Fifth Creek Energy Company, LLC

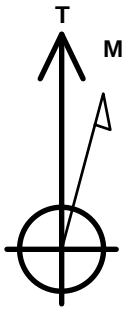
Well Name: **Critter Creek 202-1807H**
Surface Location: Critter Creek 18 SW Pad Sec.18-T11N-R63W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5336.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1578010.93	3281266.45	40.915578	-104.482342	

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

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 205'FSL & 828'FWL, Sec.18	1.0	0.0	0.0	Point
BHL 300'FNL & 1000'FWL, Sec.7	7562.0	10090.2	167.4	Point
LP 300'FSL & 1000'FWL, Sec.18	7602.0	96.2	171.4	Point



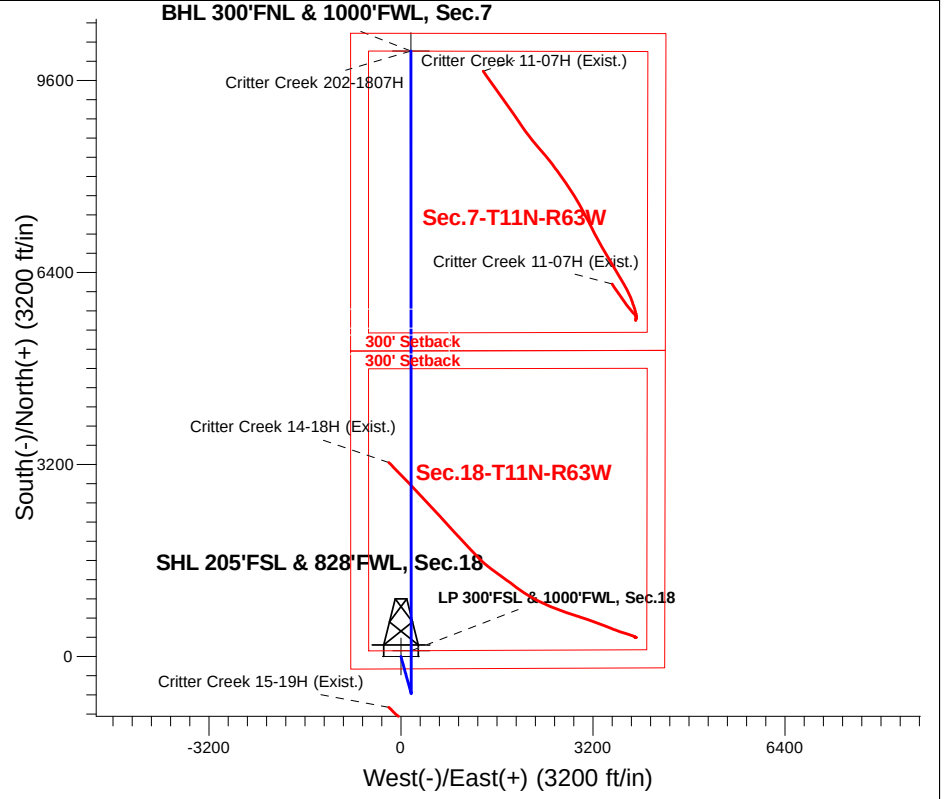
Azimuths to True North
Magnetic North: 7.98°

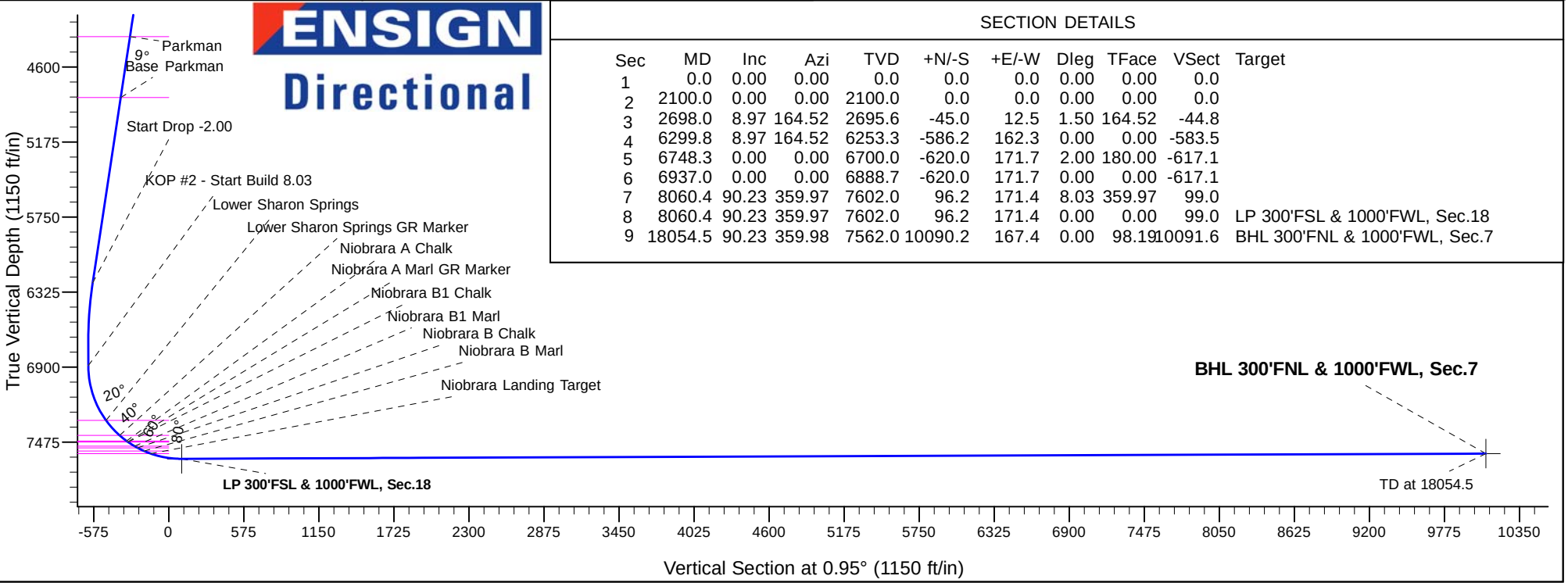
Magnetic Field
Strength: 52820.9snT
Dip Angle: 67.31°
Date: 3/1/2017
Model: IGRF2010

Critter Creek 18 SW Pad Sec.18-T11N-R63W
Critter Creek 202-1807H
Plan #1 (2-28-17)
17:28, March 01 2017

ANNOTATIONS

TVD	MD	Annotation
2100.0	2100.0	KOP - Start Build 1.50
6253.3	6299.8	Start Drop -2.00
6888.7	6937.0	KOP #2 - Start Build 8.03
7562.0	18054.5	TD at 18054.5





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2100.0	0.00	0.00	2100.0	0.0	0.0	0.00	0.00	0.0	
3	2698.0	8.97	164.52	2695.6	-45.0	12.5	1.50	164.52	-44.8	
4	6299.8	8.97	164.52	6253.3	-586.2	162.3	0.00	0.00	-583.5	
5	6748.3	0.00	0.00	6700.0	-620.0	171.7	2.00	180.00	-617.1	
6	6937.0	0.00	0.00	6888.7	-620.0	171.7	0.00	0.00	-617.1	
7	8060.4	90.23	359.97	7602.0	96.2	171.4	8.03	359.97	99.0	
8	8060.4	90.23	359.97	7602.0	96.2	171.4	0.00	0.00	99.0	LP 300'FSL & 1000'FWL, Sec.18
9	18054.5	90.23	359.98	7562.0	10090.2	167.4	0.00	98.19	10091.6	BHL 300'FNL & 1000'FWL, Sec.7

Fifth Creek Energy Company, LLC

Sec.18-T11N-R63W
Critter Creek 18 SW Pad Sec.18-T11N-R63W
Critter Creek 202-1807H

Wellbore #1

Plan: Plan #1 (2-28-17)

Standard Planning Report

01 March, 2017

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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 202-1807H

Well Position	**+N/-S**	-1.1 ft	**Northing:**	1,578,010.93 usft	**Latitude:**	40.915578
	+E/-W	-74.6 ft	**Easting:**	3,281,266.45 usft	**Longitude:**	-104.482342
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 (2-28-17)

Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.95

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	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,698.0	8.97	164.52	2,695.6	-45.0	12.5	1.50	1.50	0.00	164.52	
6,299.8	8.97	164.52	6,253.3	-586.2	162.3	0.00	0.00	0.00	0.00	
6,748.3	0.00	0.00	6,700.0	-620.0	171.7	2.00	-2.00	0.00	180.00	
6,937.0	0.00	0.00	6,888.7	-620.0	171.7	0.00	0.00	0.00	0.00	
8,060.4	90.23	359.97	7,602.0	96.2	171.4	8.03	8.03	0.00	359.97	
8,060.4	90.23	359.97	7,602.0	96.2	171.4	0.00	0.00	0.00	0.00	LP 300'FSL & 1000'F\
18,054.5	90.23	359.98	7,562.0	10,090.2	167.4	0.00	0.00	0.00	98.19	BHL 300'FNL & 1000'

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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 & 828'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
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
2,200.0	1.50	164.52	2,200.0	-1.3	0.3	-1.3	1.50	1.50	0.00
2,300.0	3.00	164.52	2,299.9	-5.0	1.4	-5.0	1.50	1.50	0.00
2,385.3	4.28	164.52	2,385.0	-10.3	2.8	-10.2	1.50	1.50	0.00
Base Pierre C&D Sand									
2,400.0	4.50	164.52	2,399.7	-11.3	3.1	-11.3	1.50	1.50	0.00
2,500.0	6.00	164.52	2,499.3	-20.2	5.6	-20.1	1.50	1.50	0.00
2,600.0	7.50	164.52	2,598.6	-31.5	8.7	-31.3	1.50	1.50	0.00
2,698.0	8.97	164.52	2,695.6	-45.0	12.5	-44.8	1.50	1.50	0.00
2,700.0	8.97	164.52	2,697.5	-45.3	12.6	-45.1	0.00	0.00	0.00
2,800.0	8.97	164.52	2,796.3	-60.3	16.7	-60.1	0.00	0.00	0.00
2,809.8	8.97	164.52	2,806.0	-61.8	17.1	-61.5	0.00	0.00	0.00
Pierre B Sand									
2,880.7	8.97	164.52	2,876.0	-72.5	20.1	-72.1	0.00	0.00	0.00
Base Pierre B Sand									
2,900.0	8.97	164.52	2,895.1	-75.4	20.9	-75.0	0.00	0.00	0.00
3,000.0	8.97	164.52	2,993.9	-90.4	25.0	-90.0	0.00	0.00	0.00
3,100.0	8.97	164.52	3,092.6	-105.4	29.2	-104.9	0.00	0.00	0.00
3,200.0	8.97	164.52	3,191.4	-120.5	33.4	-119.9	0.00	0.00	0.00
3,300.0	8.97	164.52	3,290.2	-135.5	37.5	-134.8	0.00	0.00	0.00
3,400.0	8.97	164.52	3,389.0	-150.5	41.7	-149.8	0.00	0.00	0.00
3,500.0	8.97	164.52	3,487.8	-165.5	45.8	-164.7	0.00	0.00	0.00
3,600.0	8.97	164.52	3,586.5	-180.6	50.0	-179.7	0.00	0.00	0.00
3,627.8	8.97	164.52	3,614.0	-184.7	51.2	-183.9	0.00	0.00	0.00
Pierre A Sand									
3,700.0	8.97	164.52	3,685.3	-195.6	54.2	-194.7	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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	8.97	164.52	3,784.1	-210.6	58.3	-209.6	0.00	0.00	0.00
3,900.0	8.97	164.52	3,882.9	-225.6	62.5	-224.6	0.00	0.00	0.00
4,000.0	8.97	164.52	3,981.6	-240.7	66.6	-239.5	0.00	0.00	0.00
4,080.3	8.97	164.52	4,061.0	-252.7	70.0	-251.5	0.00	0.00	0.00
Base Pierre A Sand									
4,100.0	8.97	164.52	4,080.4	-255.7	70.8	-254.5	0.00	0.00	0.00
4,200.0	8.97	164.52	4,179.2	-270.7	75.0	-269.4	0.00	0.00	0.00
4,300.0	8.97	164.52	4,278.0	-285.7	79.1	-284.4	0.00	0.00	0.00
4,389.1	8.97	164.52	4,366.0	-299.1	82.8	-297.7	0.00	0.00	0.00
Parkman									
4,400.0	8.97	164.52	4,376.7	-300.8	83.3	-299.3	0.00	0.00	0.00
4,500.0	8.97	164.52	4,475.5	-315.8	87.5	-314.3	0.00	0.00	0.00
4,600.0	8.97	164.52	4,574.3	-330.8	91.6	-329.3	0.00	0.00	0.00
4,700.0	8.97	164.52	4,673.1	-345.8	95.8	-344.2	0.00	0.00	0.00
4,800.0	8.97	164.52	4,771.9	-360.9	99.9	-359.2	0.00	0.00	0.00
4,861.9	8.97	164.52	4,833.0	-370.2	102.5	-368.4	0.00	0.00	0.00
Base Parkman									
4,900.0	8.97	164.52	4,870.6	-375.9	104.1	-374.1	0.00	0.00	0.00
5,000.0	8.97	164.52	4,969.4	-390.9	108.3	-389.1	0.00	0.00	0.00
5,100.0	8.97	164.52	5,068.2	-405.9	112.4	-404.0	0.00	0.00	0.00
5,200.0	8.97	164.52	5,167.0	-421.0	116.6	-419.0	0.00	0.00	0.00
5,300.0	8.97	164.52	5,265.7	-436.0	120.7	-433.9	0.00	0.00	0.00
5,400.0	8.97	164.52	5,364.5	-451.0	124.9	-448.9	0.00	0.00	0.00
5,500.0	8.97	164.52	5,463.3	-466.1	129.1	-463.8	0.00	0.00	0.00
5,600.0	8.97	164.52	5,562.1	-481.1	133.2	-478.8	0.00	0.00	0.00
5,700.0	8.97	164.52	5,660.8	-496.1	137.4	-493.8	0.00	0.00	0.00
5,800.0	8.97	164.52	5,759.6	-511.1	141.6	-508.7	0.00	0.00	0.00
5,900.0	8.97	164.52	5,858.4	-526.2	145.7	-523.7	0.00	0.00	0.00
6,000.0	8.97	164.52	5,957.2	-541.2	149.9	-538.6	0.00	0.00	0.00
6,100.0	8.97	164.52	6,056.0	-556.2	154.0	-553.6	0.00	0.00	0.00
6,200.0	8.97	164.52	6,154.7	-571.2	158.2	-568.5	0.00	0.00	0.00
6,299.8	8.97	164.52	6,253.3	-586.2	162.3	-583.5	0.00	0.00	0.00
Start Drop -2.00									
6,300.0	8.97	164.52	6,253.5	-586.3	162.4	-583.5	0.00	0.00	0.00
6,400.0	6.97	164.52	6,352.5	-599.6	166.1	-596.8	2.00	-2.00	0.00
6,500.0	4.97	164.52	6,452.0	-609.6	168.8	-606.7	2.00	-2.00	0.00
6,600.0	2.97	164.52	6,551.7	-616.3	170.7	-613.4	2.00	-2.00	0.00
6,700.0	0.97	164.52	6,651.7	-619.6	171.6	-616.7	2.00	-2.00	0.00
6,748.3	0.00	0.00	6,700.0	-620.0	171.7	-617.1	2.00	-2.00	0.00
6,800.0	0.00	0.00	6,751.7	-620.0	171.7	-617.1	0.00	0.00	0.00
6,900.0	0.00	0.00	6,851.7	-620.0	171.7	-617.1	0.00	0.00	0.00
6,937.0	0.00	0.00	6,888.7	-620.0	171.7	-617.1	0.00	0.00	0.00
KOP #2 - Start Build 8.03									
7,000.0	5.06	359.97	6,951.6	-617.2	171.7	-614.3	8.03	8.03	0.00
7,100.0	13.09	359.97	7,050.3	-601.5	171.7	-598.5	8.03	8.03	0.00
7,200.0	21.13	359.97	7,145.8	-572.1	171.7	-569.1	8.03	8.03	0.00
7,300.0	29.16	359.97	7,236.2	-529.6	171.7	-526.7	8.03	8.03	0.00
7,385.2	36.00	359.97	7,308.0	-483.7	171.6	-480.8	8.03	8.03	0.00
Lower Sharon Springs									
7,400.0	37.19	359.97	7,319.8	-474.9	171.6	-472.0	8.03	8.03	0.00
7,500.0	45.22	359.97	7,395.0	-409.1	171.6	-406.2	8.03	8.03	0.00
7,540.9	48.51	359.97	7,423.0	-379.2	171.6	-376.3	8.03	8.03	0.00
Lower Sharon Springs GR Marker									

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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)
7,600.0	53.25	359.97	7,460.3	-333.4	171.6	-330.5	8.03	8.03	0.00
7,608.0	53.90	359.97	7,465.0	-327.0	171.6	-324.1	8.03	8.03	0.00
Niobrara A Chalk									
7,620.0	54.86	359.97	7,472.0	-317.2	171.6	-314.3	8.03	8.03	0.00
Niobrara A Marl GR Marker									
7,623.5	55.14	359.97	7,474.0	-314.4	171.6	-311.5	8.03	8.03	0.00
Niobrara B1 Chalk									
7,681.1	59.77	359.97	7,505.0	-265.8	171.5	-262.9	8.03	8.03	0.00
Niobrara B1 Marl									
7,700.0	61.29	359.97	7,514.3	-249.4	171.5	-246.5	8.03	8.03	0.00
7,707.8	61.91	359.97	7,518.0	-242.5	171.5	-239.6	8.03	8.03	0.00
Niobrara B Chalk									
7,762.8	66.33	359.97	7,542.0	-193.0	171.5	-190.2	8.03	8.03	0.00
Niobrara B Marl									
7,800.0	69.32	359.97	7,556.0	-158.6	171.5	-155.7	8.03	8.03	0.00
7,817.5	70.72	359.97	7,562.0	-142.2	171.5	-139.3	8.03	8.03	0.00
Niobrara Landing Target									
7,900.0	77.35	359.97	7,584.7	-62.9	171.4	-60.0	8.03	8.03	0.00
8,000.0	85.38	359.97	7,599.7	35.9	171.4	38.7	8.03	8.03	0.00
8,060.4	90.23	359.97	7,602.0	96.2	171.4	99.0	8.03	8.03	0.00
LP 300'FSL & 1000'FWL, Sec.18									
8,100.0	90.23	359.97	7,601.8	135.8	171.3	138.7	0.00	0.00	0.00
8,200.0	90.23	359.97	7,601.4	235.8	171.3	238.7	0.00	0.00	0.00
8,300.0	90.23	359.97	7,601.0	335.8	171.2	338.6	0.00	0.00	0.00
8,400.0	90.23	359.97	7,600.6	435.8	171.2	438.6	0.00	0.00	0.00
8,500.0	90.23	359.97	7,600.2	535.8	171.2	538.6	0.00	0.00	0.00
8,600.0	90.23	359.97	7,599.8	635.8	171.1	638.6	0.00	0.00	0.00
8,700.0	90.23	359.97	7,599.4	735.8	171.1	738.6	0.00	0.00	0.00
8,800.0	90.23	359.97	7,599.0	835.8	171.0	838.6	0.00	0.00	0.00
8,900.0	90.23	359.97	7,598.6	935.8	171.0	938.5	0.00	0.00	0.00
9,000.0	90.23	359.97	7,598.2	1,035.8	170.9	1,038.5	0.00	0.00	0.00
9,100.0	90.23	359.97	7,597.8	1,135.8	170.9	1,138.5	0.00	0.00	0.00
9,200.0	90.23	359.97	7,597.4	1,235.8	170.8	1,238.5	0.00	0.00	0.00
9,300.0	90.23	359.97	7,597.0	1,335.8	170.8	1,338.5	0.00	0.00	0.00
9,400.0	90.23	359.97	7,596.6	1,435.8	170.7	1,438.5	0.00	0.00	0.00
9,500.0	90.23	359.97	7,596.2	1,535.8	170.7	1,538.5	0.00	0.00	0.00
9,600.0	90.23	359.97	7,595.8	1,635.8	170.6	1,638.4	0.00	0.00	0.00
9,700.0	90.23	359.97	7,595.4	1,735.8	170.6	1,738.4	0.00	0.00	0.00
9,800.0	90.23	359.97	7,595.0	1,835.8	170.6	1,838.4	0.00	0.00	0.00
9,900.0	90.23	359.97	7,594.6	1,935.8	170.5	1,938.4	0.00	0.00	0.00
10,000.0	90.23	359.97	7,594.2	2,035.8	170.5	2,038.4	0.00	0.00	0.00
10,100.0	90.23	359.97	7,593.8	2,135.8	170.4	2,138.4	0.00	0.00	0.00
10,200.0	90.23	359.97	7,593.4	2,235.8	170.4	2,238.3	0.00	0.00	0.00
10,300.0	90.23	359.97	7,593.0	2,335.8	170.3	2,338.3	0.00	0.00	0.00
10,400.0	90.23	359.97	7,592.6	2,435.8	170.3	2,438.3	0.00	0.00	0.00
10,500.0	90.23	359.98	7,592.2	2,535.8	170.2	2,538.3	0.00	0.00	0.00
10,600.0	90.23	359.98	7,591.8	2,635.8	170.2	2,638.3	0.00	0.00	0.00
10,700.0	90.23	359.98	7,591.4	2,735.8	170.2	2,738.3	0.00	0.00	0.00
10,800.0	90.23	359.98	7,591.0	2,835.8	170.1	2,838.3	0.00	0.00	0.00
10,900.0	90.23	359.98	7,590.6	2,935.8	170.1	2,938.2	0.00	0.00	0.00
11,000.0	90.23	359.98	7,590.2	3,035.8	170.0	3,038.2	0.00	0.00	0.00
11,100.0	90.23	359.98	7,589.8	3,135.8	170.0	3,138.2	0.00	0.00	0.00
11,200.0	90.23	359.98	7,589.4	3,235.8	169.9	3,238.2	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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)
11,300.0	90.23	359.98	7,589.0	3,335.8	169.9	3,338.2	0.00	0.00	0.00
11,400.0	90.23	359.98	7,588.6	3,435.8	169.9	3,438.2	0.00	0.00	0.00
11,500.0	90.23	359.98	7,588.2	3,535.8	169.8	3,538.1	0.00	0.00	0.00
11,600.0	90.23	359.98	7,587.8	3,635.8	169.8	3,638.1	0.00	0.00	0.00
11,700.0	90.23	359.98	7,587.4	3,735.8	169.7	3,738.1	0.00	0.00	0.00
11,800.0	90.23	359.98	7,587.0	3,835.8	169.7	3,838.1	0.00	0.00	0.00
11,900.0	90.23	359.98	7,586.6	3,935.8	169.7	3,938.1	0.00	0.00	0.00
12,000.0	90.23	359.98	7,586.2	4,035.8	169.6	4,038.1	0.00	0.00	0.00
12,100.0	90.23	359.98	7,585.8	4,135.8	169.6	4,138.1	0.00	0.00	0.00
12,200.0	90.23	359.98	7,585.4	4,235.8	169.5	4,238.0	0.00	0.00	0.00
12,300.0	90.23	359.98	7,585.0	4,335.8	169.5	4,338.0	0.00	0.00	0.00
12,400.0	90.23	359.98	7,584.6	4,435.8	169.4	4,438.0	0.00	0.00	0.00
12,500.0	90.23	359.98	7,584.2	4,535.8	169.4	4,538.0	0.00	0.00	0.00
12,600.0	90.23	359.98	7,583.8	4,635.8	169.4	4,638.0	0.00	0.00	0.00
12,700.0	90.23	359.98	7,583.4	4,735.8	169.3	4,738.0	0.00	0.00	0.00
12,800.0	90.23	359.98	7,583.0	4,835.8	169.3	4,838.0	0.00	0.00	0.00
12,900.0	90.23	359.98	7,582.6	4,935.8	169.2	4,937.9	0.00	0.00	0.00
13,000.0	90.23	359.98	7,582.2	5,035.8	169.2	5,037.9	0.00	0.00	0.00
13,100.0	90.23	359.98	7,581.8	5,135.8	169.2	5,137.9	0.00	0.00	0.00
13,200.0	90.23	359.98	7,581.4	5,235.8	169.1	5,237.9	0.00	0.00	0.00
13,300.0	90.23	359.98	7,581.0	5,335.8	169.1	5,337.9	0.00	0.00	0.00
13,400.0	90.23	359.98	7,580.6	5,435.8	169.0	5,437.9	0.00	0.00	0.00
13,500.0	90.23	359.98	7,580.2	5,535.8	169.0	5,537.8	0.00	0.00	0.00
13,600.0	90.23	359.98	7,579.8	5,635.8	169.0	5,637.8	0.00	0.00	0.00
13,700.0	90.23	359.98	7,579.4	5,735.8	168.9	5,737.8	0.00	0.00	0.00
13,800.0	90.23	359.98	7,579.0	5,835.8	168.9	5,837.8	0.00	0.00	0.00
13,900.0	90.23	359.98	7,578.6	5,935.8	168.9	5,937.8	0.00	0.00	0.00
14,000.0	90.23	359.98	7,578.2	6,035.8	168.8	6,037.8	0.00	0.00	0.00
14,100.0	90.23	359.98	7,577.8	6,135.8	168.8	6,137.8	0.00	0.00	0.00
14,200.0	90.23	359.98	7,577.4	6,235.8	168.7	6,237.7	0.00	0.00	0.00
14,300.0	90.23	359.98	7,577.0	6,335.8	168.7	6,337.7	0.00	0.00	0.00
14,400.0	90.23	359.98	7,576.6	6,435.8	168.7	6,437.7	0.00	0.00	0.00
14,500.0	90.23	359.98	7,576.2	6,535.8	168.6	6,537.7	0.00	0.00	0.00
14,600.0	90.23	359.98	7,575.8	6,635.8	168.6	6,637.7	0.00	0.00	0.00
14,700.0	90.23	359.98	7,575.4	6,735.8	168.6	6,737.7	0.00	0.00	0.00
14,800.0	90.23	359.98	7,575.0	6,835.8	168.5	6,837.6	0.00	0.00	0.00
14,900.0	90.23	359.98	7,574.6	6,935.8	168.5	6,937.6	0.00	0.00	0.00
15,000.0	90.23	359.98	7,574.2	7,035.8	168.4	7,037.6	0.00	0.00	0.00
15,100.0	90.23	359.98	7,573.8	7,135.8	168.4	7,137.6	0.00	0.00	0.00
15,200.0	90.23	359.98	7,573.4	7,235.8	168.4	7,237.6	0.00	0.00	0.00
15,300.0	90.23	359.98	7,573.0	7,335.8	168.3	7,337.6	0.00	0.00	0.00
15,400.0	90.23	359.98	7,572.6	7,435.8	168.3	7,437.6	0.00	0.00	0.00
15,500.0	90.23	359.98	7,572.2	7,535.8	168.3	7,537.5	0.00	0.00	0.00
15,600.0	90.23	359.98	7,571.8	7,635.8	168.2	7,637.5	0.00	0.00	0.00
15,700.0	90.23	359.98	7,571.4	7,735.8	168.2	7,737.5	0.00	0.00	0.00
15,800.0	90.23	359.98	7,571.0	7,835.8	168.2	7,837.5	0.00	0.00	0.00
15,900.0	90.23	359.98	7,570.6	7,935.8	168.1	7,937.5	0.00	0.00	0.00
16,000.0	90.23	359.98	7,570.2	8,035.8	168.1	8,037.5	0.00	0.00	0.00
16,100.0	90.23	359.98	7,569.8	8,135.8	168.1	8,137.4	0.00	0.00	0.00
16,200.0	90.23	359.98	7,569.4	8,235.8	168.0	8,237.4	0.00	0.00	0.00
16,300.0	90.23	359.98	7,569.0	8,335.8	168.0	8,337.4	0.00	0.00	0.00
16,400.0	90.23	359.98	7,568.6	8,435.8	168.0	8,437.4	0.00	0.00	0.00
16,500.0	90.23	359.98	7,568.2	8,535.8	167.9	8,537.4	0.00	0.00	0.00
16,600.0	90.23	359.98	7,567.8	8,635.8	167.9	8,637.4	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

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)
16,700.0	90.23	359.98	7,567.4	8,735.8	167.9	8,737.4	0.00	0.00	0.00
16,800.0	90.23	359.98	7,567.0	8,835.8	167.8	8,837.3	0.00	0.00	0.00
16,900.0	90.23	359.98	7,566.6	8,935.8	167.8	8,937.3	0.00	0.00	0.00
17,000.0	90.23	359.98	7,566.2	9,035.8	167.8	9,037.3	0.00	0.00	0.00
17,100.0	90.23	359.98	7,565.8	9,135.8	167.7	9,137.3	0.00	0.00	0.00
17,200.0	90.23	359.98	7,565.4	9,235.8	167.7	9,237.3	0.00	0.00	0.00
17,300.0	90.23	359.98	7,565.0	9,335.8	167.7	9,337.3	0.00	0.00	0.00
17,400.0	90.23	359.98	7,564.6	9,435.8	167.6	9,437.3	0.00	0.00	0.00
17,500.0	90.23	359.98	7,564.2	9,535.8	167.6	9,537.2	0.00	0.00	0.00
17,600.0	90.23	359.98	7,563.8	9,635.8	167.6	9,637.2	0.00	0.00	0.00
17,700.0	90.23	359.98	7,563.4	9,735.8	167.5	9,737.2	0.00	0.00	0.00
17,800.0	90.23	359.98	7,563.0	9,835.8	167.5	9,837.2	0.00	0.00	0.00
17,900.0	90.23	359.98	7,562.6	9,935.8	167.5	9,937.2	0.00	0.00	0.00
18,000.0	90.23	359.98	7,562.2	10,035.8	167.4	10,037.2	0.00	0.00	0.00
18,054.5	90.23	359.98	7,562.0	10,090.2	167.4	10,091.6	0.00	0.00	0.00
TD at 18054.5 - BHL 300'FNL & 1000'FWL, Sec.7									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 205'FSL & 828'FWL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,578,010.95	3,281,266.45	40.915578	-104.482342
BHL 300'FNL & 1000'FW - plan hits target center - Point	0.00	0.00	7,562.0	10,090.2	167.4	1,588,102.65	3,281,318.07	40.943272	-104.481736
LP 300'FSL & 1000'FWL - plan hits target center - Point	0.00	0.00	7,602.0	96.2	171.4	1,578,109.10	3,281,436.70	40.915842	-104.481722

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 202-1807H
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 202-1807H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-28-17)		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,608.0	1,608.0	Pierre C&D Sand		0.00	
2,385.3	2,385.0	Base Pierre C&D Sand			
2,809.8	2,806.0	Pierre B Sand			
2,880.7	2,876.0	Base Pierre B Sand			
3,627.8	3,614.0	Pierre A Sand			
4,080.3	4,061.0	Base Pierre A Sand			
4,389.1	4,366.0	Parkman			
4,861.9	4,833.0	Base Parkman			
7,385.2	7,308.0	Lower Sharon Springs			
7,540.9	7,423.0	Lower Sharon Springs GR Marker			
7,608.0	7,465.0	Niobrara A Chalk			
7,620.0	7,472.0	Niobrara A Marl GR Marker			
7,623.5	7,474.0	Niobrara B1 Chalk			
7,681.1	7,505.0	Niobrara B1 Marl			
7,707.8	7,518.0	Niobrara B Chalk			
7,762.8	7,542.0	Niobrara B Marl			
7,817.5	7,562.0	Niobrara Landing Target			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,100.0	2,100.0	0.0	0.0	KOP - Start Build 1.50
6,299.8	6,253.3	-45.0	12.5	Start Drop -2.00
6,937.0	6,888.7	-586.2	162.3	KOP #2 - Start Build 8.03
18,054.5	7,562.0	-620.0	171.7	TD at 18054.5

ENSIGN Directional

Fifth Creek Energy Company, LLC

Sec.18-T11N-R63W
Critter Creek 18 SW Pad Sec.18-T11N-R63W
Critter Creek 202-1807H

Wellbore #1
Plan #1 (2-28-17)

Anticollision Report

01 March, 2017

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (2-28-17)

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	18,054.5	Plan #1 (2-28-17) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
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	49.7	43.2	7.632	CC, ES
Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17)	18,054.5	18,082.7	650.1	259.2	1.663	SF
Critter Creek 203-1807H - Wellbore #1 - Plan #1 (2-28-17	1,700.0	1,700.0	50.0	42.6	6.745	CC, ES
Critter Creek 203-1807H - Wellbore #1 - Plan #1 (2-28-17	18,054.5	18,111.4	649.2	256.2	1.652	SF
Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17)	1,700.0	1,700.0	25.2	17.7	3.391	CC
Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17)	18,054.5	18,157.0	331.1	-28.7	0.920	Level 1, ES, SF
Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-17	1,900.0	1,900.0	24.6	16.3	2.958	CC, ES
Critter Creek 539-1807H - Wellbore #1 - Plan #1 (2-28-17	18,054.5	18,184.4	480.6	106.2	1.284	Level 3, SF
Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-17	200.0	200.0	74.6	74.0	110.682	CC, ES
Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-17	6,500.0	6,411.1	1,191.9	1,153.4	30.993	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	10,814.5	11,899.3	63.4	5.1	1.087	Level 2, CC
Critter Creek 14-18H (Exist.) - Wellbore #1 - Wellbore #1	10,900.0	11,961.3	86.2	-0.4	0.995	Level 1, ES, SF
Critter Creek 15-19H (Exist.) - Wellbore #1 - Wellbore #1	7,300.0	13,015.9	578.4	427.3	3.828	SF
Critter Creek 15-19H (Exist.) - Wellbore #1 - Wellbore #1	7,369.8	13,042.2	572.2	423.8	3.854	CC, ES

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 201-1807H - Wellbore #1 - Plan #1 (3-1-17

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	0.0	-49.7	49.7				
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	0.0	-49.7	49.7	49.5	0.22	221.339	
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-49.7	49.7	49.1	0.67	73.780	
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	0.0	-49.7	49.7	48.6	1.12	44.268	
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	0.0	-49.7	49.7	48.2	1.57	31.620	
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	0.0	-49.7	49.7	47.7	2.02	24.593	
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	0.0	-49.7	49.7	47.3	2.47	20.122	
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	0.0	-49.7	49.7	46.8	2.92	17.026	
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	0.0	-49.7	49.7	46.4	3.37	14.756	
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	0.0	-49.7	49.7	45.9	3.82	13.020	

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

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	0.0	-49.7	49.7	43.2	6.52	7.632	CC, ES
1,600.0	1,600.0	1,599.2	1,599.2	3.5	3.5	-91.23	-1.1	-50.5	50.5	43.6	6.94	7.276	
1,700.0	1,700.0	1,698.4	1,698.3	3.7	3.6	-94.63	-4.3	-52.7	52.9	45.5	7.34	7.202	
1,800.0	1,800.0	1,797.2	1,796.9	3.9	3.8	-99.64	-9.6	-56.3	57.2	49.4	7.75	7.380	
1,900.0	1,900.0	1,895.7	1,895.0	4.2	4.0	-105.43	-16.9	-61.3	63.8	55.6	8.16	7.818	
2,000.0	2,000.0	1,993.6	1,992.2	4.4	4.2	-111.23	-26.3	-67.7	73.1	64.5	8.58	8.513	
2,100.0	2,100.0	2,090.9	2,088.5	4.6	4.4	-116.52	-37.7	-75.5	85.1	76.1	9.01	9.445	
2,200.0	2,200.0	2,187.5	2,183.8	4.8	4.7	74.91	-51.0	-84.6	99.7	90.3	9.40	10.609	
2,300.0	2,299.9	2,284.7	2,279.2	5.0	5.0	72.61	-66.1	-95.0	115.9	106.2	9.78	11.855	
2,400.0	2,399.7	2,383.4	2,376.1	5.2	5.3	71.81	-81.9	-105.7	131.9	121.7	10.18	12.958	
2,500.0	2,499.3	2,482.3	2,473.1	5.3	5.6	72.13	-97.7	-116.5	147.0	136.4	10.59	13.878	
2,600.0	2,598.6	2,581.2	2,570.1	5.5	6.0	73.25	-113.5	-127.3	161.4	150.3	11.03	14.628	
2,700.0	2,697.5	2,680.0	2,667.1	5.8	6.3	75.00	-129.2	-138.1	175.1	163.6	11.50	15.224	
2,800.0	2,796.3	2,778.9	2,764.1	6.0	6.7	77.03	-145.0	-148.9	188.8	176.8	12.01	15.719	
2,900.0	2,895.1	2,877.8	2,861.1	6.2	7.0	78.78	-160.8	-159.7	202.6	190.1	12.54	16.159	
3,000.0	2,993.9	2,976.6	2,958.1	6.5	7.4	80.31	-176.6	-170.5	216.6	203.5	13.09	16.547	
3,100.0	3,092.6	3,075.5	3,055.1	6.8	7.8	81.66	-192.4	-181.3	230.8	217.1	13.66	16.891	
3,200.0	3,191.4	3,174.3	3,152.1	7.0	8.2	82.85	-208.1	-192.1	245.0	230.8	14.25	17.193	
3,300.0	3,290.2	3,273.2	3,249.1	7.3	8.6	83.91	-223.9	-202.8	259.4	244.5	14.86	17.461	
3,400.0	3,389.0	3,372.0	3,346.1	7.6	9.0	84.85	-239.7	-213.6	273.8	258.4	15.47	17.697	
3,500.0	3,487.8	3,470.9	3,443.1	7.9	9.4	85.71	-255.5	-224.4	288.3	272.2	16.10	17.906	
3,600.0	3,586.5	3,569.8	3,540.0	8.2	9.8	86.48	-271.3	-235.2	302.9	286.1	16.74	18.091	
3,700.0	3,685.3	3,668.6	3,637.0	8.6	10.2	87.18	-287.1	-246.0	317.5	300.1	17.39	18.256	
3,800.0	3,784.1	3,767.5	3,734.0	8.9	10.6	87.82	-302.8	-256.8	332.1	314.1	18.05	18.402	
3,900.0	3,882.9	3,866.3	3,831.0	9.2	11.0	88.40	-318.6	-267.6	346.8	328.1	18.71	18.533	
4,000.0	3,981.6	3,965.2	3,928.0	9.5	11.4	88.94	-334.4	-278.4	361.5	342.1	19.38	18.651	
4,100.0	4,080.4	4,064.0	4,025.0	9.9	11.8	89.43	-350.2	-289.2	376.3	356.2	20.06	18.756	
4,200.0	4,179.2	4,162.9	4,122.0	10.2	12.2	89.89	-366.0	-299.9	391.0	370.3	20.74	18.851	
4,300.0	4,278.0	4,261.8	4,219.0	10.6	12.6	90.31	-381.7	-310.7	405.8	384.4	21.43	18.937	
4,400.0	4,376.7	4,360.6	4,316.0	10.9	13.1	90.71	-397.5	-321.5	420.6	398.5	22.12	19.014	
4,500.0	4,475.5	4,459.5	4,413.0	11.2	13.5	91.08	-413.3	-332.3	435.5	412.6	22.82	19.085	
4,600.0	4,574.3	4,558.3	4,510.0	11.6	13.9	91.42	-429.1	-343.1	450.3	426.8	23.52	19.149	
4,700.0	4,673.1	4,657.2	4,606.9	11.9	14.3	91.74	-444.9	-353.9	465.2	440.9	24.22	19.207	
4,800.0	4,771.9	4,756.0	4,703.9	12.3	14.7	92.04	-460.6	-364.7	480.0	455.1	24.92	19.260	
4,900.0	4,870.6	4,854.9	4,800.9	12.6	15.2	92.33	-476.4	-375.5	494.9	469.3	25.63	19.309	
5,000.0	4,969.4	4,953.8	4,897.9	13.0	15.6	92.59	-492.2	-386.3	509.8	483.5	26.34	19.354	
5,100.0	5,068.2	5,052.6	4,994.9	13.3	16.0	92.85	-508.0	-397.0	524.7	497.7	27.05	19.395	
5,200.0	5,167.0	5,151.5	5,091.9	13.7	16.4	93.08	-523.8	-407.8	539.6	511.9	27.77	19.433	
5,300.0	5,265.7	5,250.3	5,188.9	14.1	16.9	93.31	-539.5	-418.6	554.6	526.1	28.49	19.468	
5,400.0	5,364.5	5,349.2	5,285.9	14.4	17.3	93.52	-555.3	-429.4	569.5	540.3	29.21	19.500	
5,500.0	5,463.3	5,448.0	5,382.9	14.8	17.7	93.72	-571.1	-440.2	584.4	554.5	29.93	19.530	
5,600.0	5,562.1	5,552.9	5,485.8	15.1	18.1	93.95	-587.6	-451.5	599.2	568.6	30.65	19.550	
5,700.0	5,660.8	5,669.4	5,600.8	15.5	18.5	94.43	-602.9	-462.0	611.8	580.4	31.36	19.508	
5,800.0	5,759.6	5,786.3	5,716.9	15.9	18.8	95.20	-614.4	-469.8	621.5	589.5	32.05	19.394	
5,900.0	5,858.4	5,903.2	5,833.4	16.2	19.0	96.27	-622.0	-475.0	628.6	595.9	32.73	19.208	
6,000.0	5,957.2	6,019.6	5,949.7	16.6	19.2	97.61	-625.7	-477.5	633.1	599.7	33.39	18.961	
6,100.0	6,056.0	6,125.9	6,056.0	16.9	19.3	99.06	-626.0	-477.8	635.6	601.6	34.02	18.683	

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

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,200.0	6,154.7	6,224.6	6,154.7	17.3	19.5	100.43	-626.0	-477.8	638.3	603.7	34.62	18.438	
6,300.0	6,253.5	6,323.4	6,253.5	17.7	19.6	101.78	-626.0	-477.8	641.3	606.1	35.21	18.216	
6,400.0	6,352.5	6,422.4	6,352.5	18.0	19.7	103.04	-626.0	-477.8	644.3	608.6	35.74	18.026	
6,500.0	6,452.0	6,521.9	6,452.0	18.2	19.9	103.98	-626.0	-477.8	646.8	610.6	36.19	17.872	
6,600.0	6,551.7	6,621.6	6,551.7	18.4	20.0	104.60	-626.0	-477.8	648.5	611.9	36.58	17.726	
6,700.0	6,651.7	6,721.6	6,651.7	18.6	20.1	104.91	-626.0	-477.8	649.4	612.4	36.93	17.583	
6,800.0	6,751.7	6,821.6	6,751.7	18.8	20.3	-90.53	-626.0	-477.8	649.5	612.2	37.25	17.436	
6,900.0	6,851.7	6,921.6	6,851.7	18.9	20.4	-90.53	-626.0	-477.8	649.5	611.9	37.55	17.297	
7,000.0	6,951.6	7,022.1	6,952.1	19.0	20.5	-90.49	-623.0	-477.8	649.5	611.7	37.80	17.183	
7,100.0	7,050.3	7,122.8	7,051.5	19.0	20.5	-90.46	-606.9	-477.8	649.5	611.6	37.83	17.170	
7,200.0	7,145.8	7,223.5	7,147.5	19.0	20.5	-90.43	-576.9	-477.8	649.5	611.8	37.64	17.255	
7,218.3	7,162.8	7,242.0	7,164.6	18.9	20.4	-90.42	-570.0	-477.8	649.5	611.9	37.58	17.282	
7,300.0	7,236.2	7,324.2	7,238.4	18.8	20.3	-90.40	-533.8	-477.8	649.5	612.2	37.28	17.420	
7,400.0	7,319.8	7,424.8	7,322.3	18.6	20.0	-90.36	-478.5	-477.8	649.5	612.7	36.82	17.640	
7,500.0	7,395.0	7,525.3	7,397.6	18.3	19.7	-90.32	-412.0	-477.9	649.5	613.1	36.33	17.876	
7,600.0	7,460.3	7,625.8	7,462.7	18.1	19.4	-90.27	-335.6	-477.9	649.5	613.6	35.91	18.084	
7,700.0	7,514.3	7,726.2	7,516.6	18.0	19.1	-90.23	-251.0	-478.0	649.5	613.8	35.66	18.213	
7,800.0	7,556.0	7,826.5	7,558.0	18.0	18.9	-90.19	-159.7	-478.0	649.5	613.8	35.66	18.213	
7,900.0	7,584.7	7,926.8	7,586.3	18.1	18.7	-90.15	-63.6	-478.1	649.5	613.5	35.98	18.054	
8,000.0	7,599.7	8,027.0	7,600.9	18.4	18.6	-90.11	35.5	-478.1	649.5	612.9	36.64	17.726	
8,100.0	7,601.8	8,128.1	7,601.8	18.9	18.7	-90.00	135.5	-478.2	649.5	611.9	37.63	17.262	
8,200.0	7,601.4	8,228.1	7,601.4	19.4	19.2	-90.00	235.5	-478.2	649.5	611.0	38.55	16.848	
8,300.0	7,601.0	8,328.1	7,601.0	19.8	19.8	-90.00	335.5	-478.3	649.5	610.0	39.49	16.448	
8,400.0	7,600.6	8,428.1	7,600.6	20.4	20.6	-90.00	435.5	-478.3	649.5	608.8	40.78	15.929	
8,500.0	7,600.2	8,528.1	7,600.2	21.2	21.6	-90.00	535.5	-478.4	649.5	607.2	42.38	15.327	
8,600.0	7,599.8	8,628.1	7,599.8	22.1	22.6	-90.00	635.5	-478.4	649.5	605.3	44.26	14.675	
8,700.0	7,599.4	8,728.1	7,599.4	23.1	23.8	-90.00	735.5	-478.5	649.6	603.2	46.39	14.001	
8,800.0	7,599.0	8,828.1	7,599.0	24.3	25.0	-90.00	835.5	-478.5	649.6	600.8	48.74	13.328	
8,900.0	7,598.6	8,928.1	7,598.6	25.5	26.3	-90.00	935.5	-478.6	649.6	598.3	51.27	12.670	
9,000.0	7,598.2	9,028.1	7,598.2	26.8	27.7	-90.00	1,035.5	-478.7	649.6	595.6	53.96	12.038	
9,100.0	7,597.8	9,128.1	7,597.8	28.2	29.1	-90.00	1,135.5	-478.7	649.6	592.8	56.79	11.439	
9,200.0	7,597.4	9,228.1	7,597.4	29.7	30.6	-90.00	1,235.5	-478.8	649.6	589.9	59.73	10.875	
9,300.0	7,597.0	9,328.1	7,597.0	31.2	32.2	-90.00	1,335.5	-478.8	649.6	586.8	62.78	10.347	
9,400.0	7,596.6	9,428.1	7,596.6	32.7	33.7	-90.00	1,435.5	-478.9	649.6	583.7	65.91	9.856	
9,500.0	7,596.2	9,528.1	7,596.2	34.3	35.4	-90.00	1,535.5	-478.9	649.6	580.5	69.12	9.398	
9,600.0	7,595.8	9,628.1	7,595.8	36.0	37.0	-90.00	1,635.5	-479.0	649.6	577.2	72.39	8.974	
9,700.0	7,595.4	9,728.1	7,595.4	37.6	38.7	-90.00	1,735.5	-479.0	649.6	573.9	75.72	8.579	
9,800.0	7,595.0	9,828.1	7,595.0	39.3	40.3	-90.00	1,835.5	-479.1	649.6	570.5	79.10	8.213	
9,900.0	7,594.6	9,928.1	7,594.6	41.0	42.0	-90.00	1,935.5	-479.1	649.6	567.1	82.52	7.872	
10,000.0	7,594.2	10,028.1	7,594.2	42.7	43.8	-90.00	2,035.5	-479.2	649.6	563.7	85.98	7.555	
10,100.0	7,593.8	10,128.1	7,593.8	44.5	45.5	-90.00	2,135.5	-479.2	649.6	560.2	89.48	7.260	
10,200.0	7,593.4	10,228.1	7,593.4	46.2	47.3	-90.00	2,235.5	-479.3	649.7	556.7	93.00	6.985	
10,300.0	7,593.0	10,328.1	7,593.0	48.0	49.0	-90.00	2,335.5	-479.3	649.7	553.1	96.55	6.729	
10,400.0	7,592.6	10,428.1	7,592.6	49.8	50.8	-90.00	2,435.5	-479.4	649.7	549.5	100.13	6.488	
10,500.0	7,592.2	10,528.1	7,592.2	51.5	52.6	-90.00	2,535.5	-479.4	649.7	545.9	103.72	6.263	
10,600.0	7,591.8	10,628.1	7,591.8	53.3	54.4	-90.00	2,635.5	-479.5	649.7	542.3	107.34	6.053	
10,700.0	7,591.4	10,728.1	7,591.4	55.2	56.2	-90.00	2,735.5	-479.5	649.7	538.7	110.97	5.854	
10,800.0	7,591.0	10,828.1	7,591.0	57.0	58.1	-90.00	2,835.5	-479.6	649.7	535.1	114.62	5.668	
10,900.0	7,590.6	10,928.1	7,590.6	58.8	59.9	-90.00	2,935.5	-479.6	649.7	531.4	118.28	5.493	
11,000.0	7,590.2	11,028.1	7,590.2	60.6	61.7	-90.00	3,035.5	-479.7	649.7	527.7	121.96	5.327	
11,100.0	7,589.8	11,128.1	7,589.8	62.5	63.6	-90.00	3,135.5	-479.7	649.7	524.1	125.65	5.171	
11,200.0	7,589.4	11,228.1	7,589.4	64.3	65.4	-90.00	3,235.5	-479.8	649.7	520.4	129.35	5.023	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,300.0	7,589.0	11,328.1	7,589.0	66.2	67.2	-90.00	3,335.5	-479.8	649.7	516.7	133.05	4.883	
11,400.0	7,588.6	11,428.1	7,588.6	68.0	69.1	-90.00	3,435.5	-479.9	649.7	513.0	136.77	4.750	
11,500.0	7,588.2	11,528.1	7,588.2	69.9	71.0	-90.00	3,535.5	-479.9	649.7	509.2	140.50	4.625	
11,600.0	7,587.8	11,628.1	7,587.8	71.8	72.8	-90.00	3,635.5	-480.0	649.7	505.5	144.23	4.505	
11,700.0	7,587.4	11,728.1	7,587.4	73.6	74.7	-90.00	3,735.5	-480.0	649.7	501.8	147.97	4.391	
11,800.0	7,587.0	11,828.1	7,587.0	75.5	76.6	-90.00	3,835.5	-480.1	649.8	498.0	151.72	4.283	
11,900.0	7,586.6	11,928.1	7,586.6	77.4	78.4	-90.00	3,935.5	-480.1	649.8	494.3	155.47	4.179	
12,000.0	7,586.2	12,028.1	7,586.2	79.2	80.3	-90.00	4,035.5	-480.2	649.8	490.5	159.23	4.081	
12,100.0	7,585.8	12,128.1	7,585.8	81.1	82.2	-90.00	4,135.5	-480.2	649.8	486.8	163.00	3.986	
12,200.0	7,585.4	12,228.1	7,585.4	83.0	84.1	-90.00	4,235.5	-480.3	649.8	483.0	166.77	3.896	
12,300.0	7,585.0	12,328.1	7,585.0	84.9	85.9	-90.00	4,335.5	-480.3	649.8	479.2	170.54	3.810	
12,400.0	7,584.6	12,428.1	7,584.6	86.8	87.8	-90.00	4,435.5	-480.3	649.8	475.5	174.32	3.728	
12,500.0	7,584.2	12,528.1	7,584.2	88.7	89.7	-90.00	4,535.5	-480.4	649.8	471.7	178.10	3.648	
12,600.0	7,583.8	12,628.1	7,583.8	90.6	91.6	-90.00	4,635.5	-480.4	649.8	467.9	181.89	3.573	
12,700.0	7,583.4	12,728.1	7,583.4	92.5	93.5	-90.00	4,735.5	-480.5	649.8	464.1	185.68	3.500	
12,800.0	7,583.0	12,828.1	7,583.0	94.3	95.4	-90.00	4,835.5	-480.5	649.8	460.3	189.47	3.430	
12,900.0	7,582.6	12,928.1	7,582.6	96.2	97.3	-90.00	4,935.5	-480.6	649.8	456.6	193.27	3.362	
13,000.0	7,582.2	13,028.1	7,582.2	98.1	99.2	-90.00	5,035.5	-480.6	649.8	452.8	197.07	3.298	
13,100.0	7,581.8	13,128.1	7,581.8	100.0	101.1	-90.00	5,135.5	-480.7	649.8	449.0	200.87	3.235	
13,200.0	7,581.4	13,228.1	7,581.4	101.9	103.0	-90.00	5,235.5	-480.7	649.8	445.2	204.67	3.175	
13,300.0	7,581.0	13,328.1	7,581.0	103.8	104.9	-90.00	5,335.5	-480.8	649.8	441.4	208.48	3.117	
13,400.0	7,580.6	13,428.1	7,580.6	105.7	106.8	-90.00	5,435.5	-480.8	649.8	437.6	212.29	3.061	
13,500.0	7,580.2	13,528.1	7,580.2	107.7	108.7	-90.00	5,535.5	-480.8	649.9	433.8	216.10	3.007	
13,600.0	7,579.8	13,628.1	7,579.8	109.6	110.6	-90.00	5,635.5	-480.9	649.9	429.9	219.91	2.955	
13,700.0	7,579.4	13,728.1	7,579.4	111.5	112.5	-90.00	5,735.5	-480.9	649.9	426.1	223.73	2.905	
13,800.0	7,579.0	13,828.1	7,579.0	113.4	114.4	-90.00	5,835.5	-481.0	649.9	422.3	227.55	2.856	
13,900.0	7,578.6	13,928.1	7,578.6	115.3	116.3	-90.00	5,935.5	-481.0	649.9	418.5	231.37	2.809	
14,000.0	7,578.2	14,028.1	7,578.2	117.2	118.2	-90.00	6,035.5	-481.1	649.9	414.7	235.19	2.763	
14,100.0	7,577.8	14,128.1	7,577.8	119.1	120.1	-90.00	6,135.5	-481.1	649.9	410.9	239.01	2.719	
14,200.0	7,577.4	14,228.1	7,577.4	121.0	122.0	-90.00	6,235.5	-481.1	649.9	407.1	242.84	2.676	
14,300.0	7,577.0	14,328.1	7,577.0	122.9	123.9	-90.00	6,335.5	-481.2	649.9	403.2	246.66	2.635	
14,400.0	7,576.6	14,428.1	7,576.6	124.8	125.9	-90.00	6,435.5	-481.2	649.9	399.4	250.49	2.595	
14,500.0	7,576.2	14,528.1	7,576.2	126.8	127.8	-90.00	6,535.5	-481.3	649.9	395.6	254.32	2.555	
14,600.0	7,575.8	14,628.2	7,575.8	128.7	129.7	-90.00	6,635.5	-481.3	649.9	391.8	258.15	2.518	
14,700.0	7,575.4	14,728.2	7,575.4	130.6	131.6	-90.00	6,735.5	-481.4	649.9	387.9	261.98	2.481	
14,800.0	7,575.0	14,828.2	7,575.0	132.5	133.5	-90.00	6,835.5	-481.4	649.9	384.1	265.81	2.445	
14,900.0	7,574.6	14,928.2	7,574.6	134.4	135.4	-90.00	6,935.5	-481.4	649.9	380.3	269.65	2.410	
15,000.0	7,574.2	15,028.2	7,574.2	136.3	137.3	-90.00	7,035.5	-481.5	649.9	376.5	273.48	2.377	
15,100.0	7,573.8	15,128.2	7,573.8	138.3	139.3	-90.00	7,135.5	-481.5	649.9	372.6	277.32	2.344	
15,200.0	7,573.4	15,228.2	7,573.4	140.2	141.2	-90.00	7,235.5	-481.6	649.9	368.8	281.15	2.312	
15,300.0	7,573.0	15,328.2	7,573.0	142.1	143.1	-90.00	7,335.5	-481.6	649.9	365.0	284.99	2.281	
15,400.0	7,572.6	15,428.2	7,572.6	144.0	145.0	-90.00	7,435.5	-481.6	650.0	361.1	288.83	2.250	
15,500.0	7,572.2	15,528.2	7,572.2	145.9	146.9	-90.00	7,535.5	-481.7	650.0	357.3	292.67	2.221	
15,600.0	7,571.8	15,628.2	7,571.8	147.8	148.8	-90.00	7,635.5	-481.7	650.0	353.5	296.51	2.192	
15,700.0	7,571.4	15,728.2	7,571.4	149.8	150.8	-90.00	7,735.5	-481.8	650.0	349.6	300.35	2.164	
15,800.0	7,571.0	15,828.2	7,571.0	151.7	152.7	-90.00	7,835.5	-481.8	650.0	345.8	304.19	2.137	
15,900.0	7,570.6	15,928.2	7,570.6	153.6	154.6	-90.00	7,935.5	-481.8	650.0	341.9	308.04	2.110	
16,000.0	7,570.2	16,028.2	7,570.2	155.5	156.5	-90.00	8,035.5	-481.9	650.0	338.1	311.88	2.084	
16,100.0	7,569.8	16,128.2	7,569.8	157.5	158.4	-90.00	8,135.5	-481.9	650.0	334.3	315.72	2.059	
16,200.0	7,569.4	16,228.2	7,569.4	159.4	160.4	-90.00	8,235.5	-482.0	650.0	330.4	319.57	2.034	
16,300.0	7,569.0	16,328.2	7,569.0	161.3	162.3	-90.00	8,335.5	-482.0	650.0	326.6	323.42	2.010	
16,400.0	7,568.6	16,428.2	7,568.6	163.2	164.2	-90.00	8,435.5	-482.0	650.0	322.7	327.26	1.986	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
16,500.0	7,568.2	16,528.2	7,568.2	165.1	166.1	-90.00	8,535.5	-482.1	650.0	318.9	331.11	1.963	
16,600.0	7,567.8	16,628.2	7,567.8	167.1	168.0	-90.00	8,635.5	-482.1	650.0	315.1	334.96	1.941	
16,700.0	7,567.4	16,728.2	7,567.4	169.0	170.0	-90.00	8,735.5	-482.2	650.0	311.2	338.80	1.919	
16,800.0	7,567.0	16,828.2	7,567.0	170.9	171.9	-90.00	8,835.5	-482.2	650.0	307.4	342.65	1.897	
16,900.0	7,566.6	16,928.2	7,566.6	172.8	173.8	-90.00	8,935.5	-482.2	650.0	303.5	346.50	1.876	
17,000.0	7,566.2	17,028.2	7,566.2	174.8	175.7	-90.00	9,035.5	-482.3	650.0	299.7	350.35	1.855	
17,100.0	7,565.8	17,128.2	7,565.8	176.7	177.7	-90.00	9,135.5	-482.3	650.0	295.8	354.20	1.835	
17,200.0	7,565.4	17,228.2	7,565.4	178.6	179.6	-90.00	9,235.5	-482.3	650.0	292.0	358.05	1.815	
17,300.0	7,565.0	17,328.2	7,565.0	180.5	181.5	-90.00	9,335.5	-482.4	650.0	288.1	361.90	1.796	
17,400.0	7,564.6	17,428.2	7,564.6	182.5	183.4	-90.00	9,435.5	-482.4	650.0	284.3	365.75	1.777	
17,500.0	7,564.2	17,528.2	7,564.2	184.4	185.4	-90.00	9,535.5	-482.4	650.0	280.4	369.61	1.759	
17,600.0	7,563.8	17,628.2	7,563.8	186.3	187.3	-90.00	9,635.5	-482.5	650.1	276.6	373.46	1.741	
17,700.0	7,563.4	17,728.2	7,563.4	188.2	189.2	-90.00	9,735.5	-482.5	650.1	272.7	377.31	1.723	
17,800.0	7,563.0	17,828.2	7,563.0	190.2	191.1	-90.00	9,835.5	-482.6	650.1	268.9	381.16	1.705	
17,900.0	7,562.6	17,928.2	7,562.6	192.1	193.1	-90.00	9,935.5	-482.6	650.1	265.0	385.02	1.688	
18,000.0	7,562.2	18,028.2	7,562.2	194.0	195.0	-90.00	10,035.5	-482.6	650.1	261.2	388.87	1.672	
18,054.5	7,562.0	18,082.7	7,562.0	195.0	196.0	-90.00	10,090.0	-482.6	650.1	259.2	390.90	1.663	SF

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	50.0	50.0				
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	50.0	50.0	49.8	0.22	222.569	
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	50.0	50.0	49.4	0.67	74.190	
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	50.0	50.0	48.9	1.12	44.514	
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	50.0	50.0	48.5	1.57	31.796	
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	50.0	50.0	48.0	2.02	24.730	
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	50.0	50.0	47.6	2.47	20.234	
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	50.0	50.0	47.1	2.92	17.121	
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	50.0	50.0	46.7	3.37	14.838	
900.0	900.0	900.0	900.0	1.9	1.9	89.98	0.0	50.0	50.0	46.2	3.82	13.092	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.98	0.0	50.0	50.0	45.8	4.27	11.714	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.98	0.0	50.0	50.0	45.3	4.72	10.599	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.98	0.0	50.0	50.0	44.9	5.17	9.677	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.98	0.0	50.0	50.0	44.4	5.62	8.903	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.98	0.0	50.0	50.0	44.0	6.07	8.243	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.98	0.0	50.0	50.0	43.5	6.52	7.675	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.98	0.0	50.0	50.0	43.1	6.97	7.180	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.98	0.0	50.0	50.0	42.6	7.42	6.745	CC, ES
1,800.0	1,800.0	1,799.0	1,799.0	3.9	3.9	90.88	-0.8	51.0	51.0	43.2	7.84	6.509	
1,900.0	1,900.0	1,897.8	1,897.7	4.2	4.1	93.38	-3.2	54.0	54.2	45.9	8.25	6.568	
2,000.0	2,000.0	1,996.4	1,996.1	4.4	4.3	96.94	-7.2	59.0	59.6	50.9	8.65	6.881	
2,100.0	2,100.0	2,094.5	2,093.8	4.6	4.5	100.94	-12.7	65.9	67.4	58.3	9.07	7.433	
2,200.0	2,200.0	2,192.3	2,191.0	4.8	4.7	-60.36	-19.8	74.7	77.2	67.7	9.46	8.163	
2,300.0	2,299.9	2,289.8	2,287.4	5.0	4.9	-58.64	-28.4	85.5	88.1	78.3	9.82	8.973	
2,400.0	2,399.7	2,386.8	2,383.1	5.2	5.2	-57.97	-38.5	98.0	100.1	89.9	10.20	9.814	
2,500.0	2,499.3	2,483.5	2,478.0	5.3	5.5	-58.03	-50.1	112.5	113.0	102.4	10.59	10.670	
2,600.0	2,598.6	2,579.8	2,572.0	5.5	5.8	-58.58	-63.1	128.7	126.9	115.9	11.00	11.531	
2,700.0	2,697.5	2,678.8	2,668.4	5.8	6.1	-59.74	-77.3	146.3	140.5	129.1	11.45	12.274	
2,800.0	2,796.3	2,777.9	2,764.9	6.0	6.5	-61.24	-91.4	163.9	153.7	141.7	11.94	12.874	
2,900.0	2,895.1	2,876.9	2,861.3	6.2	6.9	-62.51	-105.6	181.5	166.9	154.4	12.45	13.407	
3,000.0	2,993.9	2,976.0	2,957.8	6.5	7.3	-63.59	-119.7	199.1	180.2	167.2	12.98	13.878	
3,100.0	3,092.6	3,075.0	3,054.2	6.8	7.7	-64.52	-133.9	216.7	193.5	180.0	13.54	14.294	
3,200.0	3,191.4	3,174.1	3,150.7	7.0	8.1	-65.33	-148.0	234.3	206.9	192.8	14.11	14.660	
3,300.0	3,290.2	3,273.2	3,247.1	7.3	8.6	-66.05	-162.2	252.0	220.3	205.6	14.71	14.984	
3,400.0	3,389.0	3,372.2	3,343.6	7.6	9.0	-66.68	-176.3	269.6	233.8	218.5	15.31	15.269	
3,500.0	3,487.8	3,471.3	3,440.0	7.9	9.4	-67.24	-190.4	287.2	247.3	231.3	15.93	15.521	
3,600.0	3,586.5	3,570.3	3,536.5	8.2	9.9	-67.75	-204.6	304.8	260.8	244.2	16.56	15.745	
3,700.0	3,685.3	3,669.4	3,632.9	8.6	10.3	-68.20	-218.7	322.4	274.3	257.1	17.20	15.943	
3,800.0	3,784.1	3,768.5	3,729.4	8.9	10.8	-68.61	-232.9	340.0	287.8	270.0	17.86	16.119	
3,900.0	3,882.9	3,867.5	3,825.8	9.2	11.3	-68.99	-247.0	357.6	301.4	282.8	18.52	16.275	
4,000.0	3,981.6	3,966.6	3,922.3	9.5	11.7	-69.33	-261.2	375.2	314.9	295.7	19.18	16.415	
4,100.0	4,080.4	4,065.6	4,018.7	9.9	12.2	-69.65	-275.3	392.9	328.5	308.6	19.86	16.541	
4,200.0	4,179.2	4,164.7	4,115.2	10.2	12.7	-69.94	-289.5	410.5	342.1	321.5	20.54	16.653	
4,300.0	4,278.0	4,263.8	4,211.6	10.6	13.1	-70.20	-303.6	428.1	355.6	334.4	21.23	16.754	
4,400.0	4,376.7	4,362.8	4,308.1	10.9	13.6	-70.45	-317.7	445.7	369.2	347.3	21.92	16.845	
4,500.0	4,475.5	4,461.9	4,404.5	11.2	14.1	-70.68	-331.9	463.3	382.8	360.2	22.62	16.927	
4,600.0	4,574.3	4,560.9	4,501.0	11.6	14.6	-70.90	-346.0	480.9	396.4	373.1	23.32	17.002	
4,700.0	4,673.1	4,660.0	4,597.4	11.9	15.0	-71.10	-360.2	498.5	410.0	386.0	24.02	17.069	
4,800.0	4,771.9	4,759.1	4,693.9	12.3	15.5	-71.28	-374.3	516.1	423.7	398.9	24.73	17.130	
4,900.0	4,870.6	4,858.1	4,790.3	12.6	16.0	-71.46	-388.5	533.8	437.3	411.8	25.44	17.186	
5,000.0	4,969.4	4,957.2	4,886.8	13.0	16.5	-71.62	-402.6	551.4	450.9	424.7	26.16	17.237	
5,100.0	5,068.2	5,056.2	4,983.2	13.3	17.0	-71.78	-416.8	569.0	464.5	437.6	26.88	17.284	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,167.0	5,155.3	5,079.7	13.7	17.5	-71.93	-430.9	586.6	478.1	450.5	27.60	17.326	
5,300.0	5,265.7	5,254.4	5,176.1	14.1	18.0	-72.06	-445.0	604.2	491.8	463.5	28.32	17.366	
5,400.0	5,364.5	5,353.4	5,272.6	14.4	18.4	-72.19	-459.2	621.8	505.4	476.4	29.04	17.401	
5,500.0	5,463.3	5,452.5	5,369.0	14.8	18.9	-72.32	-473.3	639.4	519.0	489.3	29.77	17.435	
5,600.0	5,562.1	5,551.5	5,465.5	15.1	19.4	-72.44	-487.5	657.0	532.7	502.2	30.50	17.465	
5,700.0	5,660.8	5,650.6	5,561.9	15.5	19.9	-72.55	-501.6	674.7	546.3	515.1	31.23	17.493	
5,800.0	5,759.6	5,749.7	5,658.4	15.9	20.4	-72.65	-515.8	692.3	560.0	528.0	31.96	17.519	
5,900.0	5,858.4	5,848.7	5,754.8	16.2	20.9	-72.76	-529.9	709.9	573.6	540.9	32.70	17.543	
6,000.0	5,957.2	5,947.8	5,851.3	16.6	21.4	-72.85	-544.1	727.5	587.2	553.8	33.43	17.566	
6,100.0	6,056.0	6,046.8	5,947.7	16.9	21.9	-72.94	-558.2	745.1	600.9	566.7	34.17	17.586	
6,200.0	6,154.7	6,145.9	6,044.2	17.3	22.4	-73.03	-572.3	762.7	614.5	579.6	34.91	17.606	
6,300.0	6,253.5	6,265.0	6,160.7	17.7	22.8	-73.27	-587.9	782.1	626.6	591.0	35.65	17.577	
6,400.0	6,352.5	6,385.4	6,279.3	18.0	23.2	-73.77	-600.5	797.8	636.0	599.7	36.32	17.510	
6,500.0	6,452.0	6,506.2	6,399.2	18.2	23.5	-74.14	-610.1	809.7	643.0	606.2	36.87	17.441	
6,600.0	6,551.7	6,627.4	6,520.0	18.4	23.7	-74.39	-616.4	817.6	647.7	610.4	37.33	17.351	
6,700.0	6,651.7	6,748.9	6,641.3	18.6	23.9	-74.51	-619.6	821.6	650.0	612.3	37.71	17.238	
6,800.0	6,751.7	6,859.3	6,751.7	18.8	24.1	90.00	-620.0	822.0	650.3	612.3	38.03	17.101	
6,900.0	6,851.7	6,959.3	6,851.7	18.9	24.2	90.00	-620.0	822.0	650.3	612.0	38.33	16.969	
6,982.0	6,933.6	7,041.3	6,933.7	19.0	24.3	90.15	-618.4	822.0	650.3	611.8	38.52	16.885	
7,000.0	6,951.6	7,059.3	6,951.6	19.0	24.3	90.00	-617.0	822.0	650.3	611.7	38.58	16.858	
7,100.0	7,050.3	7,159.3	7,050.2	19.0	24.3	89.97	-600.9	822.0	650.3	611.7	38.61	16.844	
7,200.0	7,145.8	7,259.2	7,145.6	19.0	24.2	89.95	-571.2	822.0	650.3	611.9	38.43	16.923	
7,300.0	7,236.2	7,359.1	7,235.8	18.8	24.1	89.93	-528.6	822.0	650.3	612.2	38.08	17.076	
7,400.0	7,319.8	7,459.0	7,319.3	18.6	23.8	89.92	-473.9	822.0	650.3	612.7	37.64	17.278	
7,500.0	7,395.0	7,558.8	7,394.3	18.3	23.6	89.91	-408.1	821.9	650.3	613.2	37.18	17.494	
7,600.0	7,460.3	7,658.7	7,459.5	18.1	23.3	89.92	-332.5	821.9	650.3	613.5	36.78	17.681	
7,700.0	7,514.3	7,758.6	7,513.5	18.0	23.0	89.92	-248.6	821.9	650.3	613.8	36.55	17.792	
7,800.0	7,556.0	7,858.5	7,555.4	18.0	22.7	89.94	-158.0	821.8	650.3	613.8	36.57	17.785	
7,900.0	7,584.7	7,958.4	7,584.2	18.1	22.4	89.96	-62.5	821.8	650.3	613.4	36.89	17.630	
8,000.0	7,599.7	8,058.3	7,599.5	18.4	22.2	89.98	36.2	821.7	650.3	612.8	37.54	17.323	
8,100.0	7,601.8	8,158.3	7,601.9	18.9	22.0	90.00	136.1	821.7	650.3	611.8	38.54	16.873	
8,200.0	7,601.4	8,258.3	7,601.4	19.4	21.9	90.00	236.1	821.6	650.3	610.8	39.58	16.429	
8,300.0	7,601.0	8,358.3	7,601.0	19.8	22.1	90.00	336.1	821.6	650.3	609.7	40.68	15.988	
8,400.0	7,600.6	8,458.3	7,600.6	20.4	22.8	90.00	436.1	821.5	650.3	608.2	42.14	15.432	
8,500.0	7,600.2	8,558.3	7,600.2	21.2	23.8	90.00	536.1	821.5	650.3	606.4	43.94	14.802	
8,600.0	7,599.8	8,658.3	7,599.8	22.1	25.0	90.00	636.1	821.4	650.3	604.4	45.99	14.142	
8,700.0	7,599.4	8,758.3	7,599.4	23.1	26.2	90.00	736.1	821.4	650.3	602.1	48.26	13.476	
8,800.0	7,599.0	8,858.3	7,599.0	24.3	27.6	90.00	836.1	821.3	650.3	599.6	50.73	12.821	
8,900.0	7,598.6	8,958.3	7,598.6	25.5	29.0	90.00	936.1	821.3	650.3	597.0	53.36	12.188	
9,000.0	7,598.2	9,058.3	7,598.2	26.8	30.4	90.00	1,036.1	821.3	650.3	594.2	56.13	11.585	
9,100.0	7,597.8	9,158.3	7,597.8	28.2	31.9	90.00	1,136.1	821.2	650.3	591.3	59.03	11.016	
9,200.0	7,597.4	9,258.3	7,597.4	29.7	33.5	90.00	1,236.1	821.2	650.3	588.3	62.04	10.482	
9,300.0	7,597.0	9,358.3	7,597.0	31.2	35.1	90.00	1,336.1	821.1	650.3	585.2	65.14	9.984	
9,400.0	7,596.6	9,458.3	7,596.6	32.7	36.7	90.00	1,436.1	821.1	650.3	582.0	68.31	9.520	
9,500.0	7,596.2	9,558.3	7,596.2	34.3	38.3	90.00	1,536.1	821.0	650.3	578.8	71.56	9.088	
9,600.0	7,595.8	9,658.3	7,595.8	36.0	40.0	90.00	1,636.1	821.0	650.3	575.5	74.86	8.687	
9,700.0	7,595.4	9,758.3	7,595.4	37.6	41.6	90.00	1,736.1	820.9	650.3	572.1	78.22	8.315	
9,800.0	7,595.0	9,858.3	7,595.0	39.3	43.3	90.00	1,836.1	820.9	650.3	568.7	81.62	7.968	
9,900.0	7,594.6	9,958.3	7,594.6	41.0	45.1	90.00	1,936.1	820.8	650.3	565.3	85.06	7.646	
10,000.0	7,594.2	10,058.3	7,594.2	42.7	46.8	90.00	2,036.1	820.8	650.3	561.8	88.53	7.346	
10,100.0	7,593.8	10,158.3	7,593.8	44.5	48.5	90.00	2,136.1	820.7	650.3	558.3	92.04	7.066	
10,200.0	7,593.4	10,258.3	7,593.4	46.2	50.3	90.00	2,236.1	820.7	650.3	554.7	95.57	6.804	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,593.0	10,358.3	7,593.0	48.0	52.1	90.00	2,336.1	820.6	650.3	551.2	99.13	6.560	
10,400.0	7,592.6	10,458.3	7,592.6	49.8	53.9	90.00	2,436.1	820.6	650.3	547.6	102.71	6.331	
10,500.0	7,592.2	10,558.3	7,592.2	51.5	55.6	90.00	2,536.1	820.5	650.3	544.0	106.31	6.117	
10,600.0	7,591.8	10,658.3	7,591.8	53.3	57.4	90.00	2,636.1	820.5	650.3	540.4	109.93	5.915	
10,700.0	7,591.4	10,758.3	7,591.4	55.2	59.2	90.00	2,736.1	820.4	650.3	536.7	113.57	5.726	
10,800.0	7,591.0	10,858.3	7,591.0	57.0	61.1	90.00	2,836.1	820.4	650.3	533.1	117.22	5.548	
10,900.0	7,590.6	10,958.3	7,590.6	58.8	62.9	90.00	2,936.1	820.3	650.3	529.4	120.88	5.379	
11,000.0	7,590.2	11,058.3	7,590.2	60.6	64.7	90.00	3,036.1	820.3	650.3	525.7	124.56	5.221	
11,100.0	7,589.8	11,158.3	7,589.8	62.5	66.5	90.00	3,136.1	820.2	650.3	522.0	128.25	5.070	
11,200.0	7,589.4	11,258.3	7,589.4	64.3	68.4	90.00	3,236.1	820.2	650.3	518.3	131.94	4.928	
11,300.0	7,589.0	11,358.3	7,589.0	66.2	70.2	90.00	3,336.1	820.1	650.2	514.6	135.65	4.794	
11,400.0	7,588.6	11,458.3	7,588.6	68.0	72.1	90.00	3,436.1	820.1	650.2	510.9	139.36	4.666	
11,500.0	7,588.2	11,558.3	7,588.2	69.9	73.9	90.00	3,536.1	820.0	650.2	507.1	143.09	4.544	
11,600.0	7,587.8	11,658.3	7,587.8	71.8	75.8	90.00	3,636.1	820.0	650.2	503.4	146.82	4.429	
11,700.0	7,587.4	11,758.3	7,587.4	73.6	77.6	90.00	3,736.1	819.9	650.2	499.7	150.55	4.319	
11,800.0	7,587.0	11,858.3	7,587.0	75.5	79.5	90.00	3,836.1	819.9	650.2	495.9	154.30	4.214	
11,900.0	7,586.6	11,958.3	7,586.6	77.4	81.3	90.00	3,936.1	819.8	650.2	492.2	158.05	4.114	
12,000.0	7,586.2	12,058.3	7,586.2	79.2	83.2	90.00	4,036.1	819.8	650.2	488.4	161.80	4.018	
12,100.0	7,585.8	12,158.3	7,585.8	81.1	85.1	90.00	4,136.1	819.8	650.2	484.6	165.56	3.927	
12,200.0	7,585.4	12,258.3	7,585.4	83.0	86.9	90.00	4,236.1	819.7	650.2	480.8	169.33	3.840	
12,300.0	7,585.0	12,358.3	7,585.0	84.9	88.8	90.00	4,336.1	819.7	650.2	477.1	173.10	3.756	
12,400.0	7,584.6	12,458.3	7,584.6	86.8	90.7	90.00	4,436.1	819.6	650.2	473.3	176.87	3.676	
12,500.0	7,584.2	12,558.3	7,584.2	88.7	92.6	90.00	4,536.1	819.6	650.1	469.5	180.65	3.599	
12,600.0	7,583.8	12,658.3	7,583.8	90.6	94.4	90.00	4,636.1	819.5	650.1	465.7	184.43	3.525	
12,700.0	7,583.4	12,758.3	7,583.4	92.5	96.3	90.00	4,736.1	819.5	650.1	461.9	188.21	3.454	
12,800.0	7,583.0	12,858.3	7,583.0	94.3	98.2	90.00	4,836.1	819.4	650.1	458.1	192.00	3.386	
12,900.0	7,582.6	12,958.3	7,582.6	96.2	100.1	90.00	4,936.1	819.4	650.1	454.3	195.79	3.320	
13,000.0	7,582.2	13,058.3	7,582.2	98.1	102.0	90.00	5,036.1	819.3	650.1	450.5	199.58	3.257	
13,100.0	7,581.8	13,158.3	7,581.8	100.0	103.9	90.00	5,136.1	819.2	650.1	446.7	203.38	3.196	
13,200.0	7,581.4	13,258.3	7,581.4	101.9	105.8	90.00	5,236.1	819.2	650.1	442.9	207.18	3.138	
13,300.0	7,581.0	13,358.4	7,581.0	103.8	107.6	90.00	5,336.1	819.1	650.1	439.1	210.98	3.081	
13,400.0	7,580.6	13,458.4	7,580.6	105.7	109.5	90.00	5,436.1	819.1	650.0	435.3	214.78	3.027	
13,500.0	7,580.2	13,558.4	7,580.2	107.7	111.4	90.00	5,536.1	819.0	650.0	431.5	218.59	2.974	
13,600.0	7,579.8	13,658.4	7,579.8	109.6	113.3	90.00	5,636.1	819.0	650.0	427.6	222.39	2.923	
13,700.0	7,579.4	13,758.4	7,579.4	111.5	115.2	90.00	5,736.1	818.9	650.0	423.8	226.20	2.874	
13,800.0	7,579.0	13,858.4	7,579.0	113.4	117.1	90.00	5,836.1	818.9	650.0	420.0	230.01	2.826	
13,900.0	7,578.6	13,958.4	7,578.6	115.3	119.0	90.00	5,936.1	818.8	650.0	416.2	233.83	2.780	
14,000.0	7,578.2	14,058.4	7,578.2	117.2	120.9	90.00	6,036.1	818.8	650.0	412.3	237.64	2.735	
14,100.0	7,577.8	14,158.4	7,577.8	119.1	122.8	90.00	6,136.1	818.7	650.0	408.5	241.46	2.692	
14,200.0	7,577.4	14,258.4	7,577.4	121.0	124.7	90.00	6,236.1	818.7	649.9	404.7	245.28	2.650	
14,300.0	7,577.0	14,358.4	7,577.0	122.9	126.6	90.00	6,336.1	818.6	649.9	400.8	249.09	2.609	
14,400.0	7,576.6	14,458.4	7,576.6	124.8	128.5	90.00	6,436.1	818.6	649.9	397.0	252.91	2.570	
14,500.0	7,576.2	14,558.4	7,576.2	126.8	130.4	90.00	6,536.1	818.5	649.9	393.2	256.74	2.531	
14,600.0	7,575.8	14,658.4	7,575.8	128.7	132.3	90.00	6,636.1	818.5	649.9	389.3	260.56	2.494	
14,700.0	7,575.4	14,758.4	7,575.4	130.6	134.2	90.00	6,736.1	818.4	649.9	385.5	264.38	2.458	
14,800.0	7,575.0	14,858.4	7,575.0	132.5	136.1	90.00	6,836.1	818.4	649.9	381.7	268.21	2.423	
14,900.0	7,574.6	14,958.4	7,574.6	134.4	138.0	90.00	6,936.1	818.3	649.8	377.8	272.04	2.389	
15,000.0	7,574.2	15,058.4	7,574.2	136.3	139.9	90.00	7,036.1	818.3	649.8	374.0	275.86	2.356	
15,100.0	7,573.8	15,158.4	7,573.8	138.3	141.8	90.00	7,136.1	818.2	649.8	370.1	279.69	2.323	
15,200.0	7,573.4	15,258.4	7,573.4	140.2	143.8	90.00	7,236.1	818.2	649.8	366.3	283.52	2.292	
15,300.0	7,573.0	15,358.4	7,573.0	142.1	145.7	90.00	7,336.1	818.1	649.8	362.4	287.35	2.261	
15,400.0	7,572.6	15,458.4	7,572.6	144.0	147.6	90.00	7,436.1	818.1	649.8	358.6	291.18	2.231	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.0	7,572.2	15,558.4	7,572.2	145.9	149.5	90.00	7,536.1	818.0	649.7	354.7	295.02	2.202	
15,600.0	7,571.8	15,658.4	7,571.8	147.8	151.4	90.00	7,636.1	818.0	649.7	350.9	298.85	2.174	
15,700.0	7,571.4	15,758.4	7,571.4	149.8	153.3	90.00	7,736.1	817.9	649.7	347.0	302.68	2.147	
15,800.0	7,571.0	15,858.4	7,571.0	151.7	155.2	90.00	7,836.1	817.9	649.7	343.2	306.52	2.120	
15,900.0	7,570.6	15,958.4	7,570.6	153.6	157.1	90.00	7,936.1	817.8	649.7	339.3	310.35	2.093	
16,000.0	7,570.2	16,058.4	7,570.2	155.5	159.0	90.00	8,036.1	817.8	649.7	335.5	314.19	2.068	
16,100.0	7,569.8	16,158.4	7,569.8	157.5	160.9	90.00	8,136.1	817.7	649.6	331.6	318.03	2.043	
16,200.0	7,569.4	16,258.4	7,569.4	159.4	162.8	90.00	8,236.1	817.7	649.6	327.8	321.87	2.018	
16,300.0	7,569.0	16,358.4	7,569.0	161.3	164.8	90.00	8,336.1	817.6	649.6	323.9	325.70	1.994	
16,400.0	7,568.6	16,458.4	7,568.6	163.2	166.7	90.00	8,436.1	817.5	649.6	320.0	329.54	1.971	
16,500.0	7,568.2	16,558.4	7,568.2	165.1	168.6	90.00	8,536.1	817.5	649.6	316.2	333.38	1.948	
16,600.0	7,567.8	16,658.4	7,567.8	167.1	170.5	90.00	8,636.1	817.4	649.5	312.3	337.22	1.926	
16,700.0	7,567.4	16,758.4	7,567.4	169.0	172.4	90.00	8,736.1	817.4	649.5	308.5	341.06	1.904	
16,800.0	7,567.0	16,858.4	7,567.0	170.9	174.3	90.00	8,836.1	817.3	649.5	304.6	344.90	1.883	
16,900.0	7,566.6	16,958.4	7,566.6	172.8	176.2	90.00	8,936.1	817.3	649.5	300.7	348.75	1.862	
17,000.0	7,566.2	17,058.4	7,566.2	174.8	178.1	90.00	9,036.1	817.2	649.5	296.9	352.59	1.842	
17,100.0	7,565.8	17,158.4	7,565.8	176.7	180.1	90.00	9,136.1	817.2	649.4	293.0	356.43	1.822	
17,200.0	7,565.4	17,258.4	7,565.4	178.6	182.0	90.00	9,236.1	817.1	649.4	289.2	360.27	1.803	
17,300.0	7,565.0	17,358.4	7,565.0	180.5	183.9	90.00	9,336.1	817.1	649.4	285.3	364.12	1.784	
17,400.0	7,564.6	17,458.4	7,564.6	182.5	185.8	90.00	9,436.1	817.0	649.4	281.4	367.96	1.765	
17,500.0	7,564.2	17,558.4	7,564.2	184.4	187.7	90.00	9,536.1	817.0	649.4	277.6	371.81	1.747	
17,600.0	7,563.8	17,658.4	7,563.8	186.3	189.6	90.00	9,636.1	816.9	649.3	273.7	375.65	1.729	
17,700.0	7,563.4	17,758.4	7,563.4	188.2	191.6	90.00	9,736.1	816.9	649.3	269.8	379.50	1.711	
17,800.0	7,563.0	17,858.4	7,563.0	190.2	193.5	90.00	9,836.1	816.8	649.3	266.0	383.34	1.694	
17,900.0	7,562.6	17,958.4	7,562.6	192.1	195.4	90.00	9,936.1	816.7	649.3	262.1	387.19	1.677	
18,000.0	7,562.2	18,058.4	7,562.2	194.0	197.3	90.00	10,036.1	816.7	649.3	258.2	391.03	1.660	
18,038.6	7,562.1	18,096.9	7,562.1	194.7	198.0	90.00	10,074.7	816.7	649.2	256.8	392.47	1.654	
18,054.5	7,562.0	18,111.4	7,562.0	195.0	198.3	90.00	10,089.2	816.7	649.2	256.2	393.03	1.652 SF	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	0.0	-25.2	25.2				
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	0.0	-25.2	25.2	24.9	0.22	111.899	
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-25.2	25.2	24.5	0.67	37.300	
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	0.0	-25.2	25.2	24.0	1.12	22.380	
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	0.0	-25.2	25.2	23.6	1.57	15.986	
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	0.0	-25.2	25.2	23.1	2.02	12.433	
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	0.0	-25.2	25.2	22.7	2.47	10.173	
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	0.0	-25.2	25.2	22.2	2.92	8.608	
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	0.0	-25.2	25.2	21.8	3.37	7.460	
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	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	-90.02	0.0	-25.2	25.2	17.7	7.42	3.391	CC
1,800.0	1,800.0	1,799.9	1,799.9	3.9	3.9	-92.92	-1.3	-25.4	25.4	17.6	7.84	3.241	
1,900.0	1,900.0	1,899.6	1,899.5	4.2	4.1	-101.21	-5.2	-26.0	26.5	18.3	8.23	3.221	
2,000.0	2,000.0	1,999.1	1,998.8	4.4	4.3	-113.12	-11.6	-27.1	29.4	20.8	8.63	3.411	
2,100.0	2,100.0	2,098.1	2,097.4	4.6	4.4	-125.65	-20.5	-28.5	35.2	26.2	9.04	3.893	
2,200.0	2,200.0	2,196.8	2,195.4	4.8	4.6	60.52	-31.8	-30.4	43.6	34.2	9.43	4.625	
2,300.0	2,299.9	2,295.1	2,292.7	5.0	4.9	55.19	-45.7	-32.7	53.5	43.7	9.79	5.464	
2,400.0	2,399.7	2,394.0	2,390.3	5.2	5.1	52.45	-61.6	-35.3	64.0	53.8	10.17	6.295	
2,500.0	2,499.3	2,493.6	2,488.5	5.3	5.4	51.96	-78.0	-38.0	73.2	62.6	10.56	6.933	
2,600.0	2,598.6	2,593.3	2,586.8	5.5	5.6	53.03	-94.3	-40.7	80.8	69.8	10.97	7.367	
2,700.0	2,697.5	2,693.0	2,685.1	5.8	5.9	55.32	-110.7	-43.4	86.9	75.5	11.41	7.618	
2,800.0	2,796.3	2,792.8	2,783.5	6.0	6.2	58.03	-127.0	-46.1	92.5	80.6	11.89	7.778	
2,900.0	2,895.1	2,892.5	2,881.9	6.2	6.5	60.42	-143.4	-48.8	98.3	85.9	12.40	7.923	
3,000.0	2,993.9	2,992.3	2,980.2	6.5	6.9	62.55	-159.7	-51.5	104.2	91.3	12.93	8.055	
3,100.0	3,092.6	3,092.1	3,078.6	6.8	7.2	64.44	-176.1	-54.2	110.2	96.7	13.49	8.173	
3,200.0	3,191.4	3,191.8	3,177.0	7.0	7.5	66.14	-192.5	-56.9	116.4	102.3	14.06	8.277	
3,300.0	3,290.2	3,291.6	3,275.3	7.3	7.9	67.66	-208.8	-59.6	122.6	108.0	14.65	8.371	
3,400.0	3,389.0	3,391.3	3,373.7	7.6	8.2	69.04	-225.2	-62.3	128.9	113.7	15.25	8.453	
3,500.0	3,487.8	3,491.1	3,472.1	7.9	8.6	70.28	-241.5	-65.0	135.3	119.5	15.87	8.526	
3,600.0	3,586.5	3,590.8	3,570.4	8.2	8.9	71.42	-257.9	-67.7	141.8	125.3	16.50	8.591	
3,700.0	3,685.3	3,690.6	3,668.8	8.6	9.3	72.45	-274.2	-70.4	148.3	131.1	17.14	8.649	
3,800.0	3,784.1	3,790.3	3,767.2	8.9	9.6	73.40	-290.6	-73.1	154.8	137.0	17.79	8.700	
3,900.0	3,882.9	3,890.1	3,865.5	9.2	10.0	74.27	-306.9	-75.8	161.4	142.9	18.45	8.745	
4,000.0	3,981.6	3,989.8	3,963.9	9.5	10.3	75.08	-323.3	-78.5	168.0	148.9	19.12	8.786	
4,100.0	4,080.4	4,089.6	4,062.3	9.9	10.7	75.82	-339.7	-81.2	174.6	154.8	19.79	8.823	
4,200.0	4,179.2	4,189.4	4,160.6	10.2	11.1	76.51	-356.0	-83.9	181.3	160.8	20.47	8.856	
4,300.0	4,278.0	4,289.1	4,259.0	10.6	11.4	77.15	-372.4	-86.6	188.0	166.8	21.16	8.885	
4,400.0	4,376.7	4,388.9	4,357.4	10.9	11.8	77.74	-388.7	-89.3	194.7	172.9	21.85	8.912	
4,500.0	4,475.5	4,488.6	4,455.7	11.2	12.2	78.30	-405.1	-92.0	201.4	178.9	22.54	8.936	
4,600.0	4,574.3	4,588.4	4,554.1	11.6	12.6	78.82	-421.4	-94.7	208.2	185.0	23.24	8.957	
4,700.0	4,673.1	4,688.1	4,652.5	11.9	12.9	79.30	-437.8	-97.4	215.0	191.0	23.95	8.977	
4,800.0	4,771.9	4,787.9	4,750.8	12.3	13.3	79.76	-454.2	-100.1	221.8	197.1	24.65	8.995	
4,900.0	4,870.6	4,887.6	4,849.2	12.6	13.7	80.19	-470.5	-102.8	228.5	203.2	25.36	9.012	
5,000.0	4,969.4	4,987.4	4,947.6	13.0	14.1	80.59	-486.9	-105.5	235.4	209.3	26.07	9.027	
5,100.0	5,068.2	5,087.1	5,046.0	13.3	14.4	80.98	-503.2	-108.2	242.2	215.4	26.79	9.041	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,167.0	5,186.9	5,144.3	13.7	14.8	81.34	-519.6	-110.9	249.0	221.5	27.50	9.053	
5,300.0	5,265.7	5,286.7	5,242.7	14.1	15.2	81.68	-535.9	-113.6	255.8	227.6	28.22	9.065	
5,400.0	5,364.5	5,386.4	5,341.1	14.4	15.6	82.00	-552.3	-116.3	262.7	233.7	28.94	9.076	
5,500.0	5,463.3	5,486.2	5,439.4	14.8	15.9	82.31	-568.7	-119.0	269.5	239.9	29.67	9.086	
5,600.0	5,562.1	5,586.7	5,538.5	15.1	16.3	82.61	-585.1	-121.8	276.4	246.0	30.39	9.095	
5,700.0	5,660.8	5,691.8	5,642.6	15.5	16.6	83.33	-599.9	-124.2	282.0	251.0	31.07	9.078	
5,800.0	5,759.6	5,796.8	5,747.0	15.9	16.9	84.69	-611.0	-126.0	285.9	254.1	31.76	9.001	
5,900.0	5,858.4	5,901.5	5,851.4	16.2	17.1	86.66	-618.2	-127.2	288.1	255.7	32.46	8.877	
6,000.0	5,957.2	6,005.4	5,955.2	16.6	17.2	89.26	-621.7	-127.8	289.1	256.0	33.14	8.723	
6,100.0	6,056.0	6,106.1	6,056.0	16.9	17.4	92.31	-622.0	-127.9	289.5	255.7	33.80	8.563	
6,200.0	6,154.7	6,204.9	6,154.7	17.3	17.5	95.35	-622.0	-127.9	290.5	256.1	34.41	8.442	
6,300.0	6,253.5	6,303.7	6,253.5	17.7	17.7	98.36	-622.0	-127.9	292.4	257.4	34.99	8.358	
6,400.0	6,352.5	6,402.7	6,352.5	18.0	17.8	101.04	-622.0	-127.9	294.8	259.3	35.47	8.310	
6,500.0	6,452.0	6,502.1	6,452.0	18.2	18.0	103.04	-622.0	-127.9	296.9	261.1	35.86	8.281	
6,600.0	6,551.7	6,601.9	6,551.7	18.4	18.1	104.37	-622.0	-127.9	298.6	262.4	36.21	8.246	
6,700.0	6,651.7	6,701.8	6,651.7	18.6	18.3	105.02	-622.0	-127.9	299.5	262.9	36.53	8.198	
6,800.0	6,751.7	6,801.8	6,751.7	18.8	18.4	-90.38	-622.0	-127.9	299.6	262.7	36.84	8.131	
6,900.0	6,851.7	6,901.8	6,851.7	18.9	18.6	-90.38	-622.0	-127.9	299.6	262.4	37.14	8.065	
6,934.7	6,886.4	6,936.5	6,886.4	18.9	18.6	-90.46	-622.0	-127.9	299.6	262.3	37.24	8.044	
7,000.0	6,951.6	7,001.7	6,951.6	19.0	18.7	-90.89	-622.0	-127.9	299.6	262.2	37.43	8.004	
7,100.0	7,050.3	7,102.1	7,051.9	19.0	18.9	-93.30	-619.0	-127.9	300.1	262.5	37.58	7.984	
7,200.0	7,145.8	7,204.7	7,153.0	19.0	18.9	-95.84	-602.3	-127.9	301.1	263.7	37.48	8.035	
7,300.0	7,236.2	7,309.3	7,252.6	18.8	18.8	-98.28	-570.5	-127.9	302.8	265.6	37.12	8.156	
7,400.0	7,319.8	7,416.0	7,348.3	18.6	18.6	-100.56	-523.6	-127.9	304.8	268.2	36.56	8.337	
7,500.0	7,395.0	7,524.8	7,437.6	18.3	18.3	-102.63	-461.6	-127.9	307.1	271.2	35.87	8.561	
7,600.0	7,460.3	7,635.5	7,517.8	18.1	18.1	-104.44	-385.4	-128.0	309.4	274.3	35.16	8.800	
7,700.0	7,514.3	7,748.0	7,586.2	18.0	17.9	-105.95	-296.3	-128.0	311.6	277.1	34.57	9.014	
7,800.0	7,556.0	7,862.0	7,640.5	18.0	17.8	-107.12	-196.2	-128.1	313.5	279.3	34.27	9.149	
7,900.0	7,584.7	7,977.2	7,678.6	18.1	17.9	-107.94	-87.7	-128.1	314.9	280.5	34.37	9.161	
8,000.0	7,599.7	8,093.1	7,698.8	18.4	18.2	-108.38	26.3	-128.2	315.7	280.7	34.98	9.027	
8,100.0	7,601.8	8,202.5	7,702.0	18.9	18.8	-108.48	135.7	-128.3	315.9	279.9	36.02	8.769	
8,200.0	7,601.4	8,302.5	7,702.0	19.4	19.3	-108.55	235.7	-128.3	316.0	279.1	36.98	8.546	
8,300.0	7,601.0	8,402.5	7,702.0	19.8	19.8	-108.62	335.7	-128.4	316.2	278.3	37.90	8.343	
8,400.0	7,600.6	8,502.5	7,702.0	20.4	20.5	-108.69	435.7	-128.4	316.3	277.2	39.14	8.082	
8,500.0	7,600.2	8,602.5	7,702.0	21.2	21.3	-108.76	535.7	-128.5	316.4	275.8	40.68	7.779	
8,600.0	7,599.8	8,702.5	7,702.0	22.1	22.3	-108.83	635.7	-128.5	316.6	274.1	42.48	7.452	
8,700.0	7,599.4	8,802.5	7,702.0	23.1	23.4	-108.90	735.7	-128.6	316.7	272.2	44.52	7.115	
8,800.0	7,599.0	8,902.5	7,702.0	24.3	24.6	-108.96	835.7	-128.6	316.8	270.1	46.75	6.778	
8,900.0	7,598.6	9,002.5	7,702.0	25.5	25.9	-109.03	935.7	-128.7	317.0	267.8	49.16	6.448	
9,000.0	7,598.2	9,102.5	7,702.0	26.8	27.2	-109.10	1,035.7	-128.7	317.1	265.4	51.71	6.132	
9,100.0	7,597.8	9,202.5	7,702.0	28.2	28.7	-109.17	1,135.7	-128.8	317.3	262.9	54.39	5.833	
9,200.0	7,597.4	9,302.5	7,702.0	29.7	30.1	-109.24	1,235.7	-128.9	317.4	260.2	57.18	5.550	
9,300.0	7,597.0	9,402.5	7,702.0	31.2	31.7	-109.30	1,335.7	-128.9	317.5	257.5	60.07	5.286	
9,400.0	7,596.6	9,502.5	7,702.0	32.7	33.2	-109.37	1,435.7	-129.0	317.7	254.6	63.03	5.040	
9,500.0	7,596.2	9,602.5	7,702.0	34.3	34.9	-109.44	1,535.7	-129.0	317.8	251.8	66.06	4.811	
9,600.0	7,595.8	9,702.5	7,702.0	36.0	36.5	-109.51	1,635.7	-129.1	318.0	248.8	69.15	4.598	
9,700.0	7,595.4	9,802.5	7,702.0	37.6	38.2	-109.58	1,735.7	-129.1	318.1	245.8	72.29	4.400	
9,800.0	7,595.0	9,902.5	7,702.0	39.3	39.8	-109.64	1,835.7	-129.2	318.2	242.8	75.47	4.216	
9,900.0	7,594.6	10,002.5	7,702.0	41.0	41.5	-109.71	1,935.7	-129.2	318.4	239.7	78.70	4.046	
10,000.0	7,594.2	10,102.5	7,702.0	42.7	43.3	-109.78	2,035.7	-129.3	318.5	236.6	81.95	3.887	
10,100.0	7,593.8	10,202.5	7,702.0	44.5	45.0	-109.85	2,135.7	-129.3	318.7	233.4	85.24	3.738	
10,200.0	7,593.4	10,302.5	7,702.0	46.2	46.8	-109.91	2,235.7	-129.4	318.8	230.2	88.55	3.600	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,593.0	10,402.5	7,702.0	48.0	48.5	-109.98	2,335.7	-129.4	318.9	227.1	91.89	3.471	
10,400.0	7,592.6	10,502.5	7,702.0	49.8	50.3	-110.05	2,435.7	-129.5	319.1	223.8	95.24	3.350	
10,500.0	7,592.2	10,602.5	7,702.0	51.5	52.1	-110.12	2,535.7	-129.5	319.2	220.6	98.61	3.237	
10,600.0	7,591.8	10,702.5	7,702.0	53.3	53.9	-110.18	2,635.7	-129.6	319.4	217.4	102.00	3.131	
10,700.0	7,591.4	10,802.5	7,702.0	55.2	55.7	-110.25	2,735.7	-129.6	319.5	214.1	105.40	3.031	
10,800.0	7,591.0	10,902.5	7,702.0	57.0	57.6	-110.32	2,835.7	-129.7	319.7	210.8	108.82	2.938	
10,900.0	7,590.6	11,002.5	7,702.0	58.8	59.4	-110.38	2,935.7	-129.7	319.8	207.6	112.24	2.849	
11,000.0	7,590.2	11,102.5	7,702.0	60.6	61.2	-110.45	3,035.7	-129.8	319.9	204.3	115.68	2.766	
11,100.0	7,589.8	11,202.5	7,702.0	62.5	63.0	-110.52	3,135.7	-129.8	320.1	201.0	119.12	2.687	
11,200.0	7,589.4	11,302.5	7,702.0	64.3	64.9	-110.58	3,235.7	-129.8	320.2	197.7	122.57	2.613	
11,300.0	7,589.0	11,402.5	7,702.0	66.2	66.7	-110.65	3,335.7	-129.9	320.4	194.4	126.03	2.542	
11,400.0	7,588.6	11,502.5	7,702.0	68.0	68.6	-110.72	3,435.7	-129.9	320.5	191.0	129.49	2.475	
11,500.0	7,588.2	11,602.5	7,702.0	69.9	70.4	-110.78	3,535.7	-130.0	320.7	187.7	132.96	2.412	
11,600.0	7,587.8	11,702.5	7,702.0	71.8	72.3	-110.85	3,635.7	-130.0	320.8	184.4	136.43	2.352	
11,700.0	7,587.4	11,802.5	7,702.0	73.6	74.2	-110.92	3,735.7	-130.1	321.0	181.1	139.91	2.294	
11,800.0	7,587.0	11,902.5	7,702.0	75.5	76.0	-110.98	3,835.7	-130.1	321.1	177.7	143.39	2.240	
11,900.0	7,586.6	12,002.5	7,702.0	77.4	77.9	-111.05	3,935.7	-130.2	321.3	174.4	146.87	2.187	
12,000.0	7,586.2	12,102.5	7,702.0	79.2	79.8	-111.12	4,035.7	-130.2	321.4	171.1	150.36	2.138	
12,100.0	7,585.8	12,202.5	7,702.0	81.1	81.6	-111.18	4,135.7	-130.3	321.6	167.7	153.85	2.090	
12,200.0	7,585.4	12,302.5	7,702.0	83.0	83.5	-111.25	4,235.7	-130.3	321.7	164.4	157.34	2.045	
12,300.0	7,585.0	12,402.5	7,702.0	84.9	85.4	-111.32	4,335.7	-130.4	321.9	161.0	160.83	2.001	
12,400.0	7,584.6	12,502.5	7,702.0	86.8	87.3	-111.38	4,435.7	-130.4	322.0	157.7	164.32	1.960	
12,500.0	7,584.2	12,602.5	7,702.0	88.7	89.2	-111.45	4,535.7	-130.5	322.2	154.4	167.81	1.920	
12,600.0	7,583.8	12,702.5	7,702.0	90.6	91.1	-111.51	4,635.7	-130.5	322.3	151.0	171.31	1.881	
12,700.0	7,583.4	12,802.5	7,702.0	92.5	92.9	-111.58	4,735.7	-130.5	322.5	147.7	174.80	1.845	
12,800.0	7,583.0	12,902.5	7,702.0	94.3	94.8	-111.64	4,835.7	-130.6	322.6	144.3	178.30	1.809	
12,900.0	7,582.6	13,002.5	7,702.0	96.2	96.7	-111.71	4,935.7	-130.6	322.8	141.0	181.80	1.775	
13,000.0	7,582.2	13,102.5	7,702.0	98.1	98.6	-111.78	5,035.7	-130.7	322.9	137.6	185.29	1.743	
13,100.0	7,581.8	13,202.5	7,702.0	100.0	100.5	-111.84	5,135.7	-130.7	323.1	134.3	188.79	1.711	
13,200.0	7,581.4	13,302.5	7,702.0	101.9	102.4	-111.91	5,235.7	-130.8	323.2	130.9	192.28	1.681	
13,300.0	7,581.0	13,402.5	7,702.0	103.8	104.3	-111.97	5,335.7	-130.8	323.4	127.6	195.78	1.652	
13,400.0	7,580.6	13,502.5	7,702.0	105.7	106.2	-112.04	5,435.7	-130.8	323.5	124.3	199.27	1.624	
13,500.0	7,580.2	13,602.5	7,702.0	107.7	108.1	-112.10	5,535.7	-130.9	323.7	120.9	202.76	1.596	
13,600.0	7,579.8	13,702.5	7,702.0	109.6	110.0	-112.17	5,635.7	-130.9	323.8	117.6	206.26	1.570	
13,700.0	7,579.4	13,802.5	7,702.0	111.5	111.9	-112.23	5,735.7	-131.0	324.0	114.3	209.75	1.545	
13,800.0	7,579.0	13,902.5	7,702.0	113.4	113.8	-112.30	5,835.7	-131.0	324.2	110.9	213.24	1.520	
13,900.0	7,578.6	14,002.5	7,702.0	115.3	115.7	-112.36	5,935.7	-131.1	324.3	107.6	216.73	1.496	Level 3
14,000.0	7,578.2	14,102.5	7,702.0	117.2	117.6	-112.43	6,035.7	-131.1	324.5	104.3	220.21	1.473	Level 3
14,100.0	7,577.8	14,202.5	7,702.0	119.1	119.5	-112.49	6,135.7	-131.1	324.6	100.9	223.70	1.451	Level 3
14,200.0	7,577.4	14,302.5	7,702.0	121.0	121.4	-112.56	6,235.7	-131.2	324.8	97.6	227.18	1.430	Level 3
14,300.0	7,577.0	14,402.5	7,702.0	122.9	123.3	-112.62	6,335.7	-131.2	324.9	94.3	230.67	1.409	Level 3
14,400.0	7,576.6	14,502.5	7,702.0	124.8	125.2	-112.69	6,435.7	-131.3	325.1	90.9	234.15	1.388	Level 3
14,500.0	7,576.2	14,602.5	7,702.0	126.8	127.1	-112.75	6,535.7	-131.3	325.3	87.6	237.63	1.369	Level 3
14,600.0	7,575.8	14,702.5	7,702.0	128.7	129.0	-112.82	6,635.7	-131.3	325.4	84.3	241.11	1.350	Level 3
14,700.0	7,575.4	14,802.5	7,702.0	130.6	130.9	-112.88	6,735.7	-131.4	325.6	81.0	244.58	1.331	Level 3
14,800.0	7,575.0	14,902.5	7,702.0	132.5	132.8	-112.95	6,835.7	-131.4	325.7	77.7	248.06	1.313	Level 3
14,900.0	7,574.6	15,002.5	7,702.0	134.4	134.7	-113.01	6,935.7	-131.5	325.9	74.4	251.53	1.296	Level 3
15,000.0	7,574.2	15,102.5	7,702.0	136.3	136.7	-113.08	7,035.7	-131.5	326.0	71.0	255.00	1.279	Level 3
15,100.0	7,573.8	15,202.5	7,702.0	138.3	138.6	-113.14	7,135.7	-131.5	326.2	67.7	258.47	1.262	Level 3
15,200.0	7,573.4	15,302.5	7,702.0	140.2	140.5	-113.21	7,235.7	-131.6	326.4	64.4	261.94	1.246	Level 2
15,300.0	7,573.0	15,402.5	7,702.0	142.1	142.4	-113.27	7,335.7	-131.6	326.5	61.1	265.40	1.230	Level 2
15,400.0	7,572.6	15,502.5	7,702.0	144.0	144.3	-113.33	7,435.7	-131.7	326.7	57.8	268.86	1.215	Level 2

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 537-1807H - Wellbore #1 - Plan #1 (3-1-17

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.0	7,572.2	15,602.5	7,702.0	145.9	146.2	-113.40	7,535.7	-131.7	326.8	54.5	272.32	1.200	Level 2
15,600.0	7,571.8	15,702.5	7,702.0	147.8	148.1	-113.46	7,635.7	-131.7	327.0	51.2	275.78	1.186	Level 2
15,700.0	7,571.4	15,802.5	7,702.0	149.8	150.0	-113.53	7,735.7	-131.8	327.2	47.9	279.24	1.172	Level 2
15,800.0	7,571.0	15,902.5	7,702.0	151.7	151.9	-113.59	7,835.7	-131.8	327.3	44.6	282.69	1.158	Level 2
15,900.0	7,570.6	16,002.5	7,702.0	153.6	153.9	-113.65	7,935.7	-131.9	327.5	41.4	286.14	1.145	Level 2
16,000.0	7,570.2	16,102.5	7,702.0	155.5	155.8	-113.72	8,035.7	-131.9	327.7	38.1	289.59	1.131	Level 2
16,100.0	7,569.8	16,202.5	7,702.0	157.5	157.7	-113.78	8,135.7	-131.9	327.8	34.8	293.03	1.119	Level 2
16,200.0	7,569.4	16,302.5	7,702.0	159.4	159.6	-113.85	8,235.7	-132.0	328.0	31.5	296.48	1.106	Level 2
16,300.0	7,569.0	16,402.5	7,702.0	161.3	161.5	-113.91	8,335.7	-132.0	328.2	28.2	299.92	1.094	Level 2
16,400.0	7,568.6	16,502.5	7,702.0	163.2	163.4	-113.97	8,435.7	-132.0	328.3	25.0	303.36	1.082	Level 2
16,500.0	7,568.2	16,602.5	7,702.0	165.1	165.3	-114.04	8,535.7	-132.1	328.5	21.7	306.79	1.071	Level 2
16,600.0	7,567.8	16,702.5	7,702.0	167.1	167.3	-114.10	8,635.7	-132.1	328.6	18.4	310.23	1.059	Level 2
16,700.0	7,567.4	16,802.5	7,702.0	169.0	169.2	-114.16	8,735.7	-132.1	328.8	15.2	313.66	1.048	Level 2
16,800.0	7,567.0	16,902.5	7,702.0	170.9	171.1	-114.23	8,835.7	-132.2	329.0	11.9	317.09	1.038	Level 2
16,900.0	7,566.6	17,002.5	7,702.0	172.8	173.0	-114.29	8,935.7	-132.2	329.1	8.6	320.51	1.027	Level 2
17,000.0	7,566.2	17,102.5	7,702.0	174.8	174.9	-114.35	9,035.7	-132.3	329.3	5.4	323.94	1.017	Level 2
17,100.0	7,565.8	17,202.5	7,702.0	176.7	176.8	-114.42	9,135.7	-132.3	329.5	2.1	327.36	1.006	Level 2
17,200.0	7,565.4	17,302.5	7,702.0	178.6	178.8	-114.48	9,235.7	-132.3	329.6	-1.1	330.77	0.997	Level 1
17,300.0	7,565.0	17,402.5	7,702.0	180.5	180.7	-114.54	9,335.7	-132.4	329.8	-4.4	334.19	0.987	Level 1
17,400.0	7,564.6	17,502.5	7,702.0	182.5	182.6	-114.60	9,435.7	-132.4	330.0	-7.6	337.60	0.977	Level 1
17,500.0	7,564.2	17,602.5	7,702.0	184.4	184.5	-114.67	9,535.7	-132.4	330.1	-10.9	341.01	0.968	Level 1
17,600.0	7,563.8	17,702.5	7,702.0	186.3	186.4	-114.73	9,635.7	-132.5	330.3	-14.1	344.42	0.959	Level 1
17,700.0	7,563.4	17,802.5	7,702.0	188.2	188.3	-114.79	9,735.7	-132.5	330.5	-17.3	347.82	0.950	Level 1
17,800.0	7,563.0	17,902.5	7,702.0	190.2	190.3	-114.86	9,835.7	-132.5	330.7	-20.6	351.22	0.941	Level 1
17,900.0	7,562.6	18,002.5	7,702.0	192.1	192.2	-114.92	9,935.7	-132.6	330.8	-23.8	354.62	0.933	Level 1
18,000.0	7,562.2	18,102.5	7,702.0	194.0	194.1	-114.98	10,035.7	-132.6	331.0	-27.0	358.02	0.925	Level 1
18,054.5	7,562.0	18,157.0	7,702.0	195.0	195.1	-115.01	10,090.1	-132.6	331.1	-28.7	359.80	0.920	Level 1, ES, SF

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	24.6	24.6				
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	24.6	24.6	24.4	0.22	109.440	
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	24.6	24.6	23.9	0.67	36.480	
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	24.6	24.6	23.5	1.12	21.888	
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	24.6	24.6	23.0	1.57	15.634	
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	24.6	24.6	22.6	2.02	12.160	
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	24.6	24.6	22.1	2.47	9.949	
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	24.6	24.6	21.7	2.92	8.418	
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	24.6	24.6	21.2	3.37	7.296	
900.0	900.0	900.0	900.0	1.9	1.9	89.98	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	89.98	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	89.98	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	89.98	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	89.98	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	89.98	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	89.98	0.0	24.6	24.6	18.1	6.52	3.774	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.98	0.0	24.6	24.6	17.6	6.97	3.530	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.98	0.0	24.6	24.6	17.2	7.42	3.316	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	89.98	0.0	24.6	24.6	16.7	7.87	3.127	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	89.98	0.0	24.6	24.6	16.3	8.32	2.958	CC, ES
2,000.0	2,000.0	1,999.5	1,999.5	4.4	4.4	92.06	-0.9	25.5	25.5	16.8	8.74	2.921	
2,100.0	2,100.0	2,098.9	2,098.8	4.6	4.5	97.43	-3.7	28.2	28.5	19.4	9.14	3.117	
2,200.0	2,200.0	2,198.1	2,197.8	4.8	4.7	-62.22	-8.3	32.8	33.2	23.7	9.52	3.491	
2,300.0	2,299.9	2,297.1	2,296.4	5.0	4.9	-59.95	-14.7	39.1	39.0	29.2	9.87	3.954	
2,400.0	2,399.7	2,396.0	2,394.6	5.2	5.1	-59.44	-22.9	47.1	45.8	35.5	10.24	4.473	
2,500.0	2,499.3	2,494.6	2,492.2	5.3	5.4	-60.03	-32.9	57.0	53.4	42.8	10.62	5.033	
2,600.0	2,598.6	2,592.9	2,589.2	5.5	5.6	-61.29	-44.7	68.6	62.0	51.0	11.02	5.627	
2,700.0	2,697.5	2,691.3	2,685.7	5.8	5.9	-62.94	-58.2	81.8	71.5	60.0	11.45	6.242	
2,800.0	2,796.3	2,790.8	2,783.2	6.0	6.2	-64.77	-72.4	95.9	81.1	69.2	11.93	6.804	
2,900.0	2,895.1	2,890.3	2,880.6	6.2	6.5	-66.22	-86.7	109.9	90.9	78.4	12.43	7.312	
3,000.0	2,993.9	2,989.8	2,978.1	6.5	6.8	-67.38	-100.9	123.9	100.7	87.7	12.96	7.769	
3,100.0	3,092.6	3,089.3	3,075.6	6.8	7.2	-68.33	-115.2	137.9	110.5	97.0	13.50	8.181	
3,200.0	3,191.4	3,188.8	3,173.1	7.0	7.6	-69.13	-129.4	151.9	120.3	106.2	14.07	8.549	
3,300.0	3,290.2	3,288.3	3,270.5	7.3	7.9	-69.81	-143.7	165.9	130.2	115.5	14.66	8.881	
3,400.0	3,389.0	3,387.8	3,368.0	7.6	8.3	-70.39	-157.9	179.9	140.0	124.8	15.26	9.178	
3,500.0	3,487.8	3,487.3	3,465.5	7.9	8.7	-70.90	-172.1	194.0	149.9	134.1	15.87	9.446	
3,600.0	3,586.5	3,586.8	3,563.0	8.2	9.1	-71.34	-186.4	208.0	159.8	143.3	16.50	9.687	
3,700.0	3,685.3	3,686.3	3,660.4	8.6	9.5	-71.74	-200.6	222.0	169.7	152.6	17.14	9.904	
3,800.0	3,784.1	3,785.9	3,757.9	8.9	9.9	-72.08	-214.9	236.0	179.6	161.9	17.78	10.101	
3,900.0	3,882.9	3,885.4	3,855.4	9.2	10.3	-72.40	-229.1	250.0	189.6	171.1	18.44	10.280	
4,000.0	3,981.6	3,984.9	3,952.9	9.5	10.7	-72.68	-243.4	264.0	199.5	180.4	19.10	10.442	
4,100.0	4,080.4	4,084.4	4,050.3	9.9	11.1	-72.93	-257.6	278.0	209.4	189.6	19.78	10.590	
4,200.0	4,179.2	4,183.9	4,147.8	10.2	11.5	-73.16	-271.9	292.1	219.4	198.9	20.45	10.725	
4,300.0	4,278.0	4,283.4	4,245.3	10.6	11.9	-73.37	-286.1	306.1	229.3	208.2	21.14	10.848	
4,400.0	4,376.7	4,382.9	4,342.8	10.9	12.4	-73.57	-300.4	320.1	239.2	217.4	21.82	10.962	
4,500.0	4,475.5	4,482.4	4,440.2	11.2	12.8	-73.75	-314.6	334.1	249.2	226.7	22.52	11.066	
4,600.0	4,574.3	4,581.9	4,537.7	11.6	13.2	-73.91	-328.8	348.1	259.1	235.9	23.21	11.162	
4,700.0	4,673.1	4,681.4	4,635.2	11.9	13.6	-74.06	-343.1	362.1	269.1	245.1	23.91	11.251	
4,800.0	4,771.9	4,780.9	4,732.7	12.3	14.1	-74.21	-357.3	376.2	279.0	254.4	24.62	11.333	
4,900.0	4,870.6	4,880.4	4,830.1	12.6	14.5	-74.34	-371.6	390.2	289.0	263.6	25.33	11.409	
5,000.0	4,969.4	4,979.9	4,927.6	13.0	14.9	-74.46	-385.8	404.2	298.9	272.9	26.04	11.479	
5,100.0	5,068.2	5,079.4	5,025.1	13.3	15.4	-74.58	-400.1	418.2	308.9	282.1	26.75	11.545	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,167.0	5,178.9	5,122.6	13.7	15.8	-74.68	-414.3	432.2	318.8	291.3	27.47	11.606	
5,300.0	5,265.7	5,278.4	5,220.0	14.1	16.2	-74.79	-428.6	446.2	328.8	300.6	28.19	11.664	
5,400.0	5,364.5	5,377.9	5,317.5	14.4	16.7	-74.88	-442.8	460.2	338.7	309.8	28.91	11.717	
5,500.0	5,463.3	5,477.4	5,415.0	14.8	17.1	-74.97	-457.1	474.3	348.7	319.0	29.63	11.767	
5,600.0	5,562.1	5,576.9	5,512.5	15.1	17.6	-75.06	-471.3	488.3	358.6	328.3	30.36	11.814	
5,700.0	5,660.8	5,676.4	5,609.9	15.5	18.0	-75.14	-485.5	502.3	368.6	337.5	31.08	11.858	
5,800.0	5,759.6	5,775.9	5,707.4	15.9	18.4	-75.21	-499.8	516.3	378.5	346.7	31.81	11.900	
5,900.0	5,858.4	5,875.4	5,804.9	16.2	18.9	-75.28	-514.0	530.3	388.5	356.0	32.54	11.939	
6,000.0	5,957.2	5,974.9	5,902.4	16.6	19.3	-75.35	-528.3	544.3	398.5	365.2	33.27	11.976	
6,100.0	6,056.0	6,074.4	5,999.8	16.9	19.8	-75.42	-542.5	558.3	408.4	374.4	34.00	12.011	
6,200.0	6,154.7	6,173.9	6,097.3	17.3	20.2	-75.48	-556.8	572.4	418.4	383.6	34.74	12.044	
6,300.0	6,253.5	6,273.4	6,194.8	17.7	20.6	-75.54	-571.0	586.4	428.3	392.9	35.47	12.075	
6,400.0	6,352.5	6,380.9	6,300.3	18.0	21.1	-75.64	-585.7	600.8	438.1	402.0	36.13	12.124	
6,500.0	6,452.0	6,492.3	6,410.4	18.2	21.4	-75.62	-598.0	612.9	446.2	409.6	36.64	12.178	
6,600.0	6,551.7	6,604.2	6,521.4	18.4	21.7	-75.49	-607.3	622.1	452.5	415.4	37.06	12.209	
6,700.0	6,651.7	6,716.4	6,633.3	18.6	21.9	-75.25	-613.5	628.2	457.0	419.6	37.41	12.216	
6,800.0	6,751.7	6,828.8	6,745.6	18.8	22.1	89.58	-616.6	631.2	459.6	421.9	37.71	12.189	
6,900.0	6,851.7	6,934.9	6,851.7	18.9	22.2	89.63	-617.0	631.6	459.9	421.9	38.01	12.099	
7,000.0	6,951.6	7,034.8	6,951.6	19.0	22.4	90.00	-617.0	631.6	459.9	421.7	38.24	12.026	
7,000.1	6,951.7	7,034.9	6,951.7	19.0	22.4	90.00	-617.0	631.6	459.9	421.7	38.24	12.026	
7,100.0	7,050.3	7,134.7	7,051.4	19.0	22.5	91.59	-614.1	631.6	460.1	421.9	38.15	12.061	
7,200.0	7,145.8	7,236.6	7,151.9	19.0	22.5	93.28	-597.7	631.6	460.7	422.8	37.83	12.178	
7,300.0	7,236.2	7,340.5	7,250.9	18.8	22.4	94.92	-566.5	631.6	461.6	424.3	37.33	12.365	
7,400.0	7,319.8	7,446.6	7,346.3	18.6	22.2	96.47	-520.2	631.6	462.9	426.2	36.73	12.603	
7,500.0	7,395.0	7,554.8	7,435.3	18.3	22.0	97.91	-459.0	631.5	464.4	428.3	36.10	12.865	
7,600.0	7,460.3	7,664.9	7,515.5	18.1	21.7	99.19	-383.5	631.5	465.9	430.4	35.53	13.113	
7,700.0	7,514.3	7,777.0	7,584.2	18.0	21.4	100.28	-295.2	631.4	467.5	432.3	35.14	13.302	
7,800.0	7,556.0	7,890.6	7,638.9	18.0	21.0	101.15	-195.7	631.4	468.8	433.8	35.03	13.383	
7,900.0	7,584.7	8,005.5	7,677.5	18.1	20.7	101.79	-87.6	631.4	469.8	434.6	35.28	13.317	
8,000.0	7,599.7	8,121.3	7,698.4	18.4	20.4	102.17	26.2	631.3	470.5	434.5	35.95	13.088	
8,100.0	7,601.8	8,231.3	7,702.0	18.9	20.1	102.29	136.1	631.2	470.7	433.8	36.91	12.751	
8,200.0	7,601.4	8,331.3	7,702.0	19.4	19.9	102.33	236.1	631.2	470.8	433.1	37.71	12.483	
8,300.0	7,601.0	8,431.3	7,702.0	19.8	20.7	102.38	336.1	631.2	470.9	432.4	38.51	12.228	
8,400.0	7,600.6	8,531.3	7,702.0	20.4	21.5	102.43	436.1	631.1	470.9	431.3	39.64	11.879	
8,500.0	7,600.2	8,631.3	7,702.0	21.2	22.5	102.48	536.1	631.1	471.0	429.9	41.10	11.461	
8,600.0	7,599.8	8,731.3	7,702.0	22.1	23.5	102.52	636.1	631.0	471.1	428.3	42.84	10.997	
8,700.0	7,599.4	8,831.3	7,702.0	23.1	24.6	102.57	736.1	631.0	471.2	426.4	44.83	10.510	
8,800.0	7,599.0	8,931.3	7,702.0	24.3	25.8	102.62	836.1	630.9	471.3	424.2	47.05	10.018	
8,900.0	7,598.6	9,031.3	7,702.0	25.5	27.0	102.67	936.1	630.9	471.4	421.9	49.45	9.533	
9,000.0	7,598.2	9,131.3	7,702.0	26.8	28.3	102.71	1,036.0	630.8	471.5	419.5	52.01	9.065	
9,100.0	7,597.8	9,231.3	7,702.0	28.2	29.7	102.76	1,136.0	630.8	471.6	416.8	54.72	8.618	
9,200.0	7,597.4	9,331.3	7,702.0	29.7	31.1	102.81	1,236.0	630.7	471.6	414.1	57.54	8.197	
9,300.0	7,597.0	9,431.3	7,702.0	31.2	32.6	102.86	1,336.0	630.7	471.7	411.3	60.47	7.801	
9,400.0	7,596.6	9,531.3	7,702.0	32.7	34.1	102.90	1,436.0	630.6	471.8	408.3	63.48	7.432	
9,500.0	7,596.2	9,631.3	7,702.0	34.3	35.6	102.95	1,536.0	630.6	471.9	405.3	66.58	7.088	
9,600.0	7,595.8	9,731.3	7,702.0	36.0	37.2	103.00	1,636.0	630.6	472.0	402.3	69.73	6.769	
9,700.0	7,595.4	9,831.3	7,702.0	37.6	38.8	103.05	1,736.0	630.5	472.1	399.1	72.95	6.472	
9,800.0	7,595.0	9,931.3	7,702.0	39.3	40.4	103.09	1,836.0	630.5	472.2	396.0	76.21	6.196	
9,900.0	7,594.6	10,031.3	7,702.0	41.0	42.1	103.14	1,936.0	630.4	472.3	392.8	79.52	5.939	
10,000.0	7,594.2	10,131.3	7,702.0	42.7	43.8	103.19	2,036.0	630.4	472.4	389.5	82.87	5.700	
10,100.0	7,593.8	10,231.3	7,702.0	44.5	45.5	103.24	2,136.0	630.3	472.5	386.2	86.25	5.478	
10,200.0	7,593.4	10,331.3	7,702.0	46.2	47.2	103.28	2,236.0	630.3	472.6	382.9	89.66	5.271	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,593.0	10,431.3	7,702.0	48.0	48.9	103.33	2,336.0	630.2	472.6	379.6	93.09	5.077	
10,400.0	7,592.6	10,531.3	7,702.0	49.8	50.7	103.38	2,436.0	630.2	472.7	376.2	96.55	4.896	
10,500.0	7,592.2	10,631.3	7,702.0	51.5	52.4	103.43	2,536.0	630.2	472.8	372.8	100.03	4.727	
10,600.0	7,591.8	10,731.3	7,702.0	53.3	54.2	103.47	2,636.0	630.1	472.9	369.4	103.53	4.568	
10,700.0	7,591.4	10,831.3	7,702.0	55.2	56.0	103.52	2,736.0	630.1	473.0	366.0	107.04	4.419	
10,800.0	7,591.0	10,931.3	7,702.0	57.0	57.7	103.57	2,836.0	630.0	473.1	362.5	110.57	4.279	
10,900.0	7,590.6	11,031.3	7,702.0	58.8	59.5	103.61	2,936.0	630.0	473.2	359.1	114.11	4.147	
11,000.0	7,590.2	11,131.3	7,702.0	60.6	61.3	103.66	3,036.0	629.9	473.3	355.6	117.66	4.022	
11,100.0	7,589.8	11,231.3	7,702.0	62.5	63.1	103.71	3,136.0	629.9	473.4	352.2	121.23	3.905	
11,200.0	7,589.4	11,331.3	7,702.0	64.3	65.0	103.76	3,236.0	629.8	473.5	348.7	124.80	3.794	
11,300.0	7,589.0	11,431.3	7,702.0	66.2	66.8	103.80	3,336.0	629.8	473.6	345.2	128.38	3.689	
11,400.0	7,588.6	11,531.3	7,702.0	68.0	68.6	103.85	3,436.0	629.8	473.7	341.7	131.97	3.589	
11,500.0	7,588.2	11,631.3	7,702.0	69.9	70.4	103.90	3,536.0	629.7	473.8	338.2	135.57	3.495	
11,600.0	7,587.8	11,731.3	7,702.0	71.8	72.3	103.94	3,636.0	629.7	473.9	334.7	139.18	3.405	
11,700.0	7,587.4	11,831.3	7,702.0	73.6	74.1	103.99	3,736.0	629.6	474.0	331.2	142.79	3.319	
11,800.0	7,587.0	11,931.3	7,702.0	75.5	76.0	104.04	3,836.0	629.6	474.1	327.7	146.40	3.238	
11,900.0	7,586.6	12,031.3	7,702.0	77.4	77.8	104.09	3,936.0	629.5	474.1	324.1	150.02	3.161	
12,000.0	7,586.2	12,131.3	7,702.0	79.2	79.7	104.13	4,036.0	629.5	474.2	320.6	153.65	3.087	
12,100.0	7,585.8	12,231.3	7,702.0	81.1	81.5	104.18	4,136.0	629.5	474.3	317.1	157.27	3.016	
12,200.0	7,585.4	12,331.3	7,702.0	83.0	83.4	104.23	4,236.0	629.4	474.4	313.5	160.91	2.949	
12,300.0	7,585.0	12,431.3	7,702.0	84.9	85.2	104.27	4,336.0	629.4	474.5	310.0	164.54	2.884	
12,400.0	7,584.6	12,531.3	7,702.0	86.8	87.1	104.32	4,436.0	629.3	474.6	306.5	168.18	2.822	
12,500.0	7,584.2	12,631.3	7,702.0	88.7	89.0	104.37	4,536.0	629.3	474.7	302.9	171.82	2.763	
12,600.0	7,583.8	12,731.3	7,702.0	90.6	90.8	104.41	4,636.0	629.2	474.8	299.4	175.46	2.706	
12,700.0	7,583.4	12,831.3	7,702.0	92.5	92.7	104.46	4,736.0	629.2	474.9	295.8	179.11	2.652	
12,800.0	7,583.0	12,931.3	7,702.0	94.3	94.6	104.51	4,836.0	629.2	475.0	292.3	182.76	2.599	
12,900.0	7,582.6	13,031.3	7,702.0	96.2	96.5	104.55	4,936.0	629.1	475.1	288.7	186.41	2.549	
13,000.0	7,582.2	13,131.3	7,702.0	98.1	98.3	104.60	5,036.0	629.1	475.2	285.2	190.06	2.500	
13,100.0	7,581.8	13,231.3	7,702.0	100.0	100.2	104.65	5,136.0	629.0	475.3	281.6	193.71	2.454	
13,200.0	7,581.4	13,331.3	7,702.0	101.9	102.1	104.69	5,236.0	629.0	475.4	278.1	197.36	2.409	
13,300.0	7,581.0	13,431.3	7,702.0	103.8	104.0	104.74	5,336.0	629.0	475.5	274.5	201.02	2.366	
13,400.0	7,580.6	13,531.3	7,702.0	105.7	105.9	104.79	5,436.0	628.9	475.6	270.9	204.67	2.324	
13,500.0	7,580.2	13,631.3	7,702.0	107.7	107.8	104.83	5,536.0	628.9	475.7	267.4	208.33	2.284	
13,600.0	7,579.8	13,731.3	7,702.0	109.6	109.7	104.88	5,636.0	628.8	475.8	263.8	211.99	2.245	
13,700.0	7,579.4	13,831.3	7,702.0	111.5	111.5	104.93	5,736.0	628.8	475.9	260.3	215.64	2.207	
13,800.0	7,579.0	13,931.3	7,702.0	113.4	113.4	104.97	5,836.0	628.8	476.0	256.7	219.30	2.171	
13,900.0	7,578.6	14,031.3	7,702.0	115.3	115.3	105.02	5,936.0	628.7	476.1	253.2	222.96	2.135	
14,000.0	7,578.2	14,131.3	7,702.0	117.2	117.2	105.07	6,036.0	628.7	476.2	249.6	226.62	2.101	
14,100.0	7,577.8	14,231.3	7,702.0	119.1	119.1	105.11	6,136.0	628.6	476.3	246.1	230.28	2.069	
14,200.0	7,577.4	14,331.3	7,702.0	121.0	121.0	105.16	6,236.0	628.6	476.4	242.5	233.94	2.037	
14,300.0	7,577.0	14,431.3	7,702.0	122.9	122.9	105.21	6,336.0	628.6	476.5	238.9	237.60	2.006	
14,400.0	7,576.6	14,531.3	7,702.0	124.8	124.8	105.25	6,436.0	628.5	476.6	235.4	241.25	1.976	
14,500.0	7,576.2	14,631.3	7,702.0	126.8	126.7	105.30	6,536.0	628.5	476.7	231.8	244.91	1.947	
14,600.0	7,575.8	14,731.3	7,702.0	128.7	128.6	105.35	6,636.0	628.4	476.8	228.3	248.57	1.918	
14,700.0	7,575.4	14,831.3	7,702.0	130.6	130.5	105.39	6,736.0	628.4	476.9	224.7	252.23	1.891	
14,800.0	7,575.0	14,931.3	7,702.0	132.5	132.4	105.44	6,836.0	628.4	477.1	221.2	255.89	1.864	
14,900.0	7,574.6	15,031.3	7,702.0	134.4	134.3	105.49	6,936.0	628.3	477.2	217.6	259.54	1.838	
15,000.0	7,574.2	15,131.3	7,702.0	136.3	136.2	105.53	7,036.0	628.3	477.3	214.1	263.20	1.813	
15,100.0	7,573.8	15,231.2	7,702.0	138.3	138.1	105.58	7,136.0	628.2	477.4	210.5	266.86	1.789	
15,200.0	7,573.4	15,331.2	7,702.0	140.2	140.0	105.62	7,236.0	628.2	477.5	207.0	270.51	1.765	
15,300.0	7,573.0	15,431.2	7,702.0	142.1	141.9	105.67	7,336.0	628.2	477.6	203.4	274.17	1.742	
15,400.0	7,572.6	15,531.2	7,702.0	144.0	143.8	105.72	7,436.0	628.1	477.7	199.9	277.82	1.719	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.0	7,572.2	15,631.2	7,702.0	145.9	145.7	105.76	7,536.0	628.1	477.8	196.3	281.48	1.697	
15,600.0	7,571.8	15,731.2	7,702.0	147.8	147.6	105.81	7,636.0	628.0	477.9	192.8	285.13	1.676	
15,700.0	7,571.4	15,831.2	7,702.0	149.8	149.5	105.86	7,736.0	628.0	478.0	189.2	288.78	1.655	
15,800.0	7,571.0	15,931.2	7,702.0	151.7	151.4	105.90	7,836.0	628.0	478.1	185.7	292.43	1.635	
15,900.0	7,570.6	16,031.2	7,702.0	153.6	153.4	105.95	7,936.0	627.9	478.2	182.1	296.09	1.615	
16,000.0	7,570.2	16,131.2	7,702.0	155.5	155.3	105.99	8,036.0	627.9	478.3	178.6	299.74	1.596	
16,100.0	7,569.8	16,231.2	7,702.0	157.5	157.2	106.04	8,136.0	627.9	478.4	175.0	303.38	1.577	
16,200.0	7,569.4	16,331.2	7,702.0	159.4	159.1	106.09	8,236.0	627.8	478.5	171.5	307.03	1.559	
16,300.0	7,569.0	16,431.2	7,702.0	161.3	161.0	106.13	8,336.0	627.8	478.6	168.0	310.68	1.541	
16,400.0	7,568.6	16,531.2	7,702.0	163.2	162.9	106.18	8,436.0	627.7	478.7	164.4	314.33	1.523	
16,500.0	7,568.2	16,631.2	7,702.0	165.1	164.8	106.22	8,535.9	627.7	478.9	160.9	317.97	1.506	
16,600.0	7,567.8	16,731.2	7,702.0	167.1	166.7	106.27	8,635.9	627.7	479.0	157.3	321.62	1.489	Level 3
16,700.0	7,567.4	16,831.2	7,702.0	169.0	168.6	106.32	8,735.9	627.6	479.1	153.8	325.26	1.473	Level 3
16,800.0	7,567.0	16,931.2	7,702.0	170.9	170.5	106.36	8,835.9	627.6	479.2	150.3	328.90	1.457	Level 3
16,900.0	7,566.6	17,031.2	7,702.0	172.8	172.5	106.41	8,935.9	627.6	479.3	146.7	332.54	1.441	Level 3
17,000.0	7,566.2	17,131.2	7,702.0	174.8	174.4	106.45	9,035.9	627.5	479.4	143.2	336.18	1.426	Level 3
17,100.0	7,565.8	17,231.2	7,702.0	176.7	176.3	106.50	9,135.9	627.5	479.5	139.7	339.82	1.411	Level 3
17,200.0	7,565.4	17,331.2	7,702.0	178.6	178.2	106.55	9,235.9	627.4	479.6	136.2	343.46	1.396	Level 3
17,300.0	7,565.0	17,431.2	7,702.0	180.5	180.1	106.59	9,335.9	627.4	479.7	132.6	347.10	1.382	Level 3
17,400.0	7,564.6	17,531.2	7,702.0	182.5	182.0	106.64	9,435.9	627.4	479.8	129.1	350.73	1.368	Level 3
17,500.0	7,564.2	17,631.2	7,702.0	184.4	183.9	106.68	9,535.9	627.3	479.9	125.6	354.37	1.354	Level 3
17,600.0	7,563.8	17,731.2	7,702.0	186.3	185.8	106.73	9,635.9	627.3	480.1	122.1	358.00	1.341	Level 3
17,700.0	7,563.4	17,831.2	7,702.0	188.2	187.8	106.78	9,735.9	627.3	480.2	118.5	361.63	1.328	Level 3
17,800.0	7,563.0	17,931.2	7,702.0	190.2	189.7	106.82	9,835.9	627.2	480.3	115.0	365.26	1.315	Level 3
17,900.0	7,562.6	18,031.2	7,702.0	192.1	191.6	106.87	9,935.9	627.2	480.4	111.5	368.89	1.302	Level 3
18,000.0	7,562.2	18,131.2	7,702.0	194.0	193.5	106.91	10,035.9	627.2	480.5	108.0	372.49	1.290	Level 3
18,054.5	7,562.0	18,184.4	7,702.0	195.0	194.4	106.94	10,089.2	627.1	480.6	106.2	374.32	1.284	Level 3, SF

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.15	1.1	74.6	74.6				
100.0	100.0	100.0	100.0	0.1	0.1	89.15	1.1	74.6	74.6	74.4	0.22	332.045	
200.0	200.0	200.0	200.0	0.3	0.3	89.15	1.1	74.6	74.6	74.0	0.67	110.682	CC, ES
300.0	300.0	298.3	298.2	0.6	0.5	89.57	0.6	75.8	75.8	74.7	1.10	68.611	
400.0	400.0	396.4	396.3	0.8	0.8	90.74	-1.0	79.2	79.3	77.8	1.54	51.566	
500.0	500.0	494.2	493.9	1.0	1.0	92.49	-3.7	84.9	85.2	83.2	1.98	42.999	
600.0	600.0	591.7	591.0	1.2	1.2	94.55	-7.4	92.8	93.5	91.1	2.43	38.493	
700.0	700.0	688.7	687.3	1.5	1.5	96.72	-12.1	102.9	104.4	101.5	2.88	36.215	
800.0	800.0	785.0	782.7	1.7	1.8	98.81	-17.8	115.1	117.8	114.4	3.34	35.284	
900.0	900.0	880.6	877.0	1.9	2.2	100.73	-24.5	129.4	133.7	129.9	3.80	35.215	
1,000.0	1,000.0	975.4	970.0	2.1	2.5	102.43	-32.1	145.7	152.1	147.9	4.26	35.722	
1,100.0	1,100.0	1,069.1	1,061.7	2.4	2.9	103.92	-40.6	163.8	173.1	168.3	4.73	36.623	
1,200.0	1,200.0	1,162.8	1,152.7	2.6	3.4	105.21	-50.0	183.9	196.4	191.2	5.20	37.764	
1,300.0	1,300.0	1,259.8	1,246.7	2.8	3.9	106.30	-60.0	205.4	220.5	214.8	5.68	38.829	
1,400.0	1,400.0	1,356.8	1,340.8	3.0	4.4	107.17	-70.1	226.8	244.7	238.5	6.16	39.719	
1,500.0	1,500.0	1,453.7	1,434.8	3.3	4.9	107.88	-80.1	248.3	268.9	262.3	6.65	40.459	
1,600.0	1,600.0	1,550.7	1,528.8	3.5	5.4	108.48	-90.2	269.8	293.2	286.1	7.14	41.081	
1,700.0	1,700.0	1,647.7	1,622.8	3.7	5.9	108.99	-100.2	291.2	317.5	309.9	7.63	41.610	
1,800.0	1,800.0	1,744.7	1,716.9	3.9	6.4	109.42	-110.2	312.7	341.8	333.7	8.13	42.065	
1,900.0	1,900.0	1,841.6	1,810.9	4.2	6.9	109.80	-120.3	334.1	366.1	357.5	8.62	42.458	
2,000.0	2,000.0	1,938.6	1,904.9	4.4	7.4	110.13	-130.3	355.6	390.5	381.3	9.12	42.802	
2,100.0	2,100.0	2,035.6	1,999.0	4.6	7.9	110.42	-140.3	377.1	414.8	405.2	9.62	43.104	
2,200.0	2,200.0	2,132.7	2,093.2	4.8	8.4	-53.69	-150.4	398.6	438.4	428.4	10.03	43.726	
2,300.0	2,299.9	2,230.2	2,187.8	5.0	9.0	-53.59	-160.5	420.1	460.5	450.1	10.47	43.974	
2,400.0	2,399.7	2,328.0	2,282.6	5.2	9.5	-53.74	-170.6	441.8	481.1	470.2	10.93	44.019	
2,500.0	2,499.3	2,426.1	2,377.6	5.3	10.0	-54.12	-180.8	463.5	500.2	488.8	11.40	43.881	
2,600.0	2,598.6	2,524.2	2,472.8	5.5	10.5	-54.72	-190.9	485.2	517.9	506.0	11.89	43.572	
2,700.0	2,697.5	2,622.5	2,568.1	5.8	11.0	-55.51	-201.1	506.9	534.3	521.9	12.40	43.099	
2,800.0	2,796.3	2,720.7	2,663.4	6.0	11.6	-56.55	-211.3	528.7	550.1	537.1	12.93	42.551	
2,900.0	2,895.1	2,819.0	2,758.6	6.2	12.1	-57.53	-221.4	550.4	566.0	552.5	13.48	42.002	
3,000.0	2,993.9	2,917.2	2,853.9	6.5	12.6	-58.46	-231.6	572.2	582.1	568.1	14.04	41.457	
3,100.0	3,092.6	3,015.5	2,949.2	6.8	13.1	-59.34	-241.8	593.9	598.4	583.8	14.62	40.919	
3,200.0	3,191.4	3,113.8	3,044.5	7.0	13.7	-60.18	-251.9	615.7	614.8	599.6	15.22	40.393	
3,300.0	3,290.2	3,212.0	3,139.8	7.3	14.2	-60.97	-262.1	637.4	631.3	615.5	15.83	39.880	
3,400.0	3,389.0	3,310.3	3,235.1	7.6	14.7	-61.72	-272.3	659.1	647.9	631.5	16.45	39.383	
3,500.0	3,487.8	3,408.5	3,330.3	7.9	15.2	-62.43	-282.5	680.9	664.6	647.5	17.08	38.903	
3,600.0	3,586.5	3,506.8	3,425.6	8.2	15.8	-63.11	-292.6	702.6	681.5	663.7	17.73	38.440	
3,700.0	3,685.3	3,605.1	3,520.9	8.6	16.3	-63.75	-302.8	724.4	698.4	680.0	18.38	37.995	
3,800.0	3,784.1	3,703.3	3,616.2	8.9	16.8	-64.37	-313.0	746.1	715.4	696.3	19.04	37.568	
3,900.0	3,882.9	3,801.6	3,711.5	9.2	17.3	-64.95	-323.1	767.9	732.4	712.7	19.71	37.159	
4,000.0	3,981.6	3,899.8	3,806.8	9.5	17.9	-65.51	-333.3	789.6	749.6	729.2	20.39	36.767	
4,100.0	4,080.4	3,998.1	3,902.0	9.9	18.4	-66.05	-343.5	811.4	766.8	745.7	21.07	36.392	
4,200.0	4,179.2	4,096.4	3,997.3	10.2	18.9	-66.56	-353.7	833.1	784.0	762.3	21.76	36.033	
4,300.0	4,278.0	4,194.6	4,092.6	10.6	19.4	-67.05	-363.8	854.9	801.4	778.9	22.45	35.690	
4,400.0	4,376.7	4,292.9	4,187.9	10.9	20.0	-67.52	-374.0	876.6	818.8	795.6	23.15	35.363	
4,500.0	4,475.5	4,391.1	4,283.2	11.2	20.5	-67.97	-384.2	898.3	836.2	812.3	23.86	35.050	
4,600.0	4,574.3	4,489.4	4,378.5	11.6	21.0	-68.40	-394.3	920.1	853.7	829.1	24.57	34.750	
4,700.0	4,673.1	4,587.7	4,473.7	11.9	21.5	-68.81	-404.5	941.8	871.2	845.9	25.28	34.464	
4,800.0	4,771.9	4,685.9	4,569.0	12.3	22.1	-69.21	-414.7	963.6	888.8	862.8	25.99	34.190	
4,900.0	4,870.6	4,784.2	4,664.3	12.6	22.6	-69.59	-424.8	985.3	906.4	879.7	26.71	33.928	
5,000.0	4,969.4	4,882.4	4,759.6	13.0	23.1	-69.96	-435.0	1,007.1	924.0	896.6	27.44	33.677	
5,100.0	5,068.2	4,980.7	4,854.9	13.3	23.6	-70.32	-445.2	1,028.8	941.7	913.5	28.16	33.437	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design Critter Creek 18 SW Pad Sec.18-T11N-R63W - Critter Creek 540-1807H - Wellbore #1 - Plan #1 (2-27-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,167.0	5,079.0	4,950.1	13.7	24.2	-70.66	-455.4	1,050.6	959.4	930.5	28.89	33.208	
5,300.0	5,265.7	5,177.2	5,045.4	14.1	24.7	-70.98	-465.5	1,072.3	977.2	947.5	29.62	32.987	
5,400.0	5,364.5	5,275.5	5,140.7	14.4	25.2	-71.30	-475.7	1,094.0	995.0	964.6	30.36	32.776	
5,500.0	5,463.3	5,373.7	5,236.0	14.8	25.7	-71.61	-485.9	1,115.8	1,012.8	981.7	31.09	32.573	
5,600.0	5,562.1	5,472.0	5,331.3	15.1	26.3	-71.90	-496.0	1,137.5	1,030.6	998.8	31.83	32.379	
5,700.0	5,660.8	5,570.3	5,426.6	15.5	26.8	-72.19	-506.2	1,159.3	1,048.5	1,015.9	32.57	32.192	
5,800.0	5,759.6	5,668.5	5,521.8	15.9	27.3	-72.46	-516.4	1,181.0	1,066.3	1,033.0	33.31	32.012	
5,900.0	5,858.4	5,766.8	5,617.1	16.2	27.8	-72.73	-526.6	1,202.8	1,084.2	1,050.2	34.05	31.840	
6,000.0	5,957.2	5,865.0	5,712.4	16.6	28.4	-72.99	-536.7	1,224.5	1,102.2	1,067.4	34.80	31.674	
6,100.0	6,056.0	5,963.3	5,807.7	16.9	28.9	-73.24	-546.9	1,246.3	1,120.1	1,084.6	35.54	31.514	
6,200.0	6,154.7	6,061.6	5,903.0	17.3	29.4	-73.48	-557.1	1,268.0	1,138.1	1,101.8	36.29	31.360	
6,300.0	6,253.5	6,159.8	5,998.3	17.7	29.9	-73.71	-567.2	1,289.7	1,156.1	1,119.0	37.04	31.212	
6,400.0	6,352.5	6,258.1	6,093.5	18.0	30.5	-74.22	-577.4	1,311.5	1,174.6	1,136.8	37.77	31.100	
6,500.0	6,452.0	6,411.1	6,242.8	18.2	31.1	-74.60	-591.7	1,342.1	1,191.9	1,153.4	38.46	30.993	SF

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,100.0	7,597.8	10,646.0	7,536.2	28.2	88.7	85.47	1,931.7	1,021.8	1,167.2	1,094.4	72.79	16.034	
9,200.0	7,597.4	10,722.9	7,536.1	29.7	90.5	85.18	1,987.6	969.0	1,098.7	1,023.2	75.53	14.547	
9,300.0	7,597.0	10,806.9	7,535.9	31.2	92.5	84.81	2,048.2	910.9	1,029.6	951.2	78.42	13.129	
9,400.0	7,596.6	10,860.0	7,535.8	32.7	93.7	84.55	2,086.8	874.4	961.1	880.3	80.85	11.888	
9,500.0	7,596.2	10,914.5	7,536.1	34.3	95.0	84.29	2,127.2	837.8	894.2	810.8	83.35	10.728	
9,600.0	7,595.8	10,993.8	7,536.4	36.0	96.8	83.85	2,186.6	785.4	828.2	741.9	86.30	9.597	
9,700.0	7,595.4	11,068.7	7,536.5	37.6	98.5	83.35	2,242.2	735.2	761.5	672.3	89.18	8.538	
9,800.0	7,595.0	11,140.9	7,535.2	39.3	100.2	82.62	2,296.0	687.1	695.2	603.2	92.00	7.556	
9,900.0	7,594.6	11,221.8	7,533.2	41.0	102.1	81.54	2,356.0	632.7	628.6	533.7	94.91	6.623	
10,000.0	7,594.2	11,297.5	7,530.4	42.7	103.8	80.17	2,411.7	581.6	561.8	464.2	97.64	5.754	
10,100.0	7,593.8	11,377.2	7,529.3	44.5	105.7	78.57	2,469.9	527.3	494.3	394.0	100.32	4.927	
10,200.0	7,593.4	11,452.9	7,531.2	46.2	107.5	77.07	2,525.3	475.5	426.6	323.7	102.90	4.146	
10,300.0	7,593.0	11,529.2	7,533.6	48.0	109.3	75.06	2,580.6	423.1	358.4	253.2	105.22	3.406	
10,400.0	7,592.6	11,601.3	7,534.6	49.8	111.1	71.93	2,632.4	373.1	290.3	183.4	106.84	2.717	
10,500.0	7,592.2	11,671.1	7,535.4	51.5	112.7	67.13	2,683.0	324.8	223.3	116.2	107.15	2.084	
10,600.0	7,591.8	11,742.8	7,536.2	53.3	114.4	58.69	2,735.3	275.8	158.8	54.7	104.06	1.526	
10,700.0	7,591.4	11,815.0	7,536.5	55.2	116.2	41.56	2,788.0	226.6	99.9	9.7	90.21	1.108	Level 2
10,800.0	7,591.0	11,888.6	7,536.5	57.0	117.9	5.94	2,842.2	176.7	64.2	5.0	59.16	1.085	Level 2
10,814.5	7,591.0	11,899.3	7,536.5	57.2	118.2	-0.63	2,850.1	169.4	63.4	5.1	58.36	1.087	Level 2, CC
10,900.0	7,590.6	11,961.3	7,536.5	58.8	119.6	-34.07	2,895.6	127.3	86.2	-0.4	86.63	0.995	Level 1, ES, SF
11,000.0	7,590.2	12,031.0	7,536.2	60.6	121.3	-55.05	2,946.1	79.4	142.3	30.2	112.05	1.270	Level 3
11,100.0	7,589.8	12,097.9	7,536.4	62.5	123.0	-65.51	2,993.2	31.8	208.1	84.5	123.59	1.684	
11,200.0	7,589.4	12,178.9	7,537.0	64.3	124.9	-72.36	3,050.5	-25.4	276.2	145.2	131.06	2.108	
11,300.0	7,589.0	12,248.7	7,537.2	66.2	126.6	-75.77	3,101.2	-73.4	343.4	207.6	135.76	2.529	
11,400.0	7,588.6	12,323.9	7,538.3	68.0	128.4	-78.45	3,155.3	-125.5	411.6	271.6	139.99	2.940	
11,500.0	7,588.2	12,394.4	7,540.1	69.9	130.1	-80.37	3,206.3	-174.2	479.8	336.0	143.74	3.338	
11,600.0	7,587.8	12,432.0	7,540.8	71.8	131.0	-81.16	3,233.4	-200.3	549.5	403.1	146.49	3.752	
11,700.0	7,587.4	12,432.0	7,540.8	73.6	131.0	-81.16	3,233.4	-200.3	626.4	478.1	148.34	4.223	
11,800.0	7,587.0	12,432.0	7,540.8	75.5	131.0	-81.16	3,233.4	-200.3	709.1	558.9	150.19	4.721	
11,900.0	7,586.6	12,432.0	7,540.8	77.4	131.0	-81.16	3,233.4	-200.3	795.7	643.7	152.05	5.234	
12,000.0	7,586.2	12,432.0	7,540.8	79.2	131.0	-81.16	3,233.4	-200.3	885.2	731.3	153.90	5.752	
12,100.0	7,585.8	12,432.0	7,540.8	81.1	131.0	-81.16	3,233.4	-200.3	976.7	821.0	155.77	6.271	
12,200.0	7,585.4	12,432.0	7,540.8	83.0	131.0	-81.16	3,233.4	-200.3	1,069.8	912.1	157.63	6.787	
12,300.0	7,585.0	12,432.0	7,540.8	84.9	131.0	-81.16	3,233.4	-200.3	1,164.0	1,004.5	159.50	7.298	

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**Offset TVD Reference:**	Offset Datum

Offset Design 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

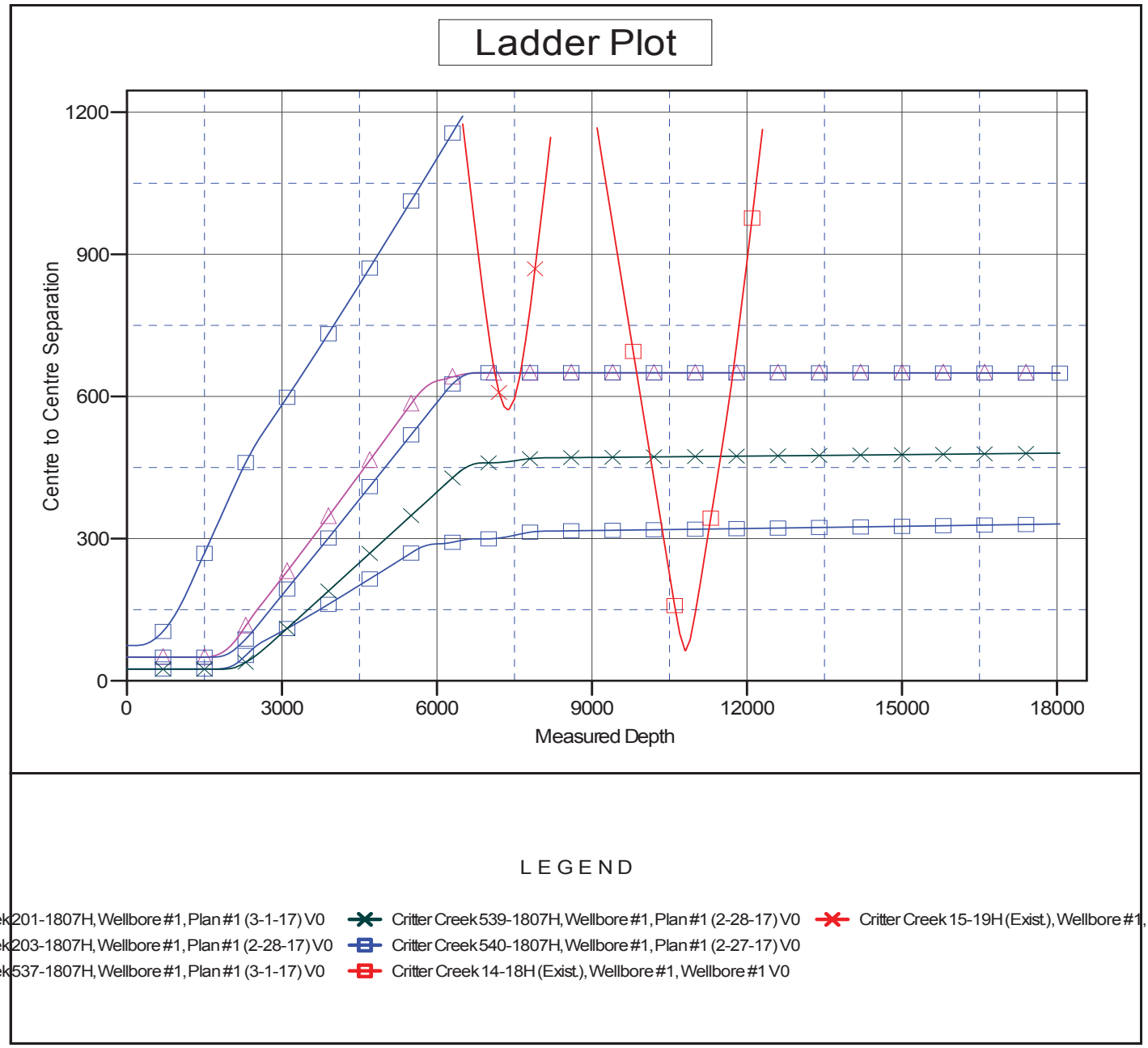
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,500.0	6,452.0	12,957.5	7,498.6	18.2	143.5	72.76	-913.7	-135.7	1,175.3	1,017.4	157.92	7.442	
6,600.0	6,551.7	12,951.9	7,498.7	18.4	143.4	66.99	-917.6	-131.8	1,081.7	921.5	160.22	6.752	
6,700.0	6,651.7	12,948.9	7,498.7	18.6	143.3	62.40	-919.7	-129.7	990.0	828.9	161.03	6.148	
6,800.0	6,751.7	12,948.3	7,498.7	18.8	143.3	-134.93	-920.1	-129.2	900.6	739.4	161.19	5.587	
6,900.0	6,851.7	12,947.9	7,498.7	18.9	143.3	-134.97	-920.4	-129.0	813.8	652.5	161.34	5.044	
7,000.0	6,951.6	12,949.5	7,498.7	19.0	143.3	-139.48	-919.3	-130.0	731.6	571.0	160.56	4.556	
7,100.0	7,050.3	12,960.5	7,498.6	19.0	143.6	-143.21	-911.6	-137.9	661.4	503.5	157.81	4.191	
7,200.0	7,145.8	12,983.5	7,498.6	19.0	144.2	-143.80	-895.3	-154.2	608.7	454.1	154.61	3.937	
7,300.0	7,236.2	13,015.9	7,498.6	18.8	145.0	-142.22	-872.2	-176.9	578.4	427.3	151.11	3.828	SF
7,369.8	7,295.4	13,042.2	7,498.6	18.6	145.7	-140.09	-853.4	-195.3	572.2	423.8	148.45	3.854	CC, ES
7,400.0	7,319.8	13,050.0	7,498.6	18.6	145.9	-139.32	-847.9	-200.8	573.4	426.4	146.97	3.901	
7,500.0	7,395.0	13,050.0	7,498.6	18.3	145.9	-138.14	-847.9	-200.8	594.9	454.7	140.20	4.243	
7,600.0	7,460.3	13,050.0	7,498.6	18.1	145.9	-135.27	-847.9	-200.8	640.8	507.1	133.67	4.794	
7,700.0	7,514.3	13,050.0	7,498.6	18.0	145.9	-130.21	-847.9	-200.8	705.6	577.4	128.15	5.506	
7,800.0	7,556.0	13,050.0	7,498.6	18.0	145.9	-122.09	-847.9	-200.8	783.5	659.0	124.42	6.297	
7,900.0	7,584.7	13,050.0	7,498.6	18.1	145.9	-109.75	-847.9	-200.8	869.7	747.0	122.70	7.088	
8,000.0	7,599.7	13,050.0	7,498.6	18.4	145.9	-92.65	-847.9	-200.8	960.5	838.8	121.70	7.892	
8,100.0	7,601.8	13,050.0	7,498.6	18.9	145.9	-80.82	-847.9	-200.8	1,053.3	932.6	120.63	8.731	
8,200.0	7,601.4	13,050.0	7,498.6	19.4	145.9	-80.82	-847.9	-200.8	1,147.2	1,026.1	121.10	9.473	

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

Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 202-1807H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°



Company:	Fifth Creek Energy Company, LLC	**Local Co-ordinate Reference:**	Well Critter Creek 202-1807H
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 202-1807H	**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 (2-28-17)	**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 202-1807H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°