	649.4	28.21	24.024		
6,400.0	6,365.4	6,369.0	6,364.4	17.4	14.3	89.41	142.0	140.6	677.6	649.0	28.63	23.670		
6,500.0	6,465.4	6,469.0	6,464.4	17.6	14.5	89.41	142.0	140.6	677.6	648.6	29.05	23.326		
6,600.0	6,565.4	6,569.0	6,564.4	17.7	14.7	89.41	142.0	140.6	677.6	648.1	29.47	22.991		
6,700.0	6,665.4	6,669.0	6,664.4	17.9	15.0	89.41	142.0	140.6	677.6	647.7	29.90	22.665		
6,800.0	6,765.4	6,769.0	6,764.4	18.1	15.2	89.41	142.0	140.6	677.6	647.3	30.32	22.347		
6,879.1	6,844.5	6,848.2	6,843.5	18.2	15.3	89.76	137.9	140.6	677.6	647.0	30.61	22.138		
6,900.4	6,865.8	6,869.3	6,864.4	18.3	15.3	89.97	135.3	140.6	677.6	646.9	30.68	22.089		
6,950.0	6,915.4	6,918.1	6,912.5	18.4	15.4	-88.65	127.0	140.6	677.6	646.8	30.83	21.981		
7,000.0	6,965.1	6,966.8	6,959.8	18.4	15.5	-88.09	115.5	140.7	677.7	646.8	30.94	21.902		
7,050.0	7,014.3	7,015.0	7,005.8	18.5	15.5	-87.54	101.0	140.8	677.8	646.8	31.05	21.833		
7,100.0	7,062.9	7,062.9	7,050.3	18.5	15.6	-87.01	83.5	140.8	678.0	646.8	31.14	21.771		
7,150.0	7,110.4	7,110.3	7,093.2	18.6	15.6	-86.49	63.3	140.9	678.1	646.9	31.23	21.712		
7,200.0	7,156.8	7,157.4	7,134.4	18.6	15.7	-85.99	40.5	141.0	678.3	646.9	31.33	21.651		
7,250.0	7,201.7	7,204.2	7,173.7	18.7	15.7	-85.51	15.2	141.1	678.4	647.0	31.44	21.582		
7,300.0	7,245.0	7,250.0	7,210.6	18.7	15.8	-85.06	-12.0	141.2	678.6	647.0	31.56	21.501		
7,350.0	7,286.5	7,296.7	7,246.3	18.8	15.9	-84.62	-42.1	141.4	678.8	647.1	31.72	21.401		
7,400.0	7,325.9	7,342.5	7,279.3	18.8	16.0	-84.21	-73.9	141.5	678.9	647.0	31.91	21.277		
7,450.0	7,363.0	7,388.1	7,310.1	18.9	16.1	-83.82	-107.5	141.7	679.1	646.9	32.14	21.127		
7,500.0	7,397.8	7,433.4	7,338.5	19.0	16.2	-83.47	-142.8	141.8	679.2	646.8	32.43	20.946		
7,550.0	7,429.9	7,478.5	7,364.5	19.1	16.4	-83.14	-179.6	142.0	679.3	646.5	32.76	20.732		
7,600.0	7,459.3	7,523.4	7,388.0	19.2	16.7	-82.85	-217.8	142.1	679.3	646.2	33.16	20.483		
7,650.0	7,485.9	7,568.1	7,409.1	19.3	16.9	-82.58	-257.2	142.3	679.3	645.7	33.63	20.200		
7,700.0	7,509.4	7,612.6	7,427.5	19.5	17.2	-82.35	-297.8	142.5	679.3	645.1	34.16	19.884		
7,750.0	7,529.7	7,657.0	7,443.4	19.7	17.5	-82.15	-339.2	142.7	679.2	644.4	34.77	19.536		
7,800.0	7,546.8	7,700.0	7,456.2	20.0	17.9	-81.99	-380.2	142.8	679.0	643.6	35.43	19.167		
7,850.0	7,560.6	7,745.5	7,467.2	20.3	18.3	-81.86	-424.4	143.0	678.8	642.7	36.18	18.760		
7,900.0	7,571.1	7,789.6	7,475.1	20.7	18.7	-81.77	-467.8	143.2	678.6	641.6	37.00	18.341		
7,950.0	7,578.0	7,833.6	7,480.3	21.1	19.1	-81.71	-511.5	143.4	678.2	640.4	37.87	17.909		
8,000.0	7,581.6	7,877.6	7,482.8	21.5	19.6	-81.68	-555.4	143.6	677.8	639.0	38.80	17.468		
8,025.4	7,582.0	7,900.1	7,483.0	21.8	19.8	-81.68	-577.8	143.7	677.6	638.3	39.30	17.244		
8,026.1	7,582.0	7,900.9	7,483.0	21.8	19.8	-81.68	-578.6	143.7	677.6	638.3	39.31	17.237		
8,026.8	7,582.0	7,901.6	7,483.0	21.8	19.9	-81.68	-579.3	143.7	677.6	638.3	39.33	17.231		
8,100.0	7,582.0	7,974.8	7,482.7	22.5	20.6	-81.65	-652.6	144.0	676.9	636.0	40.87	16.561		
8,200.0	7,582.0	8,074.8	7,482.3	23.6	21.9	-81.60	-752.6	144.4	676.0	632.7	43.29	15.613		
8,300.0	7,582.0	8,174.8	7,481.9	24.9	23.2	-81.56	-852.6	144.8	675.0	629.1	45.92	14.698		
8,400.0	7,582.0	8,274.8	7,481.5	26.2	24.6	-81.51	-952.5	145.2	674.1	625.4	48.71	13.838		
8,500.0	7,582.0	8,374.8	7,481.1	27.6	26.1	-81.46	-1,052.5	145.7	673.1	621.5	51.63	13.037		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
8,600.0	7,582.0	8,474.8	7,480.7	29.0	27.6	-81.42	-1,152.5	146.1	672.2	617.5	54.66	12.297		
8,700.0	7,582.0	8,574.8	7,480.3	30.6	29.2	-81.37	-1,252.5	146.5	671.2	613.4	57.78	11.616		
8,800.0	7,582.0	8,674.7	7,479.9	32.1	30.8	-81.32	-1,352.5	146.9	670.3	609.3	60.99	10.991		
8,900.0	7,582.0	8,774.7	7,479.5	33.7	32.5	-81.28	-1,452.5	147.3	669.3	605.1	64.25	10.417		
9,000.0	7,582.0	8,874.7	7,479.1	35.3	34.2	-81.23	-1,552.5	147.7	668.4	600.8	67.58	9.890		
9,100.0	7,582.0	8,974.7	7,478.7	37.0	35.9	-81.18	-1,652.5	148.1	667.4	596.5	70.95	9.407		
9,200.0	7,582.0	9,074.7	7,478.3	38.7	37.6	-81.13	-1,752.5	148.6	666.5	592.1	74.37	8.962		
9,300.0	7,582.0	9,174.7	7,477.9	40.4	39.4	-81.09	-1,852.5	149.0	665.5	587.7	77.82	8.552		
9,400.0	7,582.0	9,274.7	7,477.5	42.1	41.1	-81.04	-1,952.5	149.4	664.6	583.3	81.30	8.174		
9,500.0	7,582.0	9,374.7	7,477.1	43.9	42.9	-80.99	-2,052.5	149.8	663.6	578.8	84.81	7.825		
9,600.0	7,582.0	9,474.7	7,476.7	45.6	44.7	-80.94	-2,152.5	150.2	662.7	574.4	88.35	7.501		
9,700.0	7,582.0	9,574.7	7,476.3	47.4	46.5	-80.89	-2,252.4	150.6	661.8	569.9	91.91	7.200		
9,800.0	7,582.0	9,674.7	7,475.9	49.2	48.3	-80.84	-2,352.4	151.0	660.8	565.3	95.48	6.921		
9,900.0	7,582.0	9,774.7	7,475.5	51.0	50.1	-80.80	-2,452.4	151.5	659.9	560.8	99.07	6.661		
10,000.0	7,582.0	9,874.7	7,475.1	52.8	52.0	-80.75	-2,552.4	151.9	658.9	556.3	102.68	6.417		
10,100.0	7,582.0	9,974.7	7,474.7	54.6	53.8	-80.70	-2,652.4	152.3	658.0	551.7	106.30	6.190		
10,200.0	7,582.0	10,074.7	7,474.3	56.4	55.7	-80.65	-2,752.4	152.7	657.0	547.1	109.93	5.977		
10,300.0	7,582.0	10,174.7	7,473.9	58.2	57.5	-80.60	-2,852.4	153.1	656.1	542.5	113.57	5.777		
10,400.0	7,582.0	10,274.7	7,473.5	60.1	59.4	-80.55	-2,952.4	153.5	655.2	537.9	117.22	5.589		
10,500.0	7,582.0	10,374.6	7,473.0	61.9	61.2	-80.50	-3,052.4	154.0	654.2	533.4	120.88	5.412		
10,600.0	7,582.0	10,474.6	7,472.6	63.8	63.1	-80.45	-3,152.4	154.4	653.3	528.7	124.55	5.245		
10,700.0	7,582.0	10,574.6	7,472.2	65.6	64.9	-80.40	-3,252.4	154.8	652.4	524.1	128.22	5.088		
10,800.0	7,582.0	10,674.6	7,471.8	67.5	66.8	-80.35	-3,352.4	155.2	651.4	519.5	131.90	4.939		
10,900.0	7,582.0	10,774.6	7,471.4	69.3	68.7	-80.30	-3,452.4	155.6	650.5	514.9	135.58	4.798		
11,000.0	7,582.0	10,874.6	7,471.0	71.2	70.6	-80.25	-3,552.3	156.0	649.5	510.3	139.27	4.664		
11,100.0	7,582.0	10,974.6	7,470.6	73.1	72.4	-80.20	-3,652.3	156.4	648.6	505.6	142.97	4.537		
11,200.0	7,582.0	11,074.6	7,470.2	74.9	74.3	-80.15	-3,752.3	156.9	647.7	501.0	146.67	4.416		
11,300.0	7,582.0	11,174.6	7,469.8	76.8	76.2	-80.10	-3,852.3	157.3	646.7	496.4	150.37	4.301		
11,400.0	7,582.0	11,274.6	7,469.4	78.7	78.1	-80.05	-3,952.3	157.7	645.8	491.7	154.07	4.191		
11,500.0	7,582.0	11,374.6	7,469.0	80.6	80.0	-80.00	-4,052.3	158.1	644.9	487.1	157.78	4.087		
11,600.0	7,582.0	11,474.6	7,468.6	82.5	81.9	-79.95	-4,152.3	158.5	643.9	482.4	161.49	3.987		
11,700.0	7,582.0	11,574.6	7,468.2	84.3	83.8	-79.90	-4,252.3	158.9	643.0	477.8	165.21	3.892		
11,800.0	7,582.0	11,674.6	7,467.8	86.2	85.6	-79.85	-4,352.3	159.4	642.1	473.1	168.92	3.801		
11,900.0	7,582.0	11,774.6	7,467.4	88.1	87.5	-79.80	-4,452.3	159.8	641.1	468.5	172.64	3.714		
12,000.0	7,582.0	11,874.6	7,467.0	90.0	89.4	-79.74	-4,552.3	160.2	640.2	463.8	176.36	3.630		
12,100.0	7,582.0	11,974.5	7,466.6	91.9	91.3	-79.69	-4,652.3	160.6	639.3	459.2	180.08	3.550		
12,200.0	7,582.0	12,074.5	7,466.2	93.8	93.2	-79.64	-4,752.3	161.0	638.3	454.5	183.80	3.473		
12,300.0	7,582.0	12,174.5	7,465.8	95.7	95.1	-79.59	-4,852.2	161.4	637.4	449.9	187.52	3.399		
12,400.0	7,582.0	12,274.5	7,465.4	97.6	97.0	-79.54	-4,952.2	161.8	636.5	445.2	191.25	3.328		
12,500.0	7,582.0	12,374.5	7,465.0	99.5	98.9	-79.48	-5,052.2	162.3	635.5	440.6	194.97	3.260		
12,600.0	7,582.0	12,474.5	7,464.6	101.4	100.8	-79.43	-5,152.2	162.7	634.6	435.9	198.70	3.194		
12,700.0	7,582.0	12,574.5	7,464.2	103.3	102.7	-79.38	-5,252.2	163.1	633.7	431.3	202.42	3.130		
12,800.0	7,582.0	12,674.5	7,463.8	105.2	104.7	-79.33	-5,352.2	163.5	632.8	426.6	206.15	3.069		
12,900.0	7,582.0	12,774.5	7,463.4	107.1	106.6	-79.27	-5,452.2	163.9	631.8	421.9	209.88	3.010		
13,000.0	7,582.0	12,874.5	7,463.0	109.0	108.5	-79.22	-5,552.2	164.3	630.9	417.3	213.61	2.954		
13,100.0	7,582.0	12,974.5	7,462.6	110.9	110.4	-79.17	-5,652.2	164.7	630.0	412.6	217.33	2.899		
13,200.0	7,582.0	13,074.5	7,462.2	112.8	112.3	-79.11	-5,752.2	165.2	629.0	408.0	221.06	2.846		
13,300.0	7,582.0	13,174.5	7,461.8	114.7	114.2	-79.06	-5,852.2	165.6	628.1	403.3	224.79	2.794		
13,400.0	7,582.0	13,274.5	7,461.4	116.6	116.1	-79.01	-5,952.2	166.0	627.2	398.7	228.52	2.745		
13,500.0	7,582.0	13,374.5	7,461.0	118.5	118.0	-78.95	-6,052.2	166.4	626.3	394.0	232.24	2.697		
13,600.0	7,582.0	13,474.5	7,460.6	120.4	119.9	-78.90	-6,152.1	166.8	625.4	389.4	235.97	2.650		
13,700.0	7,582.0	13,574.5	7,460.2	122.3	121.8	-78.84	-6,252.1	167.2	624.4	384.7	239.70	2.605		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
13,800.0	7,582.0	13,674.4	7,459.8	124.2	123.7	-78.79	-6,352.1	167.7	623.5	380.1	243.42	2.561		
13,900.0	7,582.0	13,774.4	7,459.4	126.2	125.7	-78.73	-6,452.1	168.1	622.6	375.4	247.15	2.519		
14,000.0	7,582.0	13,874.4	7,459.0	128.1	127.6	-78.68	-6,552.1	168.5	621.7	370.8	250.87	2.478		
14,100.0	7,582.0	13,974.4	7,458.6	130.0	129.5	-78.62	-6,652.1	168.9	620.7	366.1	254.60	2.438		
14,200.0	7,582.0	14,074.4	7,458.2	131.9	131.4	-78.57	-6,752.1	169.3	619.8	361.5	258.32	2.399		
14,300.0	7,582.0	14,174.4	7,457.8	133.8	133.3	-78.51	-6,852.1	169.7	618.9	356.9	262.04	2.362		
14,400.0	7,582.0	14,274.4	7,457.4	135.7	135.2	-78.46	-6,952.1	170.1	618.0	352.2	265.77	2.325		
14,500.0	7,582.0	14,374.4	7,457.0	137.6	137.1	-78.40	-7,052.1	170.6	617.1	347.6	269.49	2.290		
14,600.0	7,582.0	14,474.4	7,456.6	139.6	139.1	-78.35	-7,152.1	171.0	616.1	342.9	273.21	2.255		
14,700.0	7,582.0	14,574.4	7,456.2	141.5	141.0	-78.29	-7,252.1	171.4	615.2	338.3	276.93	2.222		
14,800.0	7,582.0	14,674.4	7,455.8	143.4	142.9	-78.24	-7,352.1	171.8	614.3	333.7	280.65	2.189		
14,900.0	7,582.0	14,774.4	7,455.4	145.3	144.8	-78.18	-7,452.0	172.2	613.4	329.0	284.37	2.157		
15,000.0	7,582.0	14,874.4	7,455.0	147.2	146.7	-78.12	-7,552.0	172.6	612.5	324.4	288.08	2.126		
15,100.0	7,582.0	14,974.4	7,454.6	149.1	148.6	-78.07	-7,652.0	173.1	611.6	319.8	291.80	2.096		
15,200.0	7,582.0	15,074.4	7,454.1	151.1	150.6	-78.01	-7,752.0	173.5	610.7	315.1	295.51	2.066		
15,300.0	7,582.0	15,174.4	7,453.7	153.0	152.5	-77.95	-7,852.0	173.9	609.7	310.5	299.23	2.038		
15,400.0	7,582.0	15,274.4	7,453.3	154.9	154.4	-77.90	-7,952.0	174.3	608.8	305.9	302.94	2.010		
15,500.0	7,582.0	15,374.3	7,452.9	156.8	156.3	-77.84	-8,052.0	174.7	607.9	301.3	306.65	1.982		
15,600.0	7,582.0	15,474.3	7,452.5	158.7	158.2	-77.78	-8,152.0	175.1	607.0	296.6	310.36	1.956		
15,700.0	7,582.0	15,574.3	7,452.1	160.6	160.2	-77.72	-8,252.0	175.5	606.1	292.0	314.07	1.930		
15,800.0	7,582.0	15,674.3	7,451.7	162.6	162.1	-77.67	-8,352.0	176.0	605.2	287.4	317.77	1.904		
15,900.0	7,582.0	15,774.3	7,451.3	164.5	164.0	-77.61	-8,452.0	176.4	604.3	282.8	321.48	1.880		
16,000.0	7,582.0	15,874.3	7,450.9	166.4	165.9	-77.55	-8,552.0	176.8	603.4	278.2	325.18	1.855		
16,100.0	7,582.0	15,974.3	7,450.5	168.3	167.8	-77.49	-8,652.0	177.2	602.4	273.6	328.89	1.832		
16,200.0	7,582.0	16,074.3	7,450.1	170.2	169.7	-77.43	-8,751.9	177.6	601.5	269.0	332.59	1.809		
16,300.0	7,582.0	16,174.3	7,449.7	172.2	171.7	-77.38	-8,851.9	178.0	600.6	264.3	336.29	1.786		
16,400.0	7,582.0	16,274.3	7,449.3	174.1	173.6	-77.32	-8,951.9	178.5	599.7	259.7	339.98	1.764		
16,500.0	7,582.0	16,374.3	7,448.9	176.0	175.5	-77.26	-9,051.9	178.9	598.8	255.1	343.68	1.742		
16,600.0	7,582.0	16,474.3	7,448.5	177.9	177.4	-77.20	-9,151.9	179.3	597.9	250.5	347.37	1.721		
16,700.0	7,582.0	16,574.3	7,448.1	179.9	179.4	-77.14	-9,251.9	179.7	597.0	245.9	351.07	1.701		
16,800.0	7,582.0	16,674.3	7,447.7	181.8	181.3	-77.08	-9,351.9	180.1	596.1	241.3	354.76	1.680		
16,900.0	7,582.0	16,774.3	7,447.3	183.7	183.2	-77.02	-9,451.9	180.5	595.2	236.8	358.45	1.660		
17,000.0	7,582.0	16,874.3	7,446.9	185.6	185.1	-76.96	-9,551.9	180.9	594.3	232.2	362.14	1.641		
17,100.0	7,582.0	16,974.2	7,446.5	187.5	187.0	-76.90	-9,651.9	181.4	593.4	227.6	365.82	1.622		
17,200.0	7,582.0	17,074.2	7,446.1	189.5	189.0	-76.84	-9,751.9	181.8	592.5	223.0	369.51	1.603		
17,300.0	7,582.0	17,174.2	7,445.7	191.4	190.9	-76.78	-9,851.9	182.2	591.6	218.4	373.19	1.585		
17,400.0	7,582.0	17,274.2	7,445.3	193.3	192.8	-76.72	-9,951.9	182.6	590.7	213.8	376.87	1.567		
17,500.0	7,582.0	17,374.2	7,444.9	195.2	194.7	-76.66	-10,051.8	183.0	589.8	209.2	380.55	1.550		
17,600.0	7,582.0	17,474.2	7,444.5	197.2	196.6	-76.60	-10,151.8	183.4	588.9	204.7	384.22	1.533		
17,700.0	7,582.0	17,574.2	7,444.1	199.1	198.6	-76.54	-10,251.8	183.8	588.0	200.1	387.90	1.516		
17,800.0	7,582.0	17,674.2	7,443.7	201.0	200.5	-76.47	-10,351.8	184.3	587.1	195.5	391.57	1.499 Level 3		
17,900.0	7,582.0	17,774.2	7,443.3	202.9	202.4	-76.41	-10,451.8	184.7	586.2	191.0	395.24	1.483 Level 3		
17,972.9	7,582.0	17,846.8	7,443.0	204.3	203.8	-76.37	-10,524.4	185.0	585.5	187.6	397.91	1.472 Level 3, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 279-1527H - Wellbore #1 - Plan 1 (Feb 14, 2017)													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	89.58	5.1	700.1	700.1					
100.0	100.0	98.0	98.0	0.1	0.1	89.58	5.1	700.1	700.1	699.9	0.22	3,146.202		
200.0	200.0	198.0	198.0	0.3	0.3	89.58	5.1	700.1	700.1	699.4	0.67	1,045.233		
300.0	300.0	298.0	298.0	0.6	0.6	89.58	5.1	700.1	700.1	699.0	1.12	625.461		
400.0	400.0	398.0	398.0	0.8	0.8	89.58	5.1	700.1	700.1	698.5	1.57	446.246		
500.0	500.0	498.0	498.0	1.0	1.0	89.58	5.1	700.1	700.1	698.1	2.02	346.859		
600.0	600.0	598.0	598.0	1.2	1.2	89.58	5.1	700.1	700.1	697.6	2.47	283.679		
700.0	700.0	698.0	698.0	1.5	1.5	89.58	5.1	700.1	700.1	697.2	2.92	239.969		
800.0	800.0	798.0	798.0	1.7	1.7	89.58	5.1	700.1	700.1	696.7	3.37	207.930		
900.0	900.0	898.0	898.0	1.9	1.9	89.58	5.1	700.1	700.1	696.3	3.82	183.439		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.58	5.1	700.1	700.1	695.8	4.27	164.109		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.58	5.1	700.1	700.1	695.4	4.72	148.465		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.58	5.1	700.1	700.1	694.9	5.17	135.544		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.58	5.1	700.1	700.1	694.5	5.61	124.692		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.58	5.1	700.1	700.1	694.0	6.06	115.448		
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.58	5.1	700.1	700.1	693.6	6.51	107.481	CC, ES	
1,600.0	1,600.0	1,598.0	1,598.0	3.5	3.5	165.49	5.1	700.1	701.4	694.4	6.95	100.894		
1,700.0	1,699.9	1,697.9	1,697.9	3.7	3.7	165.56	5.1	700.1	705.2	697.8	7.38	95.581		
1,800.0	1,799.7	1,797.7	1,797.7	3.9	3.9	165.67	5.1	700.1	711.5	703.7	7.80	91.192		
1,900.0	1,899.3	1,897.3	1,897.3	4.1	4.2	165.81	5.1	700.1	720.4	712.2	8.22	87.590		
1,992.8	1,991.4	1,989.4	1,989.4	4.3	4.4	165.98	5.1	700.1	730.9	722.3	8.61	84.851		
2,000.0	1,998.6	1,996.6	1,996.6	4.4	4.4	166.00	5.1	700.1	731.8	723.1	8.64	84.647		
2,100.0	2,097.7	2,095.7	2,095.7	4.6	4.6	166.24	5.1	700.1	744.3	735.2	9.08	81.953		
2,200.0	2,196.9	2,194.9	2,194.9	4.9	4.8	166.47	5.1	700.1	756.8	747.3	9.52	79.483		
2,300.0	2,296.1	2,294.1	2,294.1	5.2	5.0	166.69	5.1	700.1	769.3	759.3	9.96	77.213		
2,400.0	2,395.3	2,393.3	2,393.3	5.4	5.3	166.91	5.1	700.1	781.8	771.4	10.41	75.121		
2,500.0	2,494.4	2,492.4	2,492.4	5.7	5.5	167.12	5.1	700.1	794.4	783.5	10.85	73.189	SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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	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	89.58	5.9	799.9	799.9					
100.0	100.0	98.0	98.0	0.1	0.1	89.58	5.9	799.9	799.9	799.7	0.22	3,594.595		
200.0	200.0	198.0	198.0	0.3	0.3	89.58	5.9	799.9	799.9	799.2	0.67	1,194.199		
300.0	300.0	298.0	298.0	0.6	0.6	89.58	5.9	799.9	799.9	798.8	1.12	714.601		
400.0	400.0	398.0	398.0	0.8	0.8	89.58	5.9	799.9	799.9	798.3	1.57	509.844		
500.0	500.0	498.0	498.0	1.0	1.0	89.58	5.9	799.9	799.9	797.9	2.02	396.293		
600.0	600.0	598.0	598.0	1.2	1.2	89.58	5.9	799.9	799.9	797.4	2.47	324.109		
700.0	700.0	698.0	698.0	1.5	1.5	89.58	5.9	799.9	799.9	797.0	2.92	274.169		
800.0	800.0	798.0	798.0	1.7	1.7	89.58	5.9	799.9	799.9	796.5	3.37	237.564		
900.0	900.0	898.0	898.0	1.9	1.9	89.58	5.9	799.9	799.9	796.1	3.82	209.583		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.58	5.9	799.9	799.9	795.6	4.27	187.498		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.58	5.9	799.9	799.9	795.2	4.72	169.624		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.58	5.9	799.9	799.9	794.7	5.17	154.861		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.58	5.9	799.9	799.9	794.3	5.61	142.462		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.58	5.9	799.9	799.9	793.8	6.06	131.902		
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.58	5.9	799.9	799.9	793.4	6.51	122.799	CC, ES, SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+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	89.62	5.1	775.5	775.6					
100.0	100.0	98.0	98.0	0.1	0.1	89.62	5.1	775.5	775.6	775.3	0.22	3,485.274		
200.0	200.0	198.0	198.0	0.3	0.3	89.62	5.1	775.5	775.6	774.9	0.67	1,157.880		
300.0	300.0	298.0	298.0	0.6	0.6	89.62	5.1	775.5	775.6	774.4	1.12	692.868		
400.0	400.0	398.0	398.0	0.8	0.8	89.62	5.1	775.5	775.6	774.0	1.57	494.339		
500.0	500.0	498.0	498.0	1.0	1.0	89.62	5.1	775.5	775.6	773.5	2.02	384.241		
600.0	600.0	598.0	598.0	1.2	1.2	89.62	5.1	775.5	775.6	773.1	2.47	314.252		
700.0	700.0	698.0	698.0	1.5	1.5	89.62	5.1	775.5	775.6	772.6	2.92	265.831		
800.0	800.0	798.0	798.0	1.7	1.7	89.62	5.1	775.5	775.6	772.2	3.37	230.339		
900.0	900.0	898.0	898.0	1.9	1.9	89.62	5.1	775.5	775.6	771.7	3.82	203.209		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.62	5.1	775.5	775.6	771.3	4.27	181.796		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.62	5.1	775.5	775.6	770.8	4.72	164.465		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.62	5.1	775.5	775.6	770.4	5.17	150.152		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.62	5.1	775.5	775.6	769.9	5.61	138.130		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.62	5.1	775.5	775.6	769.5	6.06	127.890		
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.62	5.1	775.5	775.6	769.0	6.51	119.064 CC, ES		
1,600.0	1,600.0	1,598.0	1,598.0	3.5	3.5	165.53	5.1	775.5	776.8	769.9	6.95	111.748		
1,700.0	1,699.9	1,697.9	1,697.9	3.7	3.7	165.59	5.1	775.5	780.6	773.2	7.38	105.808		
1,800.0	1,799.7	1,797.7	1,797.7	3.9	3.9	165.68	5.1	775.5	787.0	779.2	7.80	100.863		
1,900.0	1,899.3	1,897.3	1,897.3	4.1	4.2	165.81	5.1	775.5	795.8	787.6	8.22	96.764 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 511-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	89.49	1.1	125.2	125.2					
100.0	100.0	98.0	98.0	0.1	0.1	89.49	1.1	125.2	125.2	125.0	0.22	562.672		
200.0	200.0	198.0	198.0	0.3	0.3	89.49	1.1	125.2	125.2	124.5	0.67	186.931		
300.0	300.0	298.0	298.0	0.6	0.6	89.49	1.1	125.2	125.2	124.1	1.12	111.858		
400.0	400.0	398.0	398.0	0.8	0.8	89.49	1.1	125.2	125.2	123.6	1.57	79.807		
500.0	500.0	498.0	498.0	1.0	1.0	89.49	1.1	125.2	125.2	123.2	2.02	62.033		
600.0	600.0	598.0	598.0	1.2	1.2	89.49	1.1	125.2	125.2	122.7	2.47	50.734		
700.0	700.0	698.0	698.0	1.5	1.5	89.49	1.1	125.2	125.2	122.3	2.92	42.916		
800.0	800.0	798.0	798.0	1.7	1.7	89.49	1.1	125.2	125.2	121.8	3.37	37.187		
900.0	900.0	898.0	898.0	1.9	1.9	89.49	1.1	125.2	125.2	121.4	3.82	32.807		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.49	1.1	125.2	125.2	120.9	4.27	29.350		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.49	1.1	125.2	125.2	120.5	4.72	26.552		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.49	1.1	125.2	125.2	120.0	5.17	24.241		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.49	1.1	125.2	125.2	119.6	5.61	22.300		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.49	1.1	125.2	125.2	119.1	6.06	20.647		
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.49	1.1	125.2	125.2	118.7	6.51	19.222 CC, ES		
1,600.0	1,600.0	1,598.0	1,598.0	3.5	3.5	165.53	1.1	125.2	126.5	119.5	6.95	18.194		
1,700.0	1,699.9	1,697.9	1,697.9	3.7	3.7	165.94	1.1	125.2	130.3	122.9	7.38	17.659		
1,800.0	1,799.7	1,797.1	1,797.1	3.9	3.9	167.11	-0.2	125.4	136.8	129.1	7.77	17.607 SF		
1,900.0	1,899.3	1,895.7	1,895.6	4.1	4.1	169.40	-4.0	126.0	146.6	138.4	8.14	18.005		
1,992.8	1,991.4	1,986.5	1,986.2	4.3	4.2	172.20	-9.9	126.8	158.7	150.2	8.48	18.702		
2,000.0	1,998.6	1,993.6	1,993.2	4.4	4.2	172.44	-10.5	126.9	159.7	151.2	8.51	18.766		
2,100.0	2,097.7	2,090.5	2,089.8	4.6	4.4	175.87	-19.4	128.3	175.2	166.3	8.91	19.671		
2,200.0	2,196.9	2,186.7	2,185.3	4.9	4.6	179.43	-30.7	130.0	192.2	182.9	9.32	20.627		
2,300.0	2,296.1	2,282.0	2,279.6	5.2	4.8	-176.98	-44.4	132.0	210.9	201.1	9.74	21.645		
2,400.0	2,395.3	2,379.0	2,375.4	5.4	5.1	-173.62	-59.7	134.3	231.0	220.8	10.19	22.664		
2,500.0	2,494.4	2,476.1	2,471.2	5.7	5.3	-170.79	-74.9	136.5	251.7	241.0	10.65	23.633		
2,600.0	2,593.6	2,573.3	2,567.1	6.0	5.6	-168.39	-90.2	138.8	272.9	261.8	11.12	24.544		
2,700.0	2,692.8	2,670.4	2,663.0	6.3	5.9	-166.34	-105.5	141.1	294.5	282.9	11.60	25.397		
2,800.0	2,791.9	2,767.5	2,758.9	6.6	6.2	-164.57	-120.7	143.4	316.5	304.4	12.08	26.191		
2,900.0	2,891.1	2,864.6	2,854.8	6.9	6.4	-163.03	-136.0	145.6	338.7	326.1	12.58	26.931		
3,000.0	2,990.3	2,961.8	2,950.7	7.2	6.8	-161.67	-151.3	147.9	361.1	348.0	13.07	27.618		
3,100.0	3,089.4	3,058.9	3,046.6	7.5	7.1	-160.47	-166.5	150.2	383.7	370.1	13.58	28.257		
3,200.0	3,188.6	3,156.0	3,142.5	7.8	7.4	-159.41	-181.8	152.5	406.4	392.3	14.09	28.851		
3,300.0	3,287.8	3,253.1	3,238.4	8.1	7.7	-158.46	-197.1	154.7	429.2	414.6	14.60	29.405		
3,400.0	3,386.9	3,350.3	3,334.2	8.4	8.0	-157.60	-212.3	157.0	452.1	437.0	15.11	29.921		
3,500.0	3,486.1	3,447.4	3,430.1	8.7	8.4	-156.83	-227.6	159.3	475.2	459.5	15.63	30.402		
3,600.0	3,585.3	3,544.5	3,526.0	9.1	8.7	-156.13	-242.9	161.6	498.3	482.1	16.15	30.852		
3,700.0	3,684.4	3,641.6	3,621.9	9.4	9.0	-155.49	-258.2	163.9	521.4	504.7	16.67	31.273		
3,800.0	3,783.6	3,738.7	3,717.8	9.7	9.4	-154.90	-273.4	166.1	544.6	527.4	17.20	31.668		
3,900.0	3,882.8	3,835.9	3,813.7	10.0	9.7	-154.37	-288.7	168.4	567.9	550.2	17.73	32.038		
4,000.0	3,982.0	3,933.0	3,909.6	10.3	10.0	-153.87	-304.0	170.7	591.2	573.0	18.26	32.386		
4,100.0	4,081.1	4,030.1	4,005.5	10.7	10.4	-153.41	-319.2	173.0	614.6	595.8	18.79	32.713		
4,200.0	4,180.3	4,127.2	4,101.3	11.0	10.7	-152.99	-334.5	175.2	637.9	618.6	19.32	33.022		
4,300.0	4,279.5	4,224.4	4,197.2	11.3	11.1	-152.60	-349.8	177.5	661.4	641.5	19.85	33.313		
4,400.0	4,378.6	4,321.5	4,293.1	11.6	11.4	-152.23	-365.0	179.8	684.8	664.4	20.39	33.588		
4,500.0	4,477.8	4,418.6	4,389.0	11.9	11.8	-151.88	-380.3	182.1	708.3	687.3	20.93	33.848		
4,600.0	4,577.0	4,515.7	4,484.9	12.3	12.1	-151.56	-395.6	184.3	731.8	710.3	21.46	34.094		
4,700.0	4,676.1	4,612.8	4,580.8	12.6	12.5	-151.26	-410.8	186.6	755.3	733.3	22.00	34.328		
4,800.0	4,775.3	4,710.0	4,676.7	12.9	12.8	-150.98	-426.1	188.9	778.8	756.3	22.54	34.549		
7,450.0	7,363.0	7,920.0	7,571.1	18.9	18.4	-98.23	-104.0	230.1	793.5	758.9	34.61	22.924		
7,500.0	7,397.8	7,881.3	7,563.4	19.0	18.4	-96.75	-141.9	230.0	782.9	748.2	34.69	22.571		

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

Crittter Creek Pad 15-11N-63W - Crittter Creek 511-1510H - Wellbore #1 - Plan 1 (Feb 14, 2017)												Offset Site Error:	0.0 ft	
Survey Design		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)			
7,550.0	7,429.9	7,844.6	7,554.1	19.1	18.3	-95.22	-177.5	230.0	774.3	739.5	34.82	22.238		
7,600.0	7,459.3	7,809.3	7,543.6	19.2	18.3	-93.62	-211.1	229.9	767.9	732.9	35.02	21.926		
7,650.0	7,485.9	7,775.3	7,531.8	19.3	18.3	-91.96	-243.0	229.9	763.5	728.3	35.28	21.643		
7,700.0	7,509.4	7,742.3	7,519.0	19.5	18.3	-90.22	-273.4	229.8	761.2	725.6	35.57	21.399		
7,736.0	7,524.3	7,719.1	7,509.1	19.7	18.4	-88.92	-294.4	229.8	760.7	724.9	35.81	21.193		
7,750.0	7,529.7	7,710.2	7,505.2	19.7	18.4	-88.41	-302.4	229.8	760.8	724.9	35.90	21.143		
7,800.0	7,546.8	7,678.7	7,490.4	20.0	18.4	-86.53	-330.2	229.7	762.2	726.0	36.24	21.034		
7,850.0	7,560.6	7,650.0	7,475.8	20.3	18.5	-84.72	-354.9	229.7	765.3	728.7	36.57	20.925		
7,900.0	7,571.1	7,617.4	7,458.1	20.7	18.5	-82.63	-382.3	229.6	769.9	733.0	36.89	20.868		
7,950.0	7,578.0	7,587.4	7,440.8	21.1	18.6	-80.63	-406.7	229.6	775.8	738.6	37.18	20.865		
8,000.0	7,581.6	7,557.8	7,422.6	21.5	18.7	-78.61	-430.1	229.5	783.0	745.5	37.44	20.914		
8,025.4	7,582.0	7,542.9	7,413.2	21.8	18.7	-77.59	-441.6	229.5	787.0	749.4	37.55	20.958		
8,026.1	7,582.0	7,542.5	7,412.9	21.8	18.7	-77.57	-441.9	229.5	787.1	749.6	37.56	20.958		
8,026.8	7,582.0	7,542.1	7,412.6	21.8	18.7	-77.55	-442.2	229.5	787.2	749.7	37.56	20.959		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		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	89.99	0.0	25.4	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	89.99	0.0	25.4	25.4	25.2	0.22	113.128		
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	25.4	25.4	24.8	0.67	37.709		
300.0	300.0	300.0	300.0	0.6	0.6	89.99	0.0	25.4	25.4	24.3	1.12	22.626		
400.0	400.0	400.0	400.0	0.8	0.8	89.99	0.0	25.4	25.4	23.9	1.57	16.161		
500.0	500.0	500.0	500.0	1.0	1.0	89.99	0.0	25.4	25.4	23.4	2.02	12.570		
600.0	600.0	600.0	600.0	1.2	1.2	89.99	0.0	25.4	25.4	23.0	2.47	10.284		
700.0	700.0	700.0	700.0	1.5	1.5	89.99	0.0	25.4	25.4	22.5	2.92	8.702		
800.0	800.0	800.0	800.0	1.7	1.7	89.99	0.0	25.4	25.4	22.1	3.37	7.542		
900.0	900.0	900.0	900.0	1.9	1.9	89.99	0.0	25.4	25.4	21.6	3.82	6.655		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.99	0.0	25.4	25.4	21.2	4.27	5.954		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.99	0.0	25.4	25.4	20.7	4.72	5.387		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.99	0.0	25.4	25.4	20.3	5.17	4.919		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.99	0.0	25.4	25.4	19.8	5.62	4.525		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.99	0.0	25.4	25.4	19.4	6.07	4.190		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.99	0.0	25.4	25.4	18.9	6.52	3.901 CC, ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	166.56	0.0	25.4	26.7	19.7	6.96	3.838		
1,700.0	1,699.9	1,699.9	1,699.9	3.7	3.7	168.26	0.0	25.4	30.5	23.1	7.38	4.136		
1,800.0	1,799.7	1,800.1	1,800.1	3.9	3.9	172.14	-1.1	24.7	36.4	28.6	7.78	4.674		
1,900.0	1,899.3	1,900.2	1,900.1	4.1	4.1	178.38	-4.4	22.6	43.9	35.8	8.15	5.390		
1,992.8	1,991.4	1,992.7	1,992.4	4.3	4.3	-175.19	-9.4	19.4	53.0	44.5	8.50	6.235		
2,000.0	1,998.6	1,999.9	1,999.6	4.4	4.3	-174.69	-9.9	19.1	53.8	45.3	8.53	6.307		
2,100.0	2,097.7	2,099.3	2,098.5	4.6	4.5	-167.88	-17.5	14.2	65.0	56.0	8.95	7.262		
2,200.0	2,196.9	2,198.3	2,196.9	4.9	4.7	-161.19	-27.3	7.9	76.7	67.3	9.39	8.173		
2,300.0	2,296.1	2,296.9	2,294.5	5.2	4.9	-154.70	-39.2	0.3	89.5	79.6	9.86	9.074		
2,400.0	2,395.3	2,394.9	2,391.1	5.4	5.1	-148.51	-53.0	-8.7	103.7	93.3	10.37	9.992		
2,500.0	2,494.4	2,492.6	2,487.0	5.7	5.4	-142.76	-68.8	-18.8	119.5	108.5	10.92	10.942		
2,600.0	2,593.6	2,590.6	2,583.1	6.0	5.7	-138.15	-85.0	-29.2	136.4	124.9	11.48	11.880		
2,700.0	2,692.8	2,688.7	2,679.2	6.3	6.0	-134.57	-101.3	-39.7	153.9	141.9	12.05	12.775		
2,800.0	2,791.9	2,786.7	2,775.3	6.6	6.4	-131.73	-117.5	-50.1	172.0	159.4	12.63	13.618		
2,900.0	2,891.1	2,884.8	2,871.4	6.9	6.7	-129.42	-133.8	-60.6	190.4	177.2	13.22	14.405		
3,000.0	2,990.3	2,982.8	2,967.5	7.2	7.1	-127.53	-150.0	-71.0	209.0	195.2	13.81	15.136		
3,100.0	3,089.4	3,080.8	3,063.7	7.5	7.4	-125.94	-166.3	-81.4	227.8	213.4	14.41	15.814		
3,200.0	3,188.6	3,178.9	3,159.8	7.8	7.8	-124.60	-182.5	-91.9	246.8	231.8	15.01	16.443		
3,300.0	3,287.8	3,276.9	3,255.9	8.1	8.2	-123.45	-198.8	-102.3	265.8	250.2	15.61	17.027		
3,400.0	3,386.9	3,374.9	3,352.0	8.4	8.5	-122.45	-215.0	-112.8	285.0	268.8	16.22	17.568		
3,500.0	3,486.1	3,473.0	3,448.1	8.7	8.9	-121.58	-231.3	-123.2	304.2	287.4	16.83	18.071		
3,600.0	3,585.3	3,571.0	3,544.2	9.1	9.3	-120.81	-247.5	-133.6	323.5	306.1	17.45	18.539		
3,700.0	3,684.4	3,669.0	3,640.3	9.4	9.7	-120.13	-263.8	-144.1	342.9	324.8	18.07	18.975		
3,800.0	3,783.6	3,767.1	3,736.4	9.7	10.1	-119.52	-280.0	-154.5	362.2	343.5	18.69	19.382		
3,900.0	3,882.8	3,865.1	3,832.6	10.0	10.5	-118.97	-296.3	-165.0	381.7	362.3	19.31	19.762		
4,000.0	3,982.0	3,963.1	3,928.7	10.3	10.9	-118.47	-312.5	-175.4	401.1	381.2	19.94	20.118		
4,100.0	4,081.1	4,061.2	4,024.8	10.7	11.3	-118.03	-328.8	-185.8	420.6	400.0	20.56	20.452		
4,200.0	4,180.3	4,159.2	4,120.9	11.0	11.7	-117.62	-345.0	-196.3	440.1	418.9	21.19	20.765		
4,300.0	4,279.5	4,257.2	4,217.0	11.3	12.1	-117.24	-361.2	-206.7	459.6	437.8	21.82	21.060		
4,400.0	4,378.6	4,355.3	4,313.1	11.6	12.6	-116.90	-377.5	-217.2	479.1	456.7	22.45	21.337		
4,500.0	4,477.8	4,453.3	4,409.2	11.9	13.0	-116.58	-393.7	-227.6	498.7	475.6	23.09	21.599		
4,600.0	4,577.0	4,551.3	4,505.4	12.3	13.4	-116.29	-410.0	-238.0	518.2	494.5	23.72	21.846		
4,700.0	4,676.1	4,649.4	4,601.5	12.6	13.8	-116.02	-426.2	-248.5	537.8	513.5	24.36	22.080		
4,800.0	4,775.3	4,747.4	4,697.6	12.9	14.2	-115.76	-442.5	-258.9	557.4	532.4	24.99	22.301		
4,900.0	4,874.5	4,845.4	4,793.7	13.2	14.6	-115.53	-458.7	-269.4	577.0	551.4	25.63	22.511		
5,000.0	4,973.6	4,943.5	4,889.8	13.6	15.1	-115.31	-475.0	-279.8	596.6	570.3	26.27	22.710		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
5,100.0	5,072.8	5,041.5	4,985.9	13.9	15.5	-115.10	-491.2	-290.3	616.2	589.3	26.91	22.900		
5,200.0	5,172.0	5,139.5	5,082.0	14.2	15.9	-114.91	-507.5	-300.7	635.8	608.3	27.55	23.080		
5,300.0	5,271.2	5,237.6	5,178.1	14.5	16.3	-114.73	-523.7	-311.1	655.5	627.3	28.19	23.252		
5,400.0	5,370.3	5,335.6	5,274.3	14.9	16.7	-114.56	-540.0	-321.6	675.1	646.3	28.83	23.415		
5,500.0	5,469.5	5,433.7	5,370.4	15.2	17.2	-114.39	-556.2	-332.0	694.7	665.3	29.47	23.571		
5,600.0	5,568.7	5,531.7	5,466.5	15.5	17.6	-114.24	-572.5	-342.5	714.4	684.3	30.12	23.721		
5,700.0	5,667.8	5,629.7	5,562.6	15.8	18.0	-114.10	-588.7	-352.9	734.0	703.3	30.76	23.863		
5,800.0	5,767.0	5,727.8	5,658.7	16.2	18.4	-113.96	-605.0	-363.3	753.7	722.3	31.40	24.000		
5,865.0	5,831.4	5,791.5	5,721.2	16.4	18.7	-113.88	-615.5	-370.1	766.4	734.6	31.82	24.085		
5,900.0	5,866.2	5,825.8	5,754.8	16.5	18.9	-113.94	-621.2	-373.8	773.2	741.2	32.05	24.125		
6,000.0	5,965.7	5,924.0	5,851.1	16.7	19.3	-113.96	-637.5	-384.2	791.7	759.1	32.63	24.261		
6,900.4	6,865.8	8,189.8	7,582.0	18.3	19.3	89.52	135.9	-430.8	724.0	689.3	34.76	20.830		
6,950.0	6,915.4	8,188.1	7,582.0	18.4	19.3	-113.21	134.2	-430.8	675.0	639.5	35.52	19.005		
7,000.0	6,965.1	8,182.9	7,582.0	18.4	19.3	-128.66	129.0	-430.8	626.0	589.9	36.04	17.368		
7,050.0	7,014.3	8,174.2	7,582.0	18.5	19.3	-137.83	120.3	-430.7	577.5	541.3	36.15	15.975		
7,100.0	7,062.9	8,162.2	7,582.0	18.5	19.2	-143.30	108.2	-430.6	529.9	493.9	35.95	14.738		
7,150.0	7,110.4	8,146.8	7,582.0	18.6	19.2	-146.57	92.8	-430.5	483.3	447.8	35.53	13.605		
7,200.0	7,156.8	8,128.1	7,582.0	18.6	19.1	-148.43	74.1	-430.3	438.2	403.3	34.92	12.548		
7,250.0	7,201.7	8,106.2	7,582.0	18.7	19.1	-149.27	52.2	-430.1	394.7	360.5	34.17	11.552		
7,300.0	7,245.0	8,081.2	7,582.0	18.7	19.1	-149.32	27.3	-429.9	353.1	319.8	33.32	10.597		
7,350.0	7,286.5	8,066.4	7,582.1	18.8	19.1	-150.26	13.4	-429.8	314.2	281.8	32.38	9.702		
7,400.0	7,325.9	7,994.6	7,579.0	18.8	19.2	-143.43	-58.2	-429.2	275.4	243.7	31.74	8.677		
7,450.0	7,363.0	7,952.8	7,573.4	18.9	19.2	-139.01	-99.6	-428.8	237.7	206.4	31.27	7.600		
7,500.0	7,397.8	7,913.5	7,566.0	19.0	19.3	-133.57	-138.1	-428.5	201.6	170.4	31.22	6.459		
7,550.0	7,429.9	7,876.3	7,556.9	19.1	19.4	-126.75	-174.3	-428.2	168.2	136.5	31.73	5.303		
7,600.0	7,459.3	7,840.6	7,546.5	19.2	19.5	-118.14	-208.4	-427.9	139.0	106.2	32.85	4.232		
7,650.0	7,485.9	7,806.2	7,534.9	19.3	19.6	-107.45	-240.8	-427.6	116.6	82.3	34.36	3.394		
7,700.0	7,509.4	7,772.8	7,522.2	19.5	19.7	-94.84	-271.6	-427.4	104.8	69.2	35.57	2.946		
7,719.4	7,517.6	7,760.1	7,517.0	19.6	19.7	-89.60	-283.2	-427.3	103.8	68.0	35.75	2.902 SF		
7,750.0	7,529.7	7,740.3	7,508.4	19.7	19.8	-81.22	-301.1	-427.1	106.3	70.7	35.55	2.990		
7,800.0	7,546.8	7,708.5	7,493.7	20.0	19.9	-68.08	-329.2	-426.9	119.9	86.0	33.88	3.538		
7,850.0	7,560.6	7,677.4	7,478.0	20.3	20.0	-56.62	-356.2	-426.7	141.4	110.5	30.94	4.570		
7,900.0	7,571.1	7,650.0	7,463.3	20.7	20.1	-48.00	-379.2	-426.5	167.3	139.6	27.73	6.033		
7,950.0	7,578.0	7,616.5	7,444.1	21.1	20.2	-39.97	-406.7	-426.2	195.2	171.2	24.01	8.129		
8,000.0	7,581.6	7,586.7	7,426.0	21.5	20.3	-34.25	-430.4	-426.0	224.0	203.1	20.90	10.715		
8,025.4	7,582.0	7,571.7	7,416.5	21.8	20.4	-31.85	-442.0	-425.9	238.6	219.1	19.51	12.232		
8,026.1	7,582.0	7,571.3	7,416.2	21.8	20.4	-31.81	-442.3	-425.9	239.0	219.5	19.49	12.263		
8,026.8	7,582.0	7,570.8	7,415.9	21.8	20.4	-31.77	-442.6	-425.9	239.4	220.0	19.48	12.293		
8,100.0	7,582.0	7,529.8	7,388.7	22.5	20.5	-27.98	-473.3	-425.7	284.0	265.9	18.07	15.718		
8,200.0	7,582.0	7,480.2	7,353.5	23.6	20.7	-24.15	-508.2	-425.4	351.1	334.2	16.90	20.779		
8,300.0	7,582.0	7,437.0	7,321.0	24.9	20.8	-21.40	-536.6	-425.1	423.7	407.4	16.31	25.981		
8,400.0	7,582.0	7,400.0	7,291.7	26.2	21.0	-19.39	-559.3	-425.0	500.7	484.6	16.13	31.043		
8,500.0	7,582.0	7,366.4	7,264.3	27.6	21.1	-17.81	-578.6	-424.8	581.1	564.9	16.18	35.911		
8,600.0	7,582.0	7,337.5	7,239.9	29.0	21.1	-16.59	-594.2	-424.7	664.2	647.8	16.43	40.436		
8,700.0	7,582.0	7,300.0	7,207.4	30.6	21.2	-15.21	-612.9	-424.5	749.8	733.2	16.60	45.155		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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	0.0	0.0	0.0	0.0	89.37	1.1	100.6	100.6					
100.0	100.0	99.0	99.0	0.1	0.1	89.37	1.1	100.6	100.6	100.4	0.22	449.866		
200.0	200.0	199.0	199.0	0.3	0.3	89.37	1.1	100.6	100.6	99.9	0.67	149.706		
300.0	300.0	299.0	299.0	0.6	0.6	89.37	1.1	100.6	100.6	99.5	1.12	89.704		
400.0	400.0	399.0	399.0	0.8	0.8	89.37	1.1	100.6	100.6	99.0	1.57	64.037		
500.0	500.0	499.0	499.0	1.0	1.0	89.37	1.1	100.6	100.6	98.6	2.02	49.791		
600.0	600.0	599.0	599.0	1.2	1.2	89.37	1.1	100.6	100.6	98.1	2.47	40.730		
700.0	700.0	699.0	699.0	1.5	1.5	89.37	1.1	100.6	100.6	97.7	2.92	34.459		
800.0	800.0	799.0	799.0	1.7	1.7	89.37	1.1	100.6	100.6	97.2	3.37	29.861		
900.0	900.0	899.0	899.0	1.9	1.9	89.37	1.1	100.6	100.6	96.8	3.82	26.346		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.37	1.1	100.6	100.6	96.3	4.27	23.571		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.37	1.1	100.6	100.6	95.9	4.72	21.325		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.37	1.1	100.6	100.6	95.4	5.17	19.470		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.37	1.1	100.6	100.6	95.0	5.62	17.912		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.37	1.1	100.6	100.6	94.5	6.07	16.585		
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	89.37	1.1	100.6	100.6	94.1	6.52	15.441	CC, ES	
1,600.0	1,600.0	1,596.7	1,596.7	3.5	3.5	165.09	1.7	101.7	103.0	96.0	6.94	14.831		
1,700.0	1,699.9	1,694.1	1,694.1	3.7	3.7	164.60	3.6	104.8	110.0	102.7	7.35	14.967		
1,800.0	1,799.7	1,792.6	1,792.4	3.9	3.9	164.02	6.6	109.7	121.4	113.6	7.77	15.630		
1,900.0	1,899.3	1,891.7	1,891.2	4.1	4.1	163.80	9.6	114.8	135.3	127.2	8.18	16.551		
1,992.8	1,991.4	1,983.2	1,982.6	4.3	4.3	163.87	12.4	119.5	150.5	142.0	8.56	17.589		
2,000.0	1,998.6	1,990.3	1,989.7	4.4	4.3	163.89	12.6	119.8	151.8	143.2	8.59	17.673		
2,100.0	2,097.7	2,088.7	2,088.0	4.6	4.6	164.12	15.6	124.8	169.3	160.3	9.02	18.778		
2,200.0	2,196.9	2,187.2	2,186.2	4.9	4.8	164.30	18.7	129.9	186.8	177.4	9.45	19.773		
2,300.0	2,296.1	2,285.6	2,284.5	5.2	5.0	164.46	21.7	134.9	204.3	194.4	9.88	20.674		
2,400.0	2,395.3	2,384.1	2,382.8	5.4	5.2	164.59	24.7	139.9	221.8	211.5	10.32	21.492		
2,500.0	2,494.4	2,482.6	2,481.1	5.7	5.5	164.70	27.7	144.9	239.3	228.6	10.76	22.237		
2,600.0	2,593.6	2,581.0	2,579.4	6.0	5.7	164.79	30.7	149.9	256.9	245.7	11.21	22.918		
2,700.0	2,692.8	2,679.5	2,677.6	6.3	5.9	164.87	33.7	155.0	274.4	262.7	11.65	23.543		
2,800.0	2,791.9	2,777.9	2,775.9	6.6	6.2	164.95	36.7	160.0	291.9	279.8	12.10	24.118		
2,900.0	2,891.1	2,876.4	2,874.2	6.9	6.4	165.01	39.8	165.0	309.4	296.9	12.55	24.648		
3,000.0	2,990.3	2,974.8	2,972.5	7.2	6.6	165.07	42.8	170.0	326.9	313.9	13.01	25.139		
3,100.0	3,089.4	3,073.3	3,070.8	7.5	6.9	165.12	45.8	175.1	344.5	331.0	13.46	25.593		
3,200.0	3,188.6	3,171.7	3,169.0	7.8	7.1	165.17	48.8	180.1	362.0	348.1	13.91	26.016		
3,300.0	3,287.8	3,270.2	3,267.3	8.1	7.4	165.21	51.8	185.1	379.5	365.1	14.37	26.410		
3,400.0	3,386.9	3,368.6	3,365.6	8.4	7.6	165.25	54.8	190.1	397.0	382.2	14.83	26.777		
3,500.0	3,486.1	3,467.1	3,463.9	8.7	7.8	165.29	57.8	195.1	414.5	399.3	15.28	27.121		
3,600.0	3,585.3	3,565.5	3,562.1	9.1	8.1	165.32	60.8	200.2	432.1	416.3	15.74	27.444		
3,700.0	3,684.4	3,664.0	3,660.4	9.4	8.3	165.35	63.9	205.2	449.6	433.4	16.20	27.746		
3,800.0	3,783.6	3,762.4	3,758.7	9.7	8.5	165.38	66.9	210.2	467.1	450.4	16.66	28.031		
3,900.0	3,882.8	3,860.9	3,857.0	10.0	8.8	165.40	69.9	215.2	484.6	467.5	17.12	28.300		
4,000.0	3,982.0	3,959.3	3,955.3	10.3	9.0	165.43	72.9	220.3	502.1	484.6	17.59	28.553		
4,100.0	4,081.1	4,057.8	4,053.5	10.7	9.3	165.45	75.9	225.3	519.7	501.6	18.05	28.792		
4,200.0	4,180.3	4,156.3	4,151.8	11.0	9.5	165.47	78.9	230.3	537.2	518.7	18.51	29.019		
4,300.0	4,279.5	4,254.7	4,250.1	11.3	9.8	165.49	81.9	235.3	554.7	535.7	18.97	29.234		
4,400.0	4,378.6	4,353.2	4,348.4	11.6	10.0	165.51	84.9	240.3	572.2	552.8	19.44	29.437		
4,500.0	4,477.8	4,451.6	4,446.7	11.9	10.2	165.52	88.0	245.4	589.7	569.8	19.90	29.631		
4,600.0	4,577.0	4,550.1	4,544.9	12.3	10.5	165.54	91.0	250.4	607.3	586.9	20.37	29.815		
4,700.0	4,676.1	4,648.5	4,643.2	12.6	10.7	165.56	94.0	255.4	624.8	604.0	20.83	29.991		
4,800.0	4,775.3	4,747.0	4,741.5	12.9	11.0	165.57	97.0	260.4	642.3	621.0	21.30	30.158		
4,900.0	4,874.5	4,845.4	4,839.8	13.2	11.2	165.59	100.0	265.5	659.8	638.1	21.76	30.318		
5,000.0	4,973.6	4,943.9	4,938.0	13.6	11.4	165.60	103.0	270.5	677.4	655.1	22.23	30.471		

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 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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		
5,100.0	5,072.8	5,042.3	5,036.3	13.9	11.7	165.61	106.0	275.5	694.9	672.2	22.70	30.617		
5,200.0	5,172.0	5,140.8	5,134.6	14.2	11.9	165.62	109.1	280.5	712.4	689.2	23.16	30.756		
5,300.0	5,271.2	5,239.2	5,232.9	14.5	12.2	165.63	112.1	285.5	729.9	706.3	23.63	30.890		
5,400.0	5,370.3	5,337.7	5,331.2	14.9	12.4	165.64	115.1	290.6	747.4	723.3	24.10	31.018		
5,500.0	5,469.5	5,436.1	5,429.4	15.2	12.7	165.65	118.1	295.6	765.0	740.4	24.56	31.142		
5,600.0	5,568.7	5,534.6	5,527.7	15.5	12.9	165.66	121.1	300.6	782.5	757.4	25.03	31.260		
5,700.0	5,667.8	5,633.0	5,626.0	15.8	13.1	165.67	124.1	305.6	800.0	774.5	25.50	31.374		
14,000.0	7,582.0	13,973.4	7,582.0	128.1	127.7	-90.07	-6,551.7	358.6	799.7	544.3	255.43	3.131		
14,100.0	7,582.0	14,073.4	7,582.0	130.0	129.6	-90.07	-6,651.7	359.1	798.7	539.5	259.26	3.081		
14,200.0	7,582.0	14,173.4	7,582.0	131.9	131.5	-90.07	-6,751.7	359.5	797.7	534.6	263.09	3.032		
14,300.0	7,582.0	14,273.4	7,582.0	133.8	133.4	-90.07	-6,851.7	359.9	796.7	529.8	266.92	2.985		
14,400.0	7,582.0	14,373.4	7,582.0	135.7	135.3	-90.07	-6,951.7	360.3	795.7	524.9	270.75	2.939		
14,500.0	7,582.0	14,473.4	7,582.0	137.6	137.2	-90.07	-7,051.7	360.8	794.7	520.1	274.59	2.894		
14,600.0	7,582.0	14,573.4	7,582.0	139.6	139.1	-90.07	-7,151.7	361.2	793.7	515.2	278.42	2.851		
14,700.0	7,582.0	14,673.4	7,582.0	141.5	141.1	-90.07	-7,251.7	361.6	792.7	510.4	282.26	2.808		
14,800.0	7,582.0	14,773.4	7,582.0	143.4	143.0	-90.07	-7,351.7	362.0	791.6	505.5	286.09	2.767		
14,900.0	7,582.0	14,873.4	7,582.0	145.3	144.9	-90.07	-7,451.7	362.5	790.6	500.7	289.93	2.727		
15,000.0	7,582.0	14,973.4	7,582.0	147.2	146.8	-90.07	-7,551.7	362.9	789.6	495.9	293.77	2.688		
15,100.0	7,582.0	15,073.4	7,582.0	149.1	148.7	-90.07	-7,651.7	363.3	788.6	491.0	297.60	2.650		
15,200.0	7,582.0	15,173.4	7,582.0	151.1	150.6	-90.07	-7,751.7	363.7	787.6	486.2	301.44	2.613		
15,300.0	7,582.0	15,273.3	7,582.0	153.0	152.6	-90.07	-7,851.7	364.2	786.6	481.3	305.28	2.577		
15,400.0	7,582.0	15,373.3	7,582.0	154.9	154.5	-90.07	-7,951.7	364.6	785.6	476.5	309.12	2.541		
15,500.0	7,582.0	15,473.3	7,582.0	156.8	156.4	-90.07	-8,051.7	365.0	784.6	471.6	312.96	2.507		
15,600.0	7,582.0	15,573.3	7,582.0	158.7	158.3	-90.07	-8,151.7	365.4	783.6	466.8	316.80	2.473		
15,700.0	7,582.0	15,673.3	7,582.0	160.6	160.2	-90.07	-8,251.6	365.9	782.5	461.9	320.64	2.441		
15,800.0	7,582.0	15,773.3	7,582.0	162.6	162.2	-90.07	-8,351.6	366.3	781.5	457.1	324.48	2.409		
15,900.0	7,582.0	15,873.3	7,582.0	164.5	164.1	-90.07	-8,451.6	366.7	780.5	452.2	328.32	2.377		
16,000.0	7,582.0	15,973.3	7,582.0	166.4	166.0	-90.07	-8,551.6	367.1	779.5	447.3	332.17	2.347		
16,100.0	7,582.0	16,073.3	7,582.0	168.3	167.9	-90.07	-8,651.6	367.6	778.5	442.5	336.01	2.317		
16,200.0	7,582.0	16,173.3	7,582.0	170.2	169.8	-90.07	-8,751.6	368.0	777.5	437.6	339.85	2.288		
16,300.0	7,582.0	16,273.3	7,582.0	172.2	171.7	-90.07	-8,851.6	368.4	776.5	432.8	343.69	2.259		
16,400.0	7,582.0	16,373.3	7,582.0	174.1	173.7	-90.07	-8,951.6	368.8	775.5	427.9	347.54	2.231		
16,500.0	7,582.0	16,473.3	7,582.0	176.0	175.6	-90.07	-9,051.6	369.2	774.5	423.1	351.38	2.204		
16,600.0	7,582.0	16,573.3	7,582.0	177.9	177.5	-90.07	-9,151.6	369.7	773.4	418.2	355.23	2.177		
16,700.0	7,582.0	16,673.3	7,582.0	179.9	179.4	-90.07	-9,251.6	370.1	772.4	413.4	359.07	2.151		
16,800.0	7,582.0	16,773.3	7,582.0	181.8	181.3	-90.07	-9,351.6	370.5	771.4	408.5	362.92	2.126		
16,900.0	7,582.0	16,873.3	7,582.0	183.7	183.3	-90.07	-9,451.6	370.9	770.4	403.6	366.76	2.101		
17,000.0	7,582.0	16,973.3	7,582.0	185.6	185.2	-90.07	-9,551.6	371.4	769.4	398.8	370.61	2.076		
17,100.0	7,582.0	17,073.3	7,582.0	187.5	187.1	-90.07	-9,651.6	371.8	768.4	393.9	374.46	2.052		
17,200.0	7,582.0	17,173.3	7,582.0	189.5	189.0	-90.07	-9,751.6	372.2	767.4	389.1	378.30	2.028		
17,300.0	7,582.0	17,273.2	7,582.0	191.4	191.0	-90.07	-9,851.5	372.6	766.4	384.2	382.15	2.005		
17,400.0	7,582.0	17,373.2	7,582.0	193.3	192.9	-90.07	-9,951.5	373.1	765.4	379.4	386.00	1.983		
17,500.0	7,582.0	17,473.2	7,582.0	195.2	194.8	-90.07	-10,051.5	373.5	764.3	374.5	389.85	1.961		
17,600.0	7,582.0	17,573.2	7,582.0	197.2	196.7	-90.08	-10,151.5	373.9	763.3	369.6	393.69	1.939		
17,700.0	7,582.0	17,673.2	7,582.0	199.1	198.6	-90.08	-10,251.5	374.3	762.3	364.8	397.54	1.918		
17,800.0	7,582.0	17,773.2	7,582.0	201.0	200.6	-90.08	-10,351.5	374.8	761.3	359.9	401.39	1.897		
17,900.0	7,582.0	17,873.2	7,582.0	202.9	202.5	-90.08	-10,451.5	375.2	760.3	355.1	405.24	1.876		
17,972.9	7,582.0	17,945.3	7,582.0	204.3	203.9	-90.08	-10,523.6	375.5	759.6	351.5	408.03	1.862 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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-MWDD												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	0.0	0.0	0.0	0.0	89.61	5.1	750.1	750.1				
100.0	100.0	98.0	98.0	0.1	0.1	89.61	5.1	750.1	750.1	749.9	0.22	3,371.008	
200.0	200.0	198.0	198.0	0.3	0.3	89.61	5.1	750.1	750.1	749.5	0.67	1,119.919	
300.0	300.0	298.0	298.0	0.6	0.6	89.61	5.1	750.1	750.1	749.0	1.12	670.152	
400.0	400.0	398.0	398.0	0.8	0.8	89.61	5.1	750.1	750.1	748.6	1.57	478.132	
500.0	500.0	498.0	498.0	1.0	1.0	89.61	5.1	750.1	750.1	748.1	2.02	371.643	
600.0	600.0	598.0	598.0	1.2	1.2	89.61	5.1	750.1	750.1	747.7	2.47	303.949	
700.0	700.0	698.0	698.0	1.5	1.5	89.61	5.1	750.1	750.1	747.2	2.92	257.115	
800.0	800.0	798.0	798.0	1.7	1.7	89.61	5.1	750.1	750.1	746.8	3.37	222.788	
900.0	900.0	898.0	898.0	1.9	1.9	89.61	5.1	750.1	750.1	746.3	3.82	196.546	
1,000.0	1,000.0	998.0	998.0	2.1	2.1	89.61	5.1	750.1	750.1	745.9	4.27	175.836	
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	89.61	5.1	750.1	750.1	745.4	4.72	159.073	
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	89.61	5.1	750.1	750.1	745.0	5.17	145.229	
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	89.61	5.1	750.1	750.1	744.5	5.61	133.601	
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	89.61	5.1	750.1	750.1	744.1	6.06	123.697	
1,500.0	1,500.0	1,498.0	1,498.0	3.3	3.3	89.61	5.1	750.1	750.1	743.6	6.51	115.161	CC, ES
1,600.0	1,600.0	1,598.0	1,598.0	3.5	3.5	165.52	5.1	750.1	751.4	744.4	6.95	108.090	
1,700.0	1,699.9	1,697.9	1,697.9	3.7	3.7	165.58	5.1	750.1	755.2	747.8	7.38	102.362	
1,800.0	1,799.7	1,797.7	1,797.7	3.9	3.9	165.68	5.1	750.1	761.5	753.7	7.80	97.604	
1,900.0	1,899.3	1,897.3	1,897.3	4.1	4.2	165.81	5.1	750.1	770.4	762.2	8.22	93.672	
1,992.8	1,991.4	1,989.4	1,989.4	4.3	4.4	165.97	5.1	750.1	780.9	772.3	8.61	90.659	
2,000.0	1,998.6	1,996.6	1,996.6	4.4	4.4	165.98	5.1	750.1	781.8	773.2	8.64	90.434	
2,100.0	2,097.7	2,095.7	2,095.7	4.6	4.6	166.21	5.1	750.1	794.3	785.2	9.08	87.461	SF

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 18-22H (Exist) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft
Survey Program:		1365-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)			
10,900.0	7,582.0	10,861.4	7,316.3	69.3	87.0	56.44	-3,976.3	-913.2	733.2	610.2	122.92	5.965		
11,000.0	7,582.0	10,945.0	7,316.8	71.2	89.0	52.11	-4,028.1	-847.7	662.3	541.9	120.41	5.500		
11,100.0	7,582.0	11,022.3	7,317.9	73.1	90.9	47.16	-4,075.1	-786.3	592.3	476.1	116.19	5.098		
11,200.0	7,582.0	11,084.1	7,318.4	74.9	92.4	42.24	-4,111.6	-736.4	523.6	412.6	111.00	4.717		
11,300.0	7,582.0	11,151.4	7,317.8	76.8	94.0	35.61	-4,150.2	-681.3	458.2	355.9	102.33	4.478		
11,400.0	7,582.0	11,219.1	7,317.3	78.7	95.7	27.44	-4,186.9	-624.4	397.1	306.8	90.28	4.398		
11,500.0	7,582.0	11,275.5	7,316.8	80.6	97.1	19.40	-4,216.0	-576.1	344.6	266.1	78.50	4.389		
11,600.0	7,582.0	11,324.3	7,315.7	82.5	98.2	11.67	-4,240.7	-534.1	307.3	238.3	68.99	4.454		
11,700.0	7,582.0	11,372.0	7,314.2	84.3	99.4	3.71	-4,264.6	-492.8	291.6	228.2	63.41	4.599 ES		
11,711.5	7,582.0	11,377.0	7,314.0	84.6	99.5	2.87	-4,267.0	-488.5	291.4	228.2	63.18	4.612 CC		
11,800.0	7,582.0	11,418.6	7,311.7	86.2	100.5	-4.10	-4,287.9	-452.6	301.6	237.3	64.32	4.689		
11,900.0	7,582.0	11,491.1	7,309.0	88.1	102.3	-15.51	-4,326.1	-390.9	332.8	256.0	76.79	4.334		
12,000.0	7,582.0	11,548.1	7,309.2	90.0	103.7	-23.70	-4,356.5	-342.8	378.4	286.8	91.55	4.133		
12,100.0	7,582.0	11,600.0	7,309.0	91.9	104.9	-30.34	-4,384.4	-299.0	435.5	330.1	105.42	4.131 SF		
12,200.0	7,582.0	11,647.4	7,308.4	93.8	106.1	-35.67	-4,409.7	-258.9	500.7	383.4	117.30	4.268		
12,300.0	7,582.0	11,692.3	7,306.4	95.7	107.2	-40.00	-4,433.6	-220.9	571.7	444.4	127.33	4.490		
12,400.0	7,582.0	11,760.0	7,305.1	97.6	108.9	-45.73	-4,468.9	-163.3	645.7	505.7	140.06	4.610		
12,500.0	7,582.0	11,807.8	7,305.6	99.5	110.1	-49.31	-4,493.7	-122.4	721.6	573.2	148.43	4.862		
12,600.0	7,582.0	11,851.0	7,305.6	101.4	111.1	-52.13	-4,515.9	-85.3	799.8	644.6	155.27	5.151		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 22-27H (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1339-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,000.0	7,582.0	9,971.0	7,273.0	147.2	72.4	58.47	-8,054.1	-928.1	773.1	598.2	174.95	4.419		
15,100.0	7,582.0	10,048.9	7,270.9	149.1	74.3	55.29	-8,108.4	-872.4	710.0	537.2	172.79	4.109		
15,200.0	7,582.0	10,115.0	7,269.1	151.1	75.9	52.15	-8,154.2	-824.7	647.9	478.0	169.95	3.812		
15,300.0	7,582.0	10,187.5	7,267.9	153.0	77.7	48.28	-8,205.2	-773.1	588.3	423.0	165.31	3.559		
15,400.0	7,582.0	10,262.7	7,267.7	154.9	79.6	43.65	-8,257.7	-719.3	530.4	372.0	158.39	3.349		
15,500.0	7,582.0	10,332.9	7,267.3	156.8	81.3	38.57	-8,306.9	-669.3	476.2	326.6	149.58	3.183		
15,600.0	7,582.0	10,400.0	7,267.2	158.7	83.0	32.99	-8,354.2	-621.6	426.7	287.9	138.84	3.073		
15,700.0	7,582.0	10,473.3	7,267.1	160.6	84.8	26.11	-8,406.5	-570.3	384.3	259.6	124.63	3.083		
15,800.0	7,582.0	10,543.9	7,266.9	162.6	86.5	18.63	-8,457.1	-521.0	350.4	240.8	109.61	3.197		
15,900.0	7,582.0	10,616.6	7,267.1	164.5	88.3	10.26	-8,509.4	-470.6	327.5	231.5	95.94	3.413		
16,000.0	7,582.0	10,687.9	7,266.6	166.4	90.0	1.67	-8,561.1	-421.6	318.6	229.1	89.46	3.561		
16,016.3	7,582.0	10,701.7	7,266.5	166.7	90.4	-0.01	-8,571.2	-412.1	318.5	229.1	89.40	3.562 CC		
16,100.0	7,582.0	10,765.0	7,266.9	168.3	91.9	-7.70	-8,617.1	-368.4	323.2	228.5	94.69	3.413 ES		
16,200.0	7,582.0	10,836.5	7,267.2	170.2	93.7	-16.09	-8,668.8	-319.1	341.4	231.9	109.46	3.119		
16,300.0	7,582.0	10,903.2	7,266.5	172.2	95.3	-23.29	-8,716.9	-272.9	372.5	245.3	127.21	2.929		
16,400.0	7,582.0	10,978.6	7,265.6	174.1	97.2	-30.59	-8,771.0	-220.4	412.9	265.3	147.61	2.797		
16,500.0	7,582.0	11,048.4	7,265.4	176.0	98.9	-36.55	-8,820.8	-171.5	459.9	294.7	165.26	2.783 SF		
16,600.0	7,582.0	11,117.2	7,265.0	177.9	100.6	-41.69	-8,869.5	-122.8	512.6	331.8	180.75	2.836		
16,700.0	7,582.0	11,195.8	7,265.4	179.9	102.5	-46.77	-8,924.8	-67.1	568.7	372.8	195.92	2.903		
16,800.0	7,582.0	11,259.0	7,266.4	181.8	104.1	-50.36	-8,969.0	-21.8	627.8	420.9	206.87	3.035		
16,900.0	7,582.0	11,337.3	7,266.9	183.7	106.1	-54.12	-9,023.8	34.1	689.1	471.1	218.06	3.160		
17,000.0	7,582.0	11,402.6	7,267.2	185.6	107.7	-56.77	-9,069.9	80.3	751.7	525.3	226.36	3.321		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 562-1527H
Project:	Sec.15-T11N-R63W	TVD Reference:	WELL @ 5241.0ft (Original Well Elev)
Reference Site:	Critter Creek Pad 15-11N-63W	MD Reference:	WELL @ 5241.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 562-1527H	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 Depths are relative to WELL @ 5241.0ft (Original Well Elev)

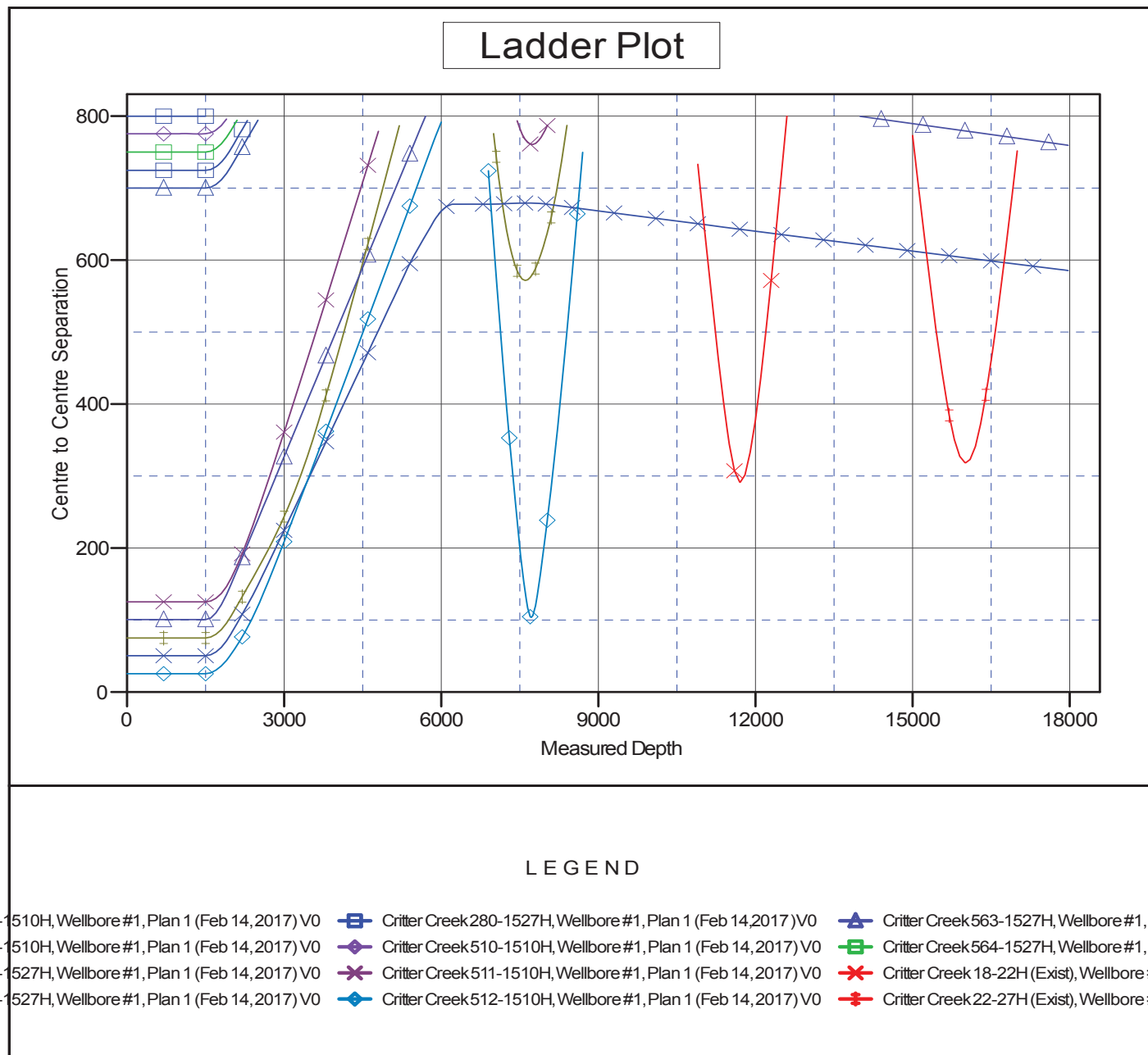
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Critter Creek 562-1527H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.70°



Company: Fifth Creek Energy Company, LLC
Project: Sec.15-T11N-R63W
Reference Site: Critter Creek Pad 15-11N-63W
Site Error: 0.0 ft
Reference Well: Critter Creek 562-1527H
Well Error: 0.0 ft
Reference Wellbore Wellbore #1
Reference Design: Plan 1 (Feb 14, 2017)

Local Co-ordinate Reference: Well Critter Creek 562-1527H
TVD Reference: WELL @ 5241.0ft (Original Well Elev)
MD Reference: WELL @ 5241.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: US_EDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5241.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

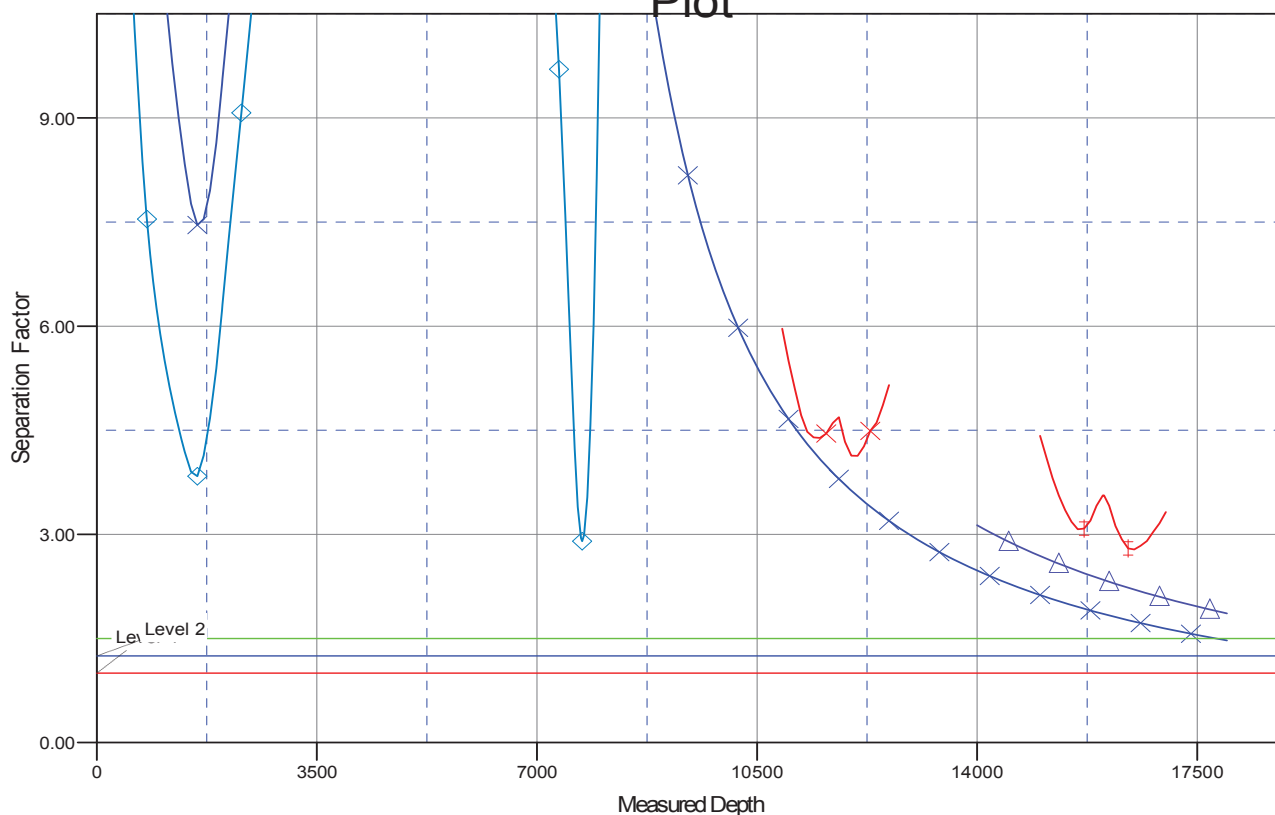
Central Meridian is -105.500000

Coordinates are relative to: Critter Creek 562-1527H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.70°

Separation Factor Plot



LEGEND

1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0
1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	1-1510H, Wellbore #1, Plan 1 (Feb 14, 2017) V0
3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0
3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0	3-1527H, Wellbore #1, Plan 1 (Feb 14, 2017) V0