

Fifth Creek Energy Company, LLC

Well Name: **Critter Creek 537-1807H**

Surface Location: Critter Creek 18 SW Pad Sec.18-T11N-R63W

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

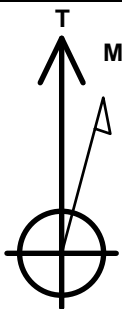
Ground Elevation: 5336.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1578010.64	3281241.30	40.915578	-104.482433	

Original Well Elev WELL @ 5359.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 205'FSL & 803'FWL, Sec.18	1.0	0.0	0.0	Point
BHL 300'FNL & 700'FWL, Sec.7	7702.0	10090.2	-107.5	Point
LP 300'FSL & 700'FWL, Sec.18	7702.0	94.0	-103.1	Point



Azimuths to True North
Magnetic North: 7.98°

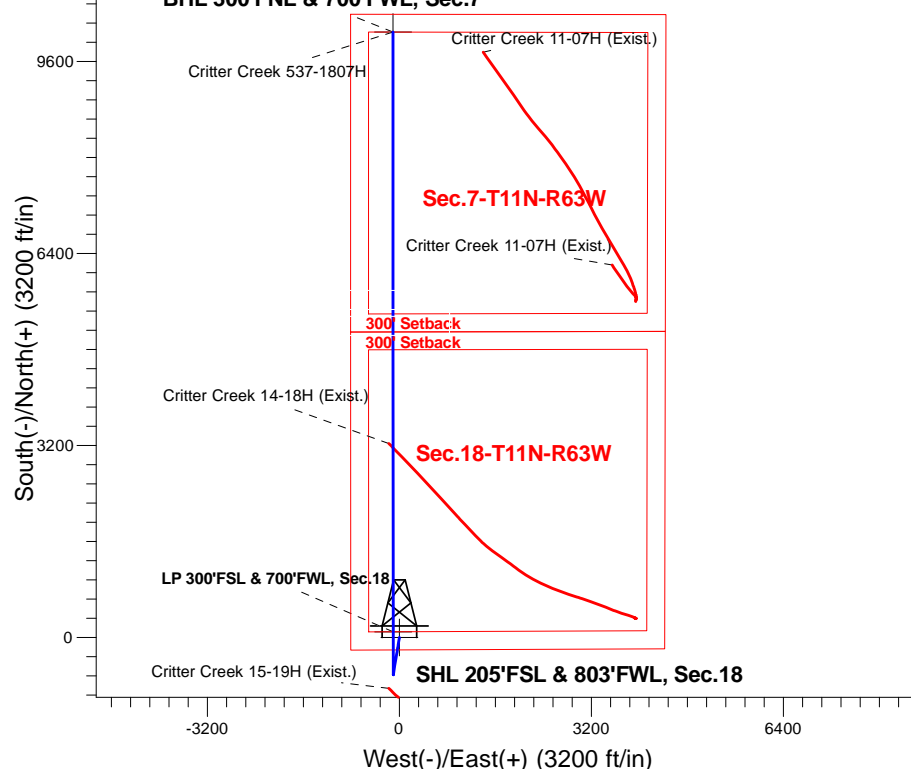
Magnetic Field
Strength: 52820.9snT
Dip Angle: 67.31°
Date: 3/1/2017
Model: IGRF2010

Critter Creek 18 SW Pad Sec.18-T11N-R63W
Critter Creek 537-1807H
Plan #1 (3-1-17)
17:18, March 01 2017

ANNOTATIONS

TVD	MD	Annotation
1700.0	1700.0	KOP - Start Build 1.50
5523.9	5571.8	Start Drop -2.00
6986.0	7036.1	KOP #2 - Start Build 8.00
7702.0	18157.1	TD at 18157.1

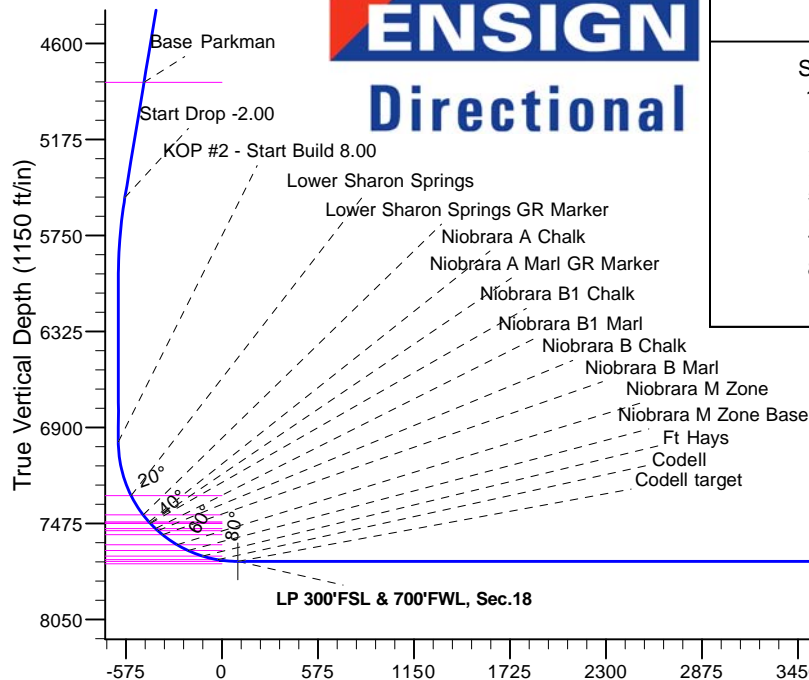
BHL 300'FNL & 700'FWL, Sec.7



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
3	2337.8	9.57	189.38	2334.8	-52.4	-8.7	1.50	189.38	-52.3	
4	5571.8	9.57	189.38	5523.9	-582.7	-96.2	0.00	0.00	-581.6	
5	6050.2	0.00	0.00	6000.0	-622.0	-102.7	2.00	180.00	-620.9	
6	7036.1	0.00	0.00	6986.0	-622.0	-102.7	0.00	0.00	-620.9	
7	8160.9	90.00	359.97	7702.0	94.0	-103.1	8.00	359.97	95.1	
8	8160.9	90.00	359.97	7702.0	94.0	-103.1	0.00	0.00	95.1	LP 300'FSL & 700'FWL, Sec.18
9	18157.1	90.00	359.98	7702.0	10090.2	-107.5	0.00	90.00	10090.8	BHL 300'FNL & 700'FWL, Sec.7

ENSIGN
Directional



BHL 300'FNL & 700'FWL, Sec.7

TD at 18157.1

Vertical Section at 359.39° (1150 ft/in)



Fifth Creek Energy Company, LLC

Sec.18-T11N-R63W

Critter Creek 18 SW Pad Sec.18-T11N-R63W

Critter Creek 537-1807H

Wellbore #1

Plan: Plan #1 (3-1-17)

Standard Planning Report

01 March, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Project:	Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

Project	Sec.18-T11N-R63W, Weld County, CO		
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 18 SW Pad Sec.18-T11N-R63W			
Site Position:		Northing:	1,578,012.90 usft	Latitude:	40.915581
From:	Lat/Long	Easting:	3,281,341.06 usft	Longitude:	-104.482072
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.66

Well	Critter Creek 537-1807H					
Well Position	+N/-S	-1.1 ft	Northing:	1,578,010.63 usft	Latitude:	40.915578
	+E/-W	-99.8 ft	Easting:	3,281,241.30 usft	Longitude:	-104.482433
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,336.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/1/2017	7.98	67.31	52,821

Design	Plan #1 (3-1-17)			
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	359.39

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,337.8	9.57	189.38	2,334.8	-52.4	-8.7	1.50	1.50	0.00	189.38	
5,571.8	9.57	189.38	5,523.9	-582.7	-96.2	0.00	0.00	0.00	0.00	
6,050.2	0.00	0.00	6,000.0	-622.0	-102.7	2.00	-2.00	0.00	180.00	
7,036.1	0.00	0.00	6,986.0	-622.0	-102.7	0.00	0.00	0.00	0.00	
8,160.9	90.00	359.97	7,702.0	94.0	-103.1	8.00	8.00	0.00	359.97	
8,160.9	90.00	359.97	7,702.0	94.0	-103.1	0.00	0.00	0.00	0.00	LP 300'FSL & 700'FW
18,157.1	90.00	359.98	7,702.0	10,090.2	-107.5	0.00	0.00	0.00	90.00	BHL 300'FNL & 700'F

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Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 205'FSL & 803'FWL, Sec.18									
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
9 5/8"									
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,608.0	0.00	0.00	1,608.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre C&D Sand									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,800.0	1.50	189.38	1,800.0	-1.3	-0.2	-1.3	1.50	1.50	0.00
1,900.0	3.00	189.38	1,899.9	-5.2	-0.9	-5.2	1.50	1.50	0.00
2,000.0	4.50	189.38	1,999.7	-11.6	-1.9	-11.6	1.50	1.50	0.00
2,100.0	6.00	189.38	2,099.3	-20.6	-3.4	-20.6	1.50	1.50	0.00
2,200.0	7.50	189.38	2,198.6	-32.2	-5.3	-32.2	1.50	1.50	0.00
2,300.0	9.00	189.38	2,297.5	-46.4	-7.7	-46.3	1.50	1.50	0.00
2,337.8	9.57	189.38	2,334.8	-52.4	-8.7	-52.3	1.50	1.50	0.00
2,388.7	9.57	189.38	2,385.0	-60.8	-10.0	-60.6	0.00	0.00	0.00
Base Pierre C&D Sand									
2,400.0	9.57	189.38	2,396.2	-62.6	-10.3	-62.5	0.00	0.00	0.00
2,500.0	9.57	189.38	2,494.8	-79.0	-13.0	-78.9	0.00	0.00	0.00
2,600.0	9.57	189.38	2,593.4	-95.4	-15.8	-95.2	0.00	0.00	0.00
2,700.0	9.57	189.38	2,692.0	-111.8	-18.5	-111.6	0.00	0.00	0.00
2,800.0	9.57	189.38	2,790.6	-128.2	-21.2	-128.0	0.00	0.00	0.00
2,815.6	9.57	189.38	2,806.0	-130.8	-21.6	-130.5	0.00	0.00	0.00
Pierre B Sand									
2,886.6	9.57	189.38	2,876.0	-142.4	-23.5	-142.1	0.00	0.00	0.00
Base Pierre B Sand									
2,900.0	9.57	189.38	2,889.2	-144.6	-23.9	-144.3	0.00	0.00	0.00
3,000.0	9.57	189.38	2,987.8	-161.0	-26.6	-160.7	0.00	0.00	0.00
3,100.0	9.57	189.38	3,086.4	-177.4	-29.3	-177.1	0.00	0.00	0.00
3,200.0	9.57	189.38	3,185.1	-193.8	-32.0	-193.4	0.00	0.00	0.00
3,300.0	9.57	189.38	3,283.7	-210.2	-34.7	-209.8	0.00	0.00	0.00
3,400.0	9.57	189.38	3,382.3	-226.6	-37.4	-226.2	0.00	0.00	0.00
3,500.0	9.57	189.38	3,480.9	-243.0	-40.1	-242.5	0.00	0.00	0.00
3,600.0	9.57	189.38	3,579.5	-259.4	-42.8	-258.9	0.00	0.00	0.00
3,635.0	9.57	189.38	3,614.0	-265.1	-43.8	-264.6	0.00	0.00	0.00
Pierre A Sand									
3,700.0	9.57	189.38	3,678.1	-275.8	-45.5	-275.3	0.00	0.00	0.00

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Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

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)
3,800.0	9.57	189.38	3,776.7	-292.2	-48.2	-291.6	0.00	0.00	0.00
3,900.0	9.57	189.38	3,875.3	-308.6	-50.9	-308.0	0.00	0.00	0.00
4,000.0	9.57	189.38	3,973.9	-325.0	-53.7	-324.4	0.00	0.00	0.00
4,088.3	9.57	189.38	4,061.0	-339.4	-56.0	-338.8	0.00	0.00	0.00
Base Pierre A Sand									
4,100.0	9.57	189.38	4,072.5	-341.4	-56.4	-340.7	0.00	0.00	0.00
4,200.0	9.57	189.38	4,171.1	-357.8	-59.1	-357.1	0.00	0.00	0.00
4,300.0	9.57	189.38	4,269.8	-374.2	-61.8	-373.5	0.00	0.00	0.00
4,397.6	9.57	189.38	4,366.0	-390.2	-64.4	-389.4	0.00	0.00	0.00
Parkman									
4,400.0	9.57	189.38	4,368.4	-390.6	-64.5	-389.8	0.00	0.00	0.00
4,500.0	9.57	189.38	4,467.0	-406.9	-67.2	-406.2	0.00	0.00	0.00
4,600.0	9.57	189.38	4,565.6	-423.3	-69.9	-422.6	0.00	0.00	0.00
4,700.0	9.57	189.38	4,664.2	-439.7	-72.6	-438.9	0.00	0.00	0.00
4,800.0	9.57	189.38	4,762.8	-456.1	-75.3	-455.3	0.00	0.00	0.00
4,871.2	9.57	189.38	4,833.0	-467.8	-77.2	-467.0	0.00	0.00	0.00
Base Parkman									
4,900.0	9.57	189.38	4,861.4	-472.5	-78.0	-471.7	0.00	0.00	0.00
5,000.0	9.57	189.38	4,960.0	-488.9	-80.7	-488.0	0.00	0.00	0.00
5,100.0	9.57	189.38	5,058.6	-505.3	-83.4	-504.4	0.00	0.00	0.00
5,200.0	9.57	189.38	5,157.2	-521.7	-86.1	-520.8	0.00	0.00	0.00
5,300.0	9.57	189.38	5,255.8	-538.1	-88.9	-537.1	0.00	0.00	0.00
5,400.0	9.57	189.38	5,354.5	-554.5	-91.6	-553.5	0.00	0.00	0.00
5,500.0	9.57	189.38	5,453.1	-570.9	-94.3	-569.9	0.00	0.00	0.00
5,571.8	9.57	189.38	5,523.9	-582.7	-96.2	-581.6	0.00	0.00	0.00
Start Drop -2.00									
5,600.0	9.00	189.38	5,551.7	-587.2	-97.0	-586.1	2.00	-2.00	0.00
5,700.0	7.00	189.38	5,650.7	-600.9	-99.2	-599.8	2.00	-2.00	0.00
5,800.0	5.00	189.38	5,750.2	-611.2	-100.9	-610.1	2.00	-2.00	0.00
5,900.0	3.00	189.38	5,849.9	-618.1	-102.1	-617.0	2.00	-2.00	0.00
6,000.0	1.00	189.38	5,949.9	-621.6	-102.6	-620.4	2.00	-2.00	0.00
6,050.2	0.00	0.00	6,000.0	-622.0	-102.7	-620.9	2.00	-2.00	0.00
6,100.0	0.00	0.00	6,049.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,149.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,249.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,349.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,449.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,549.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,700.0	0.00	0.00	6,649.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,749.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
6,900.0	0.00	0.00	6,849.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,949.8	-622.0	-102.7	-620.9	0.00	0.00	0.00
7,036.1	0.00	0.00	6,985.9	-622.0	-102.7	-620.9	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
7,100.0	5.11	359.97	7,049.8	-619.2	-102.7	-618.0	8.00	8.00	0.00
7,200.0	13.11	359.97	7,148.4	-603.3	-102.7	-602.2	8.00	8.00	0.00
7,300.0	21.12	359.97	7,243.9	-573.9	-102.7	-572.8	8.00	8.00	0.00
7,370.1	26.73	359.97	7,308.0	-545.5	-102.7	-544.4	8.00	8.00	0.00
Lower Sharon Springs									
7,400.0	29.12	359.97	7,334.4	-531.5	-102.7	-530.4	8.00	8.00	0.00
7,500.0	37.12	359.97	7,418.1	-476.9	-102.8	-475.8	8.00	8.00	0.00
7,506.2	37.62	359.97	7,423.0	-473.2	-102.8	-472.0	8.00	8.00	0.00
Lower Sharon Springs GR Marker									

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Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

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)
7,560.9	41.99	359.97	7,465.0	-438.2	-102.8	-437.0	8.00	8.00	0.00
Niobrara A Chalk									
7,570.4	42.75	359.97	7,472.0	-431.8	-102.8	-430.7	8.00	8.00	0.00
Niobrara A Marl GR Marker									
7,573.1	42.97	359.97	7,474.0	-429.9	-102.8	-428.8	8.00	8.00	0.00
Niobrara B1 Chalk									
7,600.0	45.12	359.97	7,493.3	-411.2	-102.8	-410.1	8.00	8.00	0.00
7,616.7	46.46	359.97	7,505.0	-399.2	-102.8	-398.1	8.00	8.00	0.00
Niobrara B1 Marl									
7,635.9	47.99	359.97	7,518.0	-385.2	-102.8	-384.1	8.00	8.00	0.00
Niobrara B Chalk									
7,672.8	50.95	359.97	7,542.0	-357.1	-102.8	-356.0	8.00	8.00	0.00
Niobrara B Marl									
7,700.0	53.12	359.97	7,558.7	-335.7	-102.9	-334.5	8.00	8.00	0.00
7,777.9	59.35	359.97	7,602.0	-270.9	-102.9	-269.8	8.00	8.00	0.00
Niobrara M Zone									
7,800.0	61.12	359.97	7,613.0	-251.7	-102.9	-250.6	8.00	8.00	0.00
7,853.4	65.40	359.97	7,637.0	-204.1	-102.9	-203.0	8.00	8.00	0.00
Niobrara M Zone Base									
7,900.0	69.13	359.97	7,655.0	-161.1	-103.0	-160.0	8.00	8.00	0.00
7,946.0	72.81	359.97	7,670.0	-117.6	-103.0	-116.5	8.00	8.00	0.00
Ft Hays									
8,000.0	77.13	359.97	7,684.0	-65.5	-103.0	-64.4	8.00	8.00	0.00
8,041.1	80.41	359.97	7,692.0	-25.2	-103.0	-24.1	8.00	8.00	0.00
Codell									
8,100.0	85.13	359.97	7,699.4	33.2	-103.1	34.3	8.00	8.00	0.00
8,160.9	90.00	359.97	7,702.0	94.0	-103.1	95.1	8.00	8.00	0.00
Codell target - LP 300'FSL & 700'FWL, Sec.18									
8,200.0	90.00	359.97	7,702.0	133.2	-103.1	134.3	0.00	0.00	0.00
8,300.0	90.00	359.97	7,702.0	233.2	-103.2	234.3	0.00	0.00	0.00
8,400.0	90.00	359.97	7,702.0	333.2	-103.2	334.3	0.00	0.00	0.00
8,500.0	90.00	359.97	7,702.0	433.2	-103.3	434.2	0.00	0.00	0.00
8,600.0	90.00	359.97	7,702.0	533.2	-103.3	534.2	0.00	0.00	0.00
8,700.0	90.00	359.97	7,702.0	633.2	-103.4	634.2	0.00	0.00	0.00
8,800.0	90.00	359.97	7,702.0	733.2	-103.4	734.2	0.00	0.00	0.00
8,900.0	90.00	359.97	7,702.0	833.2	-103.5	834.2	0.00	0.00	0.00
9,000.0	90.00	359.97	7,702.0	933.2	-103.5	934.2	0.00	0.00	0.00
9,100.0	90.00	359.97	7,702.0	1,033.2	-103.6	1,034.2	0.00	0.00	0.00
9,200.0	90.00	359.97	7,702.0	1,133.2	-103.6	1,134.2	0.00	0.00	0.00
9,300.0	90.00	359.97	7,702.0	1,233.2	-103.7	1,234.2	0.00	0.00	0.00
9,400.0	90.00	359.97	7,702.0	1,333.2	-103.8	1,334.2	0.00	0.00	0.00
9,500.0	90.00	359.97	7,702.0	1,433.2	-103.8	1,434.2	0.00	0.00	0.00
9,600.0	90.00	359.97	7,702.0	1,533.2	-103.9	1,534.2	0.00	0.00	0.00
9,700.0	90.00	359.97	7,702.0	1,633.2	-103.9	1,634.2	0.00	0.00	0.00
9,800.0	90.00	359.97	7,702.0	1,733.2	-104.0	1,734.2	0.00	0.00	0.00
9,900.0	90.00	359.97	7,702.0	1,833.2	-104.0	1,834.2	0.00	0.00	0.00
10,000.0	90.00	359.97	7,702.0	1,933.2	-104.1	1,934.2	0.00	0.00	0.00
10,100.0	90.00	359.97	7,702.0	2,033.2	-104.1	2,034.2	0.00	0.00	0.00
10,200.0	90.00	359.97	7,702.0	2,133.2	-104.2	2,134.2	0.00	0.00	0.00
10,300.0	90.00	359.97	7,702.0	2,233.2	-104.2	2,234.2	0.00	0.00	0.00
10,400.0	90.00	359.97	7,702.0	2,333.2	-104.3	2,334.2	0.00	0.00	0.00
10,500.0	90.00	359.97	7,702.0	2,433.2	-104.3	2,434.1	0.00	0.00	0.00
10,600.0	90.00	359.97	7,702.0	2,533.2	-104.4	2,534.1	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Project:	Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

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)
10,700.0	90.00	359.97	7,702.0	2,633.2	-104.4	2,634.1	0.00	0.00	0.00
10,800.0	90.00	359.97	7,702.0	2,733.2	-104.5	2,734.1	0.00	0.00	0.00
10,900.0	90.00	359.97	7,702.0	2,833.2	-104.5	2,834.1	0.00	0.00	0.00
11,000.0	90.00	359.97	7,702.0	2,933.2	-104.6	2,934.1	0.00	0.00	0.00
11,100.0	90.00	359.97	7,702.0	3,033.2	-104.6	3,034.1	0.00	0.00	0.00
11,200.0	90.00	359.97	7,702.0	3,133.2	-104.7	3,134.1	0.00	0.00	0.00
11,300.0	90.00	359.97	7,702.0	3,233.2	-104.7	3,234.1	0.00	0.00	0.00
11,400.0	90.00	359.97	7,702.0	3,333.2	-104.7	3,334.1	0.00	0.00	0.00
11,500.0	90.00	359.97	7,702.0	3,433.2	-104.8	3,434.1	0.00	0.00	0.00
11,600.0	90.00	359.97	7,702.0	3,533.2	-104.8	3,534.1	0.00	0.00	0.00
11,700.0	90.00	359.97	7,702.0	3,633.2	-104.9	3,634.1	0.00	0.00	0.00
11,800.0	90.00	359.97	7,702.0	3,733.2	-104.9	3,734.1	0.00	0.00	0.00
11,900.0	90.00	359.97	7,702.0	3,833.2	-105.0	3,834.1	0.00	0.00	0.00
12,000.0	90.00	359.97	7,702.0	3,933.2	-105.0	3,934.1	0.00	0.00	0.00
12,100.0	90.00	359.97	7,702.0	4,033.2	-105.1	4,034.1	0.00	0.00	0.00
12,200.0	90.00	359.97	7,702.0	4,133.2	-105.1	4,134.1	0.00	0.00	0.00
12,300.0	90.00	359.97	7,702.0	4,233.2	-105.2	4,234.1	0.00	0.00	0.00
12,400.0	90.00	359.97	7,702.0	4,333.2	-105.2	4,334.0	0.00	0.00	0.00
12,500.0	90.00	359.97	7,702.0	4,433.2	-105.3	4,434.0	0.00	0.00	0.00
12,600.0	90.00	359.97	7,702.0	4,533.2	-105.3	4,534.0	0.00	0.00	0.00
12,700.0	90.00	359.97	7,702.0	4,633.2	-105.3	4,634.0	0.00	0.00	0.00
12,800.0	90.00	359.97	7,702.0	4,733.2	-105.4	4,734.0	0.00	0.00	0.00
12,900.0	90.00	359.97	7,702.0	4,833.2	-105.4	4,834.0	0.00	0.00	0.00
13,000.0	90.00	359.97	7,702.0	4,933.2	-105.5	4,934.0	0.00	0.00	0.00
13,100.0	90.00	359.97	7,702.0	5,033.2	-105.5	5,034.0	0.00	0.00	0.00
13,200.0	90.00	359.97	7,702.0	5,133.2	-105.6	5,134.0	0.00	0.00	0.00
13,300.0	90.00	359.98	7,702.0	5,233.2	-105.6	5,234.0	0.00	0.00	0.00
13,400.0	90.00	359.98	7,702.0	5,333.2	-105.7	5,334.0	0.00	0.00	0.00
13,500.0	90.00	359.98	7,702.0	5,433.2	-105.7	5,434.0	0.00	0.00	0.00
13,600.0	90.00	359.98	7,702.0	5,533.2	-105.7	5,534.0	0.00	0.00	0.00
13,700.0	90.00	359.98	7,702.0	5,633.2	-105.8	5,634.0	0.00	0.00	0.00
13,800.0	90.00	359.98	7,702.0	5,733.2	-105.8	5,734.0	0.00	0.00	0.00
13,900.0	90.00	359.98	7,702.0	5,833.2	-105.9	5,834.0	0.00	0.00	0.00
14,000.0	90.00	359.98	7,702.0	5,933.2	-105.9	5,934.0	0.00	0.00	0.00
14,100.0	90.00	359.98	7,702.0	6,033.2	-106.0	6,034.0	0.00	0.00	0.00
14,200.0	90.00	359.98	7,702.0	6,133.2	-106.0	6,134.0	0.00	0.00	0.00
14,300.0	90.00	359.98	7,702.0	6,233.2	-106.0	6,233.9	0.00	0.00	0.00
14,400.0	90.00	359.98	7,702.0	6,333.2	-106.1	6,333.9	0.00	0.00	0.00
14,500.0	90.00	359.98	7,702.0	6,433.2	-106.1	6,433.9	0.00	0.00	0.00
14,600.0	90.00	359.98	7,702.0	6,533.2	-106.2	6,533.9	0.00	0.00	0.00
14,700.0	90.00	359.98	7,702.0	6,633.2	-106.2	6,633.9	0.00	0.00	0.00
14,800.0	90.00	359.98	7,702.0	6,733.2	-106.2	6,733.9	0.00	0.00	0.00
14,900.0	90.00	359.98	7,702.0	6,833.2	-106.3	6,833.9	0.00	0.00	0.00
15,000.0	90.00	359.98	7,702.0	6,933.2	-106.3	6,933.9	0.00	0.00	0.00
15,100.0	90.00	359.98	7,702.0	7,033.2	-106.4	7,033.9	0.00	0.00	0.00
15,200.0	90.00	359.98	7,702.0	7,133.2	-106.4	7,133.9	0.00	0.00	0.00
15,300.0	90.00	359.98	7,702.0	7,233.2	-106.4	7,233.9	0.00	0.00	0.00
15,400.0	90.00	359.98	7,702.0	7,333.2	-106.5	7,333.9	0.00	0.00	0.00
15,500.0	90.00	359.98	7,702.0	7,433.2	-106.5	7,433.9	0.00	0.00	0.00
15,600.0	90.00	359.98	7,702.0	7,533.2	-106.6	7,533.9	0.00	0.00	0.00
15,700.0	90.00	359.98	7,702.0	7,633.2	-106.6	7,633.9	0.00	0.00	0.00
15,800.0	90.00	359.98	7,702.0	7,733.2	-106.6	7,733.9	0.00	0.00	0.00
15,900.0	90.00	359.98	7,702.0	7,833.2	-106.7	7,833.9	0.00	0.00	0.00
16,000.0	90.00	359.98	7,702.0	7,933.2	-106.7	7,933.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Project:	Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

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)	
16,100.0	90.00	359.98	7,702.0	8,033.2	-106.7	8,033.9	0.00	0.00	0.00	
16,200.0	90.00	359.98	7,702.0	8,133.2	-106.8	8,133.8	0.00	0.00	0.00	
16,300.0	90.00	359.98	7,702.0	8,233.2	-106.8	8,233.8	0.00	0.00	0.00	
16,400.0	90.00	359.98	7,702.0	8,333.2	-106.9	8,333.8	0.00	0.00	0.00	
16,500.0	90.00	359.98	7,702.0	8,433.2	-106.9	8,433.8	0.00	0.00	0.00	
16,600.0	90.00	359.98	7,702.0	8,533.2	-106.9	8,533.8	0.00	0.00	0.00	
16,700.0	90.00	359.98	7,702.0	8,633.2	-107.0	8,633.8	0.00	0.00	0.00	
16,800.0	90.00	359.98	7,702.0	8,733.2	-107.0	8,733.8	0.00	0.00	0.00	
16,900.0	90.00	359.98	7,702.0	8,833.2	-107.0	8,833.8	0.00	0.00	0.00	
17,000.0	90.00	359.98	7,702.0	8,933.2	-107.1	8,933.8	0.00	0.00	0.00	
17,100.0	90.00	359.98	7,702.0	9,033.2	-107.1	9,033.8	0.00	0.00	0.00	
17,200.0	90.00	359.98	7,702.0	9,133.2	-107.1	9,133.8	0.00	0.00	0.00	
17,300.0	90.00	359.98	7,702.0	9,233.2	-107.2	9,233.8	0.00	0.00	0.00	
17,400.0	90.00	359.98	7,702.0	9,333.2	-107.2	9,333.8	0.00	0.00	0.00	
17,500.0	90.00	359.98	7,702.0	9,433.2	-107.2	9,433.8	0.00	0.00	0.00	
17,600.0	90.00	359.98	7,702.0	9,533.2	-107.3	9,533.8	0.00	0.00	0.00	
17,700.0	90.00	359.98	7,702.0	9,633.2	-107.3	9,633.8	0.00	0.00	0.00	
17,800.0	90.00	359.98	7,702.0	9,733.2	-107.4	9,733.8	0.00	0.00	0.00	
17,900.0	90.00	359.98	7,702.0	9,833.2	-107.4	9,833.8	0.00	0.00	0.00	
18,000.0	90.00	359.98	7,702.0	9,933.2	-107.4	9,933.8	0.00	0.00	0.00	
18,100.0	90.00	359.98	7,702.0	10,033.2	-107.5	10,033.7	0.00	0.00	0.00	
18,157.1	90.00	359.98	7,702.0	10,090.2	-107.5	10,090.8	0.00	0.00	0.00	
TD at 18157.1 - BHL 300'FNL & 700'FWL, Sec.7										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SHL 205'FSL & 803'FWL	0.00	0.00	1.0	0.0	0.0	1,578,010.66	3,281,241.30	40.915578	-104.482433	
- plan hits target center										
- Point										
LP 300'FSL & 700'FWL,	0.00	0.00	7,702.0	94.0	-103.1	1,578,103.48	3,281,137.14	40.915836	-104.482806	
- plan hits target center										
- Point										
BHL 300'FNL & 700'FWL	0.00	0.00	7,702.0	10,090.2	-107.5	1,588,099.21	3,281,018.05	40.943272	-104.482822	
- plan hits target center										
- Point										

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 537-1807H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Project:	Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	North Reference:	True
Well:	Critter Creek 537-1807H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-1-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,608.0	1,608.0	Pierre C&D Sand				
2,388.7	2,385.0	Base Pierre C&D Sand				
2,815.6	2,806.0	Pierre B Sand				
2,886.6	2,876.0	Base Pierre B Sand				
3,635.0	3,614.0	Pierre A Sand				
4,088.3	4,061.0	Base Pierre A Sand				
4,397.6	4,366.0	Parkman				
4,871.2	4,833.0	Base Parkman				
7,370.1	7,308.0	Lower Sharon Springs				
7,506.2	7,423.0	Lower Sharon Springs GR Marker				
7,560.9	7,465.0	Niobrara A Chalk				
7,570.4	7,472.0	Niobrara A Marl GR Marker				
7,573.1	7,474.0	Niobrara B1 Chalk				
7,616.7	7,505.0	Niobrara B1 Marl				
7,635.9	7,518.0	Niobrara B Chalk				
7,672.8	7,542.0	Niobrara B Marl				
7,777.9	7,602.0	Niobrara M Zone				
7,853.4	7,637.0	Niobrara M Zone Base				
7,946.0	7,670.0	Ft Hays				
8,041.1	7,692.0	Codell				
8,160.9	7,702.0	Codell target				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,700.0	1,700.0	0.0	0.0	KOP - Start Build 1.50	
5,571.8	5,523.9	-52.4	-8.7	Start Drop -2.00	
7,036.1	6,986.0	-582.7	-96.2	KOP #2 - Start Build 8.00	
18,157.1	7,702.0	-622.0	-102.7	TD at 18157.1	



Fifth Creek Energy Company, LLC

Sec.18-T11N-R63W

Critter Creek 18 SW Pad Sec.18-T11N-R63W

Critter Creek 537-1807H

Wellbore #1

Plan #1 (3-1-17)

Anticollision Report

01 March, 2017

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-1-17)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,200.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	3/1/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	18,157.1	Plan #1 (3-1-17) (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 18 SW Pad Sec.18-T11N-R63W						
Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)	1,500.0	1,500.0	24.6	18.1	3.774	CC
Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)	18,157.1	18,082.2	377.0	8.7	1.024	Level 2, ES, SF
Critter Creek 202-1807H - Wellbore #1 - Plan #1 (2-28-17)	1,700.0	1,700.0	25.2	17.7	3.391	CC
Critter Creek 202-1807H - Wellbore #1 - Plan #1 (2-28-17)	18,157.1	18,054.0	331.1	-28.7	0.920	Level 1, ES, SF
Critter Creek 203-1807H - Wellbore #1 - Plan #1 (2-28-17)	1,700.0	1,700.0	75.2	67.8	10.135	CC, ES
Critter Creek 203-1807H - Wellbore #1 - Plan #1 (2-28-17)	18,157.1	18,111.4	959.5	569.6	2.460	SF
Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-17)	1,700.0	1,700.0	49.7	42.3	6.707	CC
Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-17)	1,800.0	1,800.0	50.0	42.1	6.377	ES
Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-17)	18,157.1	18,184.4	759.7	370.4	1.952	SF
Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-17)	200.0	200.0	99.8	99.1	147.978	CC, ES
Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-17)	5,200.0	5,029.5	1,181.0	1,150.3	38.488	SF
Existing Wells Sec.18-T11N-R63W						
Critter Creek 11-07H (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Critter Creek 11-07H (Exist.) - Wellbore #2 - Wellbore #2						Out of range
Critter Creek 14-18H (Exist.) - Wellbore #1 - Wellbore #1	11,234.0	12,340.2	172.3	108.1	2.684	CC
Critter Creek 14-18H (Exist.) - Wellbore #1 - Wellbore #1	11,300.0	12,386.7	178.4	107.5	2.517	ES, SF
Critter Creek 15-19H (Exist.) - Wellbore #1 - Wellbore #1	7,400.0	13,050.0	387.3	263.4	3.125	ES, SF
Critter Creek 15-19H (Exist.) - Wellbore #1 - Wellbore #1	7,420.0	13,050.0	386.5	264.0	3.155	CC

Offset Design	Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)										Offset Site Error:	0.0 ft
Survey Program:	O-MWD										Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	0.0	-24.6	24.6			
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	0.0	-24.6	24.6	24.4	0.22	109.440
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-24.6	24.6	23.9	0.67	36.480
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	0.0	-24.6	24.6	23.5	1.12	21.888
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	0.0	-24.6	24.6	23.0	1.57	15.634
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	0.0	-24.6	24.6	22.6	2.02	12.160
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	0.0	-24.6	24.6	22.1	2.47	9.949
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	0.0	-24.6	24.6	21.7	2.92	8.418
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	0.0	-24.6	24.6	21.2	3.37	7.296

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	0.0	-24.6	24.6	20.8	3.82	6.438		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.02	0.0	-24.6	24.6	20.3	4.27	5.760		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.02	0.0	-24.6	24.6	19.9	4.72	5.211		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.02	0.0	-24.6	24.6	19.4	5.17	4.758		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.02	0.0	-24.6	24.6	19.0	5.62	4.378		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.02	0.0	-24.6	24.6	18.5	6.07	4.053		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.02	0.0	-24.6	24.6	18.1	6.52	3.774 CC		
1,600.0	1,600.0	1,599.6	1,599.6	3.5	3.5	-92.44	-1.1	-25.3	25.4	18.4	6.94	3.654		
1,700.0	1,700.0	1,699.1	1,699.0	3.7	3.6	-98.86	-4.3	-27.5	27.9	20.5	7.34	3.797		
1,800.0	1,800.0	1,798.4	1,798.1	3.9	3.8	65.49	-9.6	-31.2	32.1	24.4	7.72	4.162		
1,900.0	1,899.9	1,897.5	1,896.8	4.1	4.0	61.86	-17.1	-36.3	37.5	29.4	8.07	4.643		
2,000.0	1,999.7	1,996.5	1,995.1	4.3	4.2	60.15	-26.6	-42.8	43.8	35.3	8.44	5.183		
2,100.0	2,099.3	2,095.2	2,092.8	4.4	4.5	59.73	-38.2	-50.7	50.9	42.0	8.83	5.760		
2,200.0	2,198.6	2,193.7	2,189.9	4.6	4.7	60.14	-51.9	-60.1	58.8	49.5	9.25	6.357		
2,300.0	2,297.5	2,292.7	2,287.1	4.9	5.0	61.24	-67.4	-70.7	67.2	57.5	9.70	6.934		
2,400.0	2,396.2	2,392.4	2,384.9	5.1	5.3	63.43	-83.3	-81.6	75.0	64.8	10.20	7.359		
2,500.0	2,494.8	2,492.0	2,482.7	5.4	5.6	65.35	-99.2	-92.4	82.8	72.1	10.73	7.718		
2,600.0	2,593.4	2,591.7	2,580.4	5.7	6.0	66.94	-115.1	-103.3	90.7	79.4	11.29	8.030		
2,700.0	2,692.0	2,691.4	2,678.2	6.0	6.3	68.27	-131.0	-114.2	98.6	86.7	11.88	8.300		
2,800.0	2,790.6	2,791.0	2,776.0	6.3	6.7	69.41	-147.0	-125.1	106.6	94.1	12.49	8.533		
2,900.0	2,889.2	2,890.7	2,873.8	6.6	7.1	70.39	-162.9	-135.9	114.6	101.5	13.12	8.734		
3,000.0	2,987.8	2,990.3	2,971.6	6.9	7.5	71.24	-178.8	-146.8	122.6	108.9	13.77	8.908		
3,100.0	3,086.4	3,090.0	3,069.3	7.2	7.8	71.98	-194.7	-157.7	130.7	116.3	14.43	9.060		
3,200.0	3,185.1	3,189.7	3,167.1	7.6	8.2	72.64	-210.6	-168.6	138.8	123.7	15.10	9.191		
3,300.0	3,283.7	3,289.3	3,264.9	7.9	8.6	73.23	-226.5	-179.5	146.9	131.1	15.78	9.306		
3,400.0	3,382.3	3,389.0	3,362.7	8.2	9.0	73.75	-242.4	-190.3	155.0	138.5	16.47	9.407		
3,500.0	3,480.9	3,488.7	3,460.5	8.6	9.4	74.23	-258.3	-201.2	163.1	145.9	17.18	9.496		
3,600.0	3,579.5	3,588.3	3,558.2	8.9	9.8	74.65	-274.2	-212.1	171.2	153.3	17.88	9.575		
3,700.0	3,678.1	3,688.0	3,656.0	9.3	10.3	75.04	-290.1	-223.0	179.4	160.8	18.60	9.644		
3,800.0	3,776.7	3,787.6	3,753.8	9.7	10.7	75.40	-306.0	-233.8	187.5	168.2	19.32	9.706		
3,900.0	3,875.3	3,887.3	3,851.6	10.0	11.1	75.72	-322.0	-244.7	195.7	175.6	20.05	9.761		
4,000.0	3,973.9	3,987.0	3,949.4	10.4	11.5	76.02	-337.9	-255.6	203.8	183.1	20.78	9.810		
4,100.0	4,072.5	4,086.6	4,047.1	10.7	11.9	76.30	-353.8	-266.5	212.0	190.5	21.51	9.855		
4,200.0	4,171.1	4,186.3	4,144.9	11.1	12.3	76.55	-369.7	-277.3	220.2	197.9	22.25	9.895		
4,300.0	4,269.8	4,285.9	4,242.7	11.5	12.7	76.79	-385.6	-288.2	228.3	205.3	22.99	9.931		
4,400.0	4,368.4	4,385.6	4,340.5	11.9	13.2	77.01	-401.5	-299.1	236.5	212.8	23.74	9.963		
4,500.0	4,467.0	4,485.3	4,438.3	12.2	13.6	77.22	-417.4	-310.0	244.7	220.2	24.49	9.993		
4,600.0	4,565.6	4,584.9	4,536.0	12.6	14.0	77.41	-433.3	-320.9	252.9	227.6	25.24	10.020		
4,700.0	4,664.2	4,684.6	4,633.8	13.0	14.4	77.59	-449.2	-331.7	261.1	235.1	25.99	10.045		
4,800.0	4,762.8	4,784.2	4,731.6	13.3	14.9	77.76	-465.1	-342.6	269.3	242.5	26.75	10.067		
4,900.0	4,861.4	4,883.9	4,829.4	13.7	15.3	77.92	-481.0	-353.5	277.4	249.9	27.50	10.088		
5,000.0	4,960.0	4,983.6	4,927.2	14.1	15.7	78.07	-497.0	-364.4	285.6	257.4	28.26	10.107		
5,100.0	5,058.6	5,083.2	5,024.9	14.5	16.1	78.22	-512.9	-375.2	293.8	264.8	29.02	10.124		
5,200.0	5,157.2	5,182.9	5,122.7	14.9	16.6	78.35	-528.8	-386.1	302.0	272.2	29.79	10.140		
5,300.0	5,255.8	5,282.6	5,220.5	15.2	17.0	78.48	-544.7	-397.0	310.2	279.7	30.55	10.155		
5,400.0	5,354.5	5,382.2	5,318.3	15.6	17.4	78.60	-560.6	-407.9	318.4	287.1	31.31	10.169		
5,500.0	5,453.1	5,481.9	5,416.1	16.0	17.8	78.71	-576.5	-418.7	326.6	294.6	32.08	10.182		
5,600.0	5,551.7	5,586.6	5,519.0	16.4	18.2	78.98	-592.4	-429.6	334.3	301.5	32.82	10.186		
5,700.0	5,650.7	5,693.7	5,624.9	16.6	18.5	79.38	-605.6	-438.7	340.5	307.1	33.40	10.195		
5,800.0	5,750.2	5,801.0	5,731.5	16.9	18.8	79.67	-615.6	-445.5	345.1	311.2	33.89	10.181		
5,900.0	5,849.9	5,908.5	5,838.6	17.1	19.0	79.86	-622.3	-450.0	348.2	313.9	34.32	10.145		
6,000.0	5,949.9	6,016.0	5,946.1	17.2	19.2	79.96	-625.6	-452.3	349.7	315.1	34.67	10.087		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
6,100.0	6,049.8	6,119.7	6,049.8	17.4	19.3	-90.66	-626.0	-452.6	349.9	314.9	34.99	10.002		
6,200.0	6,149.8	6,219.7	6,149.8	17.5	19.5	-90.66	-626.0	-452.6	349.9	314.7	35.27	9.922		
6,300.0	6,249.8	6,319.7	6,249.8	17.7	19.6	-90.66	-626.0	-452.6	349.9	314.4	35.55	9.843		
6,400.0	6,349.8	6,419.7	6,349.8	17.8	19.7	-90.66	-626.0	-452.6	349.9	314.1	35.84	9.764		
6,500.0	6,449.8	6,519.7	6,449.8	18.0	19.9	-90.66	-626.0	-452.6	349.9	313.8	36.13	9.685		
6,600.0	6,549.8	6,619.7	6,549.8	18.1	20.0	-90.66	-626.0	-452.6	349.9	313.5	36.43	9.607		
6,700.0	6,649.8	6,719.7	6,649.8	18.3	20.1	-90.66	-626.0	-452.6	349.9	313.2	36.72	9.529		
6,800.0	6,749.8	6,819.7	6,749.8	18.4	20.3	-90.66	-626.0	-452.6	349.9	312.9	37.02	9.451		
6,900.0	6,849.8	6,919.7	6,849.8	18.6	20.4	-90.66	-626.0	-452.6	349.9	312.6	37.33	9.374		
7,000.0	6,949.8	7,019.9	6,949.9	18.7	20.5	-90.20	-623.2	-452.6	349.9	312.3	37.65	9.293		
7,011.9	6,961.7	7,031.7	6,961.7	18.7	20.5	-89.99	-622.1	-452.6	349.9	312.2	37.69	9.284		
7,100.0	7,049.8	7,118.4	7,047.1	18.9	20.5	-88.09	-607.9	-452.6	350.1	312.1	37.99	9.216		
7,200.0	7,148.4	7,215.0	7,139.5	18.9	20.5	-85.92	-580.0	-452.6	350.8	312.7	38.10	9.209		
7,300.0	7,243.9	7,310.0	7,225.9	18.8	20.3	-83.86	-540.7	-452.6	352.0	314.0	37.96	9.273		
7,400.0	7,334.4	7,403.5	7,305.2	18.6	20.1	-81.93	-491.1	-452.7	353.5	315.8	37.60	9.400		
7,500.0	7,418.1	7,495.7	7,376.4	18.4	19.8	-80.17	-432.6	-452.7	355.2	318.1	37.09	9.577		
7,600.0	7,493.3	7,586.9	7,438.8	18.1	19.6	-78.60	-366.3	-452.7	357.0	320.5	36.49	9.785		
7,700.0	7,558.7	7,677.0	7,491.7	17.9	19.3	-77.26	-293.4	-452.8	358.8	322.9	35.90	9.994		
7,800.0	7,613.0	7,766.4	7,534.7	17.8	19.0	-76.14	-215.1	-452.8	360.4	325.0	35.44	10.170		
7,900.0	7,655.0	7,855.2	7,567.5	17.8	18.8	-75.27	-132.6	-452.9	361.8	326.6	35.22	10.273		
8,000.0	7,684.0	7,943.5	7,589.7	17.9	18.6	-74.65	-47.2	-452.9	362.9	327.5	35.34	10.269		
8,100.0	7,699.4	8,031.5	7,601.2	18.3	18.6	-74.29	39.9	-453.0	363.5	327.6	35.85	10.139		
8,200.0	7,702.0	8,125.1	7,601.8	18.8	18.7	-74.03	132.6	-453.0	364.0	327.2	36.75	9.903		
8,300.0	7,702.0	8,225.1	7,601.4	19.3	19.2	-73.97	232.6	-453.1	364.1	326.3	37.73	9.650		
8,400.0	7,702.0	8,325.1	7,601.0	19.8	19.8	-73.90	332.6	-453.1	364.2	325.4	38.76	9.395		
8,500.0	7,702.0	8,425.1	7,600.6	20.5	20.6	-73.84	432.6	-453.2	364.3	324.2	40.12	9.080		
8,600.0	7,702.0	8,525.1	7,600.2	21.3	21.5	-73.78	532.6	-453.2	364.4	322.6	41.77	8.724		
8,700.0	7,702.0	8,625.1	7,599.8	22.3	22.6	-73.72	632.6	-453.3	364.5	320.8	43.67	8.347		
8,800.0	7,702.0	8,725.1	7,599.4	23.4	23.7	-73.66	732.6	-453.3	364.6	318.8	45.80	7.962		
8,900.0	7,702.0	8,825.1	7,599.0	24.6	25.0	-73.60	832.6	-453.4	364.7	316.6	48.12	7.580		
9,000.0	7,702.0	8,925.1	7,598.6	25.8	26.3	-73.54	932.6	-453.5	364.9	314.2	50.61	7.210		
9,100.0	7,702.0	9,025.1	7,598.2	27.2	27.7	-73.48	1,032.6	-453.5	365.0	311.7	53.24	6.855		
9,200.0	7,702.0	9,125.1	7,597.8	28.6	29.1	-73.42	1,132.6	-453.6	365.1	309.1	55.99	6.520		
9,300.0	7,702.0	9,225.1	7,597.4	30.1	30.6	-73.36	1,232.6	-453.6	365.2	306.4	58.85	6.206		
9,400.0	7,702.0	9,325.1	7,597.0	31.6	32.1	-73.30	1,332.6	-453.7	365.3	303.5	61.80	5.912		
9,500.0	7,702.0	9,425.1	7,596.6	33.2	33.7	-73.24	1,432.6	-453.7	365.4	300.6	64.82	5.637		
9,600.0	7,702.0	9,525.1	7,596.2	34.8	35.3	-73.18	1,532.6	-453.8	365.5	297.6	67.91	5.383		
9,700.0	7,702.0	9,625.1	7,595.8	36.4	36.9	-73.12	1,632.6	-453.8	365.7	294.6	71.06	5.146		
9,800.0	7,702.0	9,725.1	7,595.4	38.1	38.6	-73.06	1,732.6	-453.9	365.8	291.5	74.26	4.926		
9,900.0	7,702.0	9,825.1	7,595.0	39.8	40.3	-73.00	1,832.6	-453.9	365.9	288.4	77.51	4.721		
10,000.0	7,702.0	9,925.1	7,594.6	41.5	42.0	-72.94	1,932.6	-454.0	366.0	285.2	80.79	4.531		
10,100.0	7,702.0	10,025.1	7,594.2	43.2	43.7	-72.88	2,032.6	-454.0	366.1	282.0	84.10	4.354		
10,200.0	7,702.0	10,125.1	7,593.8	45.0	45.5	-72.82	2,132.6	-454.1	366.3	278.8	87.44	4.188		
10,300.0	7,702.0	10,225.1	7,593.4	46.7	47.2	-72.76	2,232.6	-454.1	366.4	275.6	90.81	4.034		
10,400.0	7,702.0	10,325.1	7,593.0	48.5	49.0	-72.70	2,332.6	-454.2	366.5	272.3	94.21	3.890		
10,500.0	7,702.0	10,425.1	7,592.6	50.3	50.8	-72.64	2,432.6	-454.2	366.6	269.0	97.62	3.756		
10,600.0	7,702.0	10,525.1	7,592.2	52.1	52.6	-72.58	2,532.6	-454.3	366.7	265.7	101.05	3.629		
10,700.0	7,702.0	10,625.1	7,591.8	53.9	54.4	-72.52	2,632.6	-454.3	366.9	262.4	104.49	3.511		
10,800.0	7,702.0	10,725.1	7,591.4	55.7	56.2	-72.46	2,732.6	-454.4	367.0	259.0	107.95	3.400		
10,900.0	7,702.0	10,825.1	7,591.0	57.5	58.0	-72.40	2,832.6	-454.4	367.1	255.7	111.42	3.295		
11,000.0	7,702.0	10,925.1	7,590.6	59.3	59.8	-72.34	2,932.6	-454.5	367.2	252.3	114.91	3.196		
11,100.0	7,702.0	11,025.1	7,590.2	61.2	61.7	-72.28	3,032.6	-454.5	367.3	248.9	118.40	3.103		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design				Crittter Creek 18 SW Pad Sec.18-T11N-R63W - Crittter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)										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)					
11,200.0	7,702.0	11,125.1	7,589.8	63.0	63.5	-72.22	3,132.6	-454.6	367.5	245.6	121.90	3.014				
11,300.0	7,702.0	11,225.1	7,589.4	64.8	65.3	-72.16	3,232.6	-454.6	367.6	242.2	125.41	2.931				
11,400.0	7,702.0	11,325.1	7,589.0	66.7	67.2	-72.10	3,332.5	-454.7	367.7	238.8	128.93	2.852				
11,500.0	7,702.0	11,425.1	7,588.6	68.5	69.0	-72.05	3,432.5	-454.7	367.8	235.4	132.45	2.777				
11,600.0	7,702.0	11,525.1	7,588.2	70.4	70.9	-71.99	3,532.5	-454.8	368.0	232.0	135.98	2.706				
11,700.0	7,702.0	11,625.1	7,587.8	72.3	72.8	-71.93	3,632.5	-454.8	368.1	228.6	139.52	2.638				
11,800.0	7,702.0	11,725.1	7,587.4	74.1	74.6	-71.87	3,732.5	-454.9	368.2	225.2	143.06	2.574				
11,900.0	7,702.0	11,825.1	7,587.0	76.0	76.5	-71.81	3,832.5	-454.9	368.3	221.7	146.60	2.513				
12,000.0	7,702.0	11,925.1	7,586.6	77.9	78.4	-71.75	3,932.5	-455.0	368.5	218.3	150.14	2.454				
12,100.0	7,702.0	12,025.1	7,586.2	79.7	80.2	-71.69	4,032.5	-455.0	368.6	214.9	153.69	2.398				
12,200.0	7,702.0	12,125.1	7,585.8	81.6	82.1	-71.63	4,132.5	-455.1	368.7	211.5	157.25	2.345				
12,300.0	7,702.0	12,225.1	7,585.4	83.5	84.0	-71.57	4,232.5	-455.1	368.8	208.0	160.80	2.294				
12,400.0	7,702.0	12,325.1	7,585.0	85.4	85.9	-71.51	4,332.5	-455.2	369.0	204.6	164.36	2.245				
12,500.0	7,702.0	12,425.1	7,584.6	87.2	87.8	-71.45	4,432.5	-455.2	369.1	201.2	167.92	2.198				
12,600.0	7,702.0	12,525.1	7,584.2	89.1	89.7	-71.40	4,532.5	-455.2	369.2	197.8	171.48	2.153				
12,700.0	7,702.0	12,625.1	7,583.8	91.0	91.5	-71.34	4,632.5	-455.3	369.4	194.3	175.04	2.110				
12,800.0	7,702.0	12,725.1	7,583.4	92.9	93.4	-71.28	4,732.5	-455.3	369.5	190.9	178.60	2.069				
12,900.0	7,702.0	12,825.1	7,583.0	94.8	95.3	-71.22	4,832.5	-455.4	369.6	187.5	182.17	2.029				
13,000.0	7,702.0	12,925.1	7,582.6	96.7	97.2	-71.16	4,932.5	-455.4	369.8	184.0	185.73	1.991				
13,100.0	7,702.0	13,025.1	7,582.2	98.6	99.1	-71.10	5,032.5	-455.5	369.9	180.6	189.30	1.954				
13,200.0	7,702.0	13,125.1	7,581.8	100.5	101.0	-71.04	5,132.5	-455.5	370.0	177.1	192.86	1.919				
13,300.0	7,702.0	13,225.1	7,581.4	102.3	102.9	-70.99	5,232.5	-455.6	370.1	173.7	196.43	1.884				
13,400.0	7,702.0	13,325.1	7,581.0	104.2	104.8	-70.93	5,332.5	-455.6	370.3	170.3	200.00	1.851				
13,500.0	7,702.0	13,425.1	7,580.6	106.1	106.7	-70.87	5,432.5	-455.7	370.4	166.8	203.56	1.820				
13,600.0	7,702.0	13,525.1	7,580.2	108.0	108.6	-70.81	5,532.5	-455.7	370.5	163.4	207.13	1.789				
13,700.0	7,702.0	13,625.1	7,579.8	109.9	110.5	-70.75	5,632.5	-455.7	370.7	160.0	210.69	1.759				
13,800.0	7,702.0	13,725.1	7,579.4	111.8	112.4	-70.69	5,732.5	-455.8	370.8	156.6	214.26	1.731				
13,900.0	7,702.0	13,825.1	7,579.0	113.7	114.3	-70.64	5,832.5	-455.8	370.9	153.1	217.82	1.703				
14,000.0	7,702.0	13,925.1	7,578.6	115.6	116.2	-70.58	5,932.5	-455.9	371.1	149.7	221.39	1.676				
14,100.0	7,702.0	14,025.1	7,578.2	117.5	118.2	-70.52	6,032.5	-455.9	371.2	146.3	224.95	1.650				
14,200.0	7,702.0	14,125.1	7,577.8	119.4	120.1	-70.46	6,132.5	-456.0	371.3	142.8	228.51	1.625				
14,300.0	7,702.0	14,225.1	7,577.4	121.3	122.0	-70.40	6,232.5	-456.0	371.5	139.4	232.07	1.601				
14,400.0	7,702.0	14,325.1	7,577.0	123.3	123.9	-70.34	6,332.5	-456.0	371.6	136.0	235.63	1.577				
14,500.0	7,702.0	14,425.1	7,576.6	125.2	125.8	-70.29	6,432.5	-456.1	371.8	132.6	239.19	1.554				
14,600.0	7,702.0	14,525.1	7,576.2	127.1	127.7	-70.23	6,532.5	-456.1	371.9	129.1	242.75	1.532				
14,700.0	7,702.0	14,625.1	7,575.8	129.0	129.6	-70.17	6,632.5	-456.2	372.0	125.7	246.31	1.510				
14,800.0	7,702.0	14,725.1	7,575.4	130.9	131.5	-70.11	6,732.5	-456.2	372.2	122.3	249.87	1.489 Level 3				
14,900.0	7,702.0	14,825.1	7,575.0	132.8	133.5	-70.06	6,832.5	-456.3	372.3	118.9	253.42	1.469 Level 3				
15,000.0	7,702.0	14,925.1	7,574.6	134.7	135.4	-70.00	6,932.5	-456.3	372.4	115.5	256.98	1.449 Level 3				
15,100.0	7,702.0	15,025.1	7,574.2	136.6	137.3	-69.94	7,032.5	-456.3	372.6	112.1	260.53	1.430 Level 3				
15,200.0	7,702.0	15,125.1	7,573.8	138.5	139.2	-69.88	7,132.5	-456.4	372.7	108.6	264.08	1.411 Level 3				
15,300.0	7,702.0	15,225.1	7,573.4	140.4	141.1	-69.83	7,232.5	-456.4	372.9	105.2	267.63	1.393 Level 3				
15,400.0	7,702.0	15,325.1	7,573.0	142.3	143.0	-69.77	7,332.5	-456.5	373.0	101.8	271.18	1.375 Level 3				
15,500.0	7,702.0	15,425.1	7,572.6	144.2	144.9	-69.71	7,432.5	-456.5	373.1	98.4	274.72	1.358 Level 3				
15,600.0	7,702.0	15,525.1	7,572.2	146.2	146.9	-69.65	7,532.5	-456.5	373.3	95.0	278.27	1.341 Level 3				
15,700.0	7,702.0	15,625.1	7,571.8	148.1	148.8	-69.60	7,632.5	-456.6	373.4	91.6	281.81	1.325 Level 3				
15,800.0	7,702.0	15,725.1	7,571.4	150.0	150.7	-69.54	7,732.5	-456.6	373.6	88.2	285.35	1.309 Level 3				
15,900.0	7,702.0	15,825.1	7,571.0	151.9	152.6	-69.48	7,832.5	-456.7	373.7	84.8	288.89	1.294 Level 3				
16,000.0	7,702.0	15,925.1	7,570.6	153.8	154.5	-69.42	7,932.5	-456.7	373.8	81.4	292.43	1.278 Level 3				
16,100.0	7,702.0	16,025.1	7,570.2	155.7	156.5	-69.37	8,032.5	-456.7	374.0	78.0	295.97	1.264 Level 3				
16,200.0	7,702.0	16,125.1	7,569.8	157.6	158.4	-69.31	8,132.5	-456.8	374.1	74.6	299.50	1.249 Level 2				
16,300.0	7,702.0	16,225.1	7,569.4	159.6	160.3	-69.25	8,232.5	-456.8	374.3	71.2	303.03	1.235 Level 2				

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design		Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)											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)				
16,400.0	7,702.0	16,325.1	7,569.0	161.5	162.2	-69.20	8,332.5	-456.9	374.4	67.8	306.57	1.221	Level 2		
16,500.0	7,702.0	16,425.1	7,568.6	163.4	164.1	-69.14	8,432.5	-456.9	374.6	64.5	310.09	1.208	Level 2		
16,600.0	7,702.0	16,525.1	7,568.2	165.3	166.1	-69.08	8,532.5	-456.9	374.7	61.1	313.62	1.195	Level 2		
16,700.0	7,702.0	16,625.1	7,567.8	167.2	168.0	-69.02	8,632.5	-457.0	374.8	57.7	317.15	1.182	Level 2		
16,800.0	7,702.0	16,725.1	7,567.4	169.1	169.9	-68.97	8,732.5	-457.0	375.0	54.3	320.67	1.169	Level 2		
16,900.0	7,702.0	16,825.1	7,567.0	171.0	171.8	-68.91	8,832.5	-457.0	375.1	50.9	324.19	1.157	Level 2		
17,000.0	7,702.0	16,925.1	7,566.6	173.0	173.8	-68.85	8,932.5	-457.1	375.3	47.6	327.71	1.145	Level 2		
17,100.0	7,702.0	17,025.1	7,566.2	174.9	175.7	-68.80	9,032.5	-457.1	375.4	44.2	331.23	1.133	Level 2		
17,200.0	7,702.0	17,125.1	7,565.8	176.8	177.6	-68.74	9,132.5	-457.2	375.6	40.8	334.74	1.122	Level 2		
17,300.0	7,702.0	17,225.1	7,565.4	178.7	179.5	-68.68	9,232.5	-457.2	375.7	37.5	338.26	1.111	Level 2		
17,400.0	7,702.0	17,325.1	7,565.0	180.6	181.4	-68.63	9,332.5	-457.2	375.9	34.1	341.77	1.100	Level 2		
17,500.0	7,702.0	17,425.1	7,564.6	182.5	183.4	-68.57	9,432.5	-457.3	376.0	30.7	345.28	1.089	Level 2		
17,600.0	7,702.0	17,525.1	7,564.2	184.5	185.3	-68.51	9,532.5	-457.3	376.2	27.4	348.78	1.078	Level 2		
17,700.0	7,702.0	17,625.1	7,563.8	186.4	187.2	-68.46	9,632.5	-457.3	376.3	24.0	352.29	1.068	Level 2		
17,800.0	7,702.0	17,725.1	7,563.4	188.3	189.1	-68.40	9,732.5	-457.4	376.5	20.7	355.79	1.058	Level 2		
17,900.0	7,702.0	17,825.1	7,563.0	190.2	191.1	-68.35	9,832.5	-457.4	376.6	17.3	359.29	1.048	Level 2		
18,000.0	7,702.0	17,925.1	7,562.6	192.1	193.0	-68.29	9,932.5	-457.5	376.8	14.0	362.79	1.039	Level 2		
18,100.0	7,702.0	18,025.1	7,562.2	194.1	194.9	-68.23	10,032.5	-457.5	376.9	10.6	366.29	1.029	Level 2		
18,157.1	7,702.0	18,082.2	7,562.0	195.1	196.0	-68.20	10,089.6	-457.5	377.0	8.7	368.28	1.024	Level 2, ES, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	25.2	25.2					
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	25.2	25.2	24.9	0.22	111.899		
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	25.2	25.2	24.5	0.67	37.300		
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	25.2	25.2	24.0	1.12	22.380		
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	25.2	25.2	23.6	1.57	15.986		
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	25.2	25.2	23.1	2.02	12.433		
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	25.2	25.2	22.7	2.47	10.173		
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	25.2	25.2	22.2	2.92	8.608		
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	25.2	25.2	21.8	3.37	7.460		
900.0	900.0	900.0	900.0	1.9	1.9	89.98	0.0	25.2	25.2	21.3	3.82	6.582		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.98	0.0	25.2	25.2	20.9	4.27	5.889		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.98	0.0	25.2	25.2	20.4	4.72	5.329		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.98	0.0	25.2	25.2	20.0	5.17	4.865		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.98	0.0	25.2	25.2	19.5	5.62	4.476		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.98	0.0	25.2	25.2	19.1	6.07	4.144		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.98	0.0	25.2	25.2	18.6	6.52	3.859		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.98	0.0	25.2	25.2	18.2	6.97	3.610		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.98	0.0	25.2	25.2	17.7	7.42	3.391 CC		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-102.30	0.0	25.2	25.4	17.6	7.84	3.241		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-110.60	0.0	25.2	26.5	18.3	8.23	3.221		
2,000.0	1,999.7	1,999.7	1,999.7	4.3	4.4	-122.54	0.0	25.2	29.5	20.8	8.63	3.414		
2,100.0	2,099.3	2,099.3	2,099.3	4.4	4.6	-135.09	0.0	25.2	35.2	26.2	9.03	3.904		
2,200.0	2,198.6	2,199.1	2,199.1	4.6	4.8	-144.38	-1.2	25.5	43.7	34.3	9.40	4.654		
2,300.0	2,297.5	2,299.2	2,299.1	4.9	5.0	-149.64	-5.0	26.5	53.7	44.0	9.74	5.516		
2,400.0	2,396.2	2,399.6	2,399.3	5.1	5.2	-152.29	-11.3	28.3	64.3	54.2	10.11	6.361		
2,500.0	2,494.8	2,500.3	2,499.5	5.4	5.3	-152.67	-20.2	30.7	73.5	63.0	10.50	6.996		
2,600.0	2,593.4	2,601.2	2,599.8	5.7	5.5	-151.49	-31.6	33.9	81.1	70.2	10.93	7.420		
2,700.0	2,692.0	2,702.2	2,699.7	6.0	5.8	-149.09	-45.6	37.8	87.2	75.8	11.38	7.659		
2,800.0	2,790.6	2,801.9	2,798.2	6.3	6.0	-146.40	-60.6	41.9	92.8	80.9	11.87	7.817		
2,900.0	2,889.2	2,901.7	2,896.8	6.6	6.2	-144.02	-75.6	46.1	98.5	86.2	12.38	7.961		
3,000.0	2,987.8	3,001.5	2,995.3	6.9	6.5	-141.90	-90.6	50.2	104.5	91.6	12.91	8.090		
3,100.0	3,086.4	3,101.2	3,093.8	7.2	6.8	-140.02	-105.6	54.4	110.5	97.0	13.47	8.205		
3,200.0	3,185.1	3,201.0	3,192.4	7.6	7.0	-138.33	-120.6	58.5	116.7	102.6	14.04	8.308		
3,300.0	3,283.7	3,300.7	3,290.9	7.9	7.3	-136.81	-135.6	62.7	122.9	108.3	14.63	8.399		
3,400.0	3,382.3	3,400.5	3,389.4	8.2	7.6	-135.44	-150.6	66.9	129.2	114.0	15.24	8.479		
3,500.0	3,480.9	3,500.2	3,488.0	8.6	7.9	-134.20	-165.6	71.0	135.6	119.8	15.86	8.551		
3,600.0	3,579.5	3,600.0	3,586.5	8.9	8.2	-133.07	-180.5	75.2	142.1	125.6	16.49	8.614		
3,700.0	3,678.1	3,699.7	3,685.0	9.3	8.6	-132.04	-195.5	79.3	148.6	131.4	17.14	8.670		
3,800.0	3,776.7	3,799.5	3,783.6	9.7	8.9	-131.10	-210.5	83.5	155.1	137.3	17.79	8.720		
3,900.0	3,875.3	3,899.2	3,882.1	10.0	9.2	-130.23	-225.5	87.6	161.7	143.2	18.45	8.764		
4,000.0	3,973.9	3,999.0	3,980.6	10.4	9.5	-129.43	-240.5	91.8	168.3	149.2	19.12	8.804		
4,100.0	4,072.5	4,098.8	4,079.2	10.7	9.9	-128.69	-255.5	95.9	174.9	155.1	19.79	8.839		
4,200.0	4,171.1	4,198.5	4,177.7	11.1	10.2	-128.00	-270.5	100.1	181.6	161.1	20.47	8.871		
4,300.0	4,269.8	4,298.3	4,276.3	11.5	10.5	-127.37	-285.5	104.2	188.3	167.1	21.16	8.899		
4,400.0	4,368.4	4,398.0	4,374.8	11.9	10.9	-126.77	-300.5	108.4	195.0	173.2	21.85	8.925		
4,500.0	4,467.0	4,497.8	4,473.3	12.2	11.2	-126.22	-315.4	112.5	201.8	179.2	22.55	8.948		
4,600.0	4,565.6	4,597.5	4,571.9	12.6	11.6	-125.70	-330.4	116.7	208.5	185.3	23.25	8.969		
4,700.0	4,664.2	4,697.3	4,670.4	13.0	11.9	-125.22	-345.4	120.8	215.3	191.3	23.95	8.989		
4,800.0	4,762.8	4,797.0	4,768.9	13.3	12.3	-124.76	-360.4	125.0	222.1	197.4	24.66	9.006		
4,900.0	4,861.4	4,896.8	4,867.5	13.7	12.6	-124.33	-375.4	129.1	228.9	203.5	25.37	9.022		
5,000.0	4,960.0	4,996.5	4,966.0	14.1	13.0	-123.93	-390.4	133.3	235.7	209.6	26.08	9.036		
5,100.0	5,058.6	5,096.3	5,064.5	14.5	13.3	-123.55	-405.4	137.4	242.5	215.7	26.79	9.050		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
5,200.0	5,157.2	5,196.1	5,163.1	14.9	13.7	-123.19	-420.4	141.6	249.3	221.8	27.51	9.062		
5,300.0	5,255.8	5,295.8	5,261.6	15.2	14.0	-122.85	-435.4	145.7	256.2	227.9	28.23	9.073		
5,400.0	5,354.5	5,395.6	5,360.1	15.6	14.4	-122.52	-450.4	149.9	263.0	234.1	28.95	9.084		
5,500.0	5,453.1	5,495.3	5,458.7	16.0	14.8	-122.22	-465.3	154.0	269.9	240.2	29.68	9.093		
5,600.0	5,551.7	5,595.1	5,557.2	16.4	15.1	-121.93	-480.3	158.2	276.6	246.3	30.40	9.102		
5,700.0	5,650.7	5,694.9	5,655.8	16.6	15.5	-121.28	-495.3	162.3	282.1	251.0	31.07	9.080		
5,800.0	5,750.2	5,794.6	5,754.3	16.9	15.8	-120.02	-510.3	166.5	285.8	254.1	31.75	9.002		
5,900.0	5,849.9	5,894.1	5,852.6	17.1	16.2	-118.17	-525.3	170.6	288.1	255.6	32.43	8.882		
6,000.0	5,949.9	5,993.3	5,950.5	17.2	16.6	-115.73	-540.2	174.7	289.1	256.0	33.10	8.732		
6,100.0	6,049.8	6,092.1	6,048.2	17.4	16.9	76.62	-555.0	178.9	289.4	255.7	33.76	8.572		
6,200.0	6,149.8	6,190.9	6,145.7	17.5	17.3	79.66	-569.9	183.0	290.4	256.0	34.38	8.448		
6,300.0	6,249.8	6,289.7	6,243.3	17.7	17.6	82.67	-584.7	187.1	292.2	257.3	34.95	8.361		
6,400.0	6,349.8	6,390.2	6,342.9	17.8	18.0	85.41	-598.5	190.9	294.6	259.2	35.45	8.312		
6,500.0	6,449.8	6,491.9	6,443.9	18.0	18.2	87.48	-608.9	193.8	296.8	261.0	35.84	8.282		
6,600.0	6,549.8	6,594.1	6,545.9	18.1	18.4	88.85	-616.0	195.7	298.5	262.3	36.19	8.248		
6,700.0	6,649.8	6,696.8	6,648.5	18.3	18.6	89.53	-619.5	196.7	299.4	262.9	36.52	8.200		
6,800.0	6,749.8	6,798.2	6,749.8	18.4	18.8	89.62	-620.0	196.9	299.6	262.7	36.83	8.133		
6,900.0	6,849.8	6,898.2	6,849.8	18.6	18.9	89.62	-620.0	196.9	299.6	262.4	37.14	8.066		
6,936.1	6,885.9	6,934.3	6,885.9	18.6	19.0	89.62	-620.0	196.9	299.6	262.3	37.25	8.043		
7,000.0	6,949.8	6,997.9	6,949.5	18.7	19.0	89.12	-617.4	196.9	299.6	262.2	37.42	8.005		
7,100.0	7,049.8	7,095.6	7,046.0	18.9	19.1	86.78	-602.4	196.8	300.0	262.5	37.58	7.983		
7,200.0	7,148.4	7,191.6	7,137.9	18.9	19.0	84.32	-575.0	196.8	301.1	263.6	37.51	8.027		
7,300.0	7,243.9	7,286.0	7,223.9	18.8	18.8	81.99	-536.3	196.8	302.6	265.3	37.20	8.132		
7,400.0	7,334.4	7,379.1	7,303.0	18.6	18.6	79.83	-487.3	196.8	304.4	267.7	36.72	8.289		
7,500.0	7,418.1	7,470.8	7,374.1	18.4	18.4	77.88	-429.4	196.8	306.5	270.3	36.12	8.484		
7,600.0	7,493.3	7,561.6	7,436.4	18.1	18.2	76.16	-363.6	196.7	308.6	273.1	35.48	8.699		
7,700.0	7,558.7	7,650.0	7,488.7	17.9	18.0	74.71	-292.3	196.7	310.7	275.8	34.89	8.905		
7,800.0	7,613.0	7,740.4	7,532.7	17.8	18.0	73.50	-213.4	196.7	312.5	278.0	34.45	9.070		
7,900.0	7,655.0	7,828.9	7,565.7	17.8	18.0	72.58	-131.3	196.6	314.0	279.7	34.28	9.159		
8,000.0	7,684.0	7,917.0	7,588.2	17.9	18.1	71.95	-46.2	196.6	315.1	280.7	34.46	9.145		
8,100.0	7,699.4	8,004.8	7,600.1	18.3	18.4	71.61	40.7	196.5	315.7	280.7	35.02	9.015		
8,200.0	7,702.0	8,097.1	7,601.9	18.8	18.9	71.52	132.9	196.5	315.9	279.9	35.99	8.776		
8,300.0	7,702.0	8,197.1	7,601.5	19.3	19.4	71.45	232.9	196.4	316.0	279.1	36.95	8.552		
8,400.0	7,702.0	8,297.1	7,601.0	19.8	19.8	71.38	332.9	196.4	316.2	278.3	37.87	8.350		
8,500.0	7,702.0	8,397.1	7,600.6	20.5	20.4	71.31	432.9	196.3	316.3	277.2	39.10	8.090		
8,600.0	7,702.0	8,497.1	7,600.2	21.3	21.2	71.24	532.9	196.3	316.4	275.8	40.63	7.788		
8,700.0	7,702.0	8,597.1	7,599.8	22.3	22.1	71.17	632.9	196.3	316.6	274.1	42.43	7.462		
8,800.0	7,702.0	8,697.1	7,599.4	23.4	23.1	71.11	732.9	196.2	316.7	272.3	44.46	7.124		
8,900.0	7,702.0	8,797.1	7,599.0	24.6	24.2	71.04	832.9	196.2	316.8	270.2	46.69	6.787		
9,000.0	7,702.0	8,897.0	7,598.6	25.8	25.5	70.97	932.9	196.1	317.0	267.9	49.09	6.457		
9,100.0	7,702.0	8,997.0	7,598.2	27.2	26.8	70.90	1,032.9	196.1	317.1	265.5	51.64	6.141		
9,200.0	7,702.0	9,097.0	7,597.8	28.6	28.2	70.83	1,132.9	196.0	317.3	262.9	54.32	5.841		
9,300.0	7,702.0	9,197.0	7,597.4	30.1	29.7	70.77	1,232.9	196.0	317.4	260.3	57.10	5.558		
9,400.0	7,702.0	9,297.0	7,597.0	31.6	31.2	70.70	1,332.9	195.9	317.5	257.5	59.98	5.294		
9,500.0	7,702.0	9,397.0	7,596.6	33.2	32.7	70.63	1,432.9	195.9	317.7	254.7	62.94	5.047		
9,600.0	7,702.0	9,497.0	7,596.2	34.8	34.3	70.56	1,532.9	195.8	317.8	251.8	65.97	4.817		
9,700.0	7,702.0	9,597.0	7,595.8	36.4	35.9	70.49	1,632.9	195.8	318.0	248.9	69.06	4.604		
9,800.0	7,702.0	9,697.0	7,595.4	38.1	37.6	70.43	1,732.9	195.8	318.1	245.9	72.20	4.406		
9,900.0	7,702.0	9,797.0	7,595.0	39.8	39.2	70.36	1,832.9	195.7	318.2	242.8	75.38	4.221		
10,000.0	7,702.0	9,897.0	7,594.6	41.5	40.9	70.29	1,932.9	195.7	318.4	239.8	78.61	4.050		
10,100.0	7,702.0	9,997.0	7,594.2	43.2	42.7	70.22	2,032.9	195.6	318.5	236.7	81.86	3.891		
10,200.0	7,702.0	10,097.0	7,593.8	45.0	44.4	70.16	2,132.9	195.6	318.7	233.5	85.15	3.742		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
10,300.0	7,702.0	10,197.0	7,593.4	46.7	46.2	70.09	2,232.9	195.5	318.8	230.3	88.46	3.604		
10,400.0	7,702.0	10,297.0	7,593.0	48.5	47.9	70.02	2,332.9	195.5	318.9	227.1	91.79	3.475		
10,500.0	7,702.0	10,397.0	7,592.6	50.3	49.7	69.95	2,432.9	195.4	319.1	223.9	95.15	3.354		
10,600.0	7,702.0	10,497.0	7,592.2	52.1	51.5	69.89	2,532.9	195.4	319.2	220.7	98.52	3.240		
10,700.0	7,702.0	10,597.0	7,591.8	53.9	53.3	69.82	2,632.9	195.4	319.4	217.5	101.91	3.134		
10,800.0	7,702.0	10,697.0	7,591.4	55.7	55.1	69.75	2,732.9	195.3	319.5	214.2	105.31	3.034		
10,900.0	7,702.0	10,797.0	7,591.0	57.5	56.9	69.69	2,832.9	195.3	319.7	210.9	108.72	2.940		
11,000.0	7,702.0	10,897.0	7,590.6	59.3	58.7	69.62	2,932.9	195.2	319.8	207.7	112.15	2.852		
11,100.0	7,702.0	10,997.0	7,590.2	61.2	60.6	69.55	3,032.9	195.2	319.9	204.4	115.58	2.768		
11,200.0	7,702.0	11,097.0	7,589.8	63.0	62.4	69.48	3,132.9	195.1	320.1	201.1	119.02	2.689		
11,300.0	7,702.0	11,197.0	7,589.4	64.8	64.3	69.42	3,232.8	195.1	320.2	197.8	122.47	2.615		
11,400.0	7,702.0	11,297.0	7,589.0	66.7	66.1	69.35	3,332.8	195.1	320.4	194.5	125.93	2.544		
11,500.0	7,702.0	11,397.0	7,588.6	68.5	68.0	69.28	3,432.8	195.0	320.5	191.1	129.39	2.477		
11,600.0	7,702.0	11,497.0	7,588.2	70.4	69.8	69.22	3,532.8	195.0	320.7	187.8	132.86	2.414		
11,700.0	7,702.0	11,597.0	7,587.8	72.3	71.7	69.15	3,632.8	194.9	320.8	184.5	136.33	2.353		
11,800.0	7,702.0	11,697.0	7,587.4	74.1	73.6	69.08	3,732.8	194.9	321.0	181.2	139.81	2.296		
11,900.0	7,702.0	11,797.0	7,587.0	76.0	75.4	69.02	3,832.8	194.8	321.1	177.8	143.29	2.241		
12,000.0	7,702.0	11,897.0	7,586.6	77.9	77.3	68.95	3,932.8	194.8	321.3	174.5	146.77	2.189		
12,100.0	7,702.0	11,997.0	7,586.2	79.7	79.2	68.89	4,032.8	194.8	321.4	171.2	150.26	2.139		
12,200.0	7,702.0	12,097.0	7,585.8	81.6	81.1	68.82	4,132.8	194.7	321.6	167.8	153.75	2.092		
12,300.0	7,702.0	12,197.0	7,585.4	83.5	82.9	68.75	4,232.8	194.7	321.7	164.5	157.24	2.046		
12,400.0	7,702.0	12,297.0	7,585.0	85.4	84.8	68.69	4,332.8	194.6	321.9	161.1	160.73	2.003		
12,500.0	7,702.0	12,397.0	7,584.6	87.2	86.7	68.62	4,432.8	194.6	322.0	157.8	164.22	1.961		
12,600.0	7,702.0	12,497.0	7,584.2	89.1	88.6	68.55	4,532.8	194.6	322.2	154.4	167.71	1.921		
12,700.0	7,702.0	12,597.0	7,583.8	91.0	90.5	68.49	4,632.8	194.5	322.3	151.1	171.21	1.883		
12,800.0	7,702.0	12,697.0	7,583.4	92.9	92.4	68.42	4,732.8	194.5	322.5	147.8	174.70	1.846		
12,900.0	7,702.0	12,797.0	7,583.0	94.8	94.3	68.36	4,832.8	194.4	322.6	144.4	178.20	1.810		
13,000.0	7,702.0	12,897.0	7,582.6	96.7	96.2	68.29	4,932.8	194.4	322.8	141.1	181.70	1.776		
13,100.0	7,702.0	12,997.0	7,582.2	98.6	98.1	68.23	5,032.8	194.4	322.9	137.7	185.19	1.744		
13,200.0	7,702.0	13,097.0	7,581.8	100.5	100.0	68.16	5,132.8	194.3	323.1	134.4	188.69	1.712		
13,300.0	7,702.0	13,197.0	7,581.4	102.3	101.9	68.09	5,232.8	194.3	323.2	131.0	192.18	1.682		
13,400.0	7,702.0	13,297.0	7,581.0	104.2	103.8	68.03	5,332.8	194.2	323.4	127.7	195.68	1.653		
13,500.0	7,702.0	13,397.0	7,580.6	106.1	105.7	67.96	5,432.8	194.2	323.5	124.4	199.17	1.624		
13,600.0	7,702.0	13,497.0	7,580.2	108.0	107.6	67.90	5,532.8	194.2	323.7	121.0	202.66	1.597		
13,700.0	7,702.0	13,597.0	7,579.8	109.9	109.5	67.83	5,632.8	194.1	323.8	117.7	206.16	1.571		
13,800.0	7,702.0	13,697.0	7,579.4	111.8	111.4	67.77	5,732.8	194.1	324.0	114.3	209.65	1.545		
13,900.0	7,702.0	13,797.0	7,579.0	113.7	113.3	67.70	5,832.8	194.0	324.2	111.0	213.14	1.521		
14,000.0	7,702.0	13,897.0	7,578.6	115.6	115.2	67.64	5,932.8	194.0	324.3	107.7	216.63	1.497 Level 3		
14,100.0	7,702.0	13,997.0	7,578.2	117.5	117.1	67.57	6,032.8	194.0	324.5	104.3	220.11	1.474 Level 3		
14,200.0	7,702.0	14,097.0	7,577.8	119.4	119.0	67.51	6,132.8	193.9	324.6	101.0	223.60	1.452 Level 3		
14,300.0	7,702.0	14,197.0	7,577.4	121.3	121.0	67.44	6,232.8	193.9	324.8	97.7	227.08	1.430 Level 3		
14,400.0	7,702.0	14,297.0	7,577.0	123.3	122.9	67.38	6,332.8	193.9	324.9	94.4	230.57	1.409 Level 3		
14,500.0	7,702.0	14,397.0	7,576.6	125.2	124.8	67.31	6,432.8	193.8	325.1	91.0	234.05	1.389 Level 3		
14,600.0	7,702.0	14,497.0	7,576.2	127.1	126.7	67.25	6,532.8	193.8	325.2	87.7	237.53	1.369 Level 3		
14,700.0	7,702.0	14,597.0	7,575.8	129.0	128.6	67.18	6,632.8	193.7	325.4	84.4	241.01	1.350 Level 3		
14,800.0	7,702.0	14,697.0	7,575.4	130.9	130.5	67.12	6,732.8	193.7	325.6	81.1	244.48	1.332 Level 3		
14,900.0	7,702.0	14,797.0	7,575.0	132.8	132.4	67.05	6,832.8	193.7	325.7	77.8	247.96	1.314 Level 3		
15,000.0	7,702.0	14,897.0	7,574.6	134.7	134.4	66.99	6,932.8	193.6	325.9	74.5	251.43	1.296 Level 3		
15,100.0	7,702.0	14,997.0	7,574.2	136.6	136.3	66.92	7,032.8	193.6	326.0	71.1	254.90	1.279 Level 3		
15,200.0	7,702.0	15,097.0	7,573.8	138.5	138.2	66.86	7,132.8	193.6	326.2	67.8	258.37	1.263 Level 3		
15,300.0	7,702.0	15,197.0	7,573.4	140.4	140.1	66.80	7,232.8	193.5	326.4	64.5	261.84	1.246 Level 2		
15,400.0	7,702.0	15,297.0	7,573.0	142.3	142.0	66.73	7,332.8	193.5	326.5	61.2	265.30	1.231 Level 2		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
15,500.0	7,702.0	15,397.0	7,572.6	144.2	143.9	66.67	7,432.8	193.5	326.7	57.9	268.76	1.216	Level 2	
15,600.0	7,702.0	15,497.0	7,572.2	146.2	145.9	66.60	7,532.8	193.4	326.8	54.6	272.22	1.201	Level 2	
15,700.0	7,702.0	15,597.0	7,571.8	148.1	147.8	66.54	7,632.8	193.4	327.0	51.3	275.68	1.186	Level 2	
15,800.0	7,702.0	15,697.0	7,571.4	150.0	149.7	66.48	7,732.8	193.3	327.2	48.0	279.14	1.172	Level 2	
15,900.0	7,702.0	15,797.0	7,571.0	151.9	151.6	66.41	7,832.8	193.3	327.3	44.7	282.59	1.158	Level 2	
16,000.0	7,702.0	15,897.0	7,570.6	153.8	153.6	66.35	7,932.8	193.3	327.5	41.5	286.04	1.145	Level 2	
16,100.0	7,702.0	15,997.0	7,570.2	155.7	155.5	66.28	8,032.7	193.2	327.7	38.2	289.49	1.132	Level 2	
16,200.0	7,702.0	16,097.0	7,569.8	157.6	157.4	66.22	8,132.7	193.2	327.8	34.9	292.93	1.119	Level 2	
16,300.0	7,702.0	16,197.0	7,569.4	159.6	159.3	66.16	8,232.7	193.2	328.0	31.6	296.38	1.107	Level 2	
16,400.0	7,702.0	16,297.0	7,569.0	161.5	161.2	66.09	8,332.7	193.1	328.1	28.3	299.82	1.094	Level 2	
16,500.0	7,702.0	16,397.0	7,568.6	163.4	163.2	66.03	8,432.7	193.1	328.3	25.1	303.26	1.083	Level 2	
16,600.0	7,702.0	16,497.0	7,568.2	165.3	165.1	65.97	8,532.7	193.1	328.5	21.8	306.69	1.071	Level 2	
16,700.0	7,702.0	16,597.0	7,567.8	167.2	167.0	65.90	8,632.7	193.0	328.6	18.5	310.13	1.060	Level 2	
16,800.0	7,702.0	16,697.0	7,567.4	169.1	168.9	65.84	8,732.7	193.0	328.8	15.2	313.56	1.049	Level 2	
16,900.0	7,702.0	16,796.9	7,567.0	171.0	170.9	65.78	8,832.7	193.0	329.0	12.0	316.99	1.038	Level 2	
17,000.0	7,702.0	16,896.9	7,566.6	173.0	172.8	65.71	8,932.7	192.9	329.1	8.7	320.41	1.027	Level 2	
17,100.0	7,702.0	16,996.9	7,566.2	174.9	174.7	65.65	9,032.7	192.9	329.3	5.5	323.84	1.017	Level 2	
17,200.0	7,702.0	17,096.9	7,565.8	176.8	176.6	65.59	9,132.7	192.9	329.5	2.2	327.26	1.007	Level 2	
17,300.0	7,702.0	17,196.9	7,565.4	178.7	178.6	65.52	9,232.7	192.8	329.6	-1.0	330.68	0.997	Level 1	
17,400.0	7,702.0	17,296.9	7,565.0	180.6	180.5	65.46	9,332.7	192.8	329.8	-4.3	334.09	0.987	Level 1	
17,500.0	7,702.0	17,396.9	7,564.6	182.5	182.4	65.40	9,432.7	192.8	330.0	-7.5	337.50	0.978	Level 1	
17,600.0	7,702.0	17,496.9	7,564.2	184.5	184.3	65.33	9,532.7	192.7	330.1	-10.8	340.91	0.968	Level 1	
17,700.0	7,702.0	17,596.9	7,563.8	186.4	186.3	65.27	9,632.7	192.7	330.3	-14.0	344.32	0.959	Level 1	
17,800.0	7,702.0	17,696.9	7,563.4	188.3	188.2	65.21	9,732.7	192.7	330.5	-17.2	347.72	0.950	Level 1	
17,900.0	7,702.0	17,796.9	7,563.0	190.2	190.1	65.15	9,832.7	192.6	330.7	-20.5	351.13	0.942	Level 1	
18,000.0	7,702.0	17,896.9	7,562.6	192.1	192.0	65.08	9,932.7	192.6	330.8	-23.7	354.52	0.933	Level 1	
18,100.0	7,702.0	17,996.9	7,562.2	194.1	194.0	65.02	10,032.7	192.6	331.0	-26.9	357.92	0.925	Level 1	
18,157.1	7,702.0	18,054.0	7,562.0	195.1	195.0	64.99	10,089.8	192.6	331.1	-28.7	359.79	0.920	Level 1, ES, SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													Crittter Creek 18 SW Pad Sec.18-T11N-R63W - Crittter Creek 203-1807H - Wellbore #1 - Plan #1 (2-28-1)		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	89.98	0.0	75.2	75.2								
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	75.2	75.2	75.0	0.22	334.468					
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	75.2	75.2	74.5	0.67	111.489					
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	75.2	75.2	74.1	1.12	66.894					
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	75.2	75.2	73.6	1.57	47.781					
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	75.2	75.2	73.2	2.02	37.163					
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	75.2	75.2	72.7	2.47	30.406					
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	75.2	75.2	72.3	2.92	25.728					
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	75.2	75.2	71.8	3.37	22.298					
900.0	900.0	900.0	900.0	1.9	1.9	89.98	0.0	75.2	75.2	71.4	3.82	19.675					
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.98	0.0	75.2	75.2	70.9	4.27	17.604					
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.98	0.0	75.2	75.2	70.5	4.72	15.927					
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.98	0.0	75.2	75.2	70.0	5.17	14.542					
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.98	0.0	75.2	75.2	69.6	5.62	13.379					
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.98	0.0	75.2	75.2	69.1	6.07	12.388					
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.98	0.0	75.2	75.2	68.7	6.52	11.533					
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.98	0.0	75.2	75.2	68.2	6.97	10.789					
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.98	0.0	75.2	75.2	67.8	7.42	10.135 CC, ES					
1,800.0	1,800.0	1,798.5	1,798.5	3.9	3.9	-99.73	-0.8	76.2	76.4	68.6	7.81	9.781					
1,900.0	1,899.9	1,896.8	1,896.8	4.1	4.1	-100.69	-3.2	79.1	80.1	71.9	8.16	9.812					
2,000.0	1,999.7	1,995.0	1,994.7	4.3	4.3	-102.09	-7.1	84.1	86.2	77.7	8.52	10.120					
2,100.0	2,099.3	2,092.9	2,092.2	4.4	4.5	-103.73	-12.6	90.9	94.9	86.0	8.90	10.667					
2,200.0	2,198.6	2,190.4	2,189.0	4.6	4.7	-105.43	-19.7	99.7	106.2	96.9	9.30	11.418					
2,300.0	2,297.5	2,287.4	2,285.0	4.9	4.9	-107.04	-28.2	110.3	120.0	110.3	9.73	12.337					
2,400.0	2,396.2	2,383.8	2,380.2	5.1	5.2	-108.44	-38.2	122.8	136.3	126.1	10.19	13.367					
2,500.0	2,494.8	2,479.8	2,474.4	5.4	5.4	-108.98	-49.6	137.0	154.3	143.6	10.69	14.425					
2,600.0	2,593.4	2,575.2	2,567.5	5.7	5.8	-108.80	-62.5	153.0	173.9	162.6	11.23	15.488					
2,700.0	2,692.0	2,672.9	2,662.7	6.0	6.1	-108.35	-76.4	170.4	194.3	182.6	11.80	16.477					
2,800.0	2,790.6	2,770.8	2,758.0	6.3	6.5	-107.98	-90.4	187.8	214.8	202.4	12.39	17.345					
2,900.0	2,889.2	2,868.7	2,853.3	6.6	6.8	-107.68	-104.4	205.2	235.3	222.3	13.00	18.108					
3,000.0	2,987.8	2,966.5	2,948.6	6.9	7.2	-107.43	-118.4	222.6	255.8	242.2	13.62	18.778					
3,100.0	3,086.4	3,064.4	3,043.9	7.2	7.7	-107.21	-132.3	240.0	276.3	262.1	14.27	19.368					
3,200.0	3,185.1	3,162.3	3,139.2	7.6	8.1	-107.02	-146.3	257.4	296.8	281.9	14.92	19.891					
3,300.0	3,283.7	3,260.1	3,234.5	7.9	8.5	-106.86	-160.3	274.8	317.3	301.7	15.59	20.355					
3,400.0	3,382.3	3,358.0	3,329.8	8.2	8.9	-106.72	-174.3	292.2	337.8	321.6	16.27	20.767					
3,500.0	3,480.9	3,455.9	3,425.0	8.6	9.4	-106.59	-188.2	309.6	358.3	341.4	16.95	21.136					
3,600.0	3,579.5	3,553.8	3,520.3	8.9	9.8	-106.48	-202.2	327.0	378.9	361.2	17.65	21.467					
3,700.0	3,678.1	3,651.6	3,615.6	9.3	10.3	-106.38	-216.2	344.4	399.4	381.0	18.35	21.765					
3,800.0	3,776.7	3,749.5	3,710.9	9.7	10.7	-106.29	-230.2	361.8	419.9	400.8	19.06	22.033					
3,900.0	3,875.3	3,847.4	3,806.2	10.0	11.2	-106.21	-244.1	379.2	440.4	420.6	19.77	22.276					
4,000.0	3,973.9	3,945.2	3,901.5	10.4	11.6	-106.13	-258.1	396.6	460.9	440.4	20.49	22.497					
4,100.0	4,072.5	4,043.1	3,996.8	10.7	12.1	-106.06	-272.1	414.0	481.4	460.2	21.21	22.699					
4,200.0	4,171.1	4,141.0	4,092.1	11.1	12.6	-106.00	-286.1	431.4	501.9	480.0	21.94	22.883					
4,300.0	4,269.8	4,238.9	4,187.4	11.5	13.0	-105.94	-300.0	448.8	522.5	499.8	22.67	23.051					
4,400.0	4,368.4	4,336.7	4,282.7	11.9	13.5	-105.89	-314.0	466.2	543.0	519.6	23.40	23.206					
4,500.0	4,467.0	4,434.6	4,378.0	12.2	14.0	-105.84	-328.0	483.6	563.5	539.4	24.13	23.348					
4,600.0	4,565.6	4,532.5	4,473.3	12.6	14.4	-105.79	-342.0	501.0	584.0	559.1	24.87	23.480					
4,700.0	4,664.2	4,630.3	4,568.6	13.0	14.9	-105.75	-355.9	518.4	604.5	578.9	25.61	23.601					
4,800.0	4,762.8	4,728.2	4,663.9	13.3	15.4	-105.71	-369.9	535.8	625.1	598.7	26.36	23.714					
4,900.0	4,861.4	4,826.1	4,759.1	13.7	15.9	-105.67	-383.9	553.2	645.6	618.5	27.10	23.819					
5,000.0	4,960.0	4,924.0	4,854.4	14.1	16.3	-105.63	-397.9	570.6	666.1	638.2	27.85	23.917					
5,100.0	5,058.6	5,021.8	4,949.7	14.5	16.8	-105.60	-411.8	588.0	686.6	658.0	28.60	24.008					

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
5,200.0	5,157.2	5,119.7	5,045.0	14.9	17.3	-105.57	-425.8	605.4	707.1	677.8	29.35	24.093		
5,300.0	5,255.8	5,217.6	5,140.3	15.2	17.8	-105.54	-439.8	622.8	727.7	697.6	30.10	24.172		
5,400.0	5,354.5	5,315.4	5,235.6	15.6	18.3	-105.51	-453.8	640.2	748.2	717.3	30.86	24.247		
5,500.0	5,453.1	5,413.3	5,330.9	16.0	18.7	-105.49	-467.7	657.6	768.7	737.1	31.61	24.317		
5,600.0	5,551.7	5,511.2	5,426.2	16.4	19.2	-105.56	-481.7	675.0	789.2	756.8	32.37	24.381		
5,700.0	5,650.7	5,609.2	5,521.6	16.6	19.7	-105.74	-495.7	692.4	809.0	775.9	33.05	24.474		
5,800.0	5,750.2	5,707.2	5,617.0	16.9	20.2	-105.67	-509.7	709.9	827.9	794.2	33.69	24.574		
5,900.0	5,849.9	5,805.1	5,712.3	17.1	20.7	-105.37	-523.7	727.3	845.9	811.7	34.27	24.683		
6,000.0	5,949.9	5,902.8	5,807.4	17.2	21.1	-104.87	-537.6	744.6	863.2	828.4	34.80	24.807		
6,100.0	6,049.8	6,000.2	5,902.3	17.4	21.6	85.34	-551.5	762.0	880.0	844.7	35.26	24.959		
6,200.0	6,149.8	6,097.5	5,997.1	17.5	22.1	86.33	-565.4	779.3	896.9	861.2	35.68	25.140		
6,300.0	6,249.8	6,209.7	6,106.4	17.7	22.6	87.40	-581.0	798.7	913.7	877.6	36.10	25.312		
6,400.0	6,349.8	6,339.8	6,234.3	17.8	23.0	88.39	-596.1	817.5	927.8	891.3	36.47	25.442		
6,500.0	6,449.8	6,472.0	6,365.1	18.0	23.4	89.12	-607.7	831.9	938.5	901.7	36.83	25.483		
6,600.0	6,549.8	6,605.5	6,498.1	18.1	23.7	89.61	-615.5	841.6	945.8	908.6	37.18	25.434		
6,700.0	6,649.8	6,740.0	6,632.4	18.3	23.9	89.85	-619.5	846.6	949.4	911.9	37.53	25.298		
6,800.0	6,749.8	6,857.4	6,749.8	18.4	24.0	89.88	-620.0	847.2	949.9	912.0	37.86	25.091		
6,900.0	6,849.8	6,957.4	6,849.8	18.6	24.2	89.88	-620.0	847.2	949.9	911.7	38.16	24.894		
6,935.5	6,885.3	6,992.9	6,885.3	18.6	24.2	89.88	-620.0	847.2	949.9	911.6	38.26	24.825		
7,000.0	6,949.8	7,057.1	6,949.5	18.7	24.3	89.71	-617.1	847.2	949.9	911.4	38.45	24.703		
7,100.0	7,049.8	7,154.8	7,045.9	18.9	24.3	88.97	-601.9	847.2	950.0	911.3	38.69	24.554		
7,200.0	7,148.4	7,250.0	7,137.0	18.9	24.2	88.18	-574.5	847.2	950.4	911.7	38.72	24.547		
7,300.0	7,243.9	7,345.1	7,223.5	18.8	24.1	87.42	-535.3	847.1	950.9	912.3	38.54	24.673		
7,400.0	7,334.4	7,438.0	7,302.4	18.6	23.9	86.71	-486.3	847.1	951.5	913.3	38.21	24.904		
7,500.0	7,418.1	7,529.7	7,373.4	18.4	23.7	86.07	-428.4	847.1	952.2	914.4	37.78	25.205		
7,600.0	7,493.3	7,620.3	7,435.7	18.1	23.4	85.50	-362.7	847.1	952.9	915.5	37.33	25.258		
7,700.0	7,558.7	7,710.1	7,488.7	17.9	23.2	85.01	-290.3	847.0	953.5	916.6	36.93	25.817		
7,800.0	7,613.0	7,800.0	7,532.4	17.8	22.9	84.61	-211.8	847.0	954.1	917.5	36.69	26.006		
7,900.0	7,655.0	7,887.6	7,565.1	17.8	22.6	84.31	-130.6	847.0	954.6	918.0	36.68	26.029		
8,000.0	7,684.0	7,975.6	7,587.8	17.9	22.4	84.11	-45.6	846.9	955.0	918.0	36.95	25.848		
8,100.0	7,699.4	8,063.5	7,599.9	18.3	22.2	84.00	41.3	846.9	955.2	917.6	37.53	25.448		
8,200.0	7,702.0	8,155.4	7,601.9	18.8	22.0	83.98	133.2	846.8	955.2	916.7	38.48	24.823		
8,300.0	7,702.0	8,255.4	7,601.5	19.3	21.9	83.96	233.2	846.8	955.3	915.7	39.57	24.141		
8,400.0	7,702.0	8,355.4	7,601.1	19.8	22.1	83.93	333.2	846.7	955.3	914.5	40.75	23.440		
8,500.0	7,702.0	8,455.4	7,600.7	20.5	22.8	83.91	433.2	846.7	955.4	913.1	42.30	22.586		
8,600.0	7,702.0	8,555.4	7,600.3	21.3	23.8	83.89	533.2	846.6	955.4	911.2	44.16	21.635		
8,700.0	7,702.0	8,655.4	7,599.9	22.3	24.9	83.86	633.2	846.6	955.5	909.2	46.27	20.651		
8,800.0	7,702.0	8,755.4	7,599.5	23.4	26.2	83.84	733.2	846.5	955.5	906.9	48.59	19.666		
8,900.0	7,702.0	8,855.4	7,599.1	24.6	27.5	83.82	833.2	846.5	955.5	904.5	51.09	18.704		
9,000.0	7,702.0	8,955.4	7,598.7	25.8	28.9	83.79	933.2	846.5	955.6	901.8	53.75	17.779		
9,100.0	7,702.0	9,055.4	7,598.3	27.2	30.4	83.77	1,033.2	846.4	955.6	899.1	56.55	16.900		
9,200.0	7,702.0	9,155.4	7,597.8	28.6	31.9	83.74	1,133.2	846.4	955.7	896.2	59.46	16.073		
9,300.0	7,702.0	9,255.4	7,597.4	30.1	33.4	83.72	1,233.2	846.3	955.7	893.3	62.47	15.299		
9,400.0	7,702.0	9,355.4	7,597.0	31.6	35.0	83.70	1,333.2	846.3	955.8	890.2	65.57	14.576		
9,500.0	7,702.0	9,455.4	7,596.6	33.2	36.6	83.67	1,433.2	846.2	955.8	887.1	68.75	13.904		
9,600.0	7,702.0	9,555.4	7,596.2	34.8	38.3	83.65	1,533.2	846.2	955.9	883.9	71.98	13.279		
9,700.0	7,702.0	9,655.4	7,595.8	36.4	39.9	83.62	1,633.2	846.1	955.9	880.7	75.28	12.699		
9,800.0	7,702.0	9,755.4	7,595.4	38.1	41.6	83.60	1,733.2	846.1	956.0	877.4	78.62	12.160		
9,900.0	7,702.0	9,855.4	7,595.0	39.8	43.3	83.58	1,833.2	846.0	956.0	874.0	82.01	11.658		
10,000.0	7,702.0	9,955.4	7,594.6	41.5	45.0	83.55	1,933.2	846.0	956.1	870.7	85.43	11.192		
10,100.0	7,702.0	10,055.4	7,594.2	43.2	46.7	83.53	2,033.2	845.9	956.1	867.2	88.89	10.757		
10,200.0	7,702.0	10,155.4	7,593.8	45.0	48.5	83.50	2,133.2	845.9	956.2	863.8	92.37	10.351		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
10,300.0	7,702.0	10,255.4	7,593.4	46.7	50.3	83.48	2,233.2	845.8	956.2	860.3	95.88	9.973		
10,400.0	7,702.0	10,355.4	7,593.0	48.5	52.0	83.46	2,333.2	845.8	956.3	856.9	99.42	9.618		
10,500.0	7,702.0	10,455.4	7,592.6	50.3	53.8	83.43	2,433.2	845.7	956.3	853.3	102.98	9.287		
10,600.0	7,702.0	10,555.4	7,592.2	52.1	55.6	83.41	2,533.2	845.7	956.4	849.8	106.55	8.975		
10,700.0	7,702.0	10,655.4	7,591.8	53.9	57.4	83.39	2,633.2	845.6	956.4	846.3	110.15	8.683		
10,800.0	7,702.0	10,755.4	7,591.4	55.7	59.2	83.36	2,733.2	845.6	956.5	842.7	113.75	8.408		
10,900.0	7,702.0	10,855.4	7,591.0	57.5	61.0	83.34	2,833.2	845.5	956.5	839.1	117.38	8.149		
11,000.0	7,702.0	10,955.4	7,590.6	59.3	62.8	83.31	2,933.2	845.5	956.6	835.5	121.01	7.905		
11,100.0	7,702.0	11,055.4	7,590.2	61.2	64.7	83.29	3,033.2	845.4	956.6	831.9	124.66	7.674		
11,200.0	7,702.0	11,155.4	7,589.8	63.0	66.5	83.27	3,133.2	845.4	956.6	828.3	128.31	7.456		
11,300.0	7,702.0	11,255.4	7,589.4	64.8	68.3	83.24	3,233.2	845.3	956.7	824.7	131.98	7.249		
11,400.0	7,702.0	11,355.4	7,589.0	66.7	70.2	83.22	3,333.2	845.3	956.7	821.1	135.65	7.053		
11,500.0	7,702.0	11,455.4	7,588.6	68.5	72.0	83.19	3,433.2	845.2	956.8	817.4	139.33	6.867		
11,600.0	7,702.0	11,555.4	7,588.2	70.4	73.9	83.17	3,533.2	845.2	956.8	813.8	143.02	6.690		
11,700.0	7,702.0	11,655.4	7,587.8	72.3	75.7	83.15	3,633.2	845.1	956.9	810.2	146.72	6.522		
11,800.0	7,702.0	11,755.4	7,587.4	74.1	77.6	83.12	3,733.2	845.1	956.9	806.5	150.42	6.361		
11,900.0	7,702.0	11,855.4	7,587.0	76.0	79.4	83.10	3,833.2	845.0	957.0	802.8	154.13	6.209		
12,000.0	7,702.0	11,955.4	7,586.6	77.9	81.3	83.08	3,933.2	845.0	957.0	799.2	157.85	6.063		
12,100.0	7,702.0	12,055.4	7,586.2	79.7	83.1	83.05	4,033.2	844.9	957.1	795.5	161.56	5.924		
12,200.0	7,702.0	12,155.4	7,585.8	81.6	85.0	83.03	4,133.2	844.9	957.1	791.8	165.29	5.790		
12,300.0	7,702.0	12,255.4	7,585.4	83.5	86.9	83.00	4,233.2	844.8	957.1	788.1	169.02	5.663		
12,400.0	7,702.0	12,355.4	7,585.0	85.4	88.8	82.98	4,333.2	844.8	957.2	784.4	172.75	5.541		
12,500.0	7,702.0	12,455.4	7,584.6	87.2	90.6	82.96	4,433.2	844.7	957.2	780.7	176.48	5.424		
12,600.0	7,702.0	12,555.4	7,584.2	89.1	92.5	82.93	4,533.2	844.7	957.3	777.1	180.22	5.312		
12,700.0	7,702.0	12,655.4	7,583.8	91.0	94.4	82.91	4,633.2	844.6	957.3	773.4	183.96	5.204		
12,800.0	7,702.0	12,755.4	7,583.4	92.9	96.3	82.89	4,733.2	844.6	957.4	769.7	187.71	5.100		
12,900.0	7,702.0	12,855.4	7,583.0	94.8	98.2	82.86	4,833.2	844.5	957.4	766.0	191.46	5.001		
13,000.0	7,702.0	12,955.4	7,582.6	96.7	100.0	82.84	4,933.2	844.5	957.5	762.2	195.21	4.905		
13,100.0	7,702.0	13,055.4	7,582.2	98.6	101.9	82.81	5,033.2	844.4	957.5	758.5	198.96	4.813		
13,200.0	7,702.0	13,155.4	7,581.8	100.5	103.8	82.79	5,133.2	844.4	957.5	754.8	202.71	4.724		
13,300.0	7,702.0	13,255.4	7,581.4	102.3	105.7	82.77	5,233.2	844.3	957.6	751.1	206.47	4.638		
13,400.0	7,702.0	13,355.4	7,581.0	104.2	107.6	82.74	5,333.2	844.3	957.6	747.4	210.23	4.555		
13,500.0	7,702.0	13,455.4	7,580.6	106.1	109.5	82.72	5,433.2	844.2	957.7	743.7	213.99	4.475		
13,600.0	7,702.0	13,555.4	7,580.2	108.0	111.4	82.69	5,533.2	844.2	957.7	740.0	217.75	4.398		
13,700.0	7,702.0	13,655.4	7,579.8	109.9	113.3	82.67	5,633.2	844.1	957.8	736.2	221.52	4.324		
13,800.0	7,702.0	13,755.4	7,579.4	111.8	115.2	82.65	5,733.2	844.1	957.8	732.5	225.28	4.252		
13,900.0	7,702.0	13,855.4	7,579.0	113.7	117.1	82.62	5,833.2	844.0	957.8	728.8	229.05	4.182		
14,000.0	7,702.0	13,955.4	7,578.6	115.6	119.0	82.60	5,933.2	844.0	957.9	725.1	232.82	4.114		
14,100.0	7,702.0	14,055.4	7,578.2	117.5	120.9	82.58	6,033.2	843.9	957.9	721.3	236.59	4.049		
14,200.0	7,702.0	14,155.4	7,577.8	119.4	122.8	82.55	6,133.2	843.9	958.0	717.6	240.36	3.986		
14,300.0	7,702.0	14,255.4	7,577.4	121.3	124.7	82.53	6,233.2	843.8	958.0	713.9	244.13	3.924		
14,400.0	7,702.0	14,355.4	7,577.0	123.3	126.6	82.50	6,333.2	843.8	958.1	710.1	247.90	3.865		
14,500.0	7,702.0	14,455.4	7,576.6	125.2	128.5	82.48	6,433.2	843.7	958.1	706.4	251.68	3.807		
14,600.0	7,702.0	14,555.4	7,576.2	127.1	130.4	82.46	6,533.2	843.7	958.1	702.7	255.45	3.751		
14,700.0	7,702.0	14,655.4	7,575.8	129.0	132.3	82.43	6,633.2	843.6	958.2	698.9	259.23	3.696		
14,800.0	7,702.0	14,755.4	7,575.4	130.9	134.2	82.41	6,733.2	843.6	958.2	695.2	263.01	3.643		
14,900.0	7,702.0	14,855.4	7,575.0	132.8	136.1	82.38	6,833.2	843.5	958.3	691.5	266.78	3.592		
15,000.0	7,702.0	14,955.4	7,574.6	134.7	138.0	82.36	6,933.2	843.5	958.3	687.7	270.56	3.542		
15,100.0	7,702.0	15,055.4	7,574.2	136.6	139.9	82.34	7,033.2	843.4	958.3	684.0	274.34	3.493		
15,200.0	7,702.0	15,155.4	7,573.8	138.5	141.8	82.31	7,133.2	843.4	958.4	680.3	278.12	3.446		
15,300.0	7,702.0	15,255.4	7,573.4	140.4	143.7	82.29	7,233.2	843.3	958.4	676.5	281.90	3.400		
15,400.0	7,702.0	15,355.4	7,573.0	142.3	145.6	82.27	7,333.2	843.3	958.5	672.8	285.68	3.355		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
15,500.0	7,702.0	15,455.4	7,572.6	144.2	147.5	82.24	7,433.2	843.2	958.5	669.0	289.46	3.311		
15,600.0	7,702.0	15,555.4	7,572.2	146.2	149.4	82.22	7,533.1	843.2	958.5	665.3	293.24	3.269		
15,700.0	7,702.0	15,655.4	7,571.8	148.1	151.3	82.19	7,633.1	843.1	958.6	661.6	297.02	3.227		
15,800.0	7,702.0	15,755.4	7,571.4	150.0	153.2	82.17	7,733.1	843.1	958.6	657.8	300.80	3.187		
15,900.0	7,702.0	15,855.4	7,571.0	151.9	155.1	82.15	7,833.1	843.0	958.7	654.1	304.59	3.147		
16,000.0	7,702.0	15,955.4	7,570.6	153.8	157.1	82.12	7,933.1	843.0	958.7	650.3	308.37	3.109		
16,100.0	7,702.0	16,055.4	7,570.2	155.7	159.0	82.10	8,033.1	842.9	958.7	646.6	312.15	3.071		
16,200.0	7,702.0	16,155.4	7,569.8	157.6	160.9	82.08	8,133.1	842.8	958.8	642.9	315.94	3.035		
16,300.0	7,702.0	16,255.4	7,569.4	159.6	162.8	82.05	8,233.1	842.8	958.8	639.1	319.72	2.999		
16,400.0	7,702.0	16,355.4	7,569.0	161.5	164.7	82.03	8,333.1	842.7	958.9	635.4	323.50	2.964		
16,500.0	7,702.0	16,455.4	7,568.6	163.4	166.6	82.00	8,433.1	842.7	958.9	631.6	327.29	2.930		
16,600.0	7,702.0	16,555.4	7,568.2	165.3	168.5	81.98	8,533.1	842.6	958.9	627.9	331.07	2.896		
16,700.0	7,702.0	16,655.4	7,567.8	167.2	170.4	81.96	8,633.1	842.6	959.0	624.1	334.85	2.864		
16,800.0	7,702.0	16,755.4	7,567.4	169.1	172.4	81.93	8,733.1	842.5	959.0	620.4	338.64	2.832		
16,900.0	7,702.0	16,855.4	7,567.0	171.0	174.3	81.91	8,833.1	842.5	959.1	616.6	342.42	2.801		
17,000.0	7,702.0	16,955.4	7,566.6	173.0	176.2	81.89	8,933.1	842.4	959.1	612.9	346.21	2.770		
17,100.0	7,702.0	17,055.4	7,566.2	174.9	178.1	81.86	9,033.1	842.4	959.1	609.1	349.99	2.740		
17,200.0	7,702.0	17,155.4	7,565.8	176.8	180.0	81.84	9,133.1	842.3	959.2	605.4	353.78	2.711		
17,300.0	7,702.0	17,255.4	7,565.4	178.7	181.9	81.81	9,233.1	842.3	959.2	601.7	357.56	2.683		
17,400.0	7,702.0	17,355.4	7,565.0	180.6	183.8	81.79	9,333.1	842.2	959.3	597.9	361.35	2.655		
17,500.0	7,702.0	17,455.4	7,564.6	182.5	185.8	81.77	9,433.1	842.2	959.3	594.2	365.13	2.627		
17,600.0	7,702.0	17,555.4	7,564.2	184.5	187.7	81.74	9,533.1	842.1	959.3	590.4	368.92	2.600		
17,700.0	7,702.0	17,655.4	7,563.8	186.4	189.6	81.72	9,633.1	842.0	959.4	586.7	372.70	2.574		
17,800.0	7,702.0	17,755.4	7,563.4	188.3	191.5	81.70	9,733.1	842.0	959.4	582.9	376.48	2.548		
17,900.0	7,702.0	17,855.4	7,563.0	190.2	193.4	81.67	9,833.1	841.9	959.4	579.2	380.27	2.523		
18,000.0	7,702.0	17,955.4	7,562.6	192.1	195.3	81.65	9,933.1	841.9	959.5	575.4	384.05	2.498		
18,100.0	7,702.0	18,055.4	7,562.2	194.1	197.2	81.62	10,033.1	841.8	959.5	571.7	387.84	2.474		
18,157.1	7,702.0	18,111.4	7,562.0	195.1	198.3	81.61	10,089.2	841.8	959.5	569.6	389.98	2.460 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	49.7	49.7					
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	49.7	49.7	49.5	0.22	221.339		
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	49.7	49.7	49.1	0.67	73.780		
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	49.7	49.7	48.6	1.12	44.268		
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	49.7	49.7	48.2	1.57	31.620		
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	49.7	49.7	47.7	2.02	24.593		
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	49.7	49.7	47.3	2.47	20.122		
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	49.7	49.7	46.8	2.92	17.026		
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	49.7	49.7	46.4	3.37	14.756		
900.0	900.0	900.0	900.0	1.9	1.9	89.98	0.0	49.7	49.7	45.9	3.82	13.020		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.98	0.0	49.7	49.7	45.5	4.27	11.649		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.98	0.0	49.7	49.7	45.0	4.72	10.540		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.98	0.0	49.7	49.7	44.6	5.17	9.623		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.98	0.0	49.7	49.7	44.1	5.62	8.854		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.98	0.0	49.7	49.7	43.7	6.07	8.198		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.98	0.0	49.7	49.7	43.2	6.52	7.632		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.98	0.0	49.7	49.7	42.8	6.97	7.140		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.98	0.0	49.7	49.7	42.3	7.42	6.707 CC		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-100.87	0.0	49.7	50.0	42.1	7.84	6.377 ES		
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-105.20	0.0	49.7	50.9	42.6	8.23	6.179		
2,000.0	1,999.7	1,998.9	1,998.9	4.3	4.4	-110.78	-0.9	50.6	53.7	45.0	8.61	6.235		
2,100.0	2,099.3	2,097.9	2,097.8	4.4	4.5	-115.80	-3.6	53.3	59.3	50.3	8.97	6.610		
2,200.0	2,198.6	2,196.8	2,196.5	4.6	4.7	-119.80	-8.2	57.8	67.6	58.3	9.34	7.237		
2,300.0	2,297.5	2,295.4	2,294.7	4.9	4.9	-122.71	-14.6	64.1	78.5	68.8	9.74	8.067		
2,400.0	2,396.2	2,393.7	2,392.4	5.1	5.1	-124.51	-22.7	72.1	91.7	81.5	10.16	9.019		
2,500.0	2,494.8	2,491.9	2,489.6	5.4	5.3	-124.66	-32.6	81.8	105.8	95.1	10.63	9.952		
2,600.0	2,593.4	2,589.8	2,586.1	5.7	5.6	-123.64	-44.3	93.3	120.7	109.6	11.13	10.846		
2,700.0	2,692.0	2,687.5	2,682.0	6.0	5.9	-121.86	-57.6	106.5	136.5	124.9	11.66	11.705		
2,800.0	2,790.6	2,786.1	2,778.5	6.3	6.2	-120.12	-71.7	120.3	152.8	140.6	12.23	12.493		
2,900.0	2,889.2	2,884.7	2,875.1	6.6	6.5	-118.71	-85.9	134.2	169.3	156.4	12.83	13.196		
3,000.0	2,987.8	2,983.2	2,971.6	6.9	6.8	-117.56	-100.0	148.1	185.8	172.3	13.44	13.825		
3,100.0	3,086.4	3,081.8	3,068.2	7.2	7.2	-116.59	-114.1	162.0	202.3	188.2	14.06	14.386		
3,200.0	3,185.1	3,180.4	3,164.8	7.6	7.5	-115.77	-128.2	175.9	218.9	204.2	14.70	14.888		
3,300.0	3,283.7	3,278.9	3,261.3	7.9	7.9	-115.06	-142.3	189.8	235.6	220.2	15.36	15.338		
3,400.0	3,382.3	3,377.5	3,357.9	8.2	8.3	-114.45	-156.4	203.6	252.2	236.2	16.02	15.742		
3,500.0	3,480.9	3,476.1	3,454.4	8.6	8.6	-113.91	-170.5	217.5	268.9	252.2	16.70	16.107		
3,600.0	3,579.5	3,574.6	3,551.0	8.9	9.0	-113.44	-184.6	231.4	285.7	268.3	17.38	16.436		
3,700.0	3,678.1	3,673.2	3,647.5	9.3	9.4	-113.02	-198.7	245.3	302.4	284.3	18.07	16.735		
3,800.0	3,776.7	3,771.8	3,744.1	9.7	9.8	-112.64	-212.9	259.2	319.1	300.4	18.77	17.006		
3,900.0	3,875.3	3,870.3	3,840.7	10.0	10.2	-112.30	-227.0	273.1	335.9	316.4	19.47	17.253		
4,000.0	3,973.9	3,968.9	3,937.2	10.4	10.6	-112.00	-241.1	286.9	352.7	332.5	20.18	17.479		
4,100.0	4,072.5	4,067.5	4,033.8	10.7	11.0	-111.72	-255.2	300.8	369.5	348.6	20.89	17.687		
4,200.0	4,171.1	4,166.0	4,130.3	11.1	11.5	-111.46	-269.3	314.7	386.3	364.7	21.61	17.877		
4,300.0	4,269.8	4,264.6	4,226.9	11.5	11.9	-111.23	-283.4	328.6	403.1	380.7	22.33	18.052		
4,400.0	4,368.4	4,363.2	4,323.4	11.9	12.3	-111.01	-297.5	342.5	419.9	396.8	23.05	18.214		
4,500.0	4,467.0	4,461.7	4,420.0	12.2	12.7	-110.82	-311.6	356.4	436.7	412.9	23.78	18.364		
4,600.0	4,565.6	4,560.3	4,516.6	12.6	13.1	-110.63	-325.7	370.2	453.5	429.0	24.51	18.503		
4,700.0	4,664.2	4,658.8	4,613.1	13.0	13.5	-110.46	-339.9	384.1	470.3	445.1	25.24	18.632		
4,800.0	4,762.8	4,757.4	4,709.7	13.3	14.0	-110.30	-354.0	398.0	487.1	461.1	25.98	18.753		
4,900.0	4,861.4	4,856.0	4,806.2	13.7	14.4	-110.15	-368.1	411.9	503.9	477.2	26.71	18.865		
5,000.0	4,960.0	4,954.5	4,902.8	14.1	14.8	-110.02	-382.2	425.8	520.8	493.3	27.45	18.970		
5,100.0	5,058.6	5,053.1	4,999.4	14.5	15.3	-109.89	-396.3	439.6	537.6	509.4	28.19	19.068		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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		
5,200.0	5,157.2	5,151.7	5,095.9	14.9	15.7	-109.76	-410.4	453.5	554.4	525.5	28.94	19.160		
5,300.0	5,255.8	5,250.2	5,192.5	15.2	16.1	-109.65	-424.5	467.4	571.3	541.6	29.68	19.247		
5,400.0	5,354.5	5,348.8	5,289.0	15.6	16.6	-109.54	-438.6	481.3	588.1	557.7	30.43	19.329		
5,500.0	5,453.1	5,447.4	5,385.6	16.0	17.0	-109.44	-452.7	495.2	604.9	573.8	31.17	19.405		
5,600.0	5,551.7	5,546.0	5,482.2	16.4	17.4	-109.42	-466.9	509.1	621.7	589.8	31.92	19.479		
5,700.0	5,650.7	5,644.6	5,578.8	16.6	17.9	-109.40	-481.0	523.0	637.7	605.1	32.59	19.570		
5,800.0	5,750.2	5,743.3	5,675.4	16.9	18.3	-109.08	-495.1	536.9	652.6	619.3	33.21	19.649		
5,900.0	5,849.9	5,841.8	5,772.0	17.1	18.7	-108.49	-509.2	550.7	666.4	632.6	33.79	19.724		
6,000.0	5,949.9	5,940.1	5,868.3	17.2	19.2	-107.64	-523.3	564.6	679.3	645.0	34.31	19.800		
6,100.0	6,049.8	6,038.1	5,964.3	17.4	19.6	82.91	-537.3	578.4	691.6	656.9	34.78	19.884		
6,200.0	6,149.8	6,136.1	6,060.3	17.5	20.0	84.19	-551.4	592.2	704.2	669.0	35.22	19.993		
6,300.0	6,249.8	6,234.1	6,156.2	17.7	20.5	85.43	-565.4	606.0	717.1	681.4	35.65	20.113		
6,400.0	6,349.8	6,337.8	6,257.9	17.8	20.9	86.68	-580.1	620.4	730.2	694.1	36.07	20.241		
6,500.0	6,449.8	6,456.9	6,375.3	18.0	21.3	87.86	-594.4	634.5	741.5	705.1	36.46	20.337		
6,600.0	6,549.8	6,577.5	6,494.9	18.1	21.6	88.73	-605.4	645.3	750.2	713.4	36.81	20.380		
6,700.0	6,649.8	6,699.3	6,616.2	18.3	21.9	89.30	-612.8	652.6	756.1	719.0	37.16	20.350		
6,800.0	6,749.8	6,821.7	6,738.5	18.4	22.1	89.59	-616.5	656.3	759.1	721.6	37.49	20.248		
6,900.0	6,849.8	6,933.0	6,849.8	18.6	22.2	89.62	-617.0	656.8	759.5	721.7	37.81	20.086		
7,000.0	6,949.8	7,033.0	6,949.8	18.7	22.4	89.62	-617.0	656.8	759.5	721.4	38.11	19.926		
7,100.0	7,049.8	7,132.6	7,049.4	18.9	22.5	89.66	-614.3	656.7	759.5	721.1	38.37	19.793		
7,160.3	7,109.5	7,192.6	7,108.8	18.9	22.5	89.67	-606.5	656.7	759.5	721.1	38.41	19.775		
7,200.0	7,148.4	7,232.0	7,147.4	18.9	22.5	89.68	-598.7	656.7	759.5	721.1	38.40	19.775		
7,300.0	7,243.9	7,331.4	7,242.5	18.8	22.4	89.70	-569.8	656.7	759.5	721.2	38.23	19.867		
7,400.0	7,334.4	7,430.9	7,332.6	18.6	22.3	89.72	-527.9	656.7	759.5	721.6	37.88	20.047		
7,500.0	7,418.1	7,530.4	7,416.1	18.4	22.0	89.75	-473.9	656.7	759.5	722.0	37.44	20.286		
7,600.0	7,493.3	7,630.0	7,491.3	18.1	21.8	89.79	-408.8	656.7	759.5	722.5	36.97	20.543		
7,700.0	7,558.7	7,729.6	7,556.8	17.9	21.5	89.82	-333.9	656.6	759.5	722.9	36.57	20.769		
7,800.0	7,613.0	7,829.3	7,611.3	17.8	21.2	89.86	-250.5	656.6	759.5	723.2	36.33	20.907		
7,900.0	7,655.0	7,929.1	7,653.7	17.8	20.9	89.90	-160.2	656.5	759.5	723.2	36.33	20.907		
8,000.0	7,684.0	8,028.9	7,683.2	17.9	20.7	89.94	-64.9	656.5	759.5	722.9	36.64	20.731		
8,100.0	7,699.4	8,128.8	7,699.1	18.3	20.4	89.98	33.6	656.4	759.5	722.2	37.28	20.372		
8,200.0	7,702.0	8,228.8	7,702.0	18.8	20.1	90.00	133.5	656.4	759.5	721.3	38.22	19.874		
8,300.0	7,702.0	8,328.8	7,702.0	19.3	19.9	90.00	233.5	656.4	759.5	720.4	39.10	19.425		
8,400.0	7,702.0	8,428.8	7,702.0	19.8	20.7	90.00	333.5	656.3	759.5	719.5	40.02	18.981		
8,500.0	7,702.0	8,528.8	7,702.0	20.5	21.5	90.00	433.5	656.3	759.5	718.3	41.27	18.403		
8,600.0	7,702.0	8,628.8	7,702.0	21.3	22.4	90.00	533.5	656.2	759.5	716.7	42.84	17.730		
8,700.0	7,702.0	8,728.8	7,702.0	22.3	23.4	90.00	633.5	656.2	759.5	714.9	44.68	16.998		
8,800.0	7,702.0	8,828.8	7,702.0	23.4	24.5	90.00	733.5	656.1	759.6	712.8	46.77	16.239		
8,900.0	7,702.0	8,928.8	7,702.0	24.6	25.7	90.00	833.5	656.1	759.6	710.5	49.08	15.476		
9,000.0	7,702.0	9,028.8	7,702.0	25.8	27.0	90.00	933.5	656.0	759.6	708.0	51.57	14.729		
9,100.0	7,702.0	9,128.8	7,702.0	27.2	28.3	90.00	1,033.5	656.0	759.6	705.4	54.22	14.009		
9,200.0	7,702.0	9,228.8	7,702.0	28.6	29.6	90.00	1,133.5	655.9	759.6	702.6	57.01	13.324		
9,300.0	7,702.0	9,328.8	7,702.0	30.1	31.1	90.00	1,233.5	655.9	759.6	699.7	59.92	12.678		
9,400.0	7,702.0	9,428.8	7,702.0	31.6	32.5	90.00	1,333.5	655.8	759.6	696.7	62.92	12.072		
9,500.0	7,702.0	9,528.8	7,702.0	33.2	34.0	90.00	1,433.5	655.8	759.6	693.6	66.02	11.505		
9,600.0	7,702.0	9,628.8	7,702.0	34.8	35.6	90.00	1,533.5	655.7	759.6	690.4	69.19	10.978		
9,700.0	7,702.0	9,728.8	7,702.0	36.4	37.2	90.00	1,633.5	655.7	759.6	687.2	72.43	10.487		
9,800.0	7,702.0	9,828.8	7,702.0	38.1	38.8	90.00	1,733.5	655.7	759.6	683.9	75.73	10.030		
9,900.0	7,702.0	9,928.8	7,702.0	39.8	40.4	90.00	1,833.5	655.6	759.6	680.5	79.08	9.606		
10,000.0	7,702.0	10,028.8	7,702.0	41.5	42.1	90.00	1,933.5	655.6	759.6	677.2	82.47	9.211		
10,100.0	7,702.0	10,128.8	7,702.0	43.2	43.7	90.00	2,033.5	655.5	759.6	673.7	85.90	8.843		
10,200.0	7,702.0	10,228.8	7,702.0	45.0	45.4	90.00	2,133.5	655.5	759.6	670.3	89.37	8.500		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-1)													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)						
10,300.0	7,702.0	10,328.8	7,702.0	46.7	47.1	90.00	2,233.5	655.4	759.6	666.8	92.87	8.180		
10,400.0	7,702.0	10,428.8	7,702.0	48.5	48.9	90.00	2,333.5	655.4	759.7	663.3	96.39	7.881		
10,500.0	7,702.0	10,528.8	7,702.0	50.3	50.6	90.00	2,433.5	655.3	759.7	659.7	99.94	7.601		
10,600.0	7,702.0	10,628.8	7,702.0	52.1	52.4	90.00	2,533.5	655.3	759.7	656.2	103.51	7.339		
10,700.0	7,702.0	10,728.8	7,702.0	53.9	54.1	90.00	2,633.5	655.3	759.7	652.6	107.10	7.093		
10,800.0	7,702.0	10,828.8	7,702.0	55.7	55.9	90.00	2,733.5	655.2	759.7	649.0	110.71	6.862		
10,900.0	7,702.0	10,928.8	7,702.0	57.5	57.7	90.00	2,833.5	655.2	759.7	645.3	114.34	6.644		
11,000.0	7,702.0	11,028.8	7,702.0	59.3	59.5	90.00	2,933.5	655.1	759.7	641.7	117.97	6.439		
11,100.0	7,702.0	11,128.8	7,702.0	61.2	61.3	90.00	3,033.5	655.1	759.7	638.1	121.63	6.246		
11,200.0	7,702.0	11,228.8	7,702.0	63.0	63.1	90.00	3,133.5	655.0	759.7	634.4	125.29	6.063		
11,300.0	7,702.0	11,328.8	7,702.0	64.8	64.9	90.00	3,233.5	655.0	759.7	630.7	128.97	5.891		
11,400.0	7,702.0	11,428.8	7,702.0	66.7	66.7	90.00	3,333.5	655.0	759.7	627.0	132.65	5.727		
11,500.0	7,702.0	11,528.8	7,702.0	68.5	68.6	90.00	3,433.5	654.9	759.7	623.4	136.35	5.572		
11,600.0	7,702.0	11,628.8	7,702.0	70.4	70.4	90.00	3,533.5	654.9	759.7	619.7	140.05	5.424		
11,700.0	7,702.0	11,728.8	7,702.0	72.3	72.2	90.00	3,633.5	654.8	759.7	615.9	143.77	5.284		
11,800.0	7,702.0	11,828.8	7,702.0	74.1	74.1	90.00	3,733.5	654.8	759.7	612.2	147.49	5.151		
11,900.0	7,702.0	11,928.8	7,702.0	76.0	75.9	90.00	3,833.5	654.7	759.7	608.5	151.21	5.024		
12,000.0	7,702.0	12,028.8	7,702.0	77.9	77.8	90.00	3,933.5	654.7	759.7	604.8	154.94	4.903		
12,100.0	7,702.0	12,128.8	7,702.0	79.7	79.6	90.00	4,033.5	654.6	759.7	601.0	158.68	4.788		
12,200.0	7,702.0	12,228.8	7,702.0	81.6	81.5	90.00	4,133.5	654.6	759.7	597.3	162.43	4.677		
12,300.0	7,702.0	12,328.8	7,702.0	83.5	83.3	90.00	4,233.5	654.6	759.7	593.6	166.18	4.572		
12,400.0	7,702.0	12,428.8	7,702.0	85.4	85.2	90.00	4,333.5	654.5	759.7	589.8	169.93	4.471		
12,500.0	7,702.0	12,528.8	7,702.0	87.2	87.1	90.00	4,433.5	654.5	759.7	586.1	173.69	4.374		
12,600.0	7,702.0	12,628.8	7,702.0	89.1	88.9	90.00	4,533.5	654.4	759.7	582.3	177.45	4.281		
12,700.0	7,702.0	12,728.8	7,702.0	91.0	90.8	90.00	4,633.5	654.4	759.7	578.5	181.22	4.192		
12,800.0	7,702.0	12,828.8	7,702.0	92.9	92.7	90.00	4,733.5	654.4	759.7	574.8	184.99	4.107		
12,900.0	7,702.0	12,928.8	7,702.0	94.8	94.5	90.00	4,833.5	654.3	759.8	571.0	188.76	4.025		
13,000.0	7,702.0	13,028.8	7,702.0	96.7	96.4	90.00	4,933.5	654.3	759.8	567.2	192.54	3.946		
13,100.0	7,702.0	13,128.8	7,702.0	98.6	98.3	90.00	5,033.5	654.2	759.8	563.4	196.32	3.870		
13,200.0	7,702.0	13,228.8	7,702.0	100.5	100.2	90.00	5,133.5	654.2	759.8	559.7	200.10	3.797		
13,300.0	7,702.0	13,328.8	7,702.0	102.3	102.1	90.00	5,233.5	654.1	759.8	555.9	203.89	3.726		
13,400.0	7,702.0	13,428.8	7,702.0	104.2	103.9	90.00	5,333.5	654.1	759.8	552.1	207.68	3.658		
13,500.0	7,702.0	13,528.8	7,702.0	106.1	105.8	90.00	5,433.5	654.1	759.8	548.3	211.47	3.593		
13,600.0	7,702.0	13,628.8	7,702.0	108.0	107.7	90.00	5,533.5	654.0	759.8	544.5	215.26	3.530		
13,700.0	7,702.0	13,728.8	7,702.0	109.9	109.6	90.00	5,633.5	654.0	759.8	540.7	219.05	3.468		
13,800.0	7,702.0	13,828.8	7,702.0	111.8	111.5	90.00	5,733.5	653.9	759.8	536.9	222.85	3.409		
13,900.0	7,702.0	13,928.8	7,702.0	113.7	113.4	90.00	5,833.5	653.9	759.8	533.1	226.65	3.352		
14,000.0	7,702.0	14,028.8	7,702.0	115.6	115.3	90.00	5,933.5	653.9	759.8	529.3	230.45	3.297		
14,100.0	7,702.0	14,128.8	7,702.0	117.5	117.2	90.00	6,033.5	653.8	759.8	525.5	234.26	3.243		
14,200.0	7,702.0	14,228.8	7,702.0	119.4	119.1	90.00	6,133.5	653.8	759.8	521.7	238.06	3.192		
14,300.0	7,702.0	14,328.7	7,702.0	121.3	121.0	90.00	6,233.5	653.7	759.8	517.9	241.87	3.141		
14,400.0	7,702.0	14,428.7	7,702.0	123.3	122.9	90.00	6,333.5	653.7	759.8	514.1	245.67	3.093		
14,500.0	7,702.0	14,528.7	7,702.0	125.2	124.8	90.00	6,433.5	653.7	759.8	510.3	249.48	3.045		
14,600.0	7,702.0	14,628.7	7,702.0	127.1	126.7	90.00	6,533.5	653.6	759.8	506.5	253.29	3.000		
14,700.0	7,702.0	14,728.7	7,702.0	129.0	128.6	90.00	6,633.5	653.6	759.8	502.7	257.11	2.955		
14,800.0	7,702.0	14,828.7	7,702.0	130.9	130.5	90.00	6,733.5	653.5	759.8	498.9	260.92	2.912		
14,900.0	7,702.0	14,928.7	7,702.0	132.8	132.4	90.00	6,833.5	653.5	759.8	495.1	264.73	2.870		
15,000.0	7,702.0	15,028.7	7,702.0	134.7	134.3	90.00	6,933.5	653.5	759.8	491.2	268.55	2.829		
15,100.0	7,702.0	15,128.7	7,702.0	136.6	136.2	90.00	7,033.5	653.4	759.8	487.4	272.37	2.790		
15,200.0	7,702.0	15,228.7	7,702.0	138.5	138.1	90.00	7,133.5	653.4	759.8	483.6	276.18	2.751		
15,300.0	7,702.0	15,328.7	7,702.0	140.4	140.0	90.00	7,233.5	653.3	759.8	479.8	280.00	2.713		
15,400.0	7,702.0	15,428.7	7,702.0	142.3	141.9	90.00	7,333.5	653.3	759.8	476.0	283.82	2.677		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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)			
15,500.0	7,702.0	15,528.7	7,702.0	144.2	143.8	90.00	7,433.5	653.3	759.8	472.1	287.64	2.641		
15,600.0	7,702.0	15,628.7	7,702.0	146.2	145.7	90.00	7,533.5	653.2	759.8	468.3	291.47	2.607		
15,700.0	7,702.0	15,728.7	7,702.0	148.1	147.6	90.00	7,633.5	653.2	759.8	464.5	295.29	2.573		
15,800.0	7,702.0	15,828.7	7,702.0	150.0	149.5	90.00	7,733.5	653.2	759.8	460.7	299.11	2.540		
15,900.0	7,702.0	15,928.7	7,702.0	151.9	151.4	90.00	7,833.5	653.1	759.8	456.8	302.94	2.508		
16,000.0	7,702.0	16,028.7	7,702.0	153.8	153.3	90.00	7,933.5	653.1	759.8	453.0	306.76	2.477		
16,100.0	7,702.0	16,128.7	7,702.0	155.7	155.2	90.00	8,033.5	653.0	759.8	449.2	310.59	2.446		
16,200.0	7,702.0	16,228.7	7,702.0	157.6	157.1	90.00	8,133.5	653.0	759.8	445.4	314.41	2.417		
16,300.0	7,702.0	16,328.7	7,702.0	159.6	159.0	90.00	8,233.5	653.0	759.8	441.5	318.24	2.387		
16,400.0	7,702.0	16,428.7	7,702.0	161.5	160.9	90.00	8,333.5	652.9	759.8	437.7	322.07	2.359		
16,500.0	7,702.0	16,528.7	7,702.0	163.4	162.9	90.00	8,433.5	652.9	759.8	433.9	325.90	2.331		
16,600.0	7,702.0	16,628.7	7,702.0	165.3	164.8	90.00	8,533.5	652.8	759.8	430.1	329.73	2.304		
16,700.0	7,702.0	16,728.7	7,702.0	167.2	166.7	90.00	8,633.5	652.8	759.8	426.2	333.56	2.278		
16,800.0	7,702.0	16,828.7	7,702.0	169.1	168.6	90.00	8,733.5	652.8	759.8	422.4	337.39	2.252		
16,900.0	7,702.0	16,928.7	7,702.0	171.0	170.5	90.00	8,833.5	652.7	759.8	418.6	341.22	2.227		
17,000.0	7,702.0	17,028.7	7,702.0	173.0	172.4	90.00	8,933.5	652.7	759.8	414.7	345.05	2.202		
17,100.0	7,702.0	17,128.7	7,702.0	174.9	174.3	90.00	9,033.5	652.7	759.8	410.9	348.88	2.178		
17,200.0	7,702.0	17,228.7	7,702.0	176.8	176.2	90.00	9,133.5	652.6	759.8	407.1	352.71	2.154		
17,300.0	7,702.0	17,328.7	7,702.0	178.7	178.1	90.00	9,233.4	652.6	759.8	403.2	356.55	2.131		
17,400.0	7,702.0	17,428.7	7,702.0	180.6	180.1	90.00	9,333.4	652.6	759.8	399.4	360.38	2.108		
17,500.0	7,702.0	17,528.7	7,702.0	182.5	182.0	90.00	9,433.4	652.5	759.8	395.5	364.22	2.086		
17,600.0	7,702.0	17,628.7	7,702.0	184.5	183.9	90.00	9,533.4	652.5	759.8	391.7	368.05	2.064		
17,700.0	7,702.0	17,728.7	7,702.0	186.4	185.8	90.00	9,633.4	652.4	759.8	387.9	371.89	2.043		
17,800.0	7,702.0	17,828.7	7,702.0	188.3	187.7	90.00	9,733.4	652.4	759.8	384.0	375.72	2.022		
17,900.0	7,702.0	17,928.7	7,702.0	190.2	189.6	90.00	9,833.4	652.4	759.8	380.2	379.56	2.002		
18,000.0	7,702.0	18,028.7	7,702.0	192.1	191.5	90.00	9,933.4	652.3	759.8	376.4	383.39	1.982		
18,100.0	7,702.0	18,128.7	7,702.0	194.1	193.4	90.00	10,033.4	652.3	759.7	372.6	387.20	1.962		
18,143.1	7,702.0	18,171.8	7,702.0	194.9	194.2	90.00	10,076.5	652.3	759.7	370.9	388.81	1.954		
18,157.1	7,702.0	18,184.4	7,702.0	195.1	194.4	90.00	10,089.2	652.3	759.7	370.4	389.30	1.952 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design													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	89.36	1.1	99.8	99.8					
100.0	100.0	100.0	100.0	0.1	0.1	89.36	1.1	99.8	99.8	99.6	0.22	443.935		
200.0	200.0	200.0	200.0	0.3	0.3	89.36	1.1	99.8	99.8	99.1	0.67	147.978 CC, ES		
300.0	300.0	297.7	297.7	0.6	0.5	89.67	0.6	100.9	100.9	99.8	1.10	91.492		
400.0	400.0	395.2	395.1	0.8	0.7	90.55	-1.0	104.3	104.4	102.9	1.54	68.015		
500.0	500.0	492.5	492.2	1.0	1.0	91.89	-3.6	109.9	110.2	108.3	1.98	55.672		
600.0	600.0	589.4	588.8	1.2	1.2	93.54	-7.3	117.7	118.5	116.1	2.44	48.646		
700.0	700.0	685.9	684.6	1.5	1.5	95.35	-12.0	127.7	129.2	126.3	2.90	44.555		
800.0	800.0	781.7	779.4	1.7	1.8	97.18	-17.6	139.8	142.4	139.0	3.37	42.243		
900.0	900.0	876.7	873.2	1.9	2.1	98.94	-24.2	153.9	158.1	154.3	3.85	41.083		
1,000.0	1,000.0	971.0	965.7	2.1	2.5	100.57	-31.7	170.0	176.3	172.0	4.33	40.707		
1,100.0	1,100.0	1,064.2	1,056.9	2.4	2.9	102.05	-40.1	188.0	197.0	192.2	4.82	40.880		
1,200.0	1,200.0	1,157.3	1,147.3	2.6	3.4	103.38	-49.4	207.8	220.0	214.7	5.31	41.425		
1,300.0	1,300.0	1,254.2	1,241.3	2.8	3.9	104.54	-59.5	229.3	244.0	238.2	5.81	41.994		
1,400.0	1,400.0	1,351.2	1,335.4	3.0	4.3	105.49	-69.5	250.8	268.1	261.8	6.31	42.495		
1,500.0	1,500.0	1,448.2	1,429.4	3.3	4.8	106.29	-79.5	272.2	292.3	285.4	6.81	42.925		
1,600.0	1,600.0	1,545.2	1,523.4	3.5	5.3	106.96	-89.6	293.7	316.4	309.1	7.31	43.300		
1,700.0	1,700.0	1,642.1	1,617.4	3.7	5.9	107.54	-99.6	315.1	340.7	332.8	7.81	43.628		
1,800.0	1,800.0	1,739.2	1,711.6	3.9	6.4	-81.17	-109.7	336.6	364.7	356.6	8.08	45.134		
1,900.0	1,899.9	1,836.3	1,805.8	4.1	6.9	-80.95	-119.7	358.1	388.4	379.9	8.52	45.605		
2,000.0	1,999.7	1,933.5	1,900.0	4.3	7.4	-81.08	-129.8	379.6	411.7	402.7	8.97	45.914		
2,100.0	2,099.3	2,030.7	1,994.2	4.4	7.9	-81.52	-139.8	401.1	434.6	425.2	9.43	46.068		
2,200.0	2,198.6	2,127.7	2,088.4	4.6	8.4	-82.22	-149.9	422.6	457.3	447.4	9.93	46.074		
2,300.0	2,297.5	2,224.7	2,182.3	4.9	8.9	-83.13	-159.9	444.1	479.8	469.3	10.45	45.933		
2,400.0	2,396.2	2,321.4	2,276.1	5.1	9.4	-84.38	-169.9	465.5	502.3	491.3	11.00	45.651		
2,500.0	2,494.8	2,418.1	2,369.9	5.4	10.0	-85.67	-179.9	486.9	525.1	513.5	11.59	45.309		
2,600.0	2,593.4	2,514.8	2,463.7	5.7	10.5	-86.84	-189.9	508.3	548.0	535.8	12.19	44.941		
2,700.0	2,692.0	2,611.6	2,557.5	6.0	11.0	-87.93	-200.0	529.7	571.2	558.4	12.82	44.560		
2,800.0	2,790.6	2,708.3	2,651.3	6.3	11.5	-88.93	-210.0	551.1	594.6	581.1	13.46	44.176		
2,900.0	2,889.2	2,805.0	2,745.1	6.6	12.0	-89.86	-220.0	572.5	618.1	604.0	14.11	43.796		
3,000.0	2,987.8	2,901.7	2,838.9	6.9	12.5	-90.72	-230.0	593.9	641.8	627.0	14.78	43.425		
3,100.0	3,086.4	2,998.4	2,932.7	7.2	13.0	-91.51	-240.0	615.3	665.6	650.2	15.46	43.066		
3,200.0	3,185.1	3,095.2	3,026.4	7.6	13.6	-92.26	-250.0	636.7	689.5	673.4	16.14	42.720		
3,300.0	3,283.7	3,191.9	3,120.2	7.9	14.1	-92.95	-260.0	658.1	713.6	696.7	16.83	42.390		
3,400.0	3,382.3	3,288.6	3,214.0	8.2	14.6	-93.60	-270.0	679.5	737.7	720.1	17.53	42.075		
3,500.0	3,480.9	3,385.3	3,307.8	8.6	15.1	-94.21	-280.0	700.9	761.9	743.6	18.24	41.775		
3,600.0	3,579.5	3,482.0	3,401.6	8.9	15.6	-94.78	-290.1	722.3	786.1	767.2	18.95	41.491		
3,700.0	3,678.1	3,578.7	3,495.4	9.3	16.1	-95.31	-300.1	743.7	810.5	790.8	19.66	41.221		
3,800.0	3,776.7	3,675.5	3,589.2	9.7	16.7	-95.82	-310.1	765.1	834.9	814.5	20.38	40.965		
3,900.0	3,875.3	3,772.2	3,683.0	10.0	17.2	-96.29	-320.1	786.5	859.3	838.2	21.10	40.722		
4,000.0	3,973.9	3,868.9	3,776.8	10.4	17.7	-96.75	-330.1	807.9	883.9	862.0	21.83	40.492		
4,100.0	4,072.5	3,965.6	3,870.5	10.7	18.2	-97.17	-340.1	829.3	908.4	885.9	22.56	40.275		
4,200.0	4,171.1	4,062.3	3,964.3	11.1	18.7	-97.58	-350.1	850.7	933.0	909.8	23.29	40.068		
4,300.0	4,269.8	4,159.1	4,058.1	11.5	19.2	-97.96	-360.1	872.1	957.7	933.7	24.02	39.872		
4,400.0	4,368.4	4,255.8	4,151.9	11.9	19.8	-98.32	-370.1	893.5	982.4	957.6	24.75	39.686		
4,500.0	4,467.0	4,352.5	4,245.7	12.2	20.3	-98.67	-380.2	914.9	1,007.1	981.6	25.49	39.509		
4,600.0	4,565.6	4,449.2	4,339.5	12.6	20.8	-99.00	-390.2	936.3	1,031.9	1,005.6	26.23	39.341		
4,700.0	4,664.2	4,545.9	4,433.3	13.0	21.3	-99.31	-400.2	957.7	1,056.7	1,029.7	26.97	39.181		
4,800.0	4,762.8	4,642.7	4,527.1	13.3	21.8	-99.61	-410.2	979.2	1,081.5	1,053.8	27.71	39.029		
4,900.0	4,861.4	4,739.4	4,620.8	13.7	22.3	-99.90	-420.2	1,000.6	1,106.3	1,077.9	28.45	38.884		
5,000.0	4,960.0	4,836.1	4,714.6	14.1	22.9	-100.17	-430.2	1,022.0	1,131.2	1,102.0	29.20	38.746		
5,100.0	5,058.6	4,932.8	4,808.4	14.5	23.4	-100.43	-440.2	1,043.4	1,156.1	1,126.1	29.94	38.614		

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 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-1)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,157.2	5,029.5	4,902.2	14.9	23.9	-100.69	-450.2	1,064.8	1,181.0	1,150.3	30.68	38.488 SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Critter Creek 537-1807H
Project:	Sec.18-T11N-R63W	TVD Reference:	WELL @ 5359.0ft (Original Well Elev)
Reference Site:	Critter Creek 18 SW Pad Sec.18-T11N-R63W	MD Reference:	WELL @ 5359.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Critter Creek 537-1807H	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 (3-1-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.18-T11N-R63W - Critter Creek 14-18H (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1484-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,500.0	7,702.0	11,045.4	7,536.7	33.2	98.0	78.80	2,225.0	775.9	1,196.3	1,112.9	83.46	14.334		
9,600.0	7,702.0	11,113.0	7,535.8	34.8	99.5	78.15	2,275.2	730.8	1,130.5	1,044.4	86.05	13.137		
9,700.0	7,702.0	11,196.2	7,533.9	36.4	101.5	77.20	2,337.1	675.2	1,064.8	976.0	88.84	11.986		
9,800.0	7,702.0	11,270.0	7,531.4	38.1	103.2	76.17	2,391.5	625.4	998.8	907.3	91.43	10.924		
9,900.0	7,702.0	11,359.5	7,529.5	39.8	105.3	74.81	2,457.0	564.5	932.2	838.1	94.14	9.902		
10,000.0	7,702.0	11,439.2	7,530.6	41.5	107.2	73.63	2,515.3	510.0	865.1	768.4	96.71	8.946		
10,100.0	7,702.0	11,520.0	7,533.4	43.2	109.1	72.38	2,573.9	454.6	797.6	698.4	99.22	8.038		
10,200.0	7,702.0	11,593.4	7,534.5	45.0	110.9	70.84	2,626.8	403.6	729.9	628.4	101.42	7.196		
10,300.0	7,702.0	11,659.4	7,535.3	46.7	112.5	69.19	2,674.5	358.0	662.8	559.4	103.36	6.412		
10,400.0	7,702.0	11,727.3	7,536.0	48.5	114.1	67.19	2,723.9	311.5	596.8	491.8	105.02	5.683		
10,500.0	7,702.0	11,798.0	7,536.5	50.3	115.8	64.62	2,775.6	263.3	531.8	425.6	106.22	5.007		
10,600.0	7,702.0	11,868.7	7,536.4	52.1	117.4	61.37	2,827.6	215.3	468.4	361.7	106.68	4.390		
10,700.0	7,702.0	11,942.8	7,536.6	53.9	119.2	57.09	2,882.0	165.0	406.1	300.2	105.95	3.833		
10,800.0	7,702.0	12,023.5	7,536.2	55.7	121.1	50.79	2,940.7	109.7	345.7	243.0	102.74	3.365		
10,900.0	7,702.0	12,103.9	7,536.4	57.5	123.1	42.01	2,997.4	52.7	286.6	190.9	95.69	2.995		
11,000.0	7,702.0	12,168.0	7,536.9	59.3	124.7	32.72	3,042.6	7.2	234.0	147.4	86.61	2.702		
11,100.0	7,702.0	12,239.2	7,537.2	61.2	126.4	19.92	3,094.3	-41.6	194.7	121.2	73.57	2.647		
11,200.0	7,702.0	12,316.0	7,538.1	63.0	128.2	3.23	3,149.7	-94.9	174.0	110.3	63.73	2.730		
11,234.0	7,702.0	12,340.2	7,538.8	63.6	128.8	-2.31	3,167.2	-111.6	172.3	108.1	64.20	2.684 CC		
11,300.0	7,702.0	12,386.7	7,539.9	64.8	129.9	-12.86	3,200.8	-143.7	178.4	107.5	70.87	2.517 ES, SF		
11,400.0	7,702.0	12,432.0	7,540.8	66.7	131.0	-22.48	3,233.4	-175.1	209.4	127.0	82.40	2.542		
11,500.0	7,702.0	12,432.0	7,540.8	68.5	131.0	-22.48	3,233.4	-175.1	271.7	188.3	83.37	3.258		
11,600.0	7,702.0	12,432.0	7,540.8	70.4	131.0	-22.48	3,233.4	-175.1	351.8	267.4	84.35	4.171		
11,700.0	7,702.0	12,432.0	7,540.8	72.3	131.0	-22.48	3,233.4	-175.1	440.1	354.8	85.33	5.158		
11,800.0	7,702.0	12,432.0	7,540.8	74.1	131.0	-22.48	3,233.4	-175.1	532.6	446.3	86.30	6.171		
11,900.0	7,702.0	12,432.0	7,540.8	76.0	131.0	-22.48	3,233.4	-175.1	627.4	540.1	87.28	7.188		
12,000.0	7,702.0	12,432.0	7,540.8	77.9	131.0	-22.48	3,233.4	-175.1	723.6	635.3	88.26	8.198		
12,100.0	7,702.0	12,432.0	7,540.8	79.7	131.0	-22.48	3,233.4	-175.1	820.7	731.4	89.25	9.195		
12,200.0	7,702.0	12,432.0	7,540.8	81.6	131.0	-22.48	3,233.4	-175.1	918.4	828.2	90.23	10.179		
12,300.0	7,702.0	12,432.0	7,540.8	83.5	131.0	-22.48	3,233.4	-175.1	1,016.5	925.3	91.21	11.145		
12,400.0	7,702.0	12,432.0	7,540.8	85.4	131.0	-22.48	3,233.4	-175.1	1,115.0	1,022.8	92.19	12.095		

Existing Wells Sec.18-T11N-R63W - Critter Creek 15-19H (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1514-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)			
6,500.0	6,449.8	13,050.0	7,498.6	18.0	145.9	-162.11	-847.9	-175.6	1,121.2	976.5	144.66	7.750		
6,600.0	6,549.8	13,050.0	7,498.6	18.1	145.9	-162.11	-847.9	-175.6	1,023.7	878.8	144.85	7.067		
6,700.0	6,649.8	13,050.0	7,498.6	18.3	145.9	-162.11	-847.9	-175.6	926.7	781.6	145.05	6.389		
6,800.0	6,749.8	13,050.0	7,498.6	18.4	145.9	-162.11	-847.9	-175.6	830.4	685.2	145.24	5.718		
6,900.0	6,849.8	13,050.0	7,498.6	18.6	145.9	-162.11	-847.9	-175.6	735.1	589.7	145.43	5.055		
7,000.0	6,949.8	13,050.0	7,498.6	18.7	145.9	-162.11	-847.9	-175.6	641.3	495.7	145.63	4.404		
7,100.0	7,049.8	13,050.0	7,498.6	18.9	145.9	-164.96	-847.9	-175.6	550.9	409.1	141.82	3.884		
7,200.0	7,148.4	13,050.0	7,498.6	18.9	145.9	-167.45	-847.9	-175.6	472.1	335.7	136.39	3.462		
7,300.0	7,243.9	13,050.0	7,498.6	18.8	145.9	-168.66	-847.9	-175.6	414.0	283.4	130.58	3.170		
7,400.0	7,334.4	13,050.0	7,498.6	18.6	145.9	-169.09	-847.9	-175.6	387.3	263.4	123.95	3.125 ES, SF		
7,420.0	7,351.7	13,050.0	7,498.6	18.6	145.9	-169.11	-847.9	-175.6	386.5	264.0	122.52	3.155 CC		
7,500.0	7,418.1	13,050.0	7,498.6	18.4	145.9	-168.91	-847.9	-175.6	399.0	282.5	116.51	3.424		
7,600.0	7,493.3	13,050.0	7,498.6	18.1	145.9	-168.05	-847.9	-175.6	445.8	337.2	108.58	4.105		
7,700.0	7,558.7	13,050.0	7,498.6	17.9	145.9	-166.17	-847.9	-175.6	517.5	416.6	100.92	5.128		
7,800.0	7,613.0	13,050.0	7,498.6	17.8	145.9	-162.30	-847.9	-175.6	604.3	509.1	95.25	6.345		
7,900.0	7,655.0	13,050.0	7,498.6	17.8	145.9	-152.85	-847.9	-175.6	699.2	602.7	96.51	7.245		
8,000.0	7,684.0	13,050.0	7,498.6	17.9	145.9	-118.32	-847.9	-175.6	797.9	678.8	119.06	6.702		
8,100.0	7,699.4	13,050.0	7,498.6	18.3	145.9	-42.96	-847.9	-175.6	897.4	812.9	84.46	10.625		
8,200.0	7,702.0	13,050.0	7,498.6	18.8	145.9	-25.04	-847.9	-175.6	996.1	928.0	68.07	14.633		
8,300.0	7,702.0	13,050.0	7,498.6	19.3	145.9	-25.04	-847.9	-175.6	1,094.7	1,026.1	68.59	15.960		
8,400.0	7,702.0	13,050.0	7,498.6	19.8	145.9	-25.04	-847.9	-175.6	1,193.6	1,124.4	69.13	17.265		

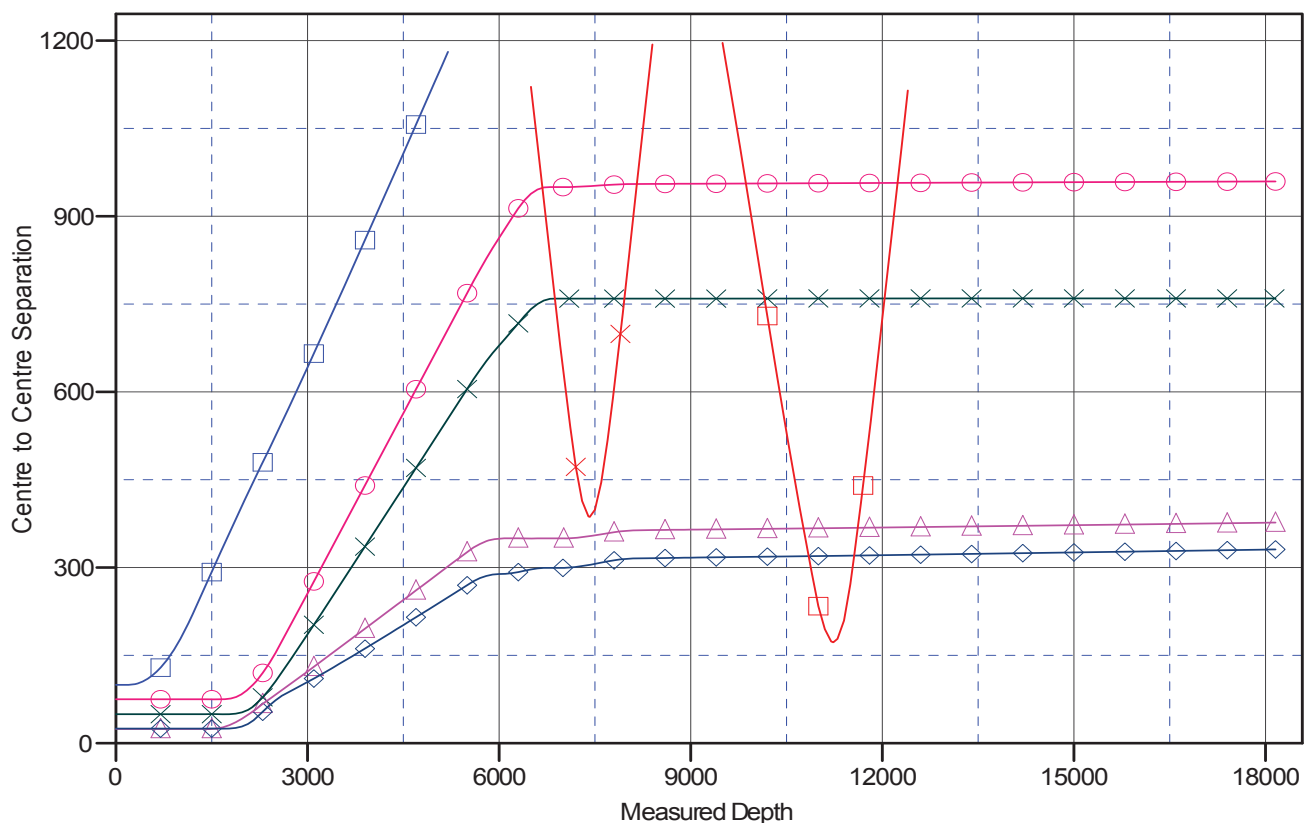
Company: Fifth Creek Energy Company, LLC
Project: Sec.18-T11N-R63W
Reference Site: Critter Creek 18 SW Pad Sec.18-T11N-R63W
Site Error: 0.0 ft
Reference Well: Critter Creek 537-1807H
Well Error: 0.0 ft
Reference Wellbore Wellbore #1
Reference Design: Plan #1 (3-1-17)

Local Co-ordinate Reference: Well Critter Creek 537-1807H
TVD Reference: WELL @ 5359.0ft (Original Well Elev)
MD Reference: WELL @ 5359.0ft (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 @ 5359.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Critter Creek 537-1807H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.66°

Ladder Plot



LEGEND

ek201-1807H, Wellbore #1, Plan #1 (3-1-17) V0 Critter Creek 539-1807H, Wellbore #1, Plan #1 (2-28-17) V0 Critter Creek 15-19H (Exist), Wellbore #1, V0
 ek202-1807H, Wellbore #1, Plan #1 (2-28-17) V0 Critter Creek 540-1807H, Wellbore #1, Plan #1 (2-27-17) V0
 ek203-1807H, Wellbore #1, Plan #1 (2-28-17) V0 Critter Creek 14-18H (Exist), Wellbore #1, Wellbore #1 V0

Reference Depths are relative to WELL @ 5359.0ft (Original Well Elev)	Coordinates are relative to: Critter Creek 537-1807H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 0.66°

