

Fifth Creek Energy Company, LLC

Well Name: **Randall Creek 504-2920H**

Surface Location: Randall Creek 29 SESE Pad Sec.29-T12N-R62W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5346.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.01599809.60 3320911.49 40.974064 -104.337883
Original Well Elev WELL @ 5369.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 250'FSL & 850'FEL, Sec.29	1.0	0.0	0.0	Point
BHL 587'FNL & 1460'FEL, Sec.20	7712.0	9755.5	-284.6	Point
LP 300'FSL & 1460'FEL, Sec.29	7712.0	48.5	-609.2	Point



Azimuths to True North
Magnetic North: 7.90°

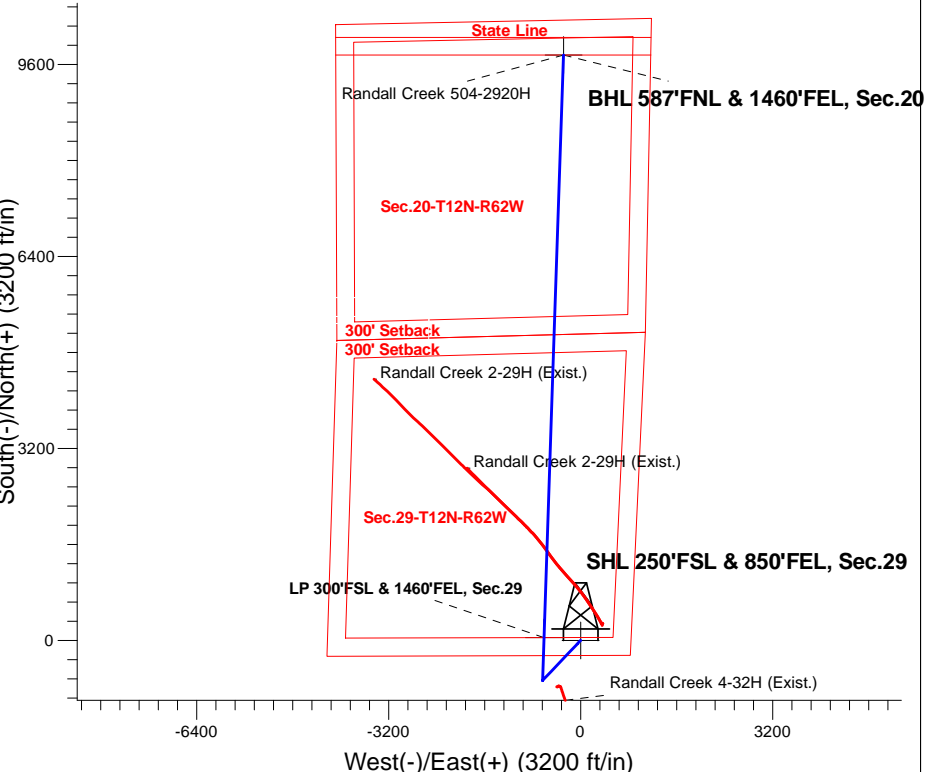
Magnetic Field
Strength: 52861.4snT
Dip Angle: 67.37°
Date: 3/13/2017
Model: IGRF2010

Randall Creek 29 SESE Pad Sec.29-T12N-R62W
Randall Creek 504-2920H
Plan #1 (3-13-17)
17:09, March 14 2017

ANNOTATIONS

TVD	MD	Annotation
1700.0	1700.0	KOP - Start Build 1.50
6214.8	6300.8	Start Drop -2.00
6995.8	7085.9	KOP #2 - Start Build 8.00
7712.0	17924.1	TD at 17924.1

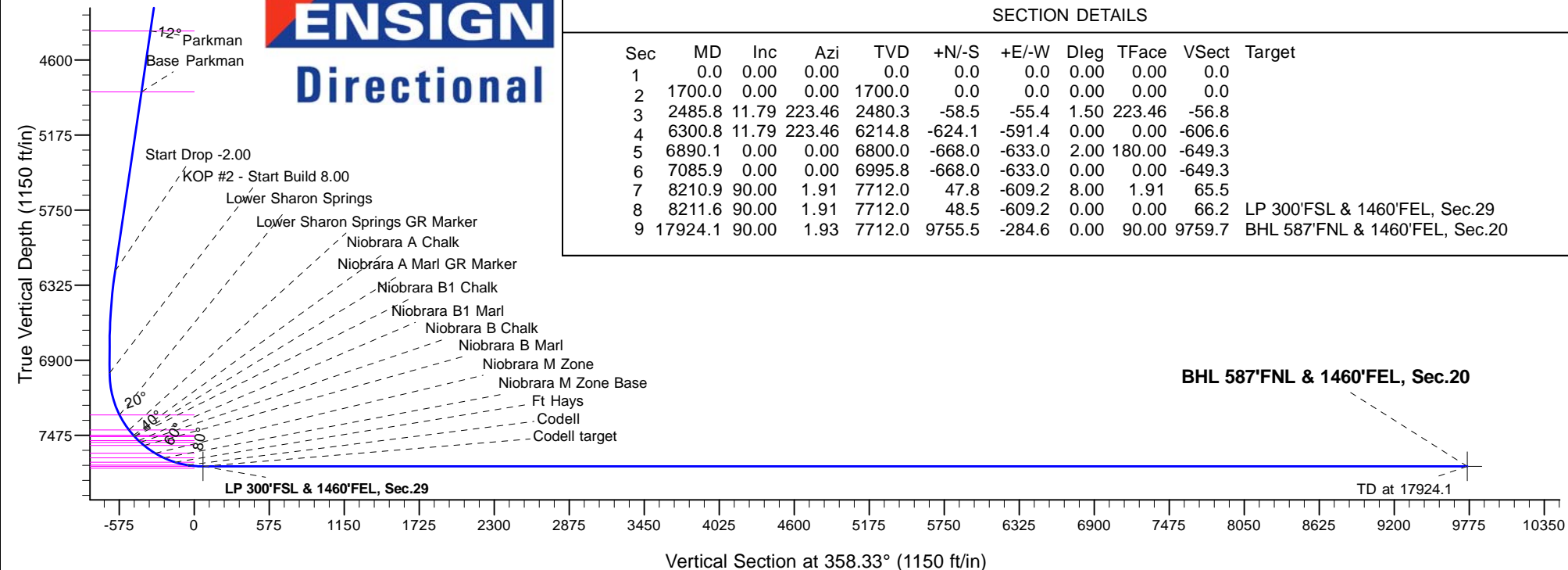
South(-)/North(+) (3200 ft/in)



ENSIGN
Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
3	2485.8	11.79	223.46	2480.3	-58.5	-55.4	1.50	223.46	-56.8	
4	6300.8	11.79	223.46	6214.8	-624.1	-591.4	0.00	0.00	-606.6	
5	6890.1	0.00	0.00	6800.0	-668.0	-633.0	2.00	180.00	-649.3	
6	7085.9	0.00	0.00	6995.8	-668.0	-633.0	0.00	0.00	-649.3	
7	8210.9	90.00	1.91	7712.0	47.8	-609.2	8.00	1.91	65.5	
8	8211.6	90.00	1.91	7712.0	48.5	-609.2	0.00	0.00	66.2	LP 300'FSL & 1460'FEL, Sec.29
9	17924.1	90.00	1.93	7712.0	9755.5	-284.6	0.00	90.00	9759.7	BHL 587'FNL & 1460'FEL, Sec.20





Fifth Creek Energy Company, LLC

Sec.29-T12N-R62W

Randall Creek 29 SESE Pad Sec.29-T12N-R62W

Randall Creek 504-2920H

Wellbore #1

Plan: Plan #1 (3-13-17)

Standard Planning Report

14 March, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Project	Sec.29-T12N-R62W, 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	Randall Creek 29 SESE Pad Sec.29-T12N-R62W				
Site Position:		Northing:	1,599,808.96 usft	Latitude:	40.974064
From:	Lat/Long	Easting:	3,320,860.69 usft	Longitude:	-104.338067
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.75

Well	Randall Creek 504-2920H					
Well Position	+N/-S	0.0 ft	Northing:	1,599,809.60 usft	Latitude:	40.974064
	+E/-W	50.8 ft	Easting:	3,320,911.50 usft	Longitude:	-104.337883
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,346.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/13/2017	7.90	67.37	52,861

Design	Plan #1 (3-13-17)			
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	358.33

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,485.8	11.79	223.46	2,480.3	-58.5	-55.4	1.50	1.50	0.00	223.46	
6,300.8	11.79	223.46	6,214.8	-624.1	-591.4	0.00	0.00	0.00	0.00	
6,890.1	0.00	0.00	6,800.0	-668.0	-633.0	2.00	-2.00	0.00	180.00	
7,085.9	0.00	0.00	6,995.8	-668.0	-633.0	0.00	0.00	0.00	0.00	
8,210.9	90.00	1.91	7,712.0	47.8	-609.2	8.00	8.00	0.00	1.91	
8,211.6	90.00	1.91	7,712.0	48.5	-609.2	0.00	0.00	0.00	0.00	LP 300'FSL & 1460'FSL
17,924.1	90.00	1.93	7,712.0	9,755.5	-284.6	0.00	0.00	0.00	90.00	BHL 587'FNL & 1460'FNL

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

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 250'FSL & 850'FEL, Sec.29									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,618.0	0.00	0.00	1,618.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre C&D Sand									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,800.0	1.50	223.46	1,800.0	-1.0	-0.9	-0.9	1.50	1.50	0.00
1,900.0	3.00	223.46	1,899.9	-3.8	-3.6	-3.7	1.50	1.50	0.00
2,000.0	4.50	223.46	1,999.7	-8.5	-8.1	-8.3	1.50	1.50	0.00
2,100.0	6.00	223.46	2,099.3	-15.2	-14.4	-14.8	1.50	1.50	0.00
2,200.0	7.50	223.46	2,198.6	-23.7	-22.5	-23.1	1.50	1.50	0.00
2,300.0	9.00	223.46	2,297.5	-34.1	-32.3	-33.2	1.50	1.50	0.00
2,398.9	10.48	223.46	2,395.0	-46.3	-43.9	-45.0	1.50	1.50	0.00
Base Pierre C&D Sand									
2,400.0	10.50	223.46	2,396.1	-46.4	-44.0	-45.1	1.50	1.50	0.00
2,485.8	11.79	223.46	2,480.3	-58.5	-55.4	-56.8	1.50	1.50	0.00
2,500.0	11.79	223.46	2,494.2	-60.6	-57.4	-58.9	0.00	0.00	0.00
2,600.0	11.79	223.46	2,592.1	-75.4	-71.4	-73.3	0.00	0.00	0.00
2,700.0	11.79	223.46	2,690.0	-90.2	-85.5	-87.7	0.00	0.00	0.00
2,800.0	11.79	223.46	2,787.8	-105.1	-99.5	-102.1	0.00	0.00	0.00
2,828.8	11.79	223.46	2,816.0	-109.3	-103.6	-106.3	0.00	0.00	0.00
Pierre B Sand									
2,900.0	11.79	223.46	2,885.7	-119.9	-113.6	-116.5	0.00	0.00	0.00
2,900.3	11.79	223.46	2,886.0	-119.9	-113.6	-116.6	0.00	0.00	0.00
Base Pierre B Sand									
3,000.0	11.79	223.46	2,983.6	-134.7	-127.7	-130.9	0.00	0.00	0.00
3,100.0	11.79	223.46	3,081.5	-149.5	-141.7	-145.3	0.00	0.00	0.00
3,200.0	11.79	223.46	3,179.4	-164.4	-155.8	-159.8	0.00	0.00	0.00
3,300.0	11.79	223.46	3,277.3	-179.2	-169.8	-174.2	0.00	0.00	0.00
3,400.0	11.79	223.46	3,375.2	-194.0	-183.9	-188.6	0.00	0.00	0.00
3,500.0	11.79	223.46	3,473.1	-208.9	-197.9	-203.0	0.00	0.00	0.00
3,600.0	11.79	223.46	3,571.0	-223.7	-212.0	-217.4	0.00	0.00	0.00
3,654.2	11.79	223.46	3,624.0	-231.7	-219.6	-225.2	0.00	0.00	0.00
Pierre A Sand									
3,700.0	11.79	223.46	3,668.9	-238.5	-226.0	-231.8	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

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	11.79	223.46	3,766.8	-253.3	-240.1	-246.2	0.00	0.00	0.00
3,900.0	11.79	223.46	3,864.6	-268.2	-254.1	-260.6	0.00	0.00	0.00
4,000.0	11.79	223.46	3,962.5	-283.0	-268.2	-275.1	0.00	0.00	0.00
4,100.0	11.79	223.46	4,060.4	-297.8	-282.2	-289.5	0.00	0.00	0.00
4,110.8	11.79	223.46	4,071.0	-299.4	-283.7	-291.0	0.00	0.00	0.00
Base Pierre A Sand									
4,200.0	11.79	223.46	4,158.3	-312.6	-296.3	-303.9	0.00	0.00	0.00
4,300.0	11.79	223.46	4,256.2	-327.5	-310.3	-318.3	0.00	0.00	0.00
4,400.0	11.79	223.46	4,354.1	-342.3	-324.4	-332.7	0.00	0.00	0.00
4,422.4	11.79	223.46	4,376.0	-345.6	-327.5	-335.9	0.00	0.00	0.00
Parkman									
4,500.0	11.79	223.46	4,452.0	-357.1	-338.4	-347.1	0.00	0.00	0.00
4,600.0	11.79	223.46	4,549.9	-372.0	-352.5	-361.5	0.00	0.00	0.00
4,700.0	11.79	223.46	4,647.8	-386.8	-366.5	-375.9	0.00	0.00	0.00
4,800.0	11.79	223.46	4,745.7	-401.6	-380.6	-390.3	0.00	0.00	0.00
4,899.4	11.79	223.46	4,843.0	-416.4	-394.5	-404.7	0.00	0.00	0.00
Base Parkman									
4,900.0	11.79	223.46	4,843.6	-416.4	-394.6	-404.8	0.00	0.00	0.00
5,000.0	11.79	223.46	4,941.5	-431.3	-408.7	-419.2	0.00	0.00	0.00
5,100.0	11.79	223.46	5,039.3	-446.1	-422.7	-433.6	0.00	0.00	0.00
5,200.0	11.79	223.46	5,137.2	-460.9	-436.8	-448.0	0.00	0.00	0.00
5,300.0	11.79	223.46	5,235.1	-475.8	-450.8	-462.4	0.00	0.00	0.00
5,400.0	11.79	223.46	5,333.0	-490.6	-464.9	-476.8	0.00	0.00	0.00
5,500.0	11.79	223.46	5,430.9	-505.4	-478.9	-491.2	0.00	0.00	0.00
5,600.0	11.79	223.46	5,528.8	-520.2	-493.0	-505.6	0.00	0.00	0.00
5,700.0	11.79	223.46	5,626.7	-535.1	-507.0	-520.1	0.00	0.00	0.00
5,800.0	11.79	223.46	5,724.6	-549.9	-521.1	-534.5	0.00	0.00	0.00
5,900.0	11.79	223.46	5,822.5	-564.7	-535.1	-548.9	0.00	0.00	0.00
6,000.0	11.79	223.46	5,920.4	-579.6	-549.2	-563.3	0.00	0.00	0.00
6,100.0	11.79	223.46	6,018.3	-594.4	-563.2	-577.7	0.00	0.00	0.00
6,200.0	11.79	223.46	6,116.1	-609.2	-577.3	-592.1	0.00	0.00	0.00
6,300.0	11.79	223.46	6,214.0	-624.0	-591.3	-606.5	0.00	0.00	0.00
6,300.8	11.79	223.46	6,214.8	-624.2	-591.5	-606.6	0.00	0.00	0.00
Start Drop -2.00									
6,400.0	9.80	223.46	6,312.3	-637.6	-604.2	-619.8	2.00	-2.00	0.00
6,500.0	7.80	223.46	6,411.1	-648.7	-614.8	-630.5	2.00	-2.00	0.00
6,600.0	5.80	223.46	6,510.4	-657.3	-622.9	-638.9	2.00	-2.00	0.00
6,700.0	3.80	223.46	6,610.0	-663.4	-628.7	-644.8	2.00	-2.00	0.00
6,800.0	1.80	223.46	6,709.9	-667.0	-632.0	-648.3	2.00	-2.00	0.00
6,890.1	0.00	0.00	6,800.0	-668.0	-633.0	-649.3	2.00	-2.00	0.00
6,900.0	0.00	0.00	6,809.9	-668.0	-633.0	-649.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,909.9	-668.0	-633.0	-649.3	0.00	0.00	0.00
7,085.9	0.00	0.00	6,995.8	-668.0	-633.0	-649.3	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
7,100.0	1.13	1.91	7,009.9	-667.9	-633.0	-649.1	7.98	7.98	0.00
7,200.0	9.13	1.91	7,109.4	-658.9	-632.7	-640.2	8.00	8.00	0.00
7,300.0	17.13	1.91	7,206.7	-636.3	-631.9	-617.6	8.00	8.00	0.00
7,400.0	25.13	1.91	7,299.9	-600.3	-630.7	-581.6	8.00	8.00	0.00
7,420.1	26.74	1.91	7,318.0	-591.5	-630.5	-572.8	8.00	8.00	0.00
Lower Sharon Springs									
7,500.0	33.13	1.91	7,387.2	-551.7	-629.1	-533.1	8.00	8.00	0.00
7,556.2	37.62	1.91	7,433.0	-519.2	-628.0	-500.6	8.00	8.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

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)
Lower Sharon Springs GR Marker									
7,600.0	41.13	1.91	7,466.9	-491.4	-627.1	-472.9	8.00	8.00	0.00
7,610.9	42.00	1.91	7,475.0	-484.2	-626.9	-465.7	8.00	8.00	0.00
Niobrara A Chalk									
7,620.4	42.75	1.91	7,482.0	-477.8	-626.7	-459.3	8.00	8.00	0.00
Niobrara A Marl GR Marker									
7,623.1	42.97	1.91	7,484.0	-475.9	-626.6	-457.5	8.00	8.00	0.00
Niobrara B1 Chalk									
7,666.7	46.46	1.91	7,515.0	-445.3	-625.6	-426.8	8.00	8.00	0.00
Niobrara B1 Marl									
7,685.9	48.00	1.91	7,528.0	-431.2	-625.1	-412.8	8.00	8.00	0.00
Niobrara B Chalk									
7,700.0	49.13	1.91	7,537.4	-420.6	-624.8	-402.2	8.00	8.00	0.00
7,722.8	50.95	1.91	7,552.0	-403.2	-624.2	-384.8	8.00	8.00	0.00
Niobrara B Marl									
7,800.0	57.13	1.91	7,597.3	-340.7	-622.1	-322.4	8.00	8.00	0.00
7,827.9	59.36	1.91	7,612.0	-317.0	-621.3	-298.8	8.00	8.00	0.00
Niobrara M Zone									
7,900.0	65.13	1.91	7,645.6	-253.3	-619.2	-235.1	8.00	8.00	0.00
7,903.4	65.40	1.91	7,647.0	-250.2	-619.1	-232.0	8.00	8.00	0.00
Niobrara M Zone Base									
7,996.0	72.81	1.91	7,680.0	-163.8	-616.2	-145.7	8.00	8.00	0.00
Ft Hays									
8,000.0	73.13	1.91	7,681.2	-160.0	-616.1	-141.9	8.00	8.00	0.00
8,091.1	80.41	1.91	7,702.0	-71.4	-613.2	-53.5	8.00	8.00	0.00
Codell									
8,100.0	81.13	1.91	7,703.4	-62.6	-612.9	-44.7	8.00	8.00	0.00
8,200.0	89.13	1.91	7,711.9	36.9	-609.6	54.6	8.00	8.00	0.00
8,210.9	90.00	1.91	7,712.0	47.8	-609.2	65.5	8.00	8.00	0.00
Codell target									
8,211.6	90.00	1.91	7,712.0	48.5	-609.2	66.2	0.00	0.00	0.00
LP 300'FSL & 1460'FEL, Sec.29									
8,300.0	90.00	1.91	7,712.0	136.8	-606.2	154.4	0.00	0.00	0.00
8,400.0	90.00	1.91	7,712.0	236.8	-602.9	254.2	0.00	0.00	0.00
8,500.0	90.00	1.91	7,712.0	336.7	-599.6	354.1	0.00	0.00	0.00
8,600.0	90.00	1.91	7,712.0	436.7	-596.3	453.9	0.00	0.00	0.00
8,700.0	90.00	1.91	7,712.0	536.6	-592.9	553.7	0.00	0.00	0.00
8,800.0	90.00	1.91	7,712.0	636.5	-589.6	653.5	0.00	0.00	0.00
8,900.0	90.00	1.91	7,712.0	736.5	-586.3	753.3	0.00	0.00	0.00
9,000.0	90.00	1.91	7,712.0	836.4	-582.9	853.1	0.00	0.00	0.00
9,100.0	90.00	1.91	7,712.0	936.4	-579.6	952.9	0.00	0.00	0.00
9,200.0	90.00	1.91	7,712.0	1,036.3	-576.3	1,052.7	0.00	0.00	0.00
9,300.0	90.00	1.91	7,712.0	1,136.3	-573.0	1,152.5	0.00	0.00	0.00
9,400.0	90.00	1.91	7,712.0	1,236.2	-569.6	1,252.3	0.00	0.00	0.00
9,500.0	90.00	1.91	7,712.0	1,336.2	-566.3	1,352.1	0.00	0.00	0.00
9,600.0	90.00	1.91	7,712.0	1,436.1	-563.0	1,451.9	0.00	0.00	0.00
9,700.0	90.00	1.91	7,712.0	1,536.0	-559.7	1,551.7	0.00	0.00	0.00
9,800.0	90.00	1.91	7,712.0	1,636.0	-556.3	1,651.5	0.00	0.00	0.00
9,900.0	90.00	1.91	7,712.0	1,735.9	-553.0	1,751.3	0.00	0.00	0.00
10,000.0	90.00	1.91	7,712.0	1,835.9	-549.7	1,851.1	0.00	0.00	0.00
10,100.0	90.00	1.91	7,712.0	1,935.8	-546.3	1,950.9	0.00	0.00	0.00
10,200.0	90.00	1.91	7,712.0	2,035.8	-543.0	2,050.7	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.0	90.00	1.91	7,712.0	2,135.7	-539.7	2,150.5	0.00	0.00	0.00
10,400.0	90.00	1.91	7,712.0	2,235.7	-536.3	2,250.3	0.00	0.00	0.00
10,500.0	90.00	1.91	7,712.0	2,335.6	-533.0	2,350.2	0.00	0.00	0.00
10,600.0	90.00	1.91	7,712.0	2,435.5	-529.7	2,450.0	0.00	0.00	0.00
10,700.0	90.00	1.91	7,712.0	2,535.5	-526.3	2,549.8	0.00	0.00	0.00
10,800.0	90.00	1.91	7,712.0	2,635.4	-523.0	2,649.6	0.00	0.00	0.00
10,900.0	90.00	1.91	7,712.0	2,735.4	-519.7	2,749.4	0.00	0.00	0.00
11,000.0	90.00	1.91	7,712.0	2,835.3	-516.3	2,849.2	0.00	0.00	0.00
11,100.0	90.00	1.91	7,712.0	2,935.3	-513.0	2,949.0	0.00	0.00	0.00
11,200.0	90.00	1.91	7,712.0	3,035.2	-509.7	3,048.8	0.00	0.00	0.00
11,300.0	90.00	1.91	7,712.0	3,135.2	-506.3	3,148.6	0.00	0.00	0.00
11,400.0	90.00	1.91	7,712.0	3,235.1	-503.0	3,248.4	0.00	0.00	0.00
11,500.0	90.00	1.91	7,712.0	3,335.0	-499.7	3,348.2	0.00	0.00	0.00
11,600.0	90.00	1.91	7,712.0	3,435.0	-496.3	3,448.0	0.00	0.00	0.00
11,700.0	90.00	1.91	7,712.0	3,534.9	-493.0	3,547.8	0.00	0.00	0.00
11,800.0	90.00	1.91	7,712.0	3,634.9	-489.6	3,647.6	0.00	0.00	0.00
11,900.0	90.00	1.91	7,712.0	3,734.8	-486.3	3,747.4	0.00	0.00	0.00
12,000.0	90.00	1.91	7,712.0	3,834.8	-483.0	3,847.2	0.00	0.00	0.00
12,100.0	90.00	1.91	7,712.0	3,934.7	-479.6	3,947.0	0.00	0.00	0.00
12,200.0	90.00	1.91	7,712.0	4,034.7	-476.3	4,046.8	0.00	0.00	0.00
12,300.0	90.00	1.91	7,712.0	4,134.6	-473.0	4,146.6	0.00	0.00	0.00
12,400.0	90.00	1.91	7,712.0	4,234.5	-469.6	4,246.4	0.00	0.00	0.00
12,500.0	90.00	1.91	7,712.0	4,334.5	-466.3	4,346.2	0.00	0.00	0.00
12,600.0	90.00	1.91	7,712.0	4,434.4	-462.9	4,446.0	0.00	0.00	0.00
12,700.0	90.00	1.91	7,712.0	4,534.4	-459.6	4,545.9	0.00	0.00	0.00
12,800.0	90.00	1.91	7,712.0	4,634.3	-456.3	4,645.7	0.00	0.00	0.00
12,900.0	90.00	1.91	7,712.0	4,734.3	-452.9	4,745.5	0.00	0.00	0.00
13,000.0	90.00	1.91	7,712.0	4,834.2	-449.6	4,845.3	0.00	0.00	0.00
13,100.0	90.00	1.92	7,712.0	4,934.2	-446.2	4,945.1	0.00	0.00	0.00
13,200.0	90.00	1.92	7,712.0	5,034.1	-442.9	5,044.9	0.00	0.00	0.00
13,300.0	90.00	1.92	7,712.0	5,134.0	-439.5	5,144.7	0.00	0.00	0.00
13,400.0	90.00	1.92	7,712.0	5,234.0	-436.2	5,244.5	0.00	0.00	0.00
13,500.0	90.00	1.92	7,712.0	5,333.9	-432.9	5,344.3	0.00	0.00	0.00
13,600.0	90.00	1.92	7,712.0	5,433.9	-429.5	5,444.1	0.00	0.00	0.00
13,700.0	90.00	1.92	7,712.0	5,533.8	-426.2	5,543.9	0.00	0.00	0.00
13,800.0	90.00	1.92	7,712.0	5,633.8	-422.8	5,643.7	0.00	0.00	0.00
13,900.0	90.00	1.92	7,712.0	5,733.7	-419.5	5,743.5	0.00	0.00	0.00
14,000.0	90.00	1.92	7,712.0	5,833.7	-416.1	5,843.3	0.00	0.00	0.00
14,100.0	90.00	1.92	7,712.0	5,933.6	-412.8	5,943.1	0.00	0.00	0.00
14,200.0	90.00	1.92	7,712.0	6,033.5	-409.4	6,042.9	0.00	0.00	0.00
14,300.0	90.00	1.92	7,712.0	6,133.5	-406.1	6,142.7	0.00	0.00	0.00
14,400.0	90.00	1.92	7,712.0	6,233.4	-402.8	6,242.5	0.00	0.00	0.00
14,500.0	90.00	1.92	7,712.0	6,333.4	-399.4	6,342.3	0.00	0.00	0.00
14,600.0	90.00	1.92	7,712.0	6,433.3	-396.1	6,442.1	0.00	0.00	0.00
14,700.0	90.00	1.92	7,712.0	6,533.3	-392.7	6,541.9	0.00	0.00	0.00
14,800.0	90.00	1.92	7,712.0	6,633.2	-389.4	6,641.7	0.00	0.00	0.00
14,900.0	90.00	1.92	7,712.0	6,733.1	-386.0	6,741.5	0.00	0.00	0.00
15,000.0	90.00	1.92	7,712.0	6,833.1	-382.7	6,841.3	0.00	0.00	0.00
15,100.0	90.00	1.92	7,712.0	6,933.0	-379.3	6,941.1	0.00	0.00	0.00
15,200.0	90.00	1.92	7,712.0	7,033.0	-376.0	7,041.0	0.00	0.00	0.00
15,300.0	90.00	1.92	7,712.0	7,132.9	-372.6	7,140.8	0.00	0.00	0.00
15,400.0	90.00	1.92	7,712.0	7,232.9	-369.3	7,240.6	0.00	0.00	0.00
15,500.0	90.00	1.92	7,712.0	7,332.8	-365.9	7,340.4	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

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)	
15,600.0	90.00	1.92	7,712.0	7,432.8	-362.6	7,440.2	0.00	0.00	0.00	
15,700.0	90.00	1.92	7,712.0	7,532.7	-359.2	7,540.0	0.00	0.00	0.00	
15,800.0	90.00	1.92	7,712.0	7,632.6	-355.9	7,639.8	0.00	0.00	0.00	
15,900.0	90.00	1.92	7,712.0	7,732.6	-352.5	7,739.6	0.00	0.00	0.00	
16,000.0	90.00	1.92	7,712.0	7,832.5	-349.2	7,839.4	0.00	0.00	0.00	
16,100.0	90.00	1.92	7,712.0	7,932.5	-345.8	7,939.2	0.00	0.00	0.00	
16,200.0	90.00	1.92	7,712.0	8,032.4	-342.5	8,039.0	0.00	0.00	0.00	
16,300.0	90.00	1.92	7,712.0	8,132.4	-339.1	8,138.8	0.00	0.00	0.00	
16,400.0	90.00	1.92	7,712.0	8,232.3	-335.7	8,238.6	0.00	0.00	0.00	
16,500.0	90.00	1.92	7,712.0	8,332.2	-332.4	8,338.4	0.00	0.00	0.00	
16,600.0	90.00	1.92	7,712.0	8,432.2	-329.0	8,438.2	0.00	0.00	0.00	
16,700.0	90.00	1.92	7,712.0	8,532.1	-325.7	8,538.0	0.00	0.00	0.00	
16,800.0	90.00	1.92	7,712.0	8,632.1	-322.3	8,637.8	0.00	0.00	0.00	
16,900.0	90.00	1.92	7,712.0	8,732.0	-319.0	8,737.6	0.00	0.00	0.00	
17,000.0	90.00	1.92	7,712.0	8,832.0	-315.6	8,837.4	0.00	0.00	0.00	
17,100.0	90.00	1.92	7,712.0	8,931.9	-312.3	8,937.2	0.00	0.00	0.00	
17,200.0	90.00	1.92	7,712.0	9,031.9	-308.9	9,037.0	0.00	0.00	0.00	
17,300.0	90.00	1.92	7,712.0	9,131.8	-305.5	9,136.8	0.00	0.00	0.00	
17,400.0	90.00	1.92	7,712.0	9,231.7	-302.2	9,236.6	0.00	0.00	0.00	
17,500.0	90.00	1.92	7,712.0	9,331.7	-298.8	9,336.4	0.00	0.00	0.00	
17,600.0	90.00	1.92	7,712.0	9,431.6	-295.5	9,436.2	0.00	0.00	0.00	
17,700.0	90.00	1.92	7,712.0	9,531.6	-292.1	9,536.0	0.00	0.00	0.00	
17,800.0	90.00	1.92	7,712.0	9,631.5	-288.8	9,635.8	0.00	0.00	0.00	
17,900.0	90.00	1.93	7,712.0	9,731.5	-285.4	9,735.6	0.00	0.00	0.00	
17,924.1	90.00	1.93	7,712.0	9,755.5	-284.6	9,759.7	0.00	0.00	0.00	
TD at 17924.1 - BHL 587'FNL & 1460'FEL, Sec.20										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL 250'FSL & 850'FEL	0.00	0.00	1.0	0.0	0.0	1,599,809.62	3,320,911.50	40.974064	-104.337883
- plan hits target center									
- Point									
BHL 587'FNL & 1460'FE	0.00	0.00	7,712.0	9,755.5	-284.6	1,609,560.88	3,320,499.07	41.000839	-104.338914
- plan hits target center									
- Point									
LP 300'FSL & 1460'FEL,	0.00	0.00	7,712.0	48.5	-609.2	1,599,850.11	3,320,301.72	40.974197	-104.340089
- plan hits target center									
- Point									

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,618.0	1,618.0	Pierre C&D Sand				
2,398.9	2,395.0	Base Pierre C&D Sand				
2,828.8	2,816.0	Pierre B Sand				
2,900.3	2,886.0	Base Pierre B Sand				
3,654.2	3,624.0	Pierre A Sand				
4,110.8	4,071.0	Base Pierre A Sand				
4,422.4	4,376.0	Parkman				
4,899.4	4,843.0	Base Parkman				
7,420.1	7,318.0	Lower Sharon Springs				
7,556.2	7,433.0	Lower Sharon Springs GR Marker				
7,610.9	7,475.0	Niobrara A Chalk				
7,620.4	7,482.0	Niobrara A Marl GR Marker				
7,623.1	7,484.0	Niobrara B1 Chalk				
7,666.7	7,515.0	Niobrara B1 Marl				
7,685.9	7,528.0	Niobrara B Chalk				
7,722.8	7,552.0	Niobrara B Marl				
7,827.9	7,612.0	Niobrara M Zone				
7,903.4	7,647.0	Niobrara M Zone Base				
7,996.0	7,680.0	Ft Hays				
8,091.1	7,702.0	Codell				
8,210.9	7,712.0	Codell target				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,700.0	1,700.0	0.0	0.0	KOP - Start Build 1.50	
6,300.8	6,214.8	-58.5	-55.4	Start Drop -2.00	
7,085.9	6,995.8	-624.1	-591.4	KOP #2 - Start Build 8.00	
17,924.1	7,712.0	-668.0	-633.0	TD at 17924.1	



Fifth Creek Energy Company, LLC

Sec.29-T12N-R62W

Randall Creek 29 SESE Pad Sec.29-T12N-R62W

Randall Creek 504-2920H

Wellbore #1

Plan #1 (3-13-17)

Anticollision Report

14 March, 2017

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-13-17)		
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	3/14/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,924.1	Plan #1 (3-13-17) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells Sec.29-T12N-R62W						
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	9,635.7	8,548.4	434.4	407.9	16.429	CC
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	9,700.0	8,619.8	434.9	406.6	15.364	ES
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	10,400.0	9,127.5	659.0	593.6	10.070	SF
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	9,635.7	8,548.4	434.4	407.9	16.429	CC
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	9,700.0	8,619.8	434.9	406.6	15.364	ES
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	10,400.0	9,127.5	659.0	593.6	10.070	SF
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	5,894.5	5,814.2	270.3	239.9	8.894	CC
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	5,900.0	5,819.6	270.3	239.9	8.883	ES
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	6,200.0	6,113.3	277.6	245.3	8.591	SF
Randall Creek 29 SESE Pad Sec.29-T12N-R62W						
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	1,500.0	1,500.0	25.4	18.9	3.898	CC
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	17,924.1	17,852.5	235.5	-86.6	0.731	Level 1, ES, SF
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	1,700.0	1,700.0	24.6	17.2	3.313	CC, ES
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	17,924.1	17,778.2	480.7	111.7	1.303	Level 3, SF
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	1,500.0	1,500.0	74.3	67.8	11.396	CC, ES
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	17,924.1	17,762.0	1,118.4	741.2	2.965	SF
Randall Creek 503-2920H - Wellbore #1 - Plan #1 (3-13-	1,700.0	1,700.0	49.7	42.3	6.701	CC, ES
Randall Creek 503-2920H - Wellbore #1 - Plan #1 (3-13-	17,924.1	17,860.2	759.5	379.9	2.000	SF
Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	50.8	47.4	15.071	CC, ES
Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3-13-	17,924.1	18,041.5	759.9	382.6	2.014	SF

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program:		1415-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	55.02	252.2	360.4	439.8						
100.0	100.0	100.0	100.0	0.1	0.1	55.02	252.2	360.4	439.8	439.6	0.22	1,955.190			
200.0	200.0	200.0	200.0	0.3	0.2	55.02	252.2	360.4	439.8	439.3	0.56	782.484			
300.0	300.0	300.0	300.0	0.6	0.3	55.02	252.2	360.4	439.8	438.9	0.90	489.116			
400.0	400.0	400.0	400.0	0.8	0.4	55.02	252.2	360.4	439.8	438.6	1.24	355.742			
500.0	500.0	500.0	500.0	1.0	0.6	55.02	252.2	360.4	439.8	438.3	1.57	279.521			

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		1415-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
600.0	600.0	600.0	600.0	1.2	0.7	55.02	252.2	360.4	439.8	437.9	1.91	230.199			
700.0	700.0	700.0	700.0	1.5	0.8	55.02	252.2	360.4	439.8	437.6	2.25	195.672			
800.0	800.0	800.0	800.0	1.7	0.9	55.02	252.2	360.4	439.8	437.2	2.58	170.151			
900.0	900.0	900.0	900.0	1.9	1.0	55.02	252.2	360.4	439.8	436.9	2.92	150.520			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	1.1	55.02	252.2	360.4	439.8	436.6	3.26	134.950			
1,100.0	1,100.0	1,100.0	1,100.0	2.4	1.2	55.02	252.2	360.4	439.8	436.2	3.60	122.299			
1,200.0	1,200.0	1,200.0	1,200.0	2.6	1.3	55.02	252.2	360.4	439.8	435.9	3.93	111.817			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	1.5	55.02	252.2	360.4	439.8	435.6	4.27	102.989			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	1.6	55.02	252.2	360.4	439.8	435.2	4.61	95.454			
1,500.0	1,500.0	1,498.4	1,498.4	3.3	1.8	54.98	252.5	360.3	440.0	435.0	5.04	87.360			
1,600.0	1,600.0	1,597.7	1,597.7	3.5	2.0	54.88	253.4	360.3	440.5	435.0	5.48	80.310			
1,700.0	1,700.0	1,696.9	1,696.9	3.7	2.2	54.72	254.7	360.1	441.1	435.2	5.93	74.354			
1,800.0	1,800.0	1,796.0	1,795.9	3.9	2.4	-168.95	256.4	359.9	443.2	436.8	6.35	69.766			
1,900.0	1,899.9	1,894.9	1,894.9	4.1	2.7	-169.23	258.2	359.8	448.0	441.3	6.75	66.379			
2,000.0	1,999.7	1,993.8	1,993.8	4.3	2.9	-169.57	260.3	359.8	455.7	448.5	7.15	63.744			
2,100.0	2,099.3	2,092.6	2,092.5	4.5	3.1	-169.96	262.5	359.9	466.1	458.5	7.55	61.748			
2,200.0	2,198.6	2,191.0	2,190.8	4.7	3.3	-170.40	264.9	359.9	479.2	471.2	7.95	60.303			
2,300.0	2,297.5	2,288.6	2,288.4	4.9	3.5	-170.87	267.5	360.1	495.0	486.7	8.34	59.341			
2,400.0	2,396.1	2,385.4	2,385.2	5.2	3.8	-171.35	270.3	360.3	513.7	505.0	8.74	58.807			
2,500.0	2,494.2	2,481.6	2,481.3	5.5	4.0	-171.86	273.3	360.7	535.2	526.1	9.13	58.621			
2,600.0	2,592.1	2,583.8	2,583.5	5.8	4.2	-172.37	276.1	361.1	557.4	547.9	9.54	58.430			
2,700.0	2,690.0	2,687.0	2,686.7	6.1	4.4	-172.76	277.6	361.3	578.7	568.8	9.95	58.135			
2,800.0	2,787.8	2,785.8	2,785.5	6.5	4.6	-173.04	278.1	361.4	599.4	589.0	10.36	57.880			
2,900.0	2,885.7	2,883.4	2,883.1	6.8	4.8	-173.28	278.4	361.6	620.1	609.3	10.75	57.653			
3,000.0	2,983.6	2,980.9	2,980.6	7.2	4.9	-173.48	278.5	362.1	640.8	629.6	11.16	57.416			
3,100.0	3,081.5	3,078.0	3,077.7	7.6	5.1	-173.65	278.6	362.7	661.6	650.0	11.58	57.116			
3,200.0	3,179.4	3,175.2	3,174.9	8.0	5.3	-173.80	278.7	363.4	682.5	670.5	12.01	56.833			
3,300.0	3,277.3	3,273.0	3,272.7	8.4	5.5	-173.94	278.8	364.2	703.5	691.1	12.44	56.558			
3,400.0	3,375.2	3,371.6	3,371.3	8.8	5.7	-174.05	278.6	365.2	724.4	711.5	12.87	56.280			
3,500.0	3,473.1	3,470.2	3,469.9	9.2	5.9	-174.13	278.1	366.2	745.2	731.9	13.31	56.003			
3,600.0	3,571.0	3,567.5	3,567.1	9.6	6.1	-174.22	277.7	367.2	766.0	752.3	13.74	55.732			
3,700.0	3,668.9	3,664.6	3,664.3	10.0	6.3	-174.32	277.5	368.0	786.9	772.7	14.18	55.479			
3,800.0	3,766.8	3,762.0	3,761.7	10.5	6.5	-174.44	277.7	368.6	807.8	793.2	14.63	55.221			
3,900.0	3,864.6	3,859.7	3,859.3	10.9	6.7	-174.55	277.9	369.3	828.8	813.7	15.08	54.950			
4,000.0	3,962.5	3,957.3	3,957.0	11.3	6.9	-174.67	278.1	369.9	849.7	834.2	15.54	54.691			
4,100.0	4,060.4	4,055.8	4,055.5	11.7	7.2	-174.78	278.4	370.5	870.7	854.7	15.99	54.444			
4,200.0	4,158.3	4,154.6	4,154.3	12.2	7.4	-174.91	278.8	370.8	891.5	875.1	16.45	54.201			
4,300.0	4,256.2	4,253.1	4,252.7	12.6	7.6	-175.04	279.3	370.9	912.3	895.4	16.90	53.969			
4,400.0	4,354.1	4,350.6	4,350.3	13.0	7.8	-175.17	279.8	371.0	933.0	915.7	17.35	53.763			
4,500.0	4,452.0	4,448.2	4,447.9	13.5	8.0	-175.29	280.3	371.1	953.8	936.0	17.81	53.566			
4,600.0	4,549.9	4,547.2	4,546.8	13.9	8.2	-175.41	280.7	371.2	974.5	956.3	18.26	53.379			
4,700.0	4,647.8	4,647.0	4,646.7	14.4	8.4	-175.52	281.1	371.2	995.1	976.4	18.71	53.190			
4,800.0	4,745.7	4,746.7	4,746.3	14.8	8.6	-175.63	281.4	371.0	1,015.5	996.3	19.16	52.998			
4,900.0	4,843.6	4,844.2	4,843.9	15.2	8.8	-175.75	281.7	370.5	1,035.8	1,016.2	19.61	52.810			
5,000.0	4,941.5	4,941.8	4,941.4	15.7	9.0	-175.89	282.5	369.9	1,056.2	1,036.1	20.07	52.632			
5,100.0	5,039.3	5,042.3	5,042.0	16.1	9.2	-176.04	283.4	368.9	1,076.5	1,056.0	20.53	52.441			
5,200.0	5,137.2	5,146.1	5,145.7	16.6	9.4	-176.21	284.3	367.4	1,096.4	1,075.4	21.00	52.216			
5,300.0	5,235.1	5,249.8	5,249.4	17.0	9.6	-176.38	284.9	365.3	1,115.8	1,094.3	21.47	51.977			
5,400.0	5,333.0	5,349.1	5,348.7	17.5	9.8	-176.54	285.4	363.1	1,134.9	1,112.9	21.93	51.760			
5,500.0	5,430.9	5,448.4	5,447.9	17.9	10.0	-176.70	285.9	360.7	1,153.9	1,131.5	22.38	51.549			
5,600.0	5,528.8	5,546.3	5,545.8	18.4	10.2	-176.86	286.4	358.2	1,172.8	1,149.9	22.84	51.347			

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		1415-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,700.0	5,626.7	5,642.8	5,642.3	18.8	10.4	-177.01	286.8	356.0	1,191.8	1,168.5	23.29	51.163			
8,000.0	7,681.2	7,385.2	7,242.8	21.1	15.7	50.27	563.6	174.9	1,158.2	1,132.8	25.46	45.496			
8,100.0	7,703.4	7,434.0	7,257.8	20.8	16.3	53.53	602.2	149.2	1,105.2	1,078.4	26.79	41.259			
8,200.0	7,711.9	7,466.0	7,264.8	20.5	16.7	57.68	628.2	131.9	1,048.5	1,019.9	28.60	36.658			
8,300.0	7,712.0	7,510.8	7,270.9	20.2	17.3	57.62	665.1	107.2	991.2	962.0	29.23	33.913			
8,400.0	7,712.0	7,578.3	7,275.3	20.1	18.3	56.36	721.2	69.9	937.0	907.3	29.71	31.541			
8,500.0	7,712.0	7,720.0	7,280.8	20.8	20.6	52.75	833.9	-15.6	879.9	849.7	30.22	29.118			
8,600.0	7,712.0	7,803.6	7,282.1	21.7	22.1	49.93	897.8	-69.5	821.5	791.0	30.54	26.900			
8,700.0	7,712.0	7,890.8	7,284.5	22.7	23.7	46.59	963.6	-126.6	763.2	732.5	30.71	24.853			
8,800.0	7,712.0	7,962.0	7,286.9	23.8	25.1	43.46	1,016.9	-173.8	705.9	675.1	30.81	22.910			
8,900.0	7,712.0	8,015.6	7,286.2	24.9	26.2	40.66	1,056.7	-209.7	652.4	621.5	30.88	21.125			
9,000.0	7,712.0	8,089.4	7,283.9	26.2	27.7	36.32	1,111.6	-258.9	603.4	573.1	30.33	19.891			
9,100.0	7,712.0	8,163.0	7,282.4	27.5	29.3	31.56	1,166.6	-307.9	558.1	528.6	29.47	18.939			
9,200.0	7,712.0	8,237.8	7,282.7	28.9	30.8	26.39	1,222.9	-357.0	516.9	488.6	28.33	18.245			
9,300.0	7,712.0	8,309.1	7,283.3	30.3	32.3	21.17	1,278.2	-402.1	482.8	455.6	27.20	17.752			
9,400.0	7,712.0	8,368.2	7,283.5	31.7	33.6	16.75	1,325.5	-437.6	457.1	430.6	26.52	17.234			
9,500.0	7,712.0	8,438.4	7,281.4	33.3	35.1	11.25	1,382.0	-479.1	441.7	415.8	25.88	17.064			
9,600.0	7,712.0	8,518.8	7,278.9	34.8	36.9	4.65	1,446.1	-527.4	434.7	408.7	26.01	16.712			
9,635.7	7,712.0	8,548.4	7,278.0	35.4	37.5	2.16	1,469.7	-545.4	434.4	407.9	26.44	16.429	CC		
9,700.0	7,712.0	8,619.8	7,278.1	36.4	39.1	-3.70	1,526.9	-588.0	434.9	406.6	28.31	15.364	ES		
9,800.0	7,712.0	8,690.0	7,279.0	38.0	40.6	-9.47	1,583.0	-630.4	442.4	410.7	31.73	13.943			
9,900.0	7,712.0	8,762.0	7,279.9	39.6	42.3	-15.35	1,639.5	-674.9	459.2	422.9	36.36	12.629			
10,000.0	7,712.0	8,825.0	7,278.9	41.3	43.7	-20.18	1,689.0	-713.9	485.9	444.8	41.05	11.836			
10,100.0	7,712.0	8,897.7	7,276.5	43.0	45.4	-25.39	1,745.5	-759.5	520.9	474.2	46.63	11.169			
10,200.0	7,712.0	8,967.0	7,277.2	44.7	47.0	-30.45	1,796.3	-806.7	562.0	509.5	52.47	10.711			
10,300.0	7,712.0	9,037.0	7,279.8	46.4	48.6	-35.33	1,846.0	-855.9	608.9	550.4	58.45	10.416			
10,400.0	7,712.0	9,127.5	7,284.2	48.1	50.8	-40.94	1,911.2	-918.4	659.0	593.6	65.45	10.070	SF		
10,500.0	7,712.0	9,182.0	7,288.3	49.9	52.1	-44.09	1,950.0	-956.5	712.5	642.4	70.05	10.171			
10,600.0	7,712.0	9,228.8	7,290.5	51.6	53.2	-46.55	1,982.7	-990.0	771.1	697.1	74.03	10.416			
10,700.0	7,712.0	9,270.0	7,292.0	53.4	54.2	-48.56	2,010.9	-1,019.9	833.8	756.2	77.61	10.743			
10,800.0	7,712.0	9,333.4	7,290.9	55.2	55.7	-51.17	2,054.7	-1,065.8	899.6	817.6	82.00	10.972			
10,900.0	7,712.0	9,435.7	7,293.1	56.9	58.2	-55.02	2,125.9	-1,139.1	964.7	876.8	87.90	10.975			
11,000.0	7,712.0	9,502.8	7,295.9	58.7	59.8	-57.31	2,172.5	-1,187.2	1,030.8	938.7	92.11	11.190			
11,100.0	7,712.0	9,562.0	7,297.9	60.5	61.2	-59.10	2,214.0	-1,229.4	1,097.8	1,001.9	95.86	11.452			
11,200.0	7,712.0	9,608.2	7,296.9	62.3	62.3	-60.24	2,246.5	-1,262.3	1,166.5	1,067.6	98.96	11.788			

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2												Offset Site Error:	0.0 ft
Survey Program: 1415-MWD, 9999-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	55.02	252.2	360.4	439.8				
100.0	100.0	100.0	100.0	0.1	0.1	55.02	252.2	360.4	439.8	439.6	0.22	1,955.190	
200.0	200.0	200.0	200.0	0.3	0.2	55.02	252.2	360.4	439.8	439.3	0.56	782.484	
300.0	300.0	300.0	300.0	0.6	0.3	55.02	252.2	360.4	439.8	438.9	0.90	489.116	
400.0	400.0	400.0	400.0	0.8	0.4	55.02	252.2	360.4	439.8	438.6	1.24	355.742	
500.0	500.0	500.0	500.0	1.0	0.6	55.02	252.2	360.4	439.8	438.3	1.57	279.521	
600.0	600.0	600.0	600.0	1.2	0.7	55.02	252.2	360.4	439.8	437.9	1.91	230.199	
700.0	700.0	700.0	700.0	1.5	0.8	55.02	252.2	360.4	439.8	437.6	2.25	195.672	
800.0	800.0	800.0	800.0	1.7	0.9	55.02	252.2	360.4	439.8	437.2	2.58	170.151	
900.0	900.0	900.0	900.0	1.9	1.0	55.02	252.2	360.4	439.8	436.9	2.92	150.520	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	1.1	55.02	252.2	360.4	439.8	436.6	3.26	134.950	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	1.2	55.02	252.2	360.4	439.8	436.2	3.60	122.299	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	1.3	55.02	252.2	360.4	439.8	435.9	3.93	111.817	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	1.5	55.02	252.2	360.4	439.8	435.6	4.27	102.989	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	1.6	55.02	252.2	360.4	439.8	435.2	4.61	95.454	
1,500.0	1,500.0	1,498.4	1,498.4	3.3	1.8	54.98	252.5	360.3	440.0	435.0	5.04	87.360	
1,600.0	1,600.0	1,597.7	1,597.7	3.5	2.0	54.88	253.4	360.3	440.5	435.0	5.48	80.310	
1,700.0	1,700.0	1,696.9	1,696.9	3.7	2.2	54.72	254.7	360.1	441.1	435.2	5.93	74.354	
1,800.0	1,800.0	1,796.0	1,795.9	3.9	2.4	-168.95	256.4	359.9	443.2	436.8	6.35	69.766	
1,900.0	1,899.9	1,894.9	1,894.9	4.1	2.7	-169.23	258.2	359.8	448.0	441.3	6.75	66.379	
2,000.0	1,999.7	1,993.8	1,993.8	4.3	2.9	-169.57	260.3	359.8	455.7	448.5	7.15	63.744	
2,100.0	2,099.3	2,092.6	2,092.5	4.5	3.1	-169.96	262.5	359.9	466.1	458.5	7.55	61.748	
2,200.0	2,198.6	2,191.0	2,190.8	4.7	3.3	-170.40	264.9	359.9	479.2	471.2	7.95	60.303	
2,300.0	2,297.5	2,288.6	2,288.4	4.9	3.5	-170.87	267.5	360.1	495.0	486.7	8.34	59.341	
2,400.0	2,396.1	2,385.4	2,385.2	5.2	3.8	-171.35	270.3	360.3	513.7	505.0	8.74	58.807	
2,500.0	2,494.2	2,481.6	2,481.3	5.5	4.0	-171.86	273.3	360.7	535.2	526.1	9.13	58.621	
2,600.0	2,592.1	2,583.8	2,583.5	5.8	4.2	-172.37	276.1	361.1	557.4	547.9	9.54	58.430	
2,700.0	2,690.0	2,687.0	2,686.7	6.1	4.4	-172.76	277.6	361.3	578.7	568.8	9.95	58.135	
2,800.0	2,787.8	2,785.8	2,785.5	6.5	4.6	-173.04	278.1	361.4	599.4	589.0	10.36	57.880	
2,900.0	2,885.7	2,883.4	2,883.1	6.8	4.8	-173.28	278.4	361.6	620.1	609.3	10.75	57.653	
3,000.0	2,983.6	2,980.9	2,980.6	7.2	4.9	-173.48	278.5	362.1	640.8	629.6	11.16	57.416	
3,100.0	3,081.5	3,078.0	3,077.7	7.6	5.1	-173.65	278.6	362.7	661.6	650.0	11.58	57.116	
3,200.0	3,179.4	3,175.2	3,174.9	8.0	5.3	-173.80	278.7	363.4	682.5	670.5	12.01	56.833	
3,300.0	3,277.3	3,273.0	3,272.7	8.4	5.5	-173.94	278.8	364.2	703.5	691.1	12.44	56.558	
3,400.0	3,375.2	3,371.6	3,371.3	8.8	5.7	-174.05	278.6	365.2	724.4	711.5	12.87	56.280	
3,500.0	3,473.1	3,470.2	3,469.9	9.2	5.9	-174.13	278.1	366.2	745.2	731.9	13.31	56.003	
3,600.0	3,571.0	3,567.5	3,567.1	9.6	6.1	-174.22	277.7	367.2	766.0	752.3	13.74	55.732	
3,700.0	3,668.9	3,664.6	3,664.3	10.0	6.3	-174.32	277.5	368.0	786.9	772.7	14.18	55.479	
3,800.0	3,766.8	3,762.0	3,761.7	10.5	6.5	-174.44	277.7	368.6	807.8	793.2	14.63	55.221	
3,900.0	3,864.6	3,859.7	3,859.3	10.9	6.7	-174.55	277.9	369.3	828.8	813.7	15.08	54.950	
4,000.0	3,962.5	3,957.3	3,957.0	11.3	6.9	-174.67	278.1	369.9	849.7	834.2	15.54	54.691	
4,100.0	4,060.4	4,055.8	4,055.5	11.7	7.2	-174.78	278.4	370.5	870.7	854.7	15.99	54.444	
4,200.0	4,158.3	4,154.6	4,154.3	12.2	7.4	-174.91	278.8	370.8	891.5	875.1	16.45	54.201	
4,300.0	4,256.2	4,253.1	4,252.7	12.6	7.6	-175.04	279.3	370.9	912.3	895.4	16.90	53.969	
4,400.0	4,354.1	4,350.6	4,350.3	13.0	7.8	-175.17	279.8	371.0	933.0	915.7	17.35	53.763	
4,500.0	4,452.0	4,448.2	4,447.9	13.5	8.0	-175.29	280.3	371.1	953.8	936.0	17.81	53.566	
4,600.0	4,549.9	4,547.2	4,546.8	13.9	8.2	-175.41	280.7	371.2	974.5	956.3	18.26	53.379	
4,700.0	4,647.8	4,647.0	4,646.7	14.4	8.4	-175.52	281.1	371.2	995.1	976.4	18.71	53.190	
4,800.0	4,745.7	4,746.7	4,746.3	14.8	8.6	-175.63	281.4	371.0	1,015.5	996.3	19.16	52.998	
4,900.0	4,843.6	4,844.2	4,843.9	15.2	8.8	-175.75	281.7	370.5	1,035.8	1,016.2	19.61	52.810	
5,000.0	4,941.5	4,941.8	4,941.4	15.7	9.0	-175.89	282.5	369.9	1,056.2	1,036.1	20.07	52.632	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2										Offset Site Error:		0.0 ft
Survey Program:		1415-MWD, 9999-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.0	5,039.3	5,042.3	5,042.0	16.1	9.2	-176.04	283.4	368.9	1,076.5	1,056.0	20.53	52.441		
5,200.0	5,137.2	5,146.1	5,145.7	16.6	9.4	-176.21	284.3	367.4	1,096.4	1,075.4	21.00	52.216		
5,300.0	5,235.1	5,249.8	5,249.4	17.0	9.6	-176.38	284.9	365.3	1,115.8	1,094.3	21.47	51.977		
5,400.0	5,333.0	5,349.1	5,348.7	17.5	9.8	-176.54	285.4	363.1	1,134.9	1,112.9	21.93	51.760		
5,500.0	5,430.9	5,448.4	5,447.9	17.9	10.0	-176.70	285.9	360.7	1,153.9	1,131.5	22.38	51.549		
5,600.0	5,528.8	5,546.3	5,545.8	18.4	10.2	-176.86	286.4	358.2	1,172.8	1,149.9	22.84	51.347		
5,700.0	5,626.7	5,642.8	5,642.3	18.8	10.4	-177.01	286.8	356.0	1,191.8	1,168.5	23.29	51.163		
8,000.0	7,681.2	7,385.2	7,242.8	21.1	15.7	50.27	563.6	174.9	1,158.2	1,132.8	25.46	45.496		
8,100.0	7,703.4	7,434.0	7,257.8	20.8	16.3	53.53	602.2	149.2	1,105.2	1,078.4	26.79	41.259		
8,200.0	7,711.9	7,466.0	7,264.8	20.5	16.7	57.68	628.2	131.9	1,048.5	1,019.9	28.60	36.658		
8,300.0	7,712.0	7,510.8	7,270.9	20.2	17.3	57.62	665.1	107.2	991.2	962.0	29.23	33.913		
8,400.0	7,712.0	7,578.3	7,275.3	20.1	18.3	56.36	721.2	69.9	937.0	907.3	29.71	31.541		
8,500.0	7,712.0	7,720.0	7,280.8	20.8	20.6	52.75	833.9	-15.6	879.9	849.7	30.22	29.118		
8,600.0	7,712.0	7,803.6	7,282.1	21.7	22.1	49.93	897.8	-69.5	821.5	791.0	30.54	26.900		
8,700.0	7,712.0	7,890.8	7,284.5	22.7	23.7	46.59	963.6	-126.6	763.2	732.5	30.71	24.853		
8,800.0	7,712.0	7,962.0	7,286.9	23.8	25.1	43.46	1,016.9	-173.8	705.9	675.1	30.81	22.910		
8,900.0	7,712.0	8,015.6	7,286.2	24.9	26.2	40.66	1,056.7	-209.7	652.4	621.5	30.88	21.125		
9,000.0	7,712.0	8,089.4	7,283.9	26.2	27.7	36.32	1,111.6	-258.9	603.4	573.1	30.33	19.891		
9,100.0	7,712.0	8,163.0	7,282.4	27.5	29.3	31.56	1,166.6	-307.9	558.1	528.6	29.47	18.939		
9,200.0	7,712.0	8,237.8	7,282.7	28.9	30.8	26.39	1,222.9	-357.0	516.9	488.6	28.33	18.245		
9,300.0	7,712.0	8,309.1	7,283.3	30.3	32.3	21.17	1,278.2	-402.1	482.8	455.6	27.20	17.752		
9,400.0	7,712.0	8,368.2	7,283.5	31.7	33.6	16.75	1,325.5	-437.6	457.1	430.6	26.52	17.234		
9,500.0	7,712.0	8,438.4	7,281.4	33.3	35.1	11.25	1,382.0	-479.1	441.7	415.8	25.88	17.064		
9,600.0	7,712.0	8,518.8	7,278.9	34.8	36.9	4.65	1,446.1	-527.4	434.7	408.7	26.01	16.712		
9,635.7	7,712.0	8,548.4	7,278.0	35.4	37.5	2.16	1,469.7	-545.4	434.4	407.9	26.44	16.429 CC		
9,700.0	7,712.0	8,619.8	7,278.1	36.4	39.1	-3.70	1,526.9	-588.0	434.9	406.6	28.31	15.364 ES		
9,800.0	7,712.0	8,690.0	7,279.0	38.0	40.6	-9.47	1,583.0	-630.4	442.4	410.7	31.73	13.943		
9,900.0	7,712.0	8,762.0	7,279.9	39.6	42.3	-15.35	1,639.5	-674.9	459.2	422.9	36.36	12.629		
10,000.0	7,712.0	8,825.0	7,278.9	41.3	43.7	-20.18	1,689.0	-713.9	485.9	444.8	41.05	11.836		
10,100.0	7,712.0	8,897.7	7,276.5	43.0	45.4	-25.39	1,745.5	-759.5	520.9	474.2	46.63	11.169		
10,200.0	7,712.0	8,967.0	7,277.2	44.7	47.0	-30.45	1,796.3	-806.7	562.0	509.5	52.47	10.711		
10,300.0	7,712.0	9,037.0	7,279.8	46.4	48.6	-35.33	1,846.0	-855.9	608.9	550.4	58.45	10.416		
10,400.0	7,712.0	9,127.5	7,284.2	48.1	50.8	-40.94	1,911.2	-918.4	659.0	593.6	65.45	10.070 SF		
10,500.0	7,712.0	9,182.0	7,288.3	49.9	52.1	-44.09	1,950.0	-956.5	712.5	642.4	70.05	10.171		
10,600.0	7,712.0	9,228.8	7,290.5	51.6	53.2	-46.55	1,982.7	-990.0	771.1	697.1	74.03	10.416		
10,700.0	7,712.0	9,270.0	7,292.0	53.4	54.2	-48.56	2,010.9	-1,019.9	833.8	756.2	77.61	10.743		
10,800.0	7,712.0	9,333.4	7,290.9	55.2	55.7	-51.17	2,054.7	-1,065.8	899.6	817.6	82.00	10.972		
10,900.0	7,712.0	9,435.7	7,293.1	56.9	58.2	-55.02	2,125.9	-1,139.1	964.7	876.8	87.90	10.975		
11,000.0	7,712.0	9,502.8	7,295.9	58.7	59.8	-57.31	2,172.5	-1,187.2	1,030.8	938.7	92.11	11.190		
11,100.0	7,712.0	9,562.0	7,297.9	60.5	61.2	-59.10	2,214.0	-1,229.4	1,097.8	1,001.9	95.86	11.452		
11,200.0	7,712.0	9,608.2	7,296.9	62.3	62.3	-60.24	2,246.5	-1,262.3	1,166.5	1,067.6	98.96	11.788		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 1409-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	1.0	1.0	0.0	0.0	-154.41	-756.0	-362.0	838.2				
100.0	100.0	101.0	101.0	0.1	0.1	-154.41	-756.0	-362.0	838.2	838.0	0.23	3,707.664	
200.0	200.0	201.0	201.0	0.3	0.2	-154.41	-756.0	-362.0	838.2	837.6	0.56	1,488.275	
300.0	300.0	301.0	301.0	0.6	0.3	-154.41	-756.0	-362.0	838.2	837.3	0.90	930.990	
400.0	400.0	401.0	401.0	0.8	0.5	-154.41	-756.0	-362.0	838.2	837.0	1.24	677.354	
500.0	500.0	501.0	501.0	1.0	0.6	-154.41	-756.0	-362.0	838.2	836.6	1.57	532.328	
600.0	600.0	601.0	601.0	1.2	0.7	-154.41	-756.0	-362.0	838.2	836.3	1.91	438.453	
700.0	700.0	701.0	701.0	1.5	0.8	-154.41	-756.0	-362.0	838.2	836.0	2.25	372.723	
800.0	800.0	801.0	801.0	1.7	0.9	-154.41	-756.0	-362.0	838.2	835.6	2.59	324.132	
900.0	900.0	901.0	901.0	1.9	1.0	-154.41	-756.0	-362.0	838.2	835.3	2.92	286.749	
1,000.0	1,000.0	1,001.0	1,001.0	2.1	1.1	-154.41	-756.0	-362.0	838.2	835.0	3.26	257.097	
1,100.0	1,100.0	1,101.0	1,101.0	2.4	1.2	-154.41	-756.0	-362.0	838.2	834.6	3.60	233.003	
1,200.0	1,200.0	1,201.0	1,201.0	2.6	1.3	-154.41	-756.0	-362.0	838.2	834.3	3.93	213.038	
1,300.0	1,300.0	1,301.0	1,301.0	2.8	1.5	-154.41	-756.0	-362.0	838.2	833.9	4.27	196.225	
1,400.0	1,400.0	1,401.0	1,401.0	3.0	1.6	-154.41	-756.0	-362.0	838.2	833.6	4.61	181.871	
1,500.0	1,500.0	1,489.4	1,489.4	3.3	1.7	-154.36	-756.5	-363.1	839.2	834.2	4.99	168.145	
1,600.0	1,600.0	1,584.5	1,584.5	3.5	1.9	-154.30	-757.5	-364.6	840.9	835.5	5.39	156.044	
1,700.0	1,700.0	1,681.4	1,681.4	3.7	2.1	-154.24	-759.1	-366.3	843.0	837.2	5.80	145.315	
1,800.0	1,800.0	1,784.0	1,783.9	3.9	2.3	-17.65	-760.6	-368.3	844.0	837.8	6.21	135.813	
1,900.0	1,899.9	1,886.3	1,886.2	4.1	2.5	-17.67	-761.9	-370.0	842.2	835.6	6.61	127.428	
2,000.0	1,999.7	1,987.6	1,987.5	4.3	2.7	-17.78	-763.1	-371.4	837.6	830.6	7.01	119.553	
2,100.0	2,099.3	2,085.8	2,085.6	4.5	3.0	-17.94	-764.2	-372.9	830.5	823.1	7.40	112.289	
2,200.0	2,198.6	2,183.8	2,183.6	4.7	3.2	-18.15	-765.3	-374.7	821.2	813.4	7.79	105.449	
2,300.0	2,297.5	2,283.2	2,283.0	4.9	3.4	-18.43	-766.6	-376.8	809.5	801.3	8.18	98.912	
2,400.0	2,396.1	2,383.8	2,383.6	5.2	3.6	-18.79	-767.6	-378.8	795.2	786.6	8.59	92.615	
2,500.0	2,494.2	2,483.7	2,483.4	5.5	3.8	-19.23	-768.5	-380.8	778.3	769.4	9.00	86.516	
2,600.0	2,592.1	2,582.7	2,582.5	5.8	4.0	-19.62	-769.1	-382.8	760.5	751.0	9.44	80.573	
2,700.0	2,690.0	2,681.8	2,681.5	6.1	4.3	-20.02	-769.6	-384.9	742.5	732.6	9.89	75.097	
2,800.0	2,787.8	2,779.8	2,779.5	6.5	4.5	-20.42	-770.0	-387.1	724.5	714.2	10.33	70.127	
2,900.0	2,885.7	2,877.6	2,877.2	6.8	4.7	-20.85	-770.5	-389.2	706.7	695.9	10.78	65.562	
3,000.0	2,983.6	2,975.4	2,975.1	7.2	4.9	-21.30	-771.1	-391.4	688.9	677.7	11.23	61.337	
3,100.0	3,081.5	3,074.0	3,073.6	7.6	5.1	-21.79	-771.7	-393.5	671.2	659.5	11.69	57.430	
3,200.0	3,179.4	3,172.6	3,172.2	8.0	5.3	-22.31	-772.3	-395.4	653.5	641.3	12.15	53.787	
3,300.0	3,277.3	3,271.8	3,271.4	8.4	5.5	-22.89	-772.8	-397.1	635.7	623.1	12.62	50.360	
3,400.0	3,375.2	3,371.4	3,371.0	8.8	5.7	-23.53	-773.3	-398.5	617.8	604.7	13.11	47.126	
3,500.0	3,473.1	3,471.0	3,470.5	9.2	5.9	-24.24	-773.7	-399.5	599.8	586.2	13.61	44.087	
3,600.0	3,571.0	3,572.2	3,571.7	9.6	6.1	-25.08	-774.0	-399.8	581.5	567.4	14.11	41.200	
3,700.0	3,668.9	3,673.0	3,672.5	10.0	6.3	-26.07	-774.0	-399.0	562.8	548.1	14.63	38.457	
3,800.0	3,766.8	3,771.8	3,771.3	10.5	6.5	-27.19	-773.9	-397.2	543.8	528.6	15.16	35.871	
3,900.0	3,864.6	3,868.9	3,868.4	10.9	6.7	-28.40	-773.9	-395.3	525.1	509.4	15.69	33.462	
4,000.0	3,962.5	3,966.0	3,965.5	11.3	6.9	-29.71	-774.0	-393.3	506.7	490.4	16.24	31.204	
4,100.0	4,060.4	4,063.8	4,063.3	11.7	7.1	-31.11	-774.1	-391.3	488.6	471.8	16.80	29.086	
4,200.0	4,158.3	4,161.9	4,161.3	12.2	7.3	-32.59	-774.0	-389.7	470.7	453.4	17.37	27.095	
4,300.0	4,256.2	4,259.9	4,259.4	12.6	7.5	-34.15	-773.8	-388.2	453.1	435.2	17.97	25.219	
4,400.0	4,354.1	4,357.9	4,357.4	13.0	7.7	-35.84	-773.6	-386.8	435.8	417.2	18.59	23.446	
4,500.0	4,452.0	4,455.9	4,455.3	13.5	7.9	-37.67	-773.3	-385.2	418.8	399.5	19.23	21.778	
4,600.0	4,549.9	4,554.2	4,553.6	13.9	8.1	-39.68	-772.8	-383.5	402.1	382.2	19.90	20.205	
4,700.0	4,647.8	4,652.6	4,652.0	14.4	8.3	-41.88	-772.2	-381.7	385.7	365.1	20.60	18.723	
4,800.0	4,745.7	4,750.7	4,750.1	14.8	8.6	-44.28	-771.4	-379.7	369.8	348.4	21.33	17.333	
4,900.0	4,843.6	4,848.0	4,847.3	15.2	8.8	-46.88	-770.5	-377.6	354.4	332.4	22.09	16.047	
5,000.0	4,941.5	4,945.2	4,944.5	15.7	9.0	-49.72	-769.6	-375.5	340.0	317.1	22.88	14.863	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1409-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,039.3	5,042.7	5,041.9	16.1	9.2	-52.81	-768.8	-373.2	326.5	302.8	23.70	13.779		
5,200.0	5,137.2	5,140.4	5,139.6	16.6	9.4	-56.18	-767.9	-370.9	314.0	289.5	24.55	12.792		
5,300.0	5,235.1	5,238.0	5,237.2	17.0	9.6	-59.83	-766.9	-368.4	302.6	277.2	25.42	11.903		
5,400.0	5,333.0	5,334.6	5,333.7	17.5	9.8	-63.69	-766.0	-366.0	292.6	266.3	26.30	11.125		
5,500.0	5,430.9	5,431.1	5,430.2	17.9	10.0	-67.75	-765.4	-363.6	284.4	257.2	27.19	10.462		
5,600.0	5,528.8	5,527.8	5,526.9	18.4	10.2	-71.99	-765.1	-361.2	278.1	250.0	28.05	9.913		
5,700.0	5,626.7	5,624.8	5,623.9	18.8	10.4	-76.36	-765.1	-358.9	273.6	244.7	28.89	9.471		
5,800.0	5,724.6	5,721.9	5,721.0	19.3	10.6	-80.79	-765.4	-356.7	271.1	241.4	29.69	9.131		
5,894.5	5,817.1	5,814.2	5,813.3	19.7	10.8	-85.01	-765.9	-354.7	270.3	239.9	30.39	8.894 CC		
5,900.0	5,822.5	5,819.6	5,818.7	19.7	10.8	-85.26	-765.9	-354.6	270.3	239.9	30.43	8.883 ES		
6,000.0	5,920.4	5,917.7	5,916.7	20.2	11.0	-89.71	-766.4	-352.7	271.2	240.1	31.12	8.714		
6,100.0	6,018.3	6,015.8	6,014.8	20.6	11.2	-94.07	-766.9	-350.9	273.6	241.9	31.75	8.618		
6,200.0	6,116.1	6,113.3	6,112.3	21.1	11.4	-98.35	-767.3	-349.1	277.6	245.3	32.31	8.591 SF		
6,300.0	6,214.0	6,211.2	6,210.1	21.5	11.6	-102.57	-767.4	-347.2	283.2	250.4	32.81	8.630		
6,400.0	6,312.3	6,308.8	6,307.7	21.9	11.8	-106.38	-767.7	-345.3	289.8	256.6	33.19	8.730		
6,500.0	6,411.1	6,407.1	6,406.1	22.2	12.0	-109.41	-768.1	-343.2	296.6	263.2	33.48	8.859		
6,600.0	6,510.4	6,507.2	6,506.1	22.4	12.2	-111.71	-768.5	-341.4	302.7	268.9	33.77	8.963		
6,700.0	6,610.0	6,606.2	6,605.1	22.6	12.4	-113.27	-769.1	-339.7	307.8	273.7	34.06	9.036		
6,800.0	6,709.9	6,706.2	6,705.1	22.8	12.6	-114.21	-769.5	-337.7	311.7	277.3	34.36	9.071		
6,900.0	6,809.9	6,799.0	6,797.9	22.9	12.8	-108.97	-770.1	-336.0	314.4	279.9	34.51	9.110		
7,000.0	6,909.9	6,863.0	6,861.4	23.0	13.0	-109.85	-776.4	-332.6	323.1	288.3	34.85	9.273		
7,100.0	7,009.9	6,925.0	6,921.1	23.2	13.1	-109.75	-791.5	-326.1	342.9	307.4	35.41	9.683		
7,200.0	7,109.4	6,994.9	6,985.0	23.2	13.3	-111.52	-818.0	-316.5	375.5	339.8	35.69	10.520		
7,300.0	7,206.7	7,043.1	7,027.0	23.2	13.4	-111.83	-840.6	-309.6	422.3	386.7	35.58	11.867		
7,400.0	7,299.9	7,076.2	7,054.6	23.0	13.5	-109.55	-858.2	-304.2	483.6	448.5	35.14	13.763		
7,500.0	7,387.2	7,098.8	7,072.7	22.8	13.6	-104.18	-871.1	-300.0	556.7	522.2	34.49	16.139		
7,600.0	7,466.9	7,114.0	7,084.5	22.5	13.7	-95.37	-880.1	-297.1	637.9	604.3	33.66	18.951		
7,700.0	7,537.4	7,114.0	7,084.5	22.2	13.7	-81.73	-880.1	-297.1	724.2	692.1	32.08	22.572		
7,800.0	7,597.3	7,114.0	7,084.5	21.8	13.7	-67.10	-880.1	-297.1	812.7	783.4	29.34	27.697		
7,900.0	7,645.6	7,114.0	7,084.5	21.4	13.7	-53.80	-880.1	-297.1	901.4	875.9	25.57	35.260		
8,000.0	7,681.2	7,101.0	7,074.3	21.1	13.6	-41.96	-872.3	-299.6	988.5	967.4	21.06	46.938		
8,100.0	7,703.4	7,083.0	7,060.0	20.8	13.5	-33.14	-862.0	-303.0	1,072.5	1,055.3	17.19	62.407		
8,200.0	7,711.9	7,072.0	7,051.1	20.5	13.5	-27.27	-855.9	-304.9	1,152.3	1,137.3	15.03	76.684		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-25.4		25.4				
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-25.4		25.4	25.2	0.22	113.029	
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-25.4		25.4	24.7	0.67	37.676	
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-25.4		25.4	24.3	1.12	22.606	
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-25.4		25.4	23.8	1.57	16.147	
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-25.4		25.4	23.4	2.02	12.559	
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-25.4		25.4	22.9	2.47	10.275	
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-25.4		25.4	22.5	2.92	8.695	
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-25.4		25.4	22.0	3.37	7.535	
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-25.4		25.4	21.6	3.82	6.649	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-25.4		25.4	21.1	4.27	5.949	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-25.4		25.4	20.7	4.72	5.382	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-25.4		25.4	20.2	5.17	4.914	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.98	0.0	-25.4		25.4	19.8	5.62	4.521	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.98	0.0	-25.4		25.4	19.3	6.07	4.186	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.98	0.0	-25.4		25.4	18.9	6.52	3.898 CC	
1,600.0	1,600.0	1,599.5	1,599.5	3.5	3.5	-91.79	-0.8	-26.4		26.4	19.5	6.94	3.804	
1,700.0	1,700.0	1,698.8	1,698.7	3.7	3.6	-96.46	-3.3	-29.4		29.6	22.2	7.35	4.024	
1,800.0	1,800.0	1,798.0	1,797.7	3.9	3.8	35.44	-7.5	-34.3		34.1	26.4	7.73	4.411	
1,900.0	1,899.9	1,897.0	1,896.3	4.1	4.0	32.28	-13.3	-41.2		38.9	30.8	8.10	4.807	
2,000.0	1,999.7	1,995.9	1,994.5	4.3	4.3	30.18	-20.7	-50.0		43.9	35.5	8.47	5.188	
2,100.0	2,099.3	2,094.6	2,092.2	4.5	4.5	28.82	-29.7	-60.7		49.1	40.2	8.85	5.547	
2,200.0	2,198.6	2,193.3	2,189.5	4.7	4.8	28.01	-40.4	-73.4		54.4	45.1	9.24	5.883	
2,300.0	2,297.5	2,291.7	2,286.1	4.9	5.1	27.60	-52.6	-88.0		59.7	50.1	9.64	6.192	
2,400.0	2,396.1	2,390.2	2,382.1	5.2	5.4	27.50	-66.5	-104.4		65.2	55.1	10.06	6.474	
2,500.0	2,494.2	2,490.1	2,479.4	5.5	5.8	28.06	-81.3	-121.9		69.4	58.9	10.51	6.599	
2,600.0	2,592.1	2,590.0	2,576.6	5.8	6.1	28.94	-96.0	-139.5		72.8	61.8	11.02	6.606	
2,700.0	2,690.0	2,690.0	2,673.9	6.1	6.5	29.74	-110.8	-157.1		76.2	64.6	11.54	6.601	
2,800.0	2,787.8	2,789.9	2,771.2	6.5	7.0	30.48	-125.6	-174.6		79.6	67.5	12.08	6.588	
2,900.0	2,885.7	2,889.8	2,868.4	6.8	7.4	31.15	-140.4	-192.2		83.0	70.4	12.64	6.567	
3,000.0	2,983.6	2,989.8	2,965.7	7.2	7.8	31.77	-155.2	-209.7		86.5	73.2	13.22	6.541	
3,100.0	3,081.5	3,089.7	3,063.0	7.6	8.3	32.34	-170.0	-227.3		89.9	76.1	13.81	6.510	
3,200.0	3,179.4	3,189.6	3,160.2	8.0	8.7	32.88	-184.7	-244.8		93.4	79.0	14.42	6.476	
3,300.0	3,277.3	3,289.6	3,257.5	8.4	9.2	33.37	-199.5	-262.4		96.8	81.8	15.04	6.441	
3,400.0	3,375.2	3,389.5	3,354.8	8.8	9.6	33.83	-214.3	-280.0		100.3	84.7	15.67	6.404	
3,500.0	3,473.1	3,489.4	3,452.0	9.2	10.1	34.25	-229.1	-297.5		103.8	87.5	16.31	6.366	
3,600.0	3,571.0	3,589.4	3,549.3	9.6	10.6	34.65	-243.9	-315.1		107.3	90.3	16.95	6.328	
3,700.0	3,668.9	3,689.3	3,646.6	10.0	11.1	35.03	-258.6	-332.6		110.8	93.2	17.61	6.290	
3,800.0	3,766.8	3,789.3	3,743.8	10.5	11.5	35.38	-273.4	-350.2		114.3	96.0	18.28	6.252	
3,900.0	3,864.6	3,889.2	3,841.1	10.9	12.0	35.71	-288.2	-367.7		117.8	98.8	18.95	6.215	
4,000.0	3,962.5	3,989.1	3,938.4	11.3	12.5	36.02	-303.0	-385.3		121.3	101.6	19.63	6.178	
4,100.0	4,060.4	4,089.1	4,035.6	11.7	13.0	36.32	-317.8	-402.9		124.8	104.5	20.31	6.143	
4,200.0	4,158.3	4,189.0	4,132.9	12.2	13.5	36.60	-332.5	-420.4		128.3	107.3	21.00	6.108	
4,300.0	4,256.2	4,288.9	4,230.2	12.6	13.9	36.86	-347.3	-438.0		131.8	110.1	21.70	6.074	
4,400.0	4,354.1	4,388.9	4,327.4	13.0	14.4	37.11	-362.1	-455.5		135.3	112.9	22.40	6.042	
4,500.0	4,452.0	4,488.8	4,424.7	13.5	14.9	37.35	-376.9	-473.1		138.8	115.7	23.10	6.010	
4,600.0	4,549.9	4,588.7	4,521.9	13.9	15.4	37.57	-391.7	-490.6		142.3	118.5	23.81	5.979	
4,700.0	4,647.8	4,688.7	4,619.2	14.4	15.9	37.79	-406.5	-508.2		145.9	121.3	24.52	5.949	
4,800.0	4,745.7	4,788.6	4,716.5	14.8	16.4	37.99	-421.2	-525.8		149.4	124.1	25.23	5.920	
4,900.0	4,843.6	4,888.6	4,813.7	15.2	16.9	38.19	-436.0	-543.3		152.9	127.0	25.95	5.892	
5,000.0	4,941.5	4,988.5	4,911.0	15.7	17.4	38.37	-450.8	-560.9		156.4	129.8	26.67	5.865	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference				Offset			Semi Major Axis		Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	5,039.3	5,088.4	5,008.3	16.1	17.9	38.55	-465.6	-578.4	160.0	132.6	27.39	5.839	
5,200.0	5,137.2	5,188.4	5,105.5	16.6	18.4	38.72	-480.4	-596.0	163.5	135.4	28.12	5.814	
5,300.0	5,235.1	5,288.3	5,202.8	17.0	18.9	38.88	-495.1	-613.5	167.0	138.2	28.85	5.790	
5,400.0	5,333.0	5,388.2	5,300.1	17.5	19.4	39.04	-509.9	-631.1	170.5	141.0	29.58	5.766	
5,500.0	5,430.9	5,488.2	5,397.3	17.9	19.8	39.19	-524.7	-648.7	174.1	143.8	30.31	5.744	
5,600.0	5,528.8	5,588.1	5,494.6	18.4	20.3	39.33	-539.5	-666.2	177.6	146.6	31.04	5.722	
5,700.0	5,626.7	5,688.0	5,591.9	18.8	20.8	39.47	-554.3	-683.8	181.1	149.4	31.78	5.701	
5,800.0	5,724.6	5,788.0	5,689.1	19.3	21.3	39.60	-569.0	-701.3	184.7	152.2	32.51	5.680	
5,900.0	5,822.5	5,887.9	5,786.4	19.7	21.8	39.73	-583.8	-718.9	188.2	155.0	33.25	5.660	
6,000.0	5,920.4	5,987.9	5,883.7	20.2	22.3	39.86	-598.6	-736.4	191.8	157.8	33.99	5.641	
6,100.0	6,018.3	6,087.8	5,980.9	20.6	22.8	39.97	-613.4	-754.0	195.3	160.6	34.74	5.622	
6,200.0	6,116.1	6,190.0	6,080.5	21.1	23.3	40.14	-628.3	-771.7	198.6	163.1	35.48	5.598	
6,300.0	6,214.0	6,296.1	6,184.4	21.5	23.7	40.80	-641.9	-787.8	199.5	163.2	36.29	5.497	
6,400.0	6,312.3	6,402.1	6,289.0	21.9	24.0	41.75	-652.9	-800.9	198.7	161.5	37.11	5.353	
6,500.0	6,411.1	6,507.9	6,394.1	22.2	24.2	42.65	-661.4	-811.1	197.5	159.6	37.81	5.222	
6,600.0	6,510.4	6,613.7	6,499.4	22.4	24.4	43.50	-667.5	-818.2	195.9	157.5	38.44	5.096	
6,700.0	6,610.0	6,719.4	6,604.9	22.6	24.6	44.30	-671.0	-822.4	194.0	155.0	38.99	4.975	
6,800.0	6,709.9	6,824.4	6,709.9	22.8	24.8	45.05	-672.0	-823.6	191.6	152.2	39.46	4.856	
6,900.0	6,809.9	6,924.3	6,809.9	22.9	24.9	-91.20	-672.0	-823.6	190.6	151.4	39.25	4.857	
7,000.0	6,909.9	7,024.5	6,910.1	23.0	25.0	-91.16	-671.8	-823.6	190.6	151.1	39.55	4.820	
7,100.0	7,009.9	7,125.0	7,010.1	23.2	25.0	-90.39	-662.8	-823.3	190.4	149.4	41.00	4.644	
7,109.9	7,019.8	7,134.9	7,019.8	23.2	25.0	-89.98	-661.2	-823.2	190.4	149.3	41.11	4.630	
7,200.0	7,109.4	7,223.3	7,105.7	23.2	25.0	-86.25	-640.6	-822.5	190.8	148.7	42.08	4.534	
7,300.0	7,206.7	7,319.8	7,195.8	23.2	24.8	-82.24	-606.2	-821.4	192.1	149.4	42.78	4.491	
7,400.0	7,299.9	7,414.6	7,279.0	23.0	24.6	-78.48	-560.9	-819.9	194.3	151.3	43.01	4.518	
7,500.0	7,387.2	7,508.0	7,354.4	22.8	24.4	-75.03	-506.0	-818.0	197.1	154.4	42.72	4.613	
7,600.0	7,466.9	7,600.0	7,421.1	22.5	24.1	-71.96	-442.7	-815.9	200.2	158.3	41.96	4.772	
7,700.0	7,537.4	7,691.0	7,478.6	22.2	23.7	-69.28	-372.3	-813.5	203.5	162.7	40.84	4.983	
7,800.0	7,597.3	7,781.0	7,526.2	21.8	23.4	-67.03	-296.0	-811.0	206.7	167.2	39.54	5.228	
7,900.0	7,645.6	7,870.2	7,563.5	21.4	23.1	-65.21	-215.1	-808.3	209.6	171.3	38.28	5.476	
8,000.0	7,681.2	7,958.8	7,590.4	21.1	22.7	-63.82	-130.8	-805.4	212.0	174.7	37.29	5.684	
8,100.0	7,703.4	8,047.0	7,606.6	20.8	22.5	-62.84	-44.2	-802.5	213.7	176.9	36.82	5.806	
8,200.0	7,711.9	8,134.8	7,612.0	20.5	22.2	-62.28	43.3	-799.6	214.8	177.8	36.99	5.807	
8,300.0	7,712.0	8,234.3	7,611.6	20.2	22.0	-62.16	142.8	-796.2	215.0	177.2	37.75	5.695	
8,400.0	7,712.0	8,334.3	7,611.2	20.1	22.0	-62.06	242.7	-792.9	215.1	176.6	38.50	5.588	
8,500.0	7,712.0	8,434.3	7,610.8	20.8	22.3	-61.95	342.7	-789.5	215.3	175.9	39.39	5.466	
8,600.0	7,712.0	8,534.3	7,610.3	21.7	22.8	-61.85	442.6	-786.2	215.5	174.9	40.57	5.311	
8,700.0	7,712.0	8,634.3	7,609.9	22.7	23.6	-61.75	542.6	-782.8	215.6	173.6	42.01	5.133	
8,800.0	7,712.0	8,734.3	7,609.5	23.8	24.4	-61.65	642.5	-779.4	215.8	172.1	43.68	4.940	
8,900.0	7,712.0	8,834.3	7,609.1	24.9	25.4	-61.55	742.4	-776.1	216.0	170.4	45.57	4.740	
9,000.0	7,712.0	8,934.3	7,608.7	26.2	26.5	-61.44	842.4	-772.7	216.2	168.5	47.63	4.538	
9,100.0	7,712.0	9,034.3	7,608.3	27.5	27.6	-61.34	942.3	-769.4	216.3	166.5	49.85	4.340	
9,200.0	7,712.0	9,134.3	7,607.8	28.9	28.9	-61.24	1,042.3	-766.0	216.5	164.3	52.21	4.147	
9,300.0	7,712.0	9,234.3	7,607.4	30.3	30.2	-61.14	1,142.2	-762.6	216.7	162.0	54.68	3.962	
9,400.0	7,712.0	9,334.3	7,607.0	31.7	31.6	-61.04	1,242.1	-759.3	216.9	159.6	57.26	3.787	
9,500.0	7,712.0	9,434.3	7,606.6	33.3	33.0	-60.94	1,342.1	-755.9	217.0	157.1	59.93	3.622	
9,600.0	7,712.0	9,534.3	7,606.2	34.8	34.5	-60.84	1,442.0	-752.6	217.2	154.5	62.67	3.466	
9,700.0	7,712.0	9,634.3	7,605.8	36.4	36.0	-60.74	1,542.0	-749.2	217.4	151.9	65.48	3.320	
9,800.0	7,712.0	9,734.3	7,605.3	38.0	37.6	-60.64	1,641.9	-745.9	217.6	149.2	68.34	3.184	
9,900.0	7,712.0	9,834.3	7,604.9	39.6	39.2	-60.55	1,741.9	-742.5	217.8	146.5	71.25	3.056	
10,000.0	7,712.0	9,934.3	7,604.5	41.3	40.8	-60.45	1,841.8	-739.2	217.9	143.7	74.21	2.937	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,100.0	7,712.0	10,034.3	7,604.1	43.0	42.5	-60.35	1,941.7	-735.8	218.1	140.9	77.20	2.826		
10,200.0	7,712.0	10,134.3	7,603.7	44.7	44.1	-60.25	2,041.7	-732.4	218.3	138.1	80.22	2.722		
10,300.0	7,712.0	10,234.3	7,603.3	46.4	45.9	-60.15	2,141.6	-729.1	218.5	135.2	83.27	2.624		
10,400.0	7,712.0	10,334.3	7,602.8	48.1	47.6	-60.05	2,241.6	-725.7	218.7	132.3	86.34	2.533		
10,500.0	7,712.0	10,434.3	7,602.4	49.9	49.3	-59.96	2,341.5	-722.4	218.9	129.4	89.43	2.447		
10,600.0	7,712.0	10,534.3	7,602.0	51.6	51.1	-59.86	2,441.4	-719.0	219.1	126.5	92.55	2.367		
10,700.0	7,712.0	10,634.3	7,601.6	53.4	52.9	-59.76	2,541.4	-715.7	219.3	123.6	95.67	2.292		
10,800.0	7,712.0	10,734.3	7,601.2	55.2	54.7	-59.67	2,641.3	-712.3	219.4	120.6	98.82	2.221		
10,900.0	7,712.0	10,834.3	7,600.8	56.9	56.5	-59.57	2,741.3	-709.0	219.6	117.7	101.97	2.154		
11,000.0	7,712.0	10,934.3	7,600.3	58.7	58.3	-59.48	2,841.2	-705.6	219.8	114.7	105.13	2.091		
11,100.0	7,712.0	11,034.3	7,599.9	60.5	60.2	-59.38	2,941.2	-702.3	220.0	111.7	108.30	2.032		
11,200.0	7,712.0	11,134.3	7,599.5	62.3	62.0	-59.28	3,041.1	-698.9	220.2	108.7	111.48	1.975		
11,300.0	7,712.0	11,234.3	7,599.1	64.1	63.9	-59.19	3,141.0	-695.5	220.4	105.7	114.67	1.922		
11,400.0	7,712.0	11,334.3	7,598.7	66.0	65.7	-59.09	3,241.0	-692.2	220.6	102.7	117.86	1.872		
11,500.0	7,712.0	11,434.3	7,598.3	67.8	67.6	-59.00	3,340.9	-688.8	220.8	99.8	121.06	1.824		
11,600.0	7,712.0	11,534.3	7,597.9	69.6	69.5	-58.91	3,440.9	-685.5	221.0	96.8	124.26	1.779		
11,700.0	7,712.0	11,634.3	7,597.4	71.4	71.4	-58.81	3,540.8	-682.1	221.2	93.7	127.46	1.736		
11,800.0	7,712.0	11,734.3	7,597.0	73.3	73.2	-58.72	3,640.7	-678.8	221.4	90.7	130.67	1.694		
11,900.0	7,712.0	11,834.3	7,596.6	75.1	75.1	-58.62	3,740.7	-675.4	221.6	87.7	133.87	1.655		
12,000.0	7,712.0	11,934.3	7,596.2	77.0	77.0	-58.53	3,840.6	-672.1	221.8	84.7	137.08	1.618		
12,100.0	7,712.0	12,034.3	7,595.8	78.8	78.9	-58.44	3,940.6	-668.7	222.0	81.7	140.29	1.583		
12,200.0	7,712.0	12,134.3	7,595.4	80.7	80.9	-58.35	4,040.5	-665.4	222.2	78.7	143.50	1.549		
12,300.0	7,712.0	12,234.3	7,595.0	82.5	82.8	-58.25	4,140.5	-662.0	222.4	75.7	146.71	1.516		
12,400.0	7,712.0	12,334.3	7,594.6	84.4	84.7	-58.16	4,240.4	-658.7	222.6	72.7	149.92	1.485 Level 3		
12,500.0	7,712.0	12,434.3	7,594.1	86.2	86.6	-58.07	4,340.3	-655.3	222.8	69.7	153.13	1.455 Level 3		
12,600.0	7,712.0	12,534.3	7,593.7	88.1	88.5	-57.98	4,440.3	-652.0	223.1	66.7	156.33	1.427 Level 3		
12,700.0	7,712.0	12,634.3	7,593.3	90.0	90.5	-57.89	4,540.2	-648.6	223.3	63.7	159.54	1.399 Level 3		
12,800.0	7,712.0	12,734.3	7,592.9	91.8	92.4	-57.80	4,640.2	-645.3	223.5	60.7	162.74	1.373 Level 3		
12,900.0	7,712.0	12,834.3	7,592.5	93.7	94.3	-57.71	4,740.1	-641.9	223.7	57.7	165.95	1.348 Level 3		
13,000.0	7,712.0	12,934.3	7,592.1	95.6	96.3	-57.62	4,840.1	-638.6	223.9	54.7	169.15	1.324 Level 3		
13,100.0	7,712.0	13,034.3	7,591.7	97.5	98.2	-57.53	4,940.0	-635.2	224.1	51.8	172.34	1.300 Level 3		
13,200.0	7,712.0	13,134.3	7,591.3	99.3	100.1	-57.44	5,039.9	-631.9	224.3	48.8	175.54	1.278 Level 3		
13,300.0	7,712.0	13,234.3	7,590.8	101.2	102.1	-57.35	5,139.9	-628.5	224.5	45.8	178.73	1.256 Level 3		
13,400.0	7,712.0	13,334.3	7,590.4	103.1	104.0	-57.26	5,239.8	-625.2	224.8	42.8	181.92	1.235 Level 2		
13,500.0	7,712.0	13,434.3	7,590.0	105.0	106.0	-57.17	5,339.8	-621.8	225.0	39.9	185.11	1.215 Level 2		
13,600.0	7,712.0	13,534.3	7,589.6	106.8	107.9	-57.08	5,439.7	-618.5	225.2	36.9	188.30	1.196 Level 2		
13,700.0	7,712.0	13,634.3	7,589.2	108.7	109.9	-56.99	5,539.6	-615.1	225.4	33.9	191.48	1.177 Level 2		
13,800.0	7,712.0	13,734.3	7,588.8	110.6	111.8	-56.90	5,639.6	-611.8	225.6	31.0	194.66	1.159 Level 2		
13,900.0	7,712.0	13,834.3	7,588.4	112.5	113.8	-56.81	5,739.5	-608.4	225.8	28.0	197.83	1.142 Level 2		
14,000.0	7,712.0	13,934.3	7,588.0	114.4	115.7	-56.73	5,839.5	-605.1	226.1	25.1	201.01	1.125 Level 2		
14,100.0	7,712.0	14,034.3	7,587.6	116.3	117.7	-56.64	5,939.4	-601.7	226.3	22.1	204.17	1.108 Level 2		
14,200.0	7,712.0	14,134.3	7,587.1	118.2	119.7	-56.55	6,039.4	-598.4	226.5	19.2	207.34	1.092 Level 2		
14,300.0	7,712.0	14,234.3	7,586.7	120.0	121.6	-56.46	6,139.3	-595.0	226.7	16.2	210.50	1.077 Level 2		
14,400.0	7,712.0	14,334.3	7,586.3	121.9	123.6	-56.38	6,239.2	-591.7	227.0	13.3	213.66	1.062 Level 2		
14,500.0	7,712.0	14,434.3	7,585.9	123.8	125.5	-56.29	6,339.2	-588.3	227.2	10.4	216.81	1.048 Level 2		
14,600.0	7,712.0	14,534.3	7,585.5	125.7	127.5	-56.21	6,439.1	-585.0	227.4	7.5	219.96	1.034 Level 2		
14,700.0	7,712.0	14,634.3	7,585.1	127.6	129.5	-56.12	6,539.1	-581.6	227.6	4.5	223.11	1.020 Level 2		
14,800.0	7,712.0	14,734.3	7,584.7	129.5	131.4	-56.03	6,639.0	-578.3	227.9	1.6	226.25	1.007 Level 2		
14,900.0	7,712.0	14,834.2	7,584.3	131.4	133.4	-55.95	6,739.0	-574.9	228.1	-1.3	229.39	0.994 Level 1		
15,000.0	7,712.0	14,934.2	7,583.9	133.3	135.4	-55.86	6,838.9	-571.6	228.3	-4.2	232.53	0.982 Level 1		
15,100.0	7,712.0	15,034.2	7,583.5	135.2	137.3	-55.78	6,938.8	-568.2	228.6	-7.1	235.66	0.970 Level 1		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 214 - 2920H - Wellbore #1 - Plan #1		Offset Site Error:		0.0 ft
Survey Program:				0-MWD								Offset Well Error:				0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
15,200.0	7,712.0	15,134.2	7,583.1	137.1	139.3	-55.70	7,038.8	-564.9	228.8	-10.0	238.78	0.958	Level 1				
15,300.0	7,712.0	15,234.2	7,582.6	139.0	141.3	-55.61	7,138.7	-561.5	229.0	-12.9	241.91	0.947	Level 1				
15,400.0	7,712.0	15,334.2	7,582.2	140.9	143.2	-55.53	7,238.7	-558.2	229.3	-15.8	245.02	0.936	Level 1				
15,500.0	7,712.0	15,434.2	7,581.8	142.8	145.2	-55.44	7,338.6	-554.8	229.5	-18.6	248.14	0.925	Level 1				
15,600.0	7,712.0	15,534.2	7,581.4	144.7	147.2	-55.36	7,438.5	-551.5	229.7	-21.5	251.25	0.914	Level 1				
15,700.0	7,712.0	15,634.2	7,581.0	146.6	149.2	-55.28	7,538.5	-548.1	230.0	-24.4	254.35	0.904	Level 1				
15,800.0	7,712.0	15,734.2	7,580.6	148.5	151.1	-55.20	7,638.4	-544.8	230.2	-27.3	257.46	0.894	Level 1				
15,900.0	7,712.0	15,834.2	7,580.2	150.4	153.1	-55.11	7,738.4	-541.5	230.4	-30.1	260.55	0.884	Level 1				
16,000.0	7,712.0	15,934.2	7,579.8	152.3	155.1	-55.03	7,838.3	-538.1	230.7	-33.0	263.65	0.875	Level 1				
16,100.0	7,712.0	16,034.2	7,579.4	154.2	157.1	-54.95	7,938.3	-534.8	230.9	-35.8	266.73	0.866	Level 1				
16,200.0	7,712.0	16,134.2	7,579.0	156.1	159.0	-54.87	8,038.2	-531.4	231.2	-38.7	269.82	0.857	Level 1				
16,300.0	7,712.0	16,234.2	7,578.6	158.0	161.0	-54.79	8,138.1	-528.1	231.4	-41.5	272.90	0.848	Level 1				
16,400.0	7,712.0	16,334.2	7,578.2	159.9	163.0	-54.70	8,238.1	-524.7	231.6	-44.3	275.98	0.839	Level 1				
16,500.0	7,712.0	16,434.2	7,577.8	161.8	165.0	-54.62	8,338.0	-521.4	231.9	-47.2	279.05	0.831	Level 1				
16,600.0	7,712.0	16,534.2	7,577.3	163.7	166.9	-54.54	8,438.0	-518.0	232.1	-50.0	282.11	0.823	Level 1				
16,700.0	7,712.0	16,634.2	7,576.9	165.6	168.9	-54.46	8,537.9	-514.7	232.4	-52.8	285.18	0.815	Level 1				
16,800.0	7,712.0	16,734.2	7,576.5	167.5	170.9	-54.38	8,637.9	-511.3	232.6	-55.6	288.24	0.807	Level 1				
16,900.0	7,712.0	16,834.2	7,576.1	169.4	172.9	-54.30	8,737.8	-508.0	232.9	-58.4	291.29	0.799	Level 1				
17,000.0	7,712.0	16,934.2	7,575.7	171.3	174.9	-54.22	8,837.7	-504.7	233.1	-61.2	294.34	0.792	Level 1				
17,100.0	7,712.0	17,034.2	7,575.3	173.2	176.8	-54.15	8,937.7	-501.3	233.4	-64.0	297.39	0.785	Level 1				
17,200.0	7,712.0	17,134.2	7,574.9	175.1	178.8	-54.07	9,037.6	-498.0	233.6	-66.8	300.43	0.778	Level 1				
17,300.0	7,712.0	17,234.2	7,574.5	177.0	180.8	-53.99	9,137.6	-494.6	233.9	-69.6	303.47	0.771	Level 1				
17,400.0	7,712.0	17,334.2	7,574.1	178.9	182.8	-53.91	9,237.5	-491.3	234.1	-72.4	306.50	0.764	Level 1				
17,500.0	7,712.0	17,434.2	7,573.7	180.8	184.8	-53.83	9,337.5	-487.9	234.4	-75.2	309.53	0.757	Level 1				
17,600.0	7,712.0	17,534.2	7,573.3	182.7	186.8	-53.75	9,437.4	-484.6	234.6	-77.9	312.55	0.751	Level 1				
17,700.0	7,712.0	17,634.2	7,572.9	184.6	188.7	-53.68	9,537.3	-481.2	234.9	-80.7	315.57	0.744	Level 1				
17,800.0	7,712.0	17,734.2	7,572.5	186.5	190.7	-53.60	9,637.3	-477.9	235.1	-83.5	318.59	0.738	Level 1				
17,900.0	7,712.0	17,834.2	7,572.1	188.4	192.6	-53.52	9,737.2	-474.6	235.4	-86.2	321.53	0.732	Level 1				
17,905.6	7,712.0	17,839.8	7,572.1	188.5	192.7	-53.52	9,742.8	-474.4	235.4	-86.3	321.68	0.732	Level 1				
17,924.1	7,712.0	17,852.5	7,572.0	188.9	192.9	-53.51	9,755.5	-473.9	235.5	-86.6	322.11	0.731	Level 1, ES, SF				

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3)													
Reference				Offset			Semi Major Axis		Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	90.02	0.0	24.6	24.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	24.6	24.6	24.4	0.22	109.343	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	24.6	24.6	23.9	0.67	36.448	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	24.6	24.6	23.5	1.12	21.869	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	24.6	24.6	23.0	1.57	15.620	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	24.6	24.6	22.6	2.02	12.149	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	24.6	24.6	22.1	2.47	9.940	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	24.6	24.6	21.7	2.92	8.411	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	24.6	24.6	21.2	3.37	7.290	
900.0	900.0	900.0	900.0	1.9	1.9	90.02	0.0	24.6	24.6	20.8	3.82	6.432	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.02	0.0	24.6	24.6	20.3	4.27	5.755	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.02	0.0	24.6	24.6	19.9	4.72	5.207	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.02	0.0	24.6	24.6	19.4	5.17	4.754	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.02	0.0	24.6	24.6	19.0	5.62	4.374	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.02	0.0	24.6	24.6	18.5	6.07	4.050	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.02	0.0	24.6	24.6	18.1	6.52	3.770	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.02	0.0	24.6	24.6	17.6	6.97	3.527	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.02	0.0	24.6	24.6	17.2	7.42	3.313 CC, ES	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-135.57	0.0	24.6	25.5	17.7	7.84	3.252	
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	-141.09	0.0	24.6	28.4	20.2	8.24	3.450	
2,000.0	1,999.7	2,000.1	2,000.1	4.3	4.4	-146.11	-1.3	24.2	33.1	24.5	8.61	3.846	
2,100.0	2,099.3	2,100.4	2,100.3	4.5	4.5	-148.54	-5.1	23.1	38.8	29.9	8.96	4.336	
2,200.0	2,198.6	2,200.8	2,200.5	4.7	4.7	-149.19	-11.4	21.2	45.5	36.1	9.32	4.880	
2,300.0	2,297.5	2,301.2	2,300.5	4.9	4.9	-148.70	-20.2	18.6	52.9	43.2	9.69	5.463	
2,400.0	2,396.1	2,401.6	2,400.2	5.2	5.1	-147.49	-31.6	15.3	61.2	51.2	10.08	6.076	
2,500.0	2,494.2	2,502.1	2,499.6	5.5	5.3	-145.86	-45.4	11.2	70.4	59.9	10.51	6.703	
2,600.0	2,592.1	2,602.1	2,598.2	5.8	5.6	-143.57	-61.5	6.5	79.4	68.4	11.00	7.214	
2,700.0	2,690.0	2,701.7	2,696.3	6.1	5.8	-141.54	-77.8	1.6	88.3	76.7	11.53	7.653	
2,800.0	2,787.8	2,801.2	2,794.4	6.5	6.1	-139.88	-94.1	-3.2	97.2	85.1	12.09	8.040	
2,900.0	2,885.7	2,900.8	2,892.5	6.8	6.4	-138.50	-110.4	-8.0	106.3	93.6	12.68	8.382	
3,000.0	2,983.6	3,000.3	2,990.6	7.2	6.7	-137.34	-126.7	-12.8	115.4	102.1	13.29	8.682	
3,100.0	3,081.5	3,099.9	3,088.7	7.6	7.0	-136.35	-143.0	-17.6	124.5	110.6	13.92	8.946	
3,200.0	3,179.4	3,199.5	3,186.8	8.0	7.3	-135.49	-159.3	-22.4	133.7	119.1	14.56	9.178	
3,300.0	3,277.3	3,299.0	3,284.9	8.4	7.6	-134.74	-175.6	-27.2	142.8	127.6	15.22	9.383	
3,400.0	3,375.2	3,398.6	3,383.0	8.8	8.0	-134.09	-191.9	-32.0	152.1	136.2	15.90	9.564	
3,500.0	3,473.1	3,498.1	3,481.1	9.2	8.3	-133.51	-208.2	-36.8	161.3	144.7	16.59	9.725	
3,600.0	3,571.0	3,597.7	3,579.2	9.6	8.6	-132.99	-224.5	-41.6	170.5	153.2	17.28	9.867	
3,700.0	3,668.9	3,697.3	3,677.3	10.0	9.0	-132.53	-240.8	-46.4	179.8	161.8	17.99	9.994	
3,800.0	3,766.8	3,796.8	3,775.4	10.5	9.3	-132.11	-257.1	-51.2	189.0	170.3	18.70	10.108	
3,900.0	3,864.6	3,894.4	3,873.5	10.9	9.7	-131.73	-273.4	-56.1	198.3	178.9	19.42	10.210	
4,000.0	3,962.5	3,995.9	3,971.6	11.3	10.1	-131.38	-289.7	-60.9	207.6	187.5	20.15	10.301	
4,100.0	4,060.4	4,095.5	4,069.7	11.7	10.4	-131.06	-306.0	-65.7	216.9	196.0	20.89	10.384	
4,200.0	4,158.3	4,195.1	4,167.8	12.2	10.8	-130.77	-322.3	-70.5	226.2	204.6	21.63	10.459	
4,300.0	4,256.2	4,294.6	4,265.9	12.6	11.2	-130.51	-338.6	-75.3	235.5	213.1	22.37	10.527	
4,400.0	4,354.1	4,394.2	4,364.0	13.0	11.5	-130.26	-354.9	-80.1	244.8	221.7	23.12	10.589	
4,500.0	4,452.0	4,493.7	4,462.1	13.5	11.9	-130.03	-371.2	-84.9	254.1	230.2	23.87	10.645	
4,600.0	4,549.9	4,593.3	4,560.2	13.9	12.3	-129.82	-387.5	-89.7	263.4	238.8	24.63	10.697	
4,700.0	4,647.8	4,692.9	4,658.3	14.4	12.6	-129.62	-403.9	-94.5	272.7	247.3	25.38	10.744	
4,800.0	4,745.7	4,792.4	4,756.4	14.8	13.0	-129.43	-420.2	-99.3	282.1	255.9	26.15	10.787	
4,900.0	4,843.6	4,892.0	4,854.5	15.2	13.4	-129.26	-436.5	-104.1	291.4	264.5	26.91	10.827	
5,000.0	4,941.5	4,991.6	4,952.6	15.7	13.8	-129.10	-452.8	-108.9	300.7	273.0	27.68	10.864	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,039.3	5,091.1	5,050.7	16.1	14.1	-128.95	-469.1	-113.8	310.0	281.6	28.45	10.899		
5,200.0	5,137.2	5,190.7	5,148.8	16.6	14.5	-128.80	-485.4	-118.6	319.4	290.1	29.22	10.930		
5,300.0	5,235.1	5,290.2	5,246.9	17.0	14.9	-128.67	-501.7	-123.4	328.7	298.7	29.99	10.960		
5,400.0	5,333.0	5,389.8	5,345.0	17.5	15.3	-128.54	-518.0	-128.2	338.0	307.3	30.77	10.987		
5,500.0	5,430.9	5,489.4	5,443.1	17.9	15.7	-128.42	-534.3	-133.0	347.4	315.8	31.54	11.013		
5,600.0	5,528.8	5,588.9	5,541.2	18.4	16.1	-128.30	-550.6	-137.8	356.7	324.4	32.32	11.036		
5,700.0	5,626.7	5,688.5	5,639.3	18.8	16.4	-128.19	-566.9	-142.6	366.0	332.9	33.10	11.059		
5,800.0	5,724.6	5,788.0	5,737.4	19.3	16.8	-128.09	-583.2	-147.4	375.4	341.5	33.88	11.079		
5,900.0	5,822.5	5,887.6	5,835.5	19.7	17.2	-127.99	-599.5	-152.2	384.7	350.0	34.66	11.099		
6,000.0	5,920.4	5,987.2	5,933.6	20.2	17.6	-127.90	-615.8	-157.0	394.0	358.6	35.44	11.117		
6,100.0	6,018.3	6,086.2	6,031.1	20.6	18.0	-127.82	-632.0	-161.8	403.4	367.2	36.21	11.139		
6,200.0	6,116.1	6,182.9	6,126.9	21.1	18.2	-128.05	-645.6	-165.8	413.2	376.4	36.84	11.217		
6,300.0	6,214.0	6,279.4	6,222.7	21.5	18.5	-128.71	-656.1	-168.9	423.7	386.4	37.37	11.339		
6,400.0	6,312.3	6,375.5	6,318.5	21.9	18.7	-129.74	-663.5	-171.1	434.0	396.2	37.79	11.483		
6,500.0	6,411.1	6,471.4	6,414.3	22.2	18.8	-130.77	-667.8	-172.4	442.8	404.7	38.09	11.626		
6,600.0	6,510.4	6,567.5	6,510.4	22.4	19.0	-131.83	-669.0	-172.7	450.3	412.0	38.32	11.750		
6,700.0	6,610.0	6,667.2	6,610.0	22.6	19.1	-132.69	-669.0	-172.7	456.0	417.4	38.53	11.834		
6,800.0	6,709.9	6,767.0	6,709.9	22.8	19.3	-133.19	-669.0	-172.7	459.3	420.6	38.75	11.853		
6,900.0	6,809.9	6,867.0	6,809.9	22.9	19.4	90.13	-669.0	-172.7	460.3	421.6	38.69	11.897		
6,961.7	6,871.6	6,928.8	6,871.6	23.0	19.5	90.13	-669.0	-172.7	460.3	421.4	38.87	11.842		
7,000.0	6,909.9	6,966.8	6,909.9	23.0	19.6	90.11	-668.9	-172.7	460.3	421.3	38.97	11.811		
7,100.0	7,009.9	7,064.0	7,006.4	23.2	19.6	87.18	-660.6	-172.4	460.6	421.3	39.32	11.714		
7,200.0	7,109.4	7,159.2	7,099.3	23.2	19.6	85.58	-639.8	-171.8	461.5	422.4	39.07	11.810		
7,300.0	7,206.7	7,253.0	7,187.2	23.2	19.5	84.07	-607.6	-170.7	462.6	423.9	38.63	11.975		
7,400.0	7,299.9	7,345.4	7,269.0	23.0	19.3	82.68	-564.8	-169.3	463.9	425.8	38.04	12.194		
7,500.0	7,387.2	7,436.6	7,343.7	22.8	19.0	81.43	-512.6	-167.5	465.3	427.9	37.37	12.450		
7,600.0	7,466.9	7,526.9	7,410.5	22.5	18.7	80.35	-452.0	-165.5	466.7	430.0	36.69	12.720		
7,700.0	7,537.4	7,616.3	7,468.7	22.2	18.5	79.44	-384.2	-163.3	468.0	431.9	36.07	12.976		
7,800.0	7,597.3	7,705.1	7,517.6	21.8	18.3	78.71	-310.2	-160.8	469.1	433.6	35.58	13.185		
7,900.0	7,645.6	7,793.4	7,556.8	21.4	18.2	78.18	-231.2	-158.2	470.0	434.7	35.31	13.312		
8,000.0	7,681.2	7,881.3	7,585.9	21.1	18.1	77.86	-148.3	-155.4	470.6	435.3	35.30	13.329		
8,100.0	7,703.4	7,969.1	7,604.6	20.8	18.3	77.74	-62.6	-152.6	470.8	435.2	35.61	13.222		
8,182.8	7,711.4	8,041.8	7,612.0	20.5	18.5	77.79	9.6	-150.2	470.7	434.6	36.11	13.034		
8,200.0	7,711.9	8,054.1	7,612.4	20.5	18.5	77.80	21.9	-149.8	470.7	434.5	36.21	12.997		
8,300.0	7,712.0	8,154.4	7,611.7	20.2	18.9	77.70	121.1	-146.5	470.8	433.9	36.98	12.734		
8,400.0	7,712.0	8,254.4	7,611.3	20.1	19.5	77.65	221.1	-143.1	470.9	433.1	37.87	12.435		
8,500.0	7,712.0	8,354.4	7,610.9	20.8	20.2	77.61	321.0	-139.8	471.0	431.9	39.08	12.051		
8,600.0	7,712.0	8,454.4	7,610.5	21.7	21.1	77.56	421.0	-136.5	471.1	430.5	40.62	11.598		
8,700.0	7,712.0	8,554.4	7,610.1	22.7	22.1	77.51	520.9	-133.2	471.2	428.7	42.44	11.103		
8,800.0	7,712.0	8,654.4	7,609.7	23.8	23.2	77.46	620.8	-129.8	471.3	426.8	44.51	10.588		
8,900.0	7,712.0	8,754.4	7,609.3	24.9	24.5	77.41	720.8	-126.5	471.3	424.5	46.80	10.071		
9,000.0	7,712.0	8,854.4	7,608.9	26.2	25.8	77.37	820.7	-123.2	471.4	422.2	49.28	9.567		
9,100.0	7,712.0	8,954.4	7,608.5	27.5	27.2	77.32	920.7	-119.9	471.5	419.6	51.92	9.082		
9,200.0	7,712.0	9,054.4	7,608.1	28.9	28.7	77.27	1,020.6	-116.5	471.6	416.9	54.69	8.623		
9,300.0	7,712.0	9,154.4	7,607.7	30.3	30.2	77.22	1,120.5	-113.2	471.7	414.1	57.58	8.191		
9,400.0	7,712.0	9,254.4	7,607.3	31.7	31.8	77.18	1,220.5	-109.9	471.8	411.2	60.58	7.788		
9,500.0	7,712.0	9,354.4	7,606.9	33.3	33.4	77.13	1,320.4	-106.6	471.9	408.2	63.65	7.413		
9,600.0	7,712.0	9,454.4	7,606.5	34.8	35.1	77.08	1,420.4	-103.2	472.0	405.1	66.81	7.065		
9,700.0	7,712.0	9,554.4	7,606.1	36.4	36.8	77.03	1,520.3	-99.9	472.0	402.0	70.02	6.741		
9,800.0	7,712.0	9,654.3	7,605.7	38.0	38.5	76.98	1,620.3	-96.6	472.1	398.8	73.29	6.442		
9,900.0	7,712.0	9,754.3	7,605.3	39.6	40.2	76.94	1,720.2	-93.3	472.2	395.6	76.61	6.164		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,000.0	7,712.0	9,854.3	7,604.9	41.3	42.0	76.89	1,820.1	-89.9	472.3	392.3	79.97	5.906		
10,100.0	7,712.0	9,954.3	7,604.4	43.0	43.8	76.84	1,920.1	-86.6	472.4	389.0	83.36	5.667		
10,200.0	7,712.0	10,054.3	7,604.0	44.7	45.6	76.79	2,020.0	-83.3	472.5	385.7	86.79	5.444		
10,300.0	7,712.0	10,154.3	7,603.6	46.4	47.4	76.74	2,120.0	-79.9	472.6	382.3	90.24	5.237		
10,400.0	7,712.0	10,254.3	7,603.2	48.1	49.2	76.70	2,219.9	-76.6	472.7	378.9	93.72	5.043		
10,500.0	7,712.0	10,354.3	7,602.8	49.9	51.0	76.65	2,319.8	-73.3	472.8	375.5	97.23	4.863		
10,600.0	7,712.0	10,454.3	7,602.4	51.6	52.9	76.60	2,419.8	-70.0	472.9	372.1	100.75	4.693		
10,700.0	7,712.0	10,554.3	7,602.0	53.4	54.7	76.55	2,519.7	-66.6	472.9	368.7	104.29	4.535		
10,800.0	7,712.0	10,654.3	7,601.6	55.2	56.6	76.50	2,619.7	-63.3	473.0	365.2	107.84	4.386		
10,900.0	7,712.0	10,754.3	7,601.2	56.9	58.5	76.46	2,719.6	-60.0	473.1	361.7	111.41	4.247		
11,000.0	7,712.0	10,854.3	7,600.8	58.7	60.3	76.41	2,819.5	-56.6	473.2	358.2	114.99	4.115		
11,100.0	7,712.0	10,954.3	7,600.4	60.5	62.2	76.36	2,919.5	-53.3	473.3	354.7	118.58	3.991		
11,200.0	7,712.0	11,054.3	7,600.0	62.3	64.1	76.31	3,019.4	-50.0	473.4	351.2	122.18	3.875		
11,300.0	7,712.0	11,154.3	7,599.6	64.1	66.0	76.26	3,119.4	-46.6	473.5	347.7	125.80	3.764		
11,400.0	7,712.0	11,254.3	7,599.2	66.0	67.9	76.22	3,219.3	-43.3	473.6	344.2	129.42	3.660		
11,500.0	7,712.0	11,354.3	7,598.8	67.8	69.8	76.17	3,319.2	-40.0	473.7	340.7	133.04	3.561		
11,600.0	7,712.0	11,454.3	7,598.3	69.6	71.7	76.12	3,419.2	-36.6	473.8	337.1	136.68	3.467		
11,700.0	7,712.0	11,554.3	7,597.9	71.4	73.6	76.07	3,519.1	-33.3	473.9	333.6	140.32	3.377		
11,800.0	7,712.0	11,654.3	7,597.5	73.3	75.5	76.02	3,619.1	-30.0	474.0	330.0	143.96	3.293		
11,900.0	7,712.0	11,754.3	7,597.1	75.1	77.4	75.98	3,719.0	-26.6	474.1	326.5	147.61	3.212		
12,000.0	7,712.0	11,854.3	7,596.7	77.0	79.3	75.93	3,818.9	-23.3	474.2	322.9	151.26	3.135		
12,100.0	7,712.0	11,954.3	7,596.3	78.8	81.3	75.88	3,918.9	-19.9	474.3	319.4	154.92	3.061		
12,200.0	7,712.0	12,054.3	7,595.9	80.7	83.2	75.83	4,018.8	-16.6	474.4	315.8	158.59	2.991		
12,300.0	7,712.0	12,154.3	7,595.5	82.5	85.1	75.78	4,118.8	-13.3	474.5	312.2	162.25	2.924		
12,400.0	7,712.0	12,254.3	7,595.1	84.4	87.0	75.74	4,218.7	-9.9	474.6	308.7	165.92	2.860		
12,500.0	7,712.0	12,354.3	7,594.7	86.2	89.0	75.69	4,318.7	-6.6	474.7	305.1	169.59	2.799		
12,600.0	7,712.0	12,454.3	7,594.2	88.1	90.9	75.64	4,418.6	-3.3	474.8	301.5	173.26	2.740		
12,700.0	7,712.0	12,554.3	7,593.8	90.0	92.8	75.59	4,518.5	0.1	474.9	297.9	176.94	2.684		
12,800.0	7,712.0	12,654.3	7,593.4	91.8	94.8	75.54	4,618.5	3.4	475.0	294.4	180.62	2.630		
12,900.0	7,712.0	12,754.3	7,593.0	93.7	96.7	75.50	4,718.4	6.8	475.1	290.8	184.30	2.578		
13,000.0	7,712.0	12,854.3	7,592.6	95.6	98.7	75.45	4,818.4	10.1	475.2	287.2	187.98	2.528		
13,100.0	7,712.0	12,954.3	7,592.2	97.5	100.6	75.40	4,918.3	13.4	475.3	283.6	191.66	2.480		
13,200.0	7,712.0	13,054.3	7,591.8	99.3	102.5	75.35	5,018.2	16.8	475.4	280.1	195.34	2.434		
13,300.0	7,712.0	13,154.2	7,591.4	101.2	104.5	75.30	5,118.2	20.1	475.5	276.5	199.03	2.389		
13,400.0	7,712.0	13,254.2	7,591.0	103.1	106.4	75.26	5,218.1	23.5	475.6	272.9	202.71	2.346		
13,500.0	7,712.0	13,354.2	7,590.5	105.0	108.4	75.21	5,318.1	26.8	475.7	269.3	206.40	2.305		
13,600.0	7,712.0	13,454.2	7,590.1	106.8	110.3	75.16	5,418.0	30.1	475.8	265.7	210.08	2.265		
13,700.0	7,712.0	13,554.2	7,589.7	108.7	112.3	75.11	5,517.9	33.5	475.9	262.1	213.77	2.226		
13,800.0	7,712.0	13,654.2	7,589.3	110.6	114.2	75.06	5,617.9	36.8	476.0	258.6	217.46	2.189		
13,900.0	7,712.0	13,754.2	7,588.9	112.5	116.2	75.01	5,717.8	40.2	476.1	255.0	221.15	2.153		
14,000.0	7,712.0	13,854.2	7,588.5	114.4	118.1	74.97	5,817.8	43.5	476.2	251.4	224.83	2.118		
14,100.0	7,712.0	13,954.2	7,588.1	116.3	120.1	74.92	5,917.7	46.9	476.3	247.8	228.52	2.084		
14,200.0	7,712.0	14,054.2	7,587.6	118.2	122.0	74.87	6,017.6	50.2	476.4	244.2	232.21	2.052		
14,300.0	7,712.0	14,154.2	7,587.2	120.0	124.0	74.82	6,117.6	53.6	476.6	240.7	235.90	2.020		
14,400.0	7,712.0	14,254.2	7,586.8	121.9	125.9	74.77	6,217.5	56.9	476.7	237.1	239.59	1.990		
14,500.0	7,712.0	14,354.2	7,586.4	123.8	127.9	74.73	6,317.5	60.2	476.8	233.5	243.27	1.960		
14,600.0	7,712.0	14,454.2	7,586.0	125.7	129.8	74.68	6,417.4	63.6	476.9	229.9	246.96	1.931		
14,700.0	7,712.0	14,554.2	7,585.6	127.6	131.8	74.63	6,517.3	66.9	477.0	226.3	250.65	1.903		
14,800.0	7,712.0	14,654.2	7,585.2	129.5	133.7	74.58	6,617.3	70.3	477.1	222.8	254.33	1.876		
14,900.0	7,712.0	14,754.2	7,584.7	131.4	135.7	74.53	6,717.2	73.6	477.2	219.2	258.02	1.850		
15,000.0	7,712.0	14,854.2	7,584.3	133.3	137.6	74.49	6,817.2	77.0	477.3	215.6	261.70	1.824		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,100.0	7,712.0	14,954.2	7,583.9	135.2	139.6	74.44	6,917.1	80.3	477.4	212.0	265.39	1.799		
15,200.0	7,712.0	15,054.2	7,583.5	137.1	141.6	74.39	7,017.0	83.7	477.5	208.5	269.07	1.775		
15,300.0	7,712.0	15,154.2	7,583.1	139.0	143.5	74.34	7,117.0	87.0	477.7	204.9	272.76	1.751		
15,400.0	7,712.0	15,254.2	7,582.7	140.9	145.5	74.29	7,216.9	90.4	477.8	201.3	276.44	1.728		
15,500.0	7,712.0	15,354.2	7,582.2	142.8	147.4	74.24	7,316.9	93.7	477.9	197.8	280.12	1.706		
15,600.0	7,712.0	15,454.2	7,581.8	144.7	149.4	74.20	7,416.8	97.1	478.0	194.2	283.80	1.684		
15,700.0	7,712.0	15,554.2	7,581.4	146.6	151.3	74.15	7,516.7	100.4	478.1	190.6	287.48	1.663		
15,800.0	7,712.0	15,654.2	7,581.0	148.5	153.3	74.10	7,616.7	103.8	478.2	187.1	291.16	1.642		
15,900.0	7,712.0	15,754.2	7,580.6	150.4	155.3	74.05	7,716.6	107.1	478.3	183.5	294.84	1.622		
16,000.0	7,712.0	15,854.2	7,580.2	152.3	157.2	74.00	7,816.6	110.5	478.4	179.9	298.52	1.603		
16,100.0	7,712.0	15,954.2	7,579.7	154.2	159.2	73.96	7,916.5	113.8	478.6	176.4	302.19	1.584		
16,200.0	7,712.0	16,054.2	7,579.3	156.1	161.1	73.91	8,016.4	117.2	478.7	172.8	305.87	1.565		
16,300.0	7,712.0	16,154.2	7,578.9	158.0	163.1	73.86	8,116.4	120.5	478.8	169.3	309.54	1.547		
16,400.0	7,712.0	16,254.2	7,578.5	159.9	165.1	73.81	8,216.3	123.9	478.9	165.7	313.21	1.529		
16,500.0	7,712.0	16,354.2	7,578.1	161.8	167.0	73.76	8,316.3	127.2	479.0	162.1	316.89	1.512		
16,600.0	7,712.0	16,454.2	7,577.6	163.7	169.0	73.71	8,416.2	130.6	479.1	158.6	320.56	1.495 Level 3		
16,700.0	7,712.0	16,554.1	7,577.2	165.6	171.0	73.67	8,516.1	134.0	479.3	155.0	324.23	1.478 Level 3		
16,800.0	7,712.0	16,654.1	7,576.8	167.5	172.9	73.62	8,616.1	137.3	479.4	151.5	327.89	1.462 Level 3		
16,900.0	7,712.0	16,754.1	7,576.4	169.4	174.9	73.57	8,716.0	140.7	479.5	147.9	331.56	1.446 Level 3		
17,000.0	7,712.0	16,854.1	7,576.0	171.3	176.8	73.52	8,816.0	144.0	479.6	144.4	335.23	1.431 Level 3		
17,100.0	7,712.0	16,954.1	7,575.5	173.2	178.8	73.47	8,915.9	147.4	479.7	140.8	338.89	1.416 Level 3		
17,200.0	7,712.0	17,054.1	7,575.1	175.1	180.8	73.43	9,015.8	150.7	479.9	137.3	342.55	1.401 Level 3		
17,300.0	7,712.0	17,154.1	7,574.7	177.0	182.7	73.38	9,115.8	154.1	480.0	133.8	346.22	1.386 Level 3		
17,400.0	7,712.0	17,254.1	7,574.3	178.9	184.7	73.33	9,215.7	157.5	480.1	130.2	349.88	1.372 Level 3		
17,500.0	7,712.0	17,354.1	7,573.9	180.8	186.7	73.28	9,315.7	160.8	480.2	126.7	353.54	1.358 Level 3		
17,600.0	7,712.0	17,454.1	7,573.4	182.7	188.6	73.23	9,415.6	164.2	480.3	123.2	357.19	1.345 Level 3		
17,700.0	7,712.0	17,554.1	7,573.0	184.6	190.6	73.18	9,515.5	167.5	480.5	119.6	360.85	1.331 Level 3		
17,800.0	7,712.0	17,654.1	7,572.6	186.5	192.6	73.14	9,615.5	170.9	480.6	116.1	364.50	1.318 Level 3		
17,900.0	7,712.0	17,754.1	7,572.2	188.4	194.5	73.09	9,715.4	174.2	480.7	112.6	368.16	1.306 Level 3		
17,924.1	7,712.0	17,778.2	7,572.1	188.9	195.0	73.08	9,739.5	175.1	480.7	111.7	369.01	1.303 Level 3, SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	90.01	0.0	74.3	74.3					
100.0	100.0	100.0	100.0	0.1	0.1	90.01	0.0	74.3	74.3	74.1	0.22	330.487		
200.0	200.0	200.0	200.0	0.3	0.3	90.01	0.0	74.3	74.3	73.6	0.67	110.162		
300.0	300.0	300.0	300.0	0.6	0.6	90.01	0.0	74.3	74.3	73.2	1.12	66.097		
400.0	400.0	400.0	400.0	0.8	0.8	90.01	0.0	74.3	74.3	72.7	1.57	47.212		
500.0	500.0	500.0	500.0	1.0	1.0	90.01	0.0	74.3	74.3	72.3	2.02	36.721		
600.0	600.0	600.0	600.0	1.2	1.2	90.01	0.0	74.3	74.3	71.8	2.47	30.044		
700.0	700.0	700.0	700.0	1.5	1.5	90.01	0.0	74.3	74.3	71.4	2.92	25.422		
800.0	800.0	800.0	800.0	1.7	1.7	90.01	0.0	74.3	74.3	70.9	3.37	22.032		
900.0	900.0	900.0	900.0	1.9	1.9	90.01	0.0	74.3	74.3	70.5	3.82	19.440		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.01	0.0	74.3	74.3	70.0	4.27	17.394		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.01	0.0	74.3	74.3	69.6	4.72	15.737		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.01	0.0	74.3	74.3	69.1	5.17	14.369		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.01	0.0	74.3	74.3	68.7	5.62	13.219		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.01	0.0	74.3	74.3	68.2	6.07	12.240		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.01	0.0	74.3	74.3	67.8	6.52	11.396 CC, ES		
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	90.85	-1.1	74.9	75.0	68.0	6.94	10.803		
1,700.0	1,700.0	1,697.8	1,697.7	3.7	3.6	93.27	-4.4	76.9	77.1	69.8	7.34	10.505		
1,800.0	1,800.0	1,796.4	1,796.1	3.9	3.8	-127.13	-9.9	80.2	81.7	74.0	7.72	10.589		
1,900.0	1,899.9	1,894.7	1,894.0	4.1	4.0	-124.48	-17.4	84.8	89.7	81.6	8.08	11.094		
2,000.0	1,999.7	1,992.4	1,991.0	4.3	4.2	-122.40	-27.1	90.7	100.9	92.4	8.46	11.921		
2,100.0	2,099.3	2,089.4	2,087.1	4.5	4.4	-120.86	-38.9	97.8	115.3	106.4	8.86	13.007		
2,200.0	2,198.6	2,186.1	2,182.4	4.7	4.7	-119.80	-52.6	106.1	132.7	123.4	9.29	14.292		
2,300.0	2,297.5	2,284.2	2,279.1	4.9	5.0	-119.54	-67.2	114.9	152.0	142.3	9.74	15.611		
2,400.0	2,396.1	2,382.1	2,375.4	5.2	5.3	-120.03	-81.8	123.7	172.7	162.4	10.22	16.892		
2,500.0	2,494.2	2,479.5	2,471.4	5.5	5.6	-121.06	-96.3	132.5	194.6	183.9	10.73	18.129		
2,600.0	2,592.1	2,576.9	2,567.2	5.8	5.9	-122.30	-110.8	141.3	217.1	205.8	11.28	19.239		
2,700.0	2,690.0	2,674.2	2,663.1	6.1	6.2	-123.30	-125.3	150.1	239.7	227.8	11.86	20.214		
2,800.0	2,787.8	2,771.6	2,758.9	6.5	6.5	-124.13	-139.8	158.8	262.3	249.9	12.45	21.072		
2,900.0	2,885.7	2,868.9	2,854.8	6.8	6.9	-124.84	-154.3	167.6	285.0	271.9	13.06	21.828		
3,000.0	2,983.6	2,966.2	2,950.6	7.2	7.2	-125.43	-168.8	176.4	307.7	294.0	13.68	22.496		
3,100.0	3,081.5	3,063.6	3,046.5	7.6	7.6	-125.95	-183.3	185.2	330.5	316.2	14.31	23.089		
3,200.0	3,179.4	3,160.9	3,142.3	8.0	7.9	-126.40	-197.9	193.9	353.2	338.3	14.96	23.616		
3,300.0	3,277.3	3,258.2	3,238.2	8.4	8.3	-126.79	-212.4	202.7	376.0	360.4	15.61	24.087		
3,400.0	3,375.2	3,355.6	3,334.0	8.8	8.7	-127.14	-226.9	211.5	398.8	382.6	16.27	24.509		
3,500.0	3,473.1	3,452.9	3,429.9	9.2	9.0	-127.45	-241.4	220.3	421.6	404.7	16.94	24.889		
3,600.0	3,571.0	3,550.3	3,525.7	9.6	9.4	-127.73	-255.9	229.0	444.5	426.9	17.62	25.231		
3,700.0	3,668.9	3,647.6	3,621.6	10.0	9.8	-127.98	-270.4	237.8	467.3	449.0	18.30	25.541		
3,800.0	3,766.8	3,744.9	3,717.4	10.5	10.1	-128.21	-284.9	246.6	490.2	471.2	18.98	25.823		
3,900.0	3,864.6	3,842.3	3,813.3	10.9	10.5	-128.42	-299.4	255.4	513.0	493.3	19.67	26.080		
4,000.0	3,962.5	3,939.6	3,909.1	11.3	10.9	-128.61	-313.9	264.1	535.9	515.5	20.36	26.314		
4,100.0	4,060.4	4,037.0	4,005.0	11.7	11.3	-128.78	-328.4	272.9	558.7	537.7	21.06	26.529		
4,200.0	4,158.3	4,134.3	4,100.8	12.2	11.7	-128.94	-342.9	281.7	581.6	559.8	21.76	26.727		
4,300.0	4,256.2	4,231.6	4,196.7	12.6	12.0	-129.09	-357.4	290.5	604.5	582.0	22.46	26.909		
4,400.0	4,354.1	4,329.0	4,292.5	13.0	12.4	-129.23	-371.9	299.2	627.3	604.2	23.17	27.076		
4,500.0	4,452.0	4,426.3	4,388.4	13.5	12.8	-129.36	-386.5	308.0	650.2	626.3	23.88	27.232		
4,600.0	4,549.9	4,523.6	4,484.2	13.9	13.2	-129.48	-401.0	316.8	673.1	648.5	24.59	27.376		
4,700.0	4,647.8	4,621.0	4,580.1	14.4	13.6	-129.59	-415.5	325.5	696.0	670.7	25.30	27.510		
4,800.0	4,745.7	4,718.3	4,675.9	14.8	14.0	-129.70	-430.0	334.3	718.8	692.8	26.01	27.635		
4,900.0	4,843.6	4,815.7	4,771.8	15.2	14.3	-129.79	-444.5	343.1	741.7	715.0	26.73	27.752		
5,000.0	4,941.5	4,913.0	4,867.6	15.7	14.7	-129.89	-459.0	351.9	764.6	737.2	27.44	27.861		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3)													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,039.3	5,010.3	4,963.5	16.1	15.1	-129.97	-473.5	360.6	787.5	759.4	28.16	27.963	
5,200.0	5,137.2	5,107.7	5,059.3	16.6	15.5	-130.06	-488.0	369.4	810.4	781.5	28.88	28.059	
5,300.0	5,235.1	5,205.0	5,155.2	17.0	15.9	-130.13	-502.5	378.2	833.3	803.7	29.60	28.149	
5,400.0	5,333.0	5,302.3	5,251.0	17.5	16.3	-130.21	-517.0	387.0	856.2	825.9	30.33	28.233	
5,500.0	5,430.9	5,399.7	5,346.9	17.9	16.7	-130.28	-531.5	395.7	879.1	848.0	31.05	28.313	
5,600.0	5,528.8	5,497.0	5,442.7	18.4	17.1	-130.34	-546.0	404.5	902.0	870.2	31.77	28.388	
5,700.0	5,626.7	5,594.4	5,538.6	18.8	17.5	-130.41	-560.6	413.3	924.9	892.4	32.50	28.460	
5,800.0	5,724.6	5,691.7	5,634.4	19.3	17.8	-130.47	-575.1	422.1	947.8	914.6	33.22	28.527	
5,900.0	5,822.5	5,789.0	5,730.3	19.7	18.2	-130.52	-589.6	430.8	970.7	936.7	33.95	28.591	
6,000.0	5,920.4	5,886.4	5,826.1	20.2	18.6	-130.58	-604.1	439.6	993.6	958.9	34.68	28.652	
6,100.0	6,018.3	5,983.7	5,922.0	20.6	19.0	-130.63	-618.6	448.4	1,016.5	981.1	35.41	28.709	
6,200.0	6,116.1	6,085.2	6,022.0	21.1	19.4	-130.68	-633.6	457.5	1,039.4	1,003.2	36.14	28.760	
6,300.0	6,214.0	6,207.1	6,142.5	21.5	19.7	-130.90	-648.9	466.7	1,060.7	1,023.9	36.82	28.809	
6,400.0	6,312.3	6,330.0	6,264.8	21.9	20.0	-131.54	-659.7	473.3	1,078.8	1,041.3	37.47	28.790	
6,500.0	6,411.1	6,454.0	6,388.5	22.2	20.3	-132.16	-666.2	477.2	1,092.3	1,054.3	37.99	28.748	
6,600.0	6,510.4	6,575.9	6,510.4	22.4	20.4	-132.76	-668.0	478.3	1,101.2	1,062.8	38.44	28.645	
6,700.0	6,610.0	6,675.5	6,610.0	22.6	20.6	-133.16	-668.0	478.3	1,107.0	1,068.2	38.80	28.529	
6,800.0	6,709.9	6,775.4	6,709.9	22.8	20.7	-133.39	-668.0	478.3	1,110.3	1,071.2	39.12	28.383	
6,900.0	6,809.9	6,875.4	6,809.9	22.9	20.8	90.00	-668.0	478.3	1,111.3	1,072.0	39.32	28.260	
6,961.2	6,871.1	6,936.6	6,871.1	23.0	20.9	90.00	-668.0	478.3	1,111.3	1,071.8	39.50	28.136	
7,000.0	6,909.9	6,974.7	6,909.2	23.0	21.0	89.99	-667.9	478.3	1,111.3	1,071.7	39.60	28.061	
7,100.0	7,009.9	7,069.0	7,003.1	23.2	21.0	87.68	-659.9	478.6	1,111.6	1,071.7	39.88	27.877	
7,200.0	7,109.4	7,161.5	7,093.4	23.2	21.0	87.04	-640.2	479.2	1,112.2	1,072.3	39.87	27.898	
7,300.0	7,206.7	7,252.7	7,179.2	23.2	20.9	86.45	-609.6	480.2	1,112.8	1,073.2	39.65	28.065	
7,400.0	7,299.9	7,342.8	7,259.5	23.0	20.7	85.93	-568.8	481.6	1,113.5	1,074.2	39.27	28.356	
7,500.0	7,387.2	7,432.0	7,333.3	22.8	20.5	85.48	-518.9	483.3	1,114.2	1,075.4	38.77	28.738	
7,600.0	7,466.9	7,520.4	7,399.8	22.5	20.2	85.11	-460.8	485.2	1,114.8	1,076.5	38.22	29.168	
7,700.0	7,537.4	7,608.2	7,458.3	22.2	20.0	84.83	-395.4	487.4	1,115.2	1,077.6	37.69	29.592	
7,800.0	7,597.3	7,695.6	7,508.1	21.8	19.7	84.64	-323.6	489.8	1,115.6	1,078.3	37.25	29.948	
7,900.0	7,645.6	7,782.8	7,548.6	21.4	19.5	84.53	-246.6	492.3	1,115.8	1,078.8	36.99	30.165	
8,000.0	7,681.2	7,869.8	7,579.5	21.1	19.3	84.53	-165.3	495.1	1,115.8	1,078.8	36.96	30.188	
8,100.0	7,703.4	7,956.9	7,600.4	20.8	19.2	84.61	-80.8	497.9	1,115.7	1,078.4	37.21	29.981	
8,200.0	7,711.9	8,044.3	7,610.8	20.5	19.1	84.79	5.8	500.8	1,115.4	1,077.6	37.77	29.532	
8,264.4	7,712.6	8,102.3	7,612.0	20.3	19.2	84.82	63.7	502.7	1,115.3	1,077.1	38.23	29.170	
8,300.0	7,712.0	8,137.9	7,611.8	20.2	19.4	84.85	99.4	503.9	1,115.3	1,076.7	38.57	28.916	
8,400.0	7,712.0	8,237.9	7,611.4	20.1	19.9	84.83	199.3	507.2	1,115.3	1,075.7	39.61	28.159	
8,500.0	7,712.0	8,337.9	7,611.0	20.8	20.8	84.80	299.3	510.6	1,115.4	1,074.4	40.97	27.227	
8,600.0	7,712.0	8,437.9	7,610.6	21.7	21.7	84.78	399.2	513.9	1,115.4	1,072.8	42.61	26.180	
8,700.0	7,712.0	8,537.9	7,610.2	22.7	22.8	84.76	499.2	517.2	1,115.4	1,070.9	44.51	25.059	
8,800.0	7,712.0	8,637.9	7,609.8	23.8	24.0	84.74	599.1	520.6	1,115.5	1,068.8	46.66	23.908	
8,900.0	7,712.0	8,737.9	7,609.4	24.9	25.3	84.72	699.0	523.9	1,115.5	1,066.5	49.01	22.763	
9,000.0	7,712.0	8,837.9	7,609.0	26.2	26.7	84.70	799.0	527.2	1,115.6	1,064.0	51.53	21.648	
9,100.0	7,712.0	8,937.9	7,608.6	27.5	28.1	84.68	898.9	530.6	1,115.6	1,061.4	54.21	20.580	
9,200.0	7,712.0	9,037.9	7,608.2	28.9	29.6	84.66	998.9	533.9	1,115.7	1,058.6	57.02	19.567	
9,300.0	7,712.0	9,137.9	7,607.8	30.3	31.1	84.64	1,098.8	537.2	1,115.7	1,055.8	59.94	18.614	
9,400.0	7,712.0	9,237.9	7,607.4	31.7	32.7	84.62	1,198.8	540.6	1,115.8	1,052.8	62.96	17.722	
9,500.0	7,712.0	9,337.9	7,607.0	33.3	34.3	84.60	1,298.7	543.9	1,115.8	1,049.7	66.06	16.891	
9,600.0	7,712.0	9,437.9	7,606.6	34.8	35.9	84.58	1,398.6	547.2	1,115.8	1,046.6	69.23	16.117	
9,700.0	7,712.0	9,537.9	7,606.2	36.4	37.5	84.56	1,498.6	550.6	1,115.9	1,043.4	72.47	15.398	
9,800.0	7,712.0	9,637.9	7,605.8	38.0	39.2	84.54	1,598.5	553.9	1,115.9	1,040.2	75.76	14.730	
9,900.0	7,712.0	9,737.9	7,605.4	39.6	40.9	84.52	1,698.5	557.2	1,116.0	1,036.9	79.10	14.108	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,000.0	7,712.0	9,837.9	7,605.0	41.3	42.6	84.50	1,798.4	560.6	1,116.0	1,033.5	82.48	13.531		
10,100.0	7,712.0	9,937.9	7,604.5	43.0	44.3	84.47	1,898.4	563.9	1,116.0	1,030.2	85.90	12.993		
10,200.0	7,712.0	10,037.9	7,604.1	44.7	46.1	84.45	1,998.3	567.2	1,116.1	1,026.7	89.35	12.492		
10,300.0	7,712.0	10,137.9	7,603.7	46.4	47.9	84.43	2,098.2	570.6	1,116.1	1,023.3	92.83	12.024		
10,400.0	7,712.0	10,237.9	7,603.3	48.1	49.6	84.41	2,198.2	573.9	1,116.2	1,019.8	96.33	11.587		
10,500.0	7,712.0	10,337.9	7,602.9	49.9	51.4	84.39	2,298.1	577.2	1,116.2	1,016.4	99.86	11.178		
10,600.0	7,712.0	10,437.9	7,602.5	51.6	53.2	84.37	2,398.1	580.6	1,116.2	1,012.8	103.41	10.795		
10,700.0	7,712.0	10,537.9	7,602.1	53.4	55.0	84.35	2,498.0	583.9	1,116.3	1,009.3	106.97	10.435		
10,800.0	7,712.0	10,637.9	7,601.7	55.2	56.8	84.33	2,598.0	587.2	1,116.3	1,005.8	110.56	10.097		
10,900.0	7,712.0	10,737.9	7,601.3	56.9	58.6	84.31	2,697.9	590.6	1,116.4	1,002.2	114.15	9.779		
11,000.0	7,712.0	10,837.9	7,600.9	58.7	60.4	84.29	2,797.9	593.9	1,116.4	998.6	117.77	9.480		
11,100.0	7,712.0	10,937.9	7,600.5	60.5	62.3	84.27	2,897.8	597.2	1,116.4	995.1	121.39	9.197		
11,200.0	7,712.0	11,037.9	7,600.1	62.3	64.1	84.25	2,997.7	600.6	1,116.5	991.5	125.03	8.930		
11,300.0	7,712.0	11,137.9	7,599.7	64.1	65.9	84.23	3,097.7	603.9	1,116.5	987.8	128.67	8.677		
11,400.0	7,712.0	11,237.9	7,599.3	66.0	67.8	84.20	3,197.6	607.2	1,116.6	984.2	132.33	8.438		
11,500.0	7,712.0	11,337.9	7,598.8	67.8	69.6	84.18	3,297.6	610.6	1,116.6	980.6	135.99	8.211		
11,600.0	7,712.0	11,437.9	7,598.4	69.6	71.5	84.16	3,397.5	613.9	1,116.6	977.0	139.67	7.995		
11,700.0	7,712.0	11,537.9	7,598.0	71.4	73.3	84.14	3,497.5	617.2	1,116.7	973.3	143.35	7.790		
11,800.0	7,712.0	11,637.9	7,597.6	73.3	75.2	84.12	3,597.4	620.6	1,116.7	969.7	147.03	7.595		
11,900.0	7,712.0	11,737.9	7,597.2	75.1	77.0	84.10	3,697.3	623.9	1,116.7	966.0	150.73	7.409		
12,000.0	7,712.0	11,837.9	7,596.8	77.0	78.9	84.08	3,797.3	627.2	1,116.8	962.4	154.42	7.232		
12,100.0	7,712.0	11,937.9	7,596.4	78.8	80.7	84.06	3,897.2	630.5	1,116.8	958.7	158.13	7.063		
12,200.0	7,712.0	12,037.9	7,596.0	80.7	82.6	84.04	3,997.2	633.9	1,116.8	955.0	161.84	6.901		
12,300.0	7,712.0	12,137.9	7,595.6	82.5	84.5	84.02	4,097.1	637.2	1,116.9	951.3	165.55	6.747		
12,400.0	7,712.0	12,237.9	7,595.2	84.4	86.3	84.00	4,197.1	640.5	1,116.9	947.6	169.27	6.599		
12,500.0	7,712.0	12,337.9	7,594.8	86.2	88.2	83.97	4,297.0	643.9	1,117.0	944.0	172.99	6.457		
12,600.0	7,712.0	12,437.9	7,594.3	88.1	90.1	83.95	4,397.0	647.2	1,117.0	940.3	176.71	6.321		
12,700.0	7,712.0	12,537.9	7,593.9	90.0	92.0	83.93	4,496.9	650.5	1,117.0	936.6	180.44	6.190		
12,800.0	7,712.0	12,637.9	7,593.5	91.8	93.8	83.91	4,596.8	653.9	1,117.1	932.9	184.18	6.065		
12,900.0	7,712.0	12,737.9	7,593.1	93.7	95.7	83.89	4,696.8	657.2	1,117.1	929.2	187.91	5.945		
13,000.0	7,712.0	12,837.9	7,592.7	95.6	97.6	83.87	4,796.7	660.5	1,117.1	925.5	191.65	5.829		
13,100.0	7,712.0	12,937.9	7,592.3	97.5	99.5	83.85	4,896.7	663.9	1,117.2	921.8	195.39	5.718		
13,200.0	7,712.0	13,037.9	7,591.9	99.3	101.4	83.83	4,996.6	667.2	1,117.2	918.1	199.13	5.610		
13,300.0	7,712.0	13,137.9	7,591.5	101.2	103.3	83.81	5,096.6	670.5	1,117.2	914.3	202.88	5.507		
13,400.0	7,712.0	13,237.9	7,591.0	103.1	105.1	83.78	5,196.5	673.8	1,117.2	910.6	206.63	5.407		
13,500.0	7,712.0	13,337.9	7,590.6	105.0	107.0	83.76	5,296.4	677.2	1,117.3	906.9	210.37	5.311		
13,600.0	7,712.0	13,437.9	7,590.2	106.8	108.9	83.74	5,396.4	680.5	1,117.3	903.2	214.13	5.218		
13,700.0	7,712.0	13,537.9	7,589.8	108.7	110.8	83.72	5,496.3	683.8	1,117.3	899.5	217.88	5.128		
13,800.0	7,712.0	13,637.9	7,589.4	110.6	112.7	83.70	5,596.3	687.2	1,117.4	895.7	221.63	5.042		
13,900.0	7,712.0	13,737.9	7,589.0	112.5	114.6	83.68	5,696.2	690.5	1,117.4	892.0	225.39	4.958		
14,000.0	7,712.0	13,837.9	7,588.6	114.4	116.5	83.66	5,796.2	693.8	1,117.4	888.3	229.15	4.876		
14,100.0	7,712.0	13,937.9	7,588.2	116.3	118.4	83.64	5,896.1	697.2	1,117.5	884.6	232.91	4.798		
14,200.0	7,712.0	14,037.9	7,587.7	118.2	120.3	83.62	5,996.1	700.5	1,117.5	880.8	236.67	4.722		
14,300.0	7,712.0	14,137.9	7,587.3	120.0	122.2	83.59	6,096.0	703.8	1,117.5	877.1	240.43	4.648		
14,400.0	7,712.0	14,237.9	7,586.9	121.9	124.1	83.57	6,195.9	707.1	1,117.6	873.4	244.20	4.576		
14,500.0	7,712.0	14,337.9	7,586.5	123.8	126.0	83.55	6,295.9	710.5	1,117.6	869.6	247.96	4.507		
14,600.0	7,712.0	14,437.9	7,586.1	125.7	127.9	83.53	6,395.8	713.8	1,117.6	865.9	251.73	4.440		
14,700.0	7,712.0	14,537.9	7,585.7	127.6	129.8	83.51	6,495.8	717.1	1,117.6	862.1	255.49	4.374		
14,800.0	7,712.0	14,637.9	7,585.2	129.5	131.7	83.49	6,595.7	720.5	1,117.7	858.4	259.26	4.311		
14,900.0	7,712.0	14,737.9	7,584.8	131.4	133.6	83.47	6,695.7	723.8	1,117.7	854.7	263.03	4.249		
15,000.0	7,712.0	14,837.9	7,584.4	133.3	135.5	83.45	6,795.6	727.1	1,117.7	850.9	266.80	4.189		

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



Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
15,100.0	7,712.0	14,937.9	7,584.0	135.2	137.4	83.42	6,895.5	730.4	1,117.7	847.2	270.57	4.131			
15,200.0	7,712.0	15,037.9	7,583.6	137.1	139.3	83.40	6,995.5	733.8	1,117.8	843.4	274.34	4.074			
15,300.0	7,712.0	15,137.9	7,583.2	139.0	141.2	83.38	7,095.4	737.1	1,117.8	839.7	278.11	4.019			
15,400.0	7,712.0	15,237.9	7,582.7	140.9	143.1	83.36	7,195.4	740.4	1,117.8	835.9	281.88	3.966			
15,500.0	7,712.0	15,337.9	7,582.3	142.8	145.0	83.34	7,295.3	743.8	1,117.9	832.2	285.65	3.913			
15,600.0	7,712.0	15,437.9	7,581.9	144.7	146.9	83.32	7,395.3	747.1	1,117.9	828.5	289.43	3.862			
15,700.0	7,712.0	15,537.9	7,581.5	146.6	148.8	83.30	7,495.2	750.4	1,117.9	824.7	293.20	3.813			
15,800.0	7,712.0	15,637.9	7,581.1	148.5	150.7	83.27	7,595.1	753.7	1,117.9	821.0	296.97	3.764			
15,900.0	7,712.0	15,737.9	7,580.7	150.4	152.6	83.25	7,695.1	757.1	1,118.0	817.2	300.75	3.717			
16,000.0	7,712.0	15,837.9	7,580.2	152.3	154.5	83.23	7,795.0	760.4	1,118.0	813.5	304.52	3.671			
16,100.0	7,712.0	15,937.9	7,579.8	154.2	156.4	83.21	7,895.0	763.7	1,118.0	809.7	308.30	3.626			
16,200.0	7,712.0	16,037.9	7,579.4	156.1	158.3	83.19	7,994.9	767.0	1,118.0	806.0	312.07	3.583			
16,300.0	7,712.0	16,137.9	7,579.0	158.0	160.2	83.17	8,094.9	770.4	1,118.1	802.2	315.85	3.540			
16,400.0	7,712.0	16,237.9	7,578.6	159.9	162.1	83.15	8,194.8	773.7	1,118.1	798.4	319.63	3.498			
16,500.0	7,712.0	16,337.9	7,578.1	161.8	164.0	83.12	8,294.8	777.0	1,118.1	794.7	323.40	3.457			
16,600.0	7,712.0	16,437.9	7,577.7	163.7	165.9	83.10	8,394.7	780.4	1,118.1	790.9	327.18	3.417			
16,700.0	7,712.0	16,537.9	7,577.3	165.6	167.8	83.08	8,494.6	783.7	1,118.1	787.2	330.96	3.379			
16,800.0	7,712.0	16,637.9	7,576.9	167.5	169.7	83.06	8,594.6	787.0	1,118.2	783.4	334.73	3.340			
16,900.0	7,712.0	16,737.9	7,576.5	169.4	171.6	83.04	8,694.5	790.3	1,118.2	779.7	338.51	3.303			
17,000.0	7,712.0	16,837.9	7,576.0	171.3	173.5	83.02	8,794.5	793.7	1,118.2	775.9	342.29	3.267			
17,100.0	7,712.0	16,937.9	7,575.6	173.2	175.4	83.00	8,894.4	797.0	1,118.2	772.2	346.07	3.231			
17,200.0	7,712.0	17,037.9	7,575.2	175.1	177.3	82.97	8,994.4	800.3	1,118.3	768.4	349.85	3.196			
17,300.0	7,712.0	17,137.9	7,574.8	177.0	179.3	82.95	9,094.3	803.6	1,118.3	764.7	353.62	3.162			
17,400.0	7,712.0	17,237.9	7,574.4	178.9	181.2	82.93	9,194.2	807.0	1,118.3	760.9	357.40	3.129			
17,500.0	7,712.0	17,337.9	7,573.9	180.8	183.1	82.91	9,294.2	810.3	1,118.3	757.1	361.18	3.096			
17,600.0	7,712.0	17,437.9	7,573.5	182.7	185.0	82.89	9,394.1	813.6	1,118.3	753.4	364.96	3.064			
17,700.0	7,712.0	17,537.9	7,573.1	184.6	186.9	82.87	9,494.1	816.9	1,118.4	749.6	368.74	3.033			
17,800.0	7,712.0	17,637.9	7,572.7	186.5	188.8	82.84	9,594.0	820.3	1,118.4	745.9	372.52	3.002			
17,900.0	7,712.0	17,737.9	7,572.3	188.4	190.7	82.82	9,694.0	823.6	1,118.4	742.1	376.30	2.972			
17,924.1	7,712.0	17,762.0	7,572.2	188.9	191.2	82.82	9,718.0	824.4	1,118.4	741.2	377.18	2.965 SF			

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.03	0.0	49.7	49.7					
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	49.7	49.7	49.5	0.22	221.144		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	49.7	49.7	49.0	0.67	73.715		
300.0	300.0	300.0	300.0	0.6	0.6	90.03	0.0	49.7	49.7	48.6	1.12	44.229		
400.0	400.0	400.0	400.0	0.8	0.8	90.03	0.0	49.7	49.7	48.1	1.57	31.592		
500.0	500.0	500.0	500.0	1.0	1.0	90.03	0.0	49.7	49.7	47.7	2.02	24.572		
600.0	600.0	600.0	600.0	1.2	1.2	90.03	0.0	49.7	49.7	47.2	2.47	20.104		
700.0	700.0	700.0	700.0	1.5	1.5	90.03	0.0	49.7	49.7	46.8	2.92	17.011		
800.0	800.0	800.0	800.0	1.7	1.7	90.03	0.0	49.7	49.7	46.3	3.37	14.743		
900.0	900.0	900.0	900.0	1.9	1.9	90.03	0.0	49.7	49.7	45.9	3.82	13.008		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.03	0.0	49.7	49.7	45.4	4.27	11.639		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.03	0.0	49.7	49.7	45.0	4.72	10.531		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.03	0.0	49.7	49.7	44.5	5.17	9.615		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.03	0.0	49.7	49.7	44.1	5.62	8.846		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.03	0.0	49.7	49.7	43.6	6.07	8.191		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.03	0.0	49.7	49.7	43.2	6.52	7.626		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.03	0.0	49.7	49.7	42.7	6.97	7.134		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.03	0.0	49.7	49.7	42.3	7.42	6.701 CC, ES		
1,800.0	1,800.0	1,799.8	1,799.8	3.9	3.9	-133.02	-1.3	49.9	50.8	42.9	7.81	6.499		
1,900.0	1,899.9	1,899.6	1,899.5	4.1	4.1	-131.91	-5.2	50.3	53.9	45.8	8.16	6.612		
2,000.0	1,999.7	1,999.2	1,998.9	4.3	4.3	-130.31	-11.7	51.1	59.3	50.7	8.51	6.960		
2,100.0	2,099.3	2,098.6	2,097.9	4.5	4.4	-128.50	-20.7	52.1	66.8	57.9	8.89	7.512		
2,200.0	2,198.6	2,197.7	2,196.3	4.7	4.6	-126.69	-32.2	53.5	76.5	67.2	9.29	8.234		
2,300.0	2,297.5	2,296.5	2,294.0	4.9	4.9	-124.99	-46.2	55.1	88.4	78.7	9.72	9.094		
2,400.0	2,396.1	2,395.3	2,391.6	5.2	5.1	-123.81	-62.1	57.0	102.3	92.1	10.19	10.041		
2,500.0	2,494.2	2,494.1	2,489.0	5.5	5.4	-123.90	-78.1	58.9	117.7	107.0	10.69	11.007		
2,600.0	2,592.1	2,592.8	2,586.4	5.8	5.6	-124.44	-94.1	60.8	133.7	122.4	11.24	11.891		
2,700.0	2,690.0	2,691.5	2,683.8	6.1	5.9	-124.86	-110.1	62.7	149.6	137.8	11.81	12.666		
2,800.0	2,787.8	2,790.2	2,781.2	6.5	6.2	-125.21	-126.0	64.5	165.6	153.2	12.41	13.346		
2,900.0	2,885.7	2,889.0	2,878.6	6.8	6.5	-125.49	-142.0	66.4	181.5	168.5	13.02	13.943		
3,000.0	2,983.6	2,987.7	2,976.0	7.2	6.8	-125.72	-158.0	68.3	197.5	183.8	13.65	14.470		
3,100.0	3,081.5	3,086.4	3,073.4	7.6	7.2	-125.93	-174.0	70.2	213.5	199.2	14.29	14.935		
3,200.0	3,179.4	3,185.1	3,170.8	8.0	7.5	-126.10	-190.0	72.1	229.4	214.5	14.95	15.347		
3,300.0	3,277.3	3,283.8	3,268.2	8.4	7.8	-126.25	-206.0	74.0	245.4	229.8	15.62	15.714		
3,400.0	3,375.2	3,382.5	3,365.6	8.8	8.2	-126.38	-222.0	75.8	261.4	245.1	16.29	16.041		
3,500.0	3,473.1	3,481.2	3,463.0	9.2	8.5	-126.50	-237.9	77.7	277.3	260.4	16.98	16.335		
3,600.0	3,571.0	3,580.0	3,560.4	9.6	8.8	-126.60	-253.9	79.6	293.3	275.6	17.67	16.598		
3,700.0	3,668.9	3,678.7	3,657.8	10.0	9.2	-126.70	-269.9	81.5	309.3	290.9	18.37	16.836		
3,800.0	3,766.8	3,777.4	3,755.2	10.5	9.5	-126.78	-285.9	83.4	325.3	306.2	19.08	17.051		
3,900.0	3,864.6	3,876.1	3,852.6	10.9	9.9	-126.86	-301.9	85.2	341.2	321.5	19.79	17.246		
4,000.0	3,962.5	3,974.8	3,949.9	11.3	10.2	-126.93	-317.9	87.1	357.2	336.7	20.50	17.424		
4,100.0	4,060.4	4,073.5	4,047.3	11.7	10.6	-126.99	-333.9	89.0	373.2	352.0	21.22	17.586		
4,200.0	4,158.3	4,172.2	4,144.7	12.2	11.0	-127.05	-349.9	90.9	389.2	367.2	21.95	17.734		
4,300.0	4,256.2	4,271.0	4,242.1	12.6	11.3	-127.10	-365.8	92.8	405.2	382.5	22.67	17.871		
4,400.0	4,354.1	4,369.7	4,339.5	13.0	11.7	-127.15	-381.8	94.7	421.1	397.7	23.40	17.996		
4,500.0	4,452.0	4,468.4	4,436.9	13.5	12.0	-127.20	-397.8	96.5	437.1	413.0	24.13	18.112		
4,600.0	4,549.9	4,567.1	4,534.3	13.9	12.4	-127.24	-413.8	98.4	453.1	428.2	24.87	18.219		
4,700.0	4,647.8	4,665.8	4,631.7	14.4	12.8	-127.28	-429.8	100.3	469.1	443.5	25.61	18.319		
4,800.0	4,745.7	4,764.5	4,729.1	14.8	13.1	-127.32	-445.8	102.2	485.1	458.7	26.35	18.411		
4,900.0	4,843.6	4,863.2	4,826.5	15.2	13.5	-127.36	-461.8	104.1	501.0	474.0	27.09	18.497		
5,000.0	4,941.5	4,962.0	4,923.9	15.7	13.9	-127.39	-477.7	106.0	517.0	489.2	27.83	18.577		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,039.3	5,060.7	5,021.3	16.1	14.2	-127.42	-493.7	107.8	533.0	504.4	28.58	18.651		
5,200.0	5,137.2	5,159.4	5,118.7	16.6	14.6	-127.45	-509.7	109.7	549.0	519.7	29.32	18.721		
5,300.0	5,235.1	5,258.1	5,216.1	17.0	15.0	-127.48	-525.7	111.6	565.0	534.9	30.07	18.787		
5,400.0	5,333.0	5,356.8	5,313.4	17.5	15.4	-127.50	-541.7	113.5	580.9	550.1	30.82	18.849		
5,500.0	5,430.9	5,455.5	5,410.8	17.9	15.7	-127.53	-557.7	115.4	596.9	565.4	31.57	18.907		
5,600.0	5,528.8	5,554.2	5,508.2	18.4	16.1	-127.55	-573.7	117.2	612.9	580.6	32.32	18.961		
5,700.0	5,626.7	5,653.0	5,605.6	18.8	16.5	-127.57	-589.6	119.1	628.9	595.8	33.08	19.013		
5,800.0	5,724.6	5,751.7	5,703.0	19.3	16.9	-127.59	-605.6	121.0	644.9	611.0	33.83	19.061		
5,900.0	5,822.5	5,850.4	5,800.4	19.7	17.2	-127.61	-621.6	122.9	660.9	626.3	34.59	19.108		
6,000.0	5,920.4	5,952.4	5,901.2	20.2	17.5	-127.70	-637.3	124.7	676.7	641.4	35.28	19.179		
6,100.0	6,018.3	6,056.1	6,004.2	20.6	17.8	-128.08	-649.8	126.2	691.8	655.9	35.90	19.273		
6,200.0	6,116.1	6,159.6	6,107.3	21.1	18.0	-128.74	-658.6	127.2	706.3	669.9	36.45	19.377		
6,300.0	6,214.0	6,262.7	6,210.2	21.5	18.2	-129.66	-663.6	127.8	720.3	683.3	36.94	19.497		
6,400.0	6,312.3	6,364.8	6,312.3	21.9	18.4	-130.90	-665.0	128.0	732.8	695.4	37.38	19.604		
6,500.0	6,411.1	6,463.6	6,411.1	22.2	18.5	-131.94	-665.0	128.0	742.9	705.2	37.72	19.698		
6,600.0	6,510.4	6,562.9	6,510.4	22.4	18.7	-132.73	-665.0	128.0	750.9	712.9	38.03	19.746		
6,700.0	6,610.0	6,662.5	6,610.0	22.6	18.8	-133.27	-665.0	128.0	756.7	718.3	38.33	19.742		
6,800.0	6,709.9	6,762.4	6,709.9	22.8	18.9	-133.59	-665.0	128.0	760.0	721.4	38.61	19.687		
6,900.0	6,809.9	6,862.4	6,809.9	22.9	19.1	89.78	-665.0	128.0	761.0	722.3	38.67	19.681		
7,000.0	6,909.9	6,962.4	6,909.9	23.0	19.2	89.78	-665.0	128.0	761.0	722.1	38.96	19.535		
7,100.0	7,009.9	7,061.9	7,009.4	23.2	19.4	87.87	-664.9	128.0	761.0	721.6	39.45	19.290		
7,200.0	7,109.4	7,158.1	7,105.2	23.2	19.4	87.91	-656.8	128.3	761.0	721.4	39.58	19.225		
7,300.0	7,206.7	7,254.4	7,199.1	23.2	19.4	87.99	-635.9	129.0	761.0	721.5	39.50	19.267		
7,400.0	7,299.9	7,350.9	7,289.6	23.0	19.3	88.10	-602.5	130.1	760.9	721.7	39.21	19.405		
7,500.0	7,387.2	7,447.6	7,374.9	22.8	19.1	88.25	-557.2	131.6	760.9	722.1	38.78	19.621		
7,600.0	7,466.9	7,544.6	7,453.5	22.5	18.8	88.43	-500.6	133.5	760.8	722.5	38.26	19.886		
7,700.0	7,537.4	7,641.9	7,524.0	22.2	18.6	88.64	-433.7	135.7	760.7	723.0	37.73	20.163		
7,800.0	7,597.3	7,739.6	7,585.1	21.8	18.3	88.88	-357.6	138.3	760.7	723.4	37.27	20.407		
7,900.0	7,645.6	7,837.7	7,635.4	21.4	18.2	89.14	-273.5	141.1	760.6	723.6	36.98	20.566		
8,000.0	7,681.2	7,936.3	7,673.8	21.1	18.2	89.42	-182.8	144.1	760.6	723.6	36.94	20.592		
8,100.0	7,703.4	8,035.4	7,699.6	20.8	18.3	89.71	-87.2	147.3	760.6	723.4	37.19	20.450		
8,154.7	7,709.8	8,089.8	7,708.0	20.6	18.5	89.87	-33.5	149.1	760.5	723.1	37.49	20.286		
8,200.0	7,711.9	8,135.1	7,711.9	20.5	18.6	90.00	11.5	150.6	760.5	722.8	37.78	20.131		
8,300.0	7,712.0	8,236.1	7,712.0	20.2	19.1	90.00	111.5	153.9	760.6	721.9	38.62	19.693		
8,400.0	7,712.0	8,336.1	7,712.0	20.1	19.8	90.00	211.4	157.2	760.6	720.9	39.67	19.173		
8,500.0	7,712.0	8,436.1	7,712.0	20.8	20.5	90.00	311.4	160.6	760.6	719.6	40.99	18.557		
8,600.0	7,712.0	8,536.1	7,712.0	21.7	21.3	90.00	411.3	163.9	760.6	718.1	42.50	17.897		
8,700.0	7,712.0	8,636.1	7,712.0	22.7	22.3	90.00	511.2	167.2	760.6	716.3	44.34	17.155		
8,800.0	7,712.0	8,736.1	7,712.0	23.8	23.5	90.00	611.2	170.6	760.6	714.1	46.51	16.353		
8,900.0	7,712.0	8,836.1	7,712.0	24.9	24.8	90.00	711.1	173.9	760.6	711.7	48.89	15.558		
9,000.0	7,712.0	8,936.1	7,712.0	26.2	26.1	90.00	811.1	177.2	760.6	709.2	51.44	14.786		
9,100.0	7,712.0	9,036.1	7,712.0	27.5	27.5	90.00	911.0	180.6	760.6	706.5	54.15	14.047		
9,200.0	7,712.0	9,136.1	7,712.0	28.9	29.0	90.00	1,011.0	183.9	760.6	703.6	56.98	13.348		
9,300.0	7,712.0	9,236.1	7,712.0	30.3	30.6	90.00	1,110.9	187.2	760.6	700.7	59.93	12.691		
9,400.0	7,712.0	9,336.1	7,712.0	31.7	32.1	90.00	1,210.9	190.6	760.6	697.7	62.98	12.078		
9,500.0	7,712.0	9,436.1	7,712.0	33.3	33.7	90.00	1,310.8	193.9	760.6	694.5	66.10	11.507		
9,600.0	7,712.0	9,536.1	7,712.0	34.8	35.4	90.00	1,410.8	197.2	760.6	691.3	69.30	10.976		
9,700.0	7,712.0	9,636.1	7,712.0	36.4	37.0	90.00	1,510.7	200.6	760.6	688.1	72.56	10.482		
9,800.0	7,712.0	9,736.1	7,712.0	38.0	38.7	90.00	1,610.6	203.9	760.6	684.8	75.88	10.025		
9,900.0	7,712.0	9,836.1	7,712.0	39.6	40.4	90.00	1,710.6	207.2	760.6	681.4	79.24	9.599		
10,000.0	7,712.0	9,936.1	7,712.0	41.3	42.2	90.00	1,810.5	210.6	760.7	678.0	82.64	9.204		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,100.0	7,712.0	10,036.1	7,712.0	43.0	43.9	90.00	1,910.5	213.9	760.7	674.6	86.09	8.836		
10,200.0	7,712.0	10,136.1	7,712.0	44.7	45.7	90.00	2,010.4	217.2	760.7	671.1	89.56	8.493		
10,300.0	7,712.0	10,236.1	7,712.0	46.4	47.4	90.00	2,110.4	220.6	760.7	667.6	93.06	8.174		
10,400.0	7,712.0	10,336.1	7,712.0	48.1	49.2	90.00	2,210.3	223.9	760.7	664.1	96.59	7.875		
10,500.0	7,712.0	10,436.1	7,712.0	49.9	51.0	90.00	2,310.3	227.2	760.7	660.5	100.14	7.596		
10,600.0	7,712.0	10,536.1	7,712.0	51.6	52.8	90.00	2,410.2	230.6	760.7	656.9	103.71	7.335		
10,700.0	7,712.0	10,636.1	7,712.0	53.4	54.6	90.00	2,510.1	233.9	760.7	653.4	107.30	7.089		
10,800.0	7,712.0	10,736.1	7,712.0	55.2	56.4	90.00	2,610.1	237.2	760.7	649.8	110.90	6.859		
10,900.0	7,712.0	10,836.1	7,712.0	56.9	58.2	90.00	2,710.0	240.6	760.7	646.1	114.52	6.642		
11,000.0	7,712.0	10,936.1	7,712.0	58.7	60.1	90.00	2,810.0	243.9	760.7	642.5	118.16	6.437		
11,100.0	7,712.0	11,036.1	7,712.0	60.5	61.9	90.00	2,909.9	247.2	760.6	638.8	121.81	6.245		
11,200.0	7,712.0	11,136.1	7,712.0	62.3	63.7	90.00	3,009.9	250.6	760.6	635.2	125.47	6.063		
11,300.0	7,712.0	11,236.1	7,712.0	64.1	65.6	90.00	3,109.8	253.9	760.6	631.5	129.13	5.890		
11,400.0	7,712.0	11,336.1	7,712.0	66.0	67.4	90.00	3,209.8	257.2	760.6	627.8	132.81	5.727		
11,500.0	7,712.0	11,436.1	7,712.0	67.8	69.3	90.00	3,309.7	260.6	760.6	624.1	136.50	5.572		
11,600.0	7,712.0	11,536.1	7,712.0	69.6	71.1	90.00	3,409.6	263.9	760.6	620.4	140.20	5.425		
11,700.0	7,712.0	11,636.1	7,712.0	71.4	73.0	90.00	3,509.6	267.2	760.6	616.7	143.90	5.286		
11,800.0	7,712.0	11,736.1	7,712.0	73.3	74.9	90.00	3,609.5	270.6	760.6	613.0	147.61	5.153		
11,900.0	7,712.0	11,836.1	7,712.0	75.1	76.7	90.00	3,709.5	273.9	760.6	609.3	151.33	5.026		
12,000.0	7,712.0	11,936.1	7,712.0	77.0	78.6	90.00	3,809.4	277.2	760.6	605.6	155.05	4.906		
12,100.0	7,712.0	12,036.1	7,712.0	78.8	80.5	90.00	3,909.4	280.5	760.6	601.8	158.78	4.790		
12,200.0	7,712.0	12,136.1	7,712.0	80.7	82.3	90.00	4,009.3	283.9	760.6	598.1	162.51	4.680		
12,300.0	7,712.0	12,236.1	7,712.0	82.5	84.2	90.00	4,109.3	287.2	760.6	594.3	166.25	4.575		
12,400.0	7,712.0	12,336.1	7,712.0	84.4	86.1	90.00	4,209.2	290.5	760.6	590.6	169.99	4.474		
12,500.0	7,712.0	12,436.1	7,712.0	86.2	88.0	90.00	4,309.1	293.9	760.6	586.8	173.74	4.378		
12,600.0	7,712.0	12,536.1	7,712.0	88.1	89.8	90.00	4,409.1	297.2	760.6	583.1	177.49	4.285		
12,700.0	7,712.0	12,636.1	7,712.0	90.0	91.7	90.00	4,509.0	300.5	760.6	579.3	181.24	4.196		
12,800.0	7,712.0	12,736.1	7,712.0	91.8	93.6	90.00	4,609.0	303.9	760.5	575.5	185.00	4.111		
12,900.0	7,712.0	12,836.1	7,712.0	93.7	95.5	90.00	4,708.9	307.2	760.5	571.8	188.76	4.029		
13,000.0	7,712.0	12,936.1	7,712.0	95.6	97.4	90.00	4,808.9	310.5	760.5	568.0	192.52	3.950		
13,100.0	7,712.0	13,036.1	7,712.0	97.5	99.2	90.00	4,908.8	313.9	760.5	564.2	196.29	3.874		
13,200.0	7,712.0	13,136.1	7,712.0	99.3	101.1	90.00	5,008.8	317.2	760.5	560.4	200.06	3.801		
13,300.0	7,712.0	13,236.1	7,712.0	101.2	103.0	90.00	5,108.7	320.5	760.5	556.7	203.83	3.731		
13,400.0	7,712.0	13,336.1	7,712.0	103.1	104.9	90.00	5,208.7	323.9	760.5	552.9	207.61	3.663		
13,500.0	7,712.0	13,436.1	7,712.0	105.0	106.8	90.00	5,308.6	327.2	760.5	549.1	211.38	3.598		
13,600.0	7,712.0	13,536.1	7,712.0	106.8	108.7	90.00	5,408.5	330.5	760.5	545.3	215.16	3.534		
13,700.0	7,712.0	13,636.1	7,712.0	108.7	110.6	90.00	5,508.5	333.8	760.4	541.5	218.94	3.473		
13,800.0	7,712.0	13,736.1	7,712.0	110.6	112.5	90.00	5,608.4	337.2	760.4	537.7	222.73	3.414		
13,900.0	7,712.0	13,836.1	7,712.0	112.5	114.4	90.00	5,708.4	340.5	760.4	533.9	226.51	3.357		
14,000.0	7,712.0	13,936.1	7,712.0	114.4	116.3	90.00	5,808.3	343.8	760.4	530.1	230.30	3.302		
14,100.0	7,712.0	14,036.1	7,712.0	116.3	118.2	90.00	5,908.3	347.2	760.4	526.3	234.09	3.248		
14,200.0	7,712.0	14,136.1	7,712.0	118.2	120.1	90.00	6,008.2	350.5	760.4	522.5	237.88	3.197		
14,300.0	7,712.0	14,236.1	7,712.0	120.0	122.0	90.00	6,108.2	353.8	760.4	518.7	241.67	3.146		
14,400.0	7,712.0	14,336.1	7,712.0	121.9	123.9	90.00	6,208.1	357.2	760.3	514.9	245.46	3.098		
14,500.0	7,712.0	14,436.1	7,712.0	123.8	125.8	90.00	6,308.0	360.5	760.3	511.1	249.25	3.050		
14,600.0	7,712.0	14,536.1	7,712.0	125.7	127.7	90.00	6,408.0	363.8	760.3	507.3	253.05	3.005		
14,700.0	7,712.0	14,636.1	7,712.0	127.6	129.6	90.00	6,507.9	367.2	760.3	503.4	256.85	2.960		
14,800.0	7,712.0	14,736.1	7,712.0	129.5	131.5	90.00	6,607.9	370.5	760.3	499.6	260.64	2.917		
14,900.0	7,712.0	14,836.1	7,712.0	131.4	133.4	90.00	6,707.8	373.8	760.3	495.8	264.44	2.875		
15,000.0	7,712.0	14,936.1	7,712.0	133.3	135.3	90.00	6,807.8	377.2	760.2	492.0	268.24	2.834		
15,100.0	7,712.0	15,036.1	7,712.0	135.2	137.2	90.00	6,907.7	380.5	760.2	488.2	272.05	2.794		

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference				Offset				Semi Major Axis				Distance		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
15,200.0	7,712.0	15,136.1	7,712.0	137.1	139.1	90.00	7,007.7	383.8	760.2	484.4	275.85	2.756		
15,300.0	7,712.0	15,236.1	7,712.0	139.0	141.0	90.00	7,107.6	387.1	760.2	480.5	279.65	2.718		
15,400.0	7,712.0	15,336.1	7,712.0	140.9	142.9	90.00	7,207.5	390.5	760.2	476.7	283.46	2.682		
15,500.0	7,712.0	15,436.1	7,712.0	142.8	144.8	90.00	7,307.5	393.8	760.1	472.9	287.26	2.646		
15,600.0	7,712.0	15,536.1	7,712.0	144.7	146.7	90.00	7,407.4	397.1	760.1	469.1	291.07	2.612		
15,700.0	7,712.0	15,636.1	7,712.0	146.6	148.6	90.00	7,507.4	400.5	760.1	465.2	294.87	2.578		
15,800.0	7,712.0	15,736.1	7,712.0	148.5	150.5	90.00	7,607.3	403.8	760.1	461.4	298.68	2.545		
15,900.0	7,712.0	15,836.1	7,712.0	150.4	152.4	90.00	7,707.3	407.1	760.1	457.6	302.49	2.513		
16,000.0	7,712.0	15,936.1	7,712.0	152.3	154.3	90.00	7,807.2	410.5	760.0	453.7	306.30	2.481		
16,100.0	7,712.0	16,036.1	7,712.0	154.2	156.2	90.00	7,907.2	413.8	760.0	449.9	310.11	2.451		
16,200.0	7,712.0	16,136.1	7,712.0	156.1	158.1	90.00	8,007.1	417.1	760.0	446.1	313.92	2.421		
16,300.0	7,712.0	16,236.1	7,712.0	158.0	160.0	90.00	8,107.1	420.4	760.0	442.2	317.73	2.392		
16,400.0	7,712.0	16,336.1	7,712.0	159.9	161.9	90.00	8,207.0	423.8	759.9	438.4	321.54	2.363		
16,500.0	7,712.0	16,436.1	7,712.0	161.8	163.8	90.00	8,306.9	427.1	759.9	434.6	325.36	2.336		
16,600.0	7,712.0	16,536.1	7,712.0	163.7	165.8	90.00	8,406.9	430.4	759.9	430.7	329.17	2.309		
16,700.0	7,712.0	16,636.1	7,712.0	165.6	167.7	90.00	8,506.8	433.8	759.9	426.9	332.98	2.282		
16,800.0	7,712.0	16,736.1	7,712.0	167.5	169.6	90.00	8,606.8	437.1	759.8	423.0	336.80	2.256		
16,900.0	7,712.0	16,836.1	7,712.0	169.4	171.5	90.00	8,706.7	440.4	759.8	419.2	340.61	2.231		
17,000.0	7,712.0	16,936.1	7,712.0	171.3	173.4	90.00	8,806.7	443.8	759.8	415.4	344.43	2.206		
17,100.0	7,712.0	17,036.1	7,712.0	173.2	175.3	90.00	8,906.6	447.1	759.8	411.5	348.24	2.182		
17,200.0	7,712.0	17,136.1	7,712.0	175.1	177.2	90.00	9,006.6	450.4	759.7	407.7	352.06	2.158		
17,300.0	7,712.0	17,236.1	7,712.0	177.0	179.1	90.00	9,106.5	453.7	759.7	403.8	355.88	2.135		
17,400.0	7,712.0	17,336.1	7,712.0	178.9	181.0	90.00	9,206.4	457.1	759.7	400.0	359.69	2.112		
17,500.0	7,712.0	17,436.1	7,712.0	180.8	182.9	90.00	9,306.4	460.4	759.7	396.1	363.51	2.090		
17,600.0	7,712.0	17,536.1	7,712.0	182.7	184.8	90.00	9,406.3	463.7	759.6	392.3	367.33	2.068		
17,700.0	7,712.0	17,636.1	7,712.0	184.6	186.8	90.00	9,506.3	467.1	759.6	388.5	371.15	2.047		
17,800.0	7,712.0	17,736.1	7,712.0	186.5	188.7	90.00	9,606.2	470.4	759.6	384.6	374.97	2.026		
17,900.0	7,712.0	17,836.1	7,712.0	188.4	190.6	90.00	9,706.2	473.7	759.5	380.8	378.79	2.005		
17,924.1	7,712.0	17,860.2	7,712.0	188.9	191.0	90.00	9,730.2	474.5	759.5	379.9	379.68	2.000 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3)											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-50.8	50.8						
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-50.8	50.8	50.6	0.22	226.058			
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-50.8	50.8	50.1	0.67	75.353			
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-50.8	50.8	49.7	1.12	45.212			
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-50.8	50.8	49.2	1.57	32.294			
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-50.8	50.8	48.8	2.02	25.118			
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-50.8	50.8	48.3	2.47	20.551			
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-50.8	50.8	47.9	2.92	17.389			
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-50.8	50.8	47.4	3.37	15.071	CC, ES		
900.0	900.0	898.8	898.8	1.9	1.9	-90.61	-0.6	-52.0	52.0	48.2	3.80	13.680			
1,000.0	1,000.0	997.5	997.4	2.1	2.1	-92.34	-2.3	-55.4	55.5	51.3	4.21	13.164			
1,100.0	1,100.0	1,095.9	1,095.6	2.4	2.3	-94.77	-5.1	-61.1	61.4	56.8	4.64	13.244			
1,200.0	1,200.0	1,193.9	1,193.2	2.6	2.5	-97.47	-9.0	-69.0	69.9	64.8	5.07	13.785			
1,300.0	1,300.0	1,291.4	1,290.0	2.8	2.7	-100.10	-14.1	-79.1	80.9	75.4	5.51	14.682			
1,400.0	1,400.0	1,388.2	1,385.9	3.0	3.0	-102.46	-20.2	-91.3	94.5	88.6	5.96	15.850			
1,500.0	1,500.0	1,484.4	1,480.7	3.3	3.3	-104.50	-27.3	-105.5	110.7	104.3	6.43	17.215			
1,600.0	1,600.0	1,579.6	1,574.2	3.5	3.6	-106.21	-35.4	-121.7	129.4	122.5	6.91	18.718			
1,700.0	1,700.0	1,673.8	1,666.2	3.7	4.0	-107.62	-44.4	-139.9	150.6	143.2	7.41	20.310			
1,800.0	1,800.0	1,767.3	1,757.0	3.9	4.4	27.79	-54.4	-159.8	173.1	165.4	7.70	22.470			
1,900.0	1,899.9	1,860.3	1,846.7	4.1	4.8	27.14	-65.3	-181.6	195.7	187.6	8.11	24.125			
2,000.0	1,999.7	1,955.2	1,937.7	4.3	5.3	26.83	-77.3	-205.7	218.2	209.6	8.54	25.556			
2,100.0	2,099.3	2,053.0	2,031.5	4.5	5.9	26.84	-89.8	-230.7	238.7	229.7	8.98	26.581			
2,200.0	2,198.6	2,151.3	2,125.7	4.7	6.4	27.12	-102.3	-255.9	256.9	247.4	9.43	27.230			
2,300.0	2,297.5	2,250.0	2,220.2	4.9	7.0	27.61	-115.0	-281.2	272.8	262.9	9.90	27.543			
2,400.0	2,396.1	2,349.0	2,315.1	5.2	7.5	28.30	-127.6	-306.5	286.5	276.1	10.40	27.559			
2,500.0	2,494.2	2,448.2	2,410.2	5.5	8.1	29.18	-140.3	-331.9	298.0	287.1	10.91	27.305			
2,600.0	2,592.1	2,547.5	2,505.3	5.8	8.7	30.16	-153.0	-357.4	308.7	297.2	11.47	26.918			
2,700.0	2,690.0	2,646.8	2,600.4	6.1	9.3	31.07	-165.7	-382.8	319.5	307.5	12.04	26.530			
2,800.0	2,787.8	2,746.1	2,695.6	6.5	9.9	31.92	-178.4	-408.2	330.4	317.8	12.64	26.146			
2,900.0	2,885.7	2,845.4	2,790.7	6.8	10.5	32.71	-191.0	-433.7	341.4	328.1	13.25	25.769			
3,000.0	2,983.6	2,944.7	2,885.8	7.2	11.1	33.46	-203.7	-459.1	352.4	338.5	13.87	25.400			
3,100.0	3,081.5	3,044.0	2,981.0	7.6	11.6	34.16	-216.4	-484.5	363.5	348.9	14.51	25.042			
3,200.0	3,179.4	3,143.3	3,076.1	8.0	12.2	34.82	-229.1	-509.9	374.6	359.4	15.17	24.695			
3,300.0	3,277.3	3,242.5	3,171.2	8.4	12.8	35.44	-241.8	-535.4	385.7	369.9	15.83	24.361			
3,400.0	3,375.2	3,341.8	3,266.4	8.8	13.4	36.03	-254.5	-560.8	397.0	380.4	16.51	24.040			
3,500.0	3,473.1	3,441.1	3,361.5	9.2	14.0	36.58	-267.2	-586.2	408.2	391.0	17.20	23.731			
3,600.0	3,571.0	3,540.4	3,456.7	9.6	14.6	37.11	-279.9	-611.6	419.5	401.6	17.90	23.436			
3,700.0	3,668.9	3,639.7	3,551.8	10.0	15.2	37.60	-292.6	-637.1	430.8	412.2	18.61	23.154			
3,800.0	3,766.8	3,739.0	3,646.9	10.5	15.9	38.08	-305.3	-662.5	442.2	422.8	19.32	22.884			
3,900.0	3,864.6	3,838.3	3,742.1	10.9	16.5	38.52	-317.9	-687.9	453.5	433.5	20.05	22.626			
4,000.0	3,962.5	3,937.6	3,837.2	11.3	17.1	38.95	-330.6	-713.4	464.9	444.2	20.78	22.379			
4,100.0	4,060.4	4,036.9	3,932.3	11.7	17.7	39.36	-343.3	-738.8	476.4	454.9	21.51	22.144			
4,200.0	4,158.3	4,136.2	4,027.5	12.2	18.3	39.74	-356.0	-764.2	487.8	465.6	22.26	21.919			
4,300.0	4,256.2	4,235.4	4,122.6	12.6	18.9	40.11	-368.7	-789.6	499.3	476.3	23.00	21.705			
4,400.0	4,354.1	4,334.7	4,217.7	13.0	19.5	40.46	-381.4	-815.1	510.8	487.0	23.76	21.500			
4,500.0	4,452.0	4,434.0	4,312.9	13.5	20.1	40.80	-394.1	-840.5	522.3	497.8	24.52	21.304			
4,600.0	4,549.9	4,533.3	4,408.0	13.9	20.7	41.12	-406.8	-865.9	533.8	508.5	25.28	21.117			
4,700.0	4,647.8	4,632.6	4,503.1	14.4	21.3	41.43	-419.5	-891.3	545.4	519.3	26.05	20.939			
4,800.0	4,745.7	4,731.9	4,598.3	14.8	21.9	41.73	-432.2	-916.8	556.9	530.1	26.82	20.768			
4,900.0	4,843.6	4,831.2	4,693.4	15.2	22.5	42.01	-444.8	-942.2	568.5	540.9	27.59	20.604			
5,000.0	4,941.5	4,930.5	4,788.6	15.7	23.1	42.29	-457.5	-967.6	580.1	551.7	28.37	20.447			

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	5,039.3	5,029.8	4,883.7	16.1	23.7	42.55	-470.2	-993.0	591.7	562.5	29.15	20.297	
5,200.0	5,137.2	5,129.0	4,978.8	16.6	24.4	42.80	-482.9	-1,018.5	603.3	573.3	29.93	20.153	
5,300.0	5,235.1	5,228.3	5,074.0	17.0	25.0	43.04	-495.6	-1,043.9	614.9	584.2	30.72	20.015	
5,400.0	5,333.0	5,327.6	5,169.1	17.5	25.6	43.28	-508.3	-1,069.3	626.5	595.0	31.51	19.883	
5,500.0	5,430.9	5,426.9	5,264.2	17.9	26.2	43.50	-521.0	-1,094.8	638.2	605.9	32.30	19.756	
5,600.0	5,528.8	5,526.2	5,359.4	18.4	26.8	43.72	-533.7	-1,120.2	649.8	616.7	33.10	19.634	
5,700.0	5,626.7	5,625.5	5,454.5	18.8	27.4	43.93	-546.4	-1,145.6	661.5	627.6	33.89	19.516	
5,800.0	5,724.6	5,724.8	5,549.6	19.3	28.0	44.13	-559.0	-1,171.0	673.1	638.5	34.69	19.403	
5,900.0	5,822.5	5,824.1	5,644.8	19.7	28.6	44.32	-571.7	-1,196.5	684.8	649.3	35.49	19.295	
6,000.0	5,920.4	5,923.4	5,739.9	20.2	29.2	44.51	-584.4	-1,221.9	696.5	660.2	36.30	19.190	
6,100.0	6,018.3	6,022.7	5,835.1	20.6	29.8	44.69	-597.1	-1,247.3	708.2	671.1	37.10	19.089	
6,200.0	6,116.1	6,121.9	5,930.2	21.1	30.5	44.87	-609.8	-1,272.7	719.9	682.0	37.90	18.992	
6,300.0	6,214.0	6,235.3	6,039.0	21.5	31.1	45.09	-624.0	-1,301.2	731.1	692.4	38.74	18.875	
6,400.0	6,312.3	6,364.8	6,164.6	21.9	31.6	45.50	-638.1	-1,329.5	740.1	700.6	39.50	18.737	
6,500.0	6,411.1	6,494.9	6,292.0	22.2	32.0	45.83	-649.7	-1,352.7	747.5	707.4	40.12	18.629	
6,600.0	6,510.4	6,625.4	6,421.0	22.4	32.4	46.08	-658.7	-1,370.8	753.2	712.6	40.65	18.530	
6,700.0	6,610.0	6,756.3	6,551.0	22.6	32.7	46.26	-665.1	-1,383.6	757.3	716.2	41.07	18.438	
6,800.0	6,709.9	6,887.3	6,681.8	22.8	32.9	46.36	-668.9	-1,391.1	759.6	718.2	41.39	18.351	
6,900.0	6,809.9	7,015.4	6,809.9	22.9	33.0	-90.15	-670.0	-1,393.3	760.3	719.4	40.94	18.569	
7,000.0	6,909.9	7,115.4	6,909.9	23.0	33.1	-90.15	-670.0	-1,393.3	760.3	719.1	41.22	18.444	
7,100.0	7,009.9	7,216.0	7,010.4	23.2	33.2	-92.05	-669.8	-1,393.3	760.3	718.1	42.19	18.023	
7,200.0	7,109.4	7,319.9	7,113.8	23.2	33.2	-92.03	-660.2	-1,393.0	760.3	718.0	42.29	17.977	
7,300.0	7,206.7	7,423.8	7,214.7	23.2	33.2	-91.96	-635.7	-1,392.2	760.3	718.1	42.18	18.023	
7,400.0	7,299.9	7,527.5	7,310.7	23.0	33.0	-91.85	-597.1	-1,390.9	760.2	718.3	41.88	18.153	
7,500.0	7,387.2	7,630.9	7,400.0	22.8	32.8	-91.71	-545.1	-1,389.1	760.1	718.7	41.43	18.350	
7,600.0	7,466.9	7,733.9	7,480.6	22.5	32.6	-91.53	-481.0	-1,387.0	760.1	719.2	40.88	18.591	
7,700.0	7,537.4	7,836.6	7,551.0	22.2	32.3	-91.32	-406.4	-1,384.5	760.0	719.7	40.33	18.846	
7,800.0	7,597.3	7,938.9	7,609.7	21.8	31.9	-91.09	-322.8	-1,381.7	759.9	720.1	39.84	19.075	
7,900.0	7,645.6	8,040.6	7,655.8	21.4	31.6	-90.83	-232.2	-1,378.7	759.9	720.4	39.50	19.237	
8,000.0	7,681.2	8,141.9	7,688.4	21.1	31.3	-90.56	-136.5	-1,375.5	759.8	720.4	39.39	19.290	
8,100.0	7,703.4	8,242.6	7,707.1	20.8	31.0	-90.28	-37.7	-1,372.2	759.8	720.2	39.56	19.203	
8,200.0	7,711.9	8,342.8	7,712.0	20.5	30.8	-90.01	62.2	-1,368.9	759.7	719.7	40.05	18.971	
8,300.0	7,712.0	8,442.8	7,712.0	20.2	30.7	-90.00	162.2	-1,365.5	759.7	719.1	40.63	18.697	
8,400.0	7,712.0	8,542.8	7,712.0	20.1	30.7	-90.00	262.1	-1,362.2	759.7	718.3	41.43	18.339	
8,500.0	7,712.0	8,642.8	7,712.0	20.8	30.8	-90.00	362.1	-1,358.9	759.7	717.2	42.53	17.865	
8,600.0	7,712.0	8,742.8	7,712.0	21.7	31.0	-90.00	462.0	-1,355.5	759.7	715.8	43.94	17.291	
8,700.0	7,712.0	8,842.8	7,712.0	22.7	31.3	-90.00	562.0	-1,352.2	759.7	714.0	45.63	16.649	
8,800.0	7,712.0	8,942.8	7,712.0	23.8	31.7	-90.00	661.9	-1,348.8	759.7	712.1	47.57	15.969	
8,900.0	7,712.0	9,042.8	7,712.0	24.9	32.3	-90.00	761.8	-1,345.5	759.7	709.9	49.74	15.274	
9,000.0	7,712.0	9,142.8	7,712.0	26.2	33.1	-90.00	861.8	-1,342.2	759.6	707.6	52.09	14.583	
9,100.0	7,712.0	9,242.8	7,712.0	27.5	33.9	-90.00	961.7	-1,338.8	759.6	705.0	54.62	13.908	
9,200.0	7,712.0	9,342.8	7,712.0	28.9	34.9	-90.00	1,061.7	-1,335.5	759.6	702.3	57.29	13.260	
9,300.0	7,712.0	9,442.8	7,712.0	30.3	36.0	-90.00	1,161.6	-1,332.2	759.6	699.5	60.09	12.642	
9,400.0	7,712.0	9,542.8	7,712.0	31.7	37.2	-90.00	1,261.6	-1,328.8	759.6	696.6	62.99	12.058	
9,500.0	7,712.0	9,642.8	7,712.0	33.3	38.4	-90.00	1,361.5	-1,325.5	759.6	693.6	66.00	11.510	
9,600.0	7,712.0	9,742.8	7,712.0	34.8	39.7	-90.00	1,461.5	-1,322.1	759.6	690.5	69.08	10.995	
9,700.0	7,712.0	9,842.8	7,712.0	36.4	41.1	-90.00	1,561.4	-1,318.8	759.6	687.3	72.24	10.515	
9,800.0	7,712.0	9,942.8	7,712.0	38.0	42.5	-90.00	1,661.4	-1,315.5	759.6	684.1	75.46	10.066	
9,900.0	7,712.0	10,042.8	7,712.0	39.6	44.0	-90.00	1,761.3	-1,312.1	759.6	680.8	78.74	9.647	
10,000.0	7,712.0	10,142.8	7,712.0	41.3	45.5	-90.00	1,861.2	-1,308.8	759.5	677.5	82.06	9.256	
10,100.0	7,712.0	10,242.8	7,712.0	43.0	47.0	-90.00	1,961.2	-1,305.4	759.5	674.1	85.43	8.891	

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

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.0	7,712.0	10,342.8	7,712.0	44.7	48.6	-90.00	2,061.1	-1,302.1	759.5	670.7	88.84	8.550		
10,300.0	7,712.0	10,442.8	7,712.0	46.4	50.2	-90.00	2,161.1	-1,298.8	759.5	667.2	92.28	8.231		
10,400.0	7,712.0	10,542.8	7,712.0	48.1	51.8	-90.00	2,261.0	-1,295.4	759.5	663.8	95.75	7.933		
10,500.0	7,712.0	10,642.8	7,712.0	49.9	53.4	-90.00	2,361.0	-1,292.1	759.5	660.3	99.24	7.653		
10,600.0	7,712.0	10,742.8	7,712.0	51.6	55.1	-90.00	2,460.9	-1,288.7	759.5	656.7	102.77	7.391		
10,700.0	7,712.0	10,842.8	7,712.0	53.4	56.8	-90.00	2,560.9	-1,285.4	759.5	653.2	106.31	7.144		
10,800.0	7,712.0	10,942.8	7,712.0	55.2	58.4	-90.00	2,660.8	-1,282.1	759.5	649.6	109.87	6.912		
10,900.0	7,712.0	11,042.8	7,712.0	56.9	60.1	-90.00	2,760.8	-1,278.7	759.5	646.0	113.45	6.694		
11,000.0	7,712.0	11,142.8	7,712.0	58.7	61.9	-90.00	2,860.7	-1,275.4	759.5	642.4	117.05	6.488		
11,100.0	7,712.0	11,242.8	7,712.0	60.5	63.6	-90.00	2,960.6	-1,272.0	759.5	638.8	120.66	6.294		
11,200.0	7,712.0	11,342.8	7,712.0	62.3	65.3	-90.00	3,060.6	-1,268.7	759.5	635.2	124.29	6.110		
11,300.0	7,712.0	11,442.8	7,712.0	64.1	67.1	-90.00	3,160.5	-1,265.4	759.5	631.5	127.93	5.937		
11,400.0	7,712.0	11,542.8	7,712.0	66.0	68.8	-90.00	3,260.5	-1,262.0	759.4	627.9	131.58	5.772		
11,500.0	7,712.0	11,642.8	7,712.0	67.8	70.6	-90.00	3,360.4	-1,258.7	759.4	624.2	135.24	5.616		
11,600.0	7,712.0	11,742.8	7,712.0	69.6	72.3	-90.00	3,460.4	-1,255.3	759.4	620.5	138.91	5.467		
11,700.0	7,712.0	11,842.8	7,712.0	71.4	74.1	-90.00	3,560.3	-1,252.0	759.4	616.8	142.59	5.326		
11,800.0	7,712.0	11,942.8	7,712.0	73.3	75.9	-90.00	3,660.3	-1,248.6	759.4	613.2	146.27	5.192		
11,900.0	7,712.0	12,042.8	7,712.0	75.1	77.7	-90.00	3,760.2	-1,245.3	759.4	609.5	149.97	5.064		
12,000.0	7,712.0	12,142.8	7,712.0	77.0	79.5	-90.00	3,860.2	-1,242.0	759.4	605.7	153.67	4.942		
12,100.0	7,712.0	12,242.8	7,712.0	78.8	81.3	-90.00	3,960.1	-1,238.6	759.4	602.0	157.38	4.825		
12,200.0	7,712.0	12,342.8	7,712.0	80.7	83.1	-90.00	4,060.0	-1,235.3	759.4	598.3	161.09	4.714		
12,300.0	7,712.0	12,442.8	7,712.0	82.5	84.9	-90.00	4,160.0	-1,231.9	759.4	594.6	164.81	4.608		
12,400.0	7,712.0	12,542.8	7,712.0	84.4	86.7	-90.00	4,259.9	-1,228.6	759.4	590.9	168.53	4.506		
12,500.0	7,712.0	12,642.8	7,712.0	86.2	88.6	-90.00	4,359.9	-1,225.2	759.4	587.1	172.26	4.408		
12,600.0	7,712.0	12,742.8	7,712.0	88.1	90.4	-90.00	4,459.8	-1,221.9	759.4	583.4	176.00	4.315		
12,700.0	7,712.0	12,842.8	7,712.0	90.0	92.2	-90.00	4,559.8	-1,218.6	759.4	579.6	179.74	4.225		
12,800.0	7,712.0	12,942.8	7,712.0	91.8	94.0	-90.00	4,659.7	-1,215.2	759.4	575.9	183.48	4.139		
12,900.0	7,712.0	13,042.8	7,712.0	93.7	95.9	-90.00	4,759.7	-1,211.9	759.4	572.2	187.23	4.056		
13,000.0	7,712.0	13,142.8	7,712.0	95.6	97.7	-90.00	4,859.6	-1,208.5	759.4	568.4	190.98	3.976		
13,100.0	7,712.0	13,242.8	7,712.0	97.5	99.5	-90.00	4,959.6	-1,205.2	759.4	564.6	194.73	3.900		
13,200.0	7,712.0	13,342.8	7,712.0	99.3	101.4	-90.00	5,059.5	-1,201.8	759.4	560.9	198.49	3.826		
13,300.0	7,712.0	13,442.8	7,712.0	101.2	103.2	-90.00	5,159.4	-1,198.5	759.4	557.1	202.25	3.755		
13,400.0	7,712.0	13,542.8	7,712.0	103.1	105.1	-90.00	5,259.4	-1,195.1	759.4	553.4	206.01	3.686		
13,500.0	7,712.0	13,642.8	7,712.0	105.0	106.9	-90.00	5,359.3	-1,191.8	759.4	549.6	209.78	3.620		
13,600.0	7,712.0	13,742.8	7,712.0	106.8	108.8	-90.00	5,459.3	-1,188.5	759.4	545.8	213.55	3.556		
13,700.0	7,712.0	13,842.8	7,712.0	108.7	110.6	-90.00	5,559.2	-1,185.1	759.4	542.0	217.32	3.494		
13,800.0	7,712.0	13,942.8	7,712.0	110.6	112.5	-90.00	5,659.2	-1,181.8	759.4	538.3	221.09	3.435		
13,900.0	7,712.0	14,042.9	7,712.0	112.5	114.4	-90.00	5,759.1	-1,178.4	759.4	534.5	224.87	3.377		
14,000.0	7,712.0	14,142.9	7,712.0	114.4	116.2	-90.00	5,859.1	-1,175.1	759.4	530.7	228.64	3.321		
14,100.0	7,712.0	14,242.9	7,712.0	116.3	118.1	-90.00	5,959.0	-1,171.7	759.4	526.9	232.42	3.267		
14,200.0	7,712.0	14,342.9	7,712.0	118.2	120.0	-90.00	6,058.9	-1,168.4	759.4	523.2	236.21	3.215		
14,300.0	7,712.0	14,442.9	7,712.0	120.0	121.8	-90.00	6,158.9	-1,165.0	759.4	519.4	239.99	3.164		
14,335.2	7,712.0	14,478.1	7,712.0	120.7	122.5	-90.00	6,194.1	-1,163.9	759.4	518.0	241.32	3.147		
14,400.0	7,712.0	14,542.9	7,712.0	121.9	123.7	-90.00	6,258.8	-1,161.7	759.4	515.6	243.77	3.115		
14,500.0	7,712.0	14,642.9	7,712.0	123.8	125.6	-90.00	6,358.8	-1,158.3	759.4	511.8	247.56	3.067		
14,600.0	7,712.0	14,742.9	7,712.0	125.7	127.4	-90.00	6,458.7	-1,155.0	759.4	508.0	251.35	3.021		
14,700.0	7,712.0	14,842.9	7,712.0	127.6	129.3	-90.00	6,558.7	-1,151.7	759.4	504.2	255.14	2.976		
14,800.0	7,712.0	14,942.9	7,712.0	129.5	131.2	-90.00	6,658.6	-1,148.3	759.4	500.4	258.93	2.933		
14,900.0	7,712.0	15,042.9	7,712.0	131.4	133.1	-90.00	6,758.6	-1,145.0	759.4	496.6	262.72	2.890		
15,000.0	7,712.0	15,142.9	7,712.0	133.3	134.9	-90.00	6,858.5	-1,141.6	759.4	492.9	266.51	2.849		
15,100.0	7,712.0	15,242.9	7,712.0	135.2	136.8	-90.00	6,958.5	-1,138.3	759.4	489.1	270.31	2.809		

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

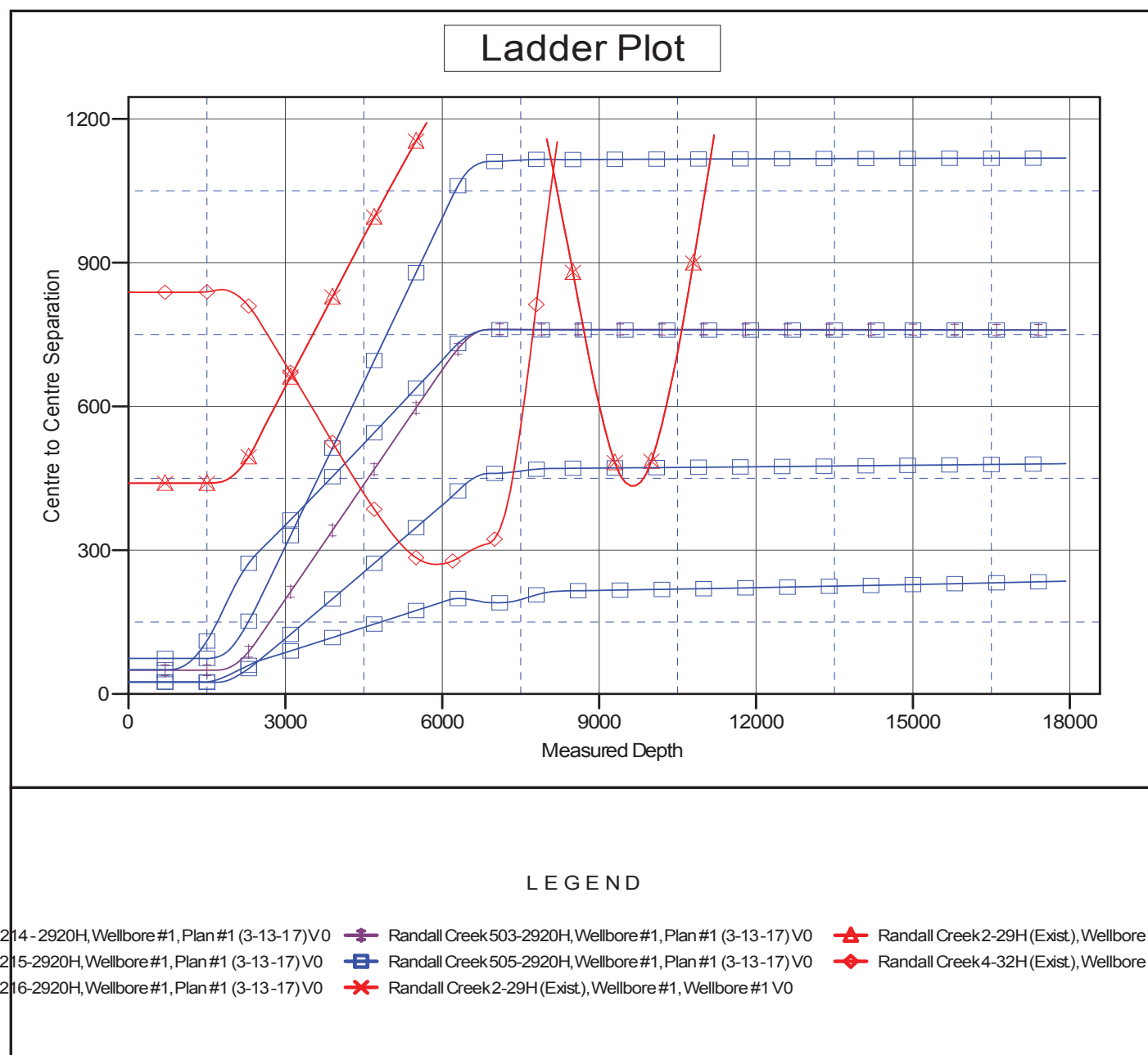
Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,200.0	7,712.0	15,342.9	7,712.0	137.1	138.7	-90.00	7,058.4	-1,134.9	759.4	485.3	274.11	2.770		
15,300.0	7,712.0	15,442.9	7,712.0	139.0	140.6	-90.00	7,158.3	-1,131.6	759.4	481.5	277.90	2.733		
15,400.0	7,712.0	15,542.9	7,712.0	140.9	142.4	-90.00	7,258.3	-1,128.2	759.4	477.7	281.70	2.696		
15,500.0	7,712.0	15,642.9	7,712.0	142.8	144.3	-90.00	7,358.2	-1,124.9	759.4	473.9	285.50	2.660		
15,600.0	7,712.0	15,742.9	7,712.0	144.7	146.2	-90.00	7,458.2	-1,121.5	759.4	470.1	289.30	2.625		
15,700.0	7,712.0	15,842.9	7,712.0	146.6	148.1	-90.00	7,558.1	-1,118.2	759.4	466.3	293.10	2.591		
15,800.0	7,712.0	15,942.9	7,712.0	148.5	150.0	-90.00	7,658.1	-1,114.8	759.4	462.5	296.90	2.558		
15,900.0	7,712.0	16,042.9	7,712.0	150.4	151.9	-90.00	7,758.0	-1,111.5	759.4	458.7	300.71	2.525		
16,000.0	7,712.0	16,142.9	7,712.0	152.3	153.8	-90.00	7,858.0	-1,108.1	759.4	454.9	304.51	2.494		
16,100.0	7,712.0	16,242.9	7,712.0	154.2	155.6	-90.00	7,957.9	-1,104.8	759.4	451.1	308.32	2.463		
16,200.0	7,712.0	16,342.9	7,712.0	156.1	157.5	-90.00	8,057.9	-1,101.4	759.4	447.3	312.12	2.433		
16,300.0	7,712.0	16,442.9	7,712.0	158.0	159.4	-90.00	8,157.8	-1,098.1	759.4	443.5	315.93	2.404		
16,400.0	7,712.0	16,542.9	7,712.0	159.9	161.3	-90.00	8,257.7	-1,094.7	759.4	439.7	319.74	2.375		
16,500.0	7,712.0	16,642.9	7,712.0	161.8	163.2	-90.00	8,357.7	-1,091.4	759.4	435.9	323.54	2.347		
16,600.0	7,712.0	16,742.9	7,712.0	163.7	165.1	-90.00	8,457.6	-1,088.0	759.4	432.1	327.35	2.320		
16,700.0	7,712.0	16,842.9	7,712.0	165.6	167.0	-90.00	8,557.6	-1,084.7	759.4	428.3	331.16	2.293		
16,800.0	7,712.0	16,942.9	7,712.0	167.5	168.9	-90.00	8,657.5	-1,081.3	759.4	424.4	334.97	2.267		
16,900.0	7,712.0	17,042.9	7,712.0	169.4	170.8	-90.00	8,757.5	-1,078.0	759.4	420.6	338.78	2.242		
17,000.0	7,712.0	17,142.9	7,712.0	171.3	172.7	-90.00	8,857.4	-1,074.6	759.4	416.8	342.59	2.217		
17,100.0	7,712.0	17,242.9	7,712.0	173.2	174.5	-90.00	8,957.4	-1,071.3	759.4	413.0	346.41	2.192		
17,200.0	7,712.0	17,342.9	7,712.0	175.1	176.4	-90.00	9,057.3	-1,067.9	759.4	409.2	350.22	2.168		
17,300.0	7,712.0	17,442.9	7,712.0	177.0	178.3	-90.00	9,157.2	-1,064.6	759.4	405.4	354.03	2.145		
17,400.0	7,712.0	17,542.9	7,712.0	178.9	180.2	-90.00	9,257.2	-1,061.2	759.5	401.6	357.85	2.122		
17,500.0	7,712.0	17,642.9	7,712.0	180.8	182.1	-90.00	9,357.1	-1,057.9	759.5	397.8	361.66	2.100		
17,600.0	7,712.0	17,742.9	7,712.0	182.7	184.0	-90.00	9,457.1	-1,054.5	759.5	394.0	365.47	2.078		
17,700.0	7,712.0	17,842.9	7,712.0	184.6	185.9	-90.00	9,557.0	-1,051.2	759.5	390.2	369.29	2.057		
17,800.0	7,712.0	17,942.9	7,712.0	186.5	187.8	-90.00	9,657.0	-1,047.8	759.5	386.4	373.11	2.036		
17,858.6	7,712.0	18,001.5	7,712.0	187.7	188.9	-90.00	9,715.5	-1,045.8	759.5	384.1	375.34	2.023		
17,900.0	7,712.0	18,041.5	7,712.0	188.4	189.6	-90.00	9,755.5	-1,044.5	759.5	382.6	376.84	2.015		
17,924.1	7,712.0	18,041.5	7,712.0	188.9	189.6	-90.00	9,755.5	-1,044.5	759.9	382.6	377.27	2.014 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 504-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 504-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5369.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Randall Creek 504-2920H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.75°



Reference Depths are relative to WELL @ 5369.0ft (Original Well Elev)	Coordinates are relative to: Randall Creek 504-2920H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 0.75°

