

# Fifth Creek Energy Company, LLC

Well Name: **Randall Creek 505-2920H**

Surface Location: Randall Creek 29 SESE Pad Sec.29-T12N-R62W

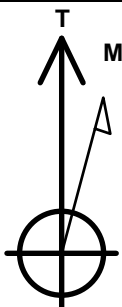
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

Ground Elevation: 5346.0

+N/-S +E/-W Northing Easting Longitude Slot  
 0.0 0.0 1599808.96 3320860.68 40.974064 -104.338067  
 Original Well Elev WELL @ 5369.0ft (Original Well Elev)

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 250'FSL & 900'FEL, Sec.29	1.0	0.0	0.0	Point
BHL 572'FNL & 2220'FEL, Sec.20	7712.0	9755.5	-993.7	Point
LP 300'FSL & 2220'FEL, Sec.26	7712.0	46.7	-1318.6	Point



Azimuths to True North  
 Magnetic North: 7.90°

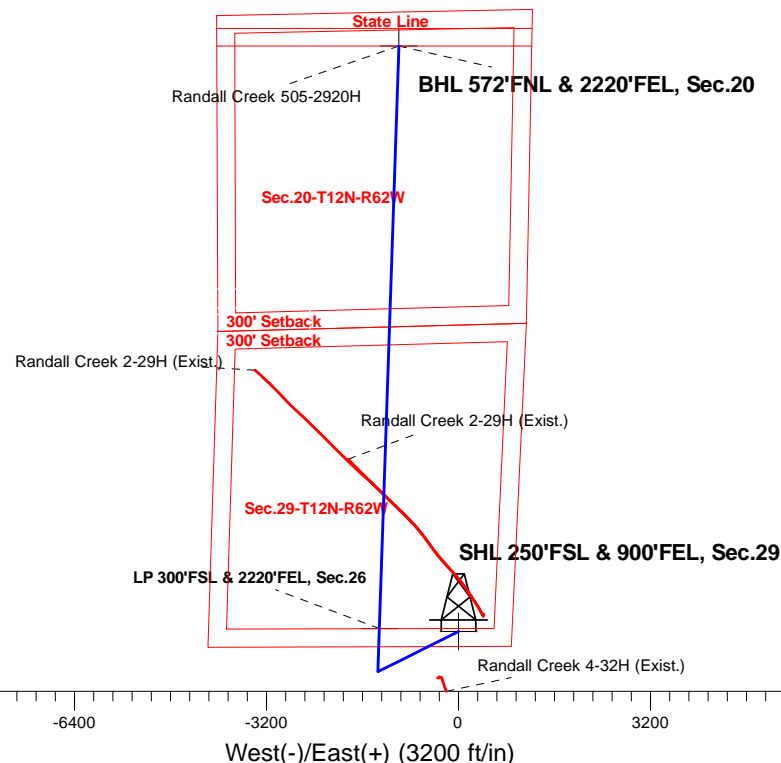
Magnetic Field  
 Strength: 52861.4snT  
 Dip Angle: 67.37°  
 Date: 3/13/2017  
 Model: IGRF2010

Randall Creek 29 SESE Pad Sec.29-T12N-R62W  
 Randall Creek 505-2920H  
 Plan #1 (3-13-17)  
 17:06, March 14 2017

## ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5980.1	6174.0	Start Drop -2.00
6995.8	7201.4	KOP #2 - Start Build 8.00
7712.0	18041.5	TD at 18041.5

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



West(-)/East(+) (3200 ft/in)



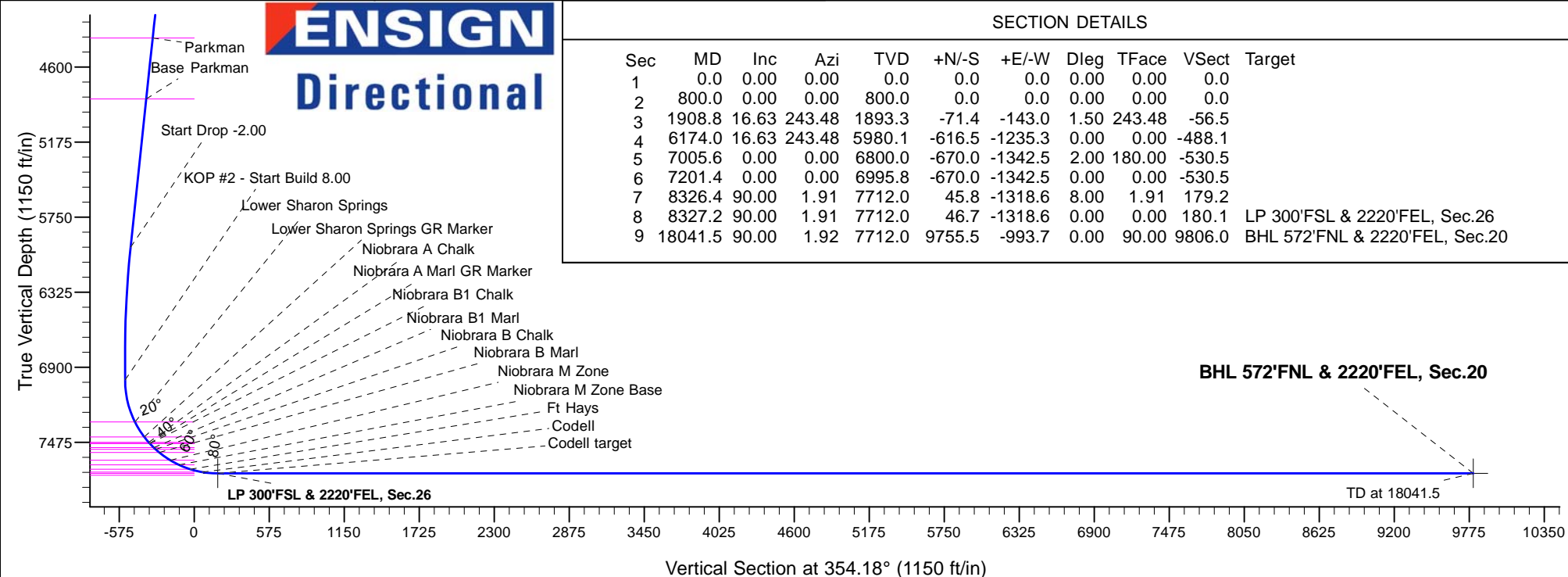
## SECTION DETAILS

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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1908.8	16.63	243.48	1893.3	-71.4	-143.0	1.50	243.48	-56.5	
4	6174.0	16.63	243.48	5980.1	-616.5	-1235.3	0.00	0.00	-488.1	
5	7005.6	0.00	0.00	6800.0	-670.0	-1342.5	2.00	180.00	-530.5	
6	7201.4	0.00	0.00	6995.8	-670.0	-1342.5	0.00	0.00	-530.5	
7	8326.4	90.00	1.91	7712.0	45.8	-1318.6	8.00	1.91	179.2	
8	8327.2	90.00	1.91	7712.0	46.7	-1318.6	0.00	0.00	180.1	LP 300'FSL & 2220'FEL, Sec.26
9	18041.5	90.00	1.92	7712.0	9755.5	-993.7	0.00	90.00	9806.0	BHL 572'FNL & 2220'FEL, Sec.20

**BHL 572'FNL & 2220'FEL, Sec.20**

TD at 18041.5

Vertical Section at 354.18° (1150 ft/in)





## **Fifth Creek Energy Company, LLC**

**Sec.29-T12N-R62W**

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

**Randall Creek 505-2920H**

**Wellbore #1**

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

## **Standard Planning Report**

**14 March, 2017**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (3-13-17)		

<b>Project</b>	Sec.29-T12N-R62W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	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 505-2920H					
Well Position	+N/-S	0.0 ft	Northing:	1,599,808.95 usft	Latitude:	40.974064
	+E/-W	0.0 ft	Easting:	3,320,860.69 usft	Longitude:	-104.338067
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,346.0 ft

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

<b>Design</b>	Plan #1 (3-13-17)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	354.18

<b>Plan Sections</b>										
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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,908.8	16.63	243.48	1,893.3	-71.4	-143.0	1.50	1.50	0.00	243.48	
6,174.0	16.63	243.48	5,980.1	-616.5	-1,235.3	0.00	0.00	0.00	0.00	
7,005.6	0.00	0.00	6,800.0	-670.0	-1,342.5	2.00	-2.00	0.00	180.00	
7,201.4	0.00	0.00	6,995.8	-670.0	-1,342.5	0.00	0.00	0.00	0.00	
8,326.4	90.00	1.91	7,712.0	45.8	-1,318.6	8.00	8.00	0.00	1.91	
8,327.2	90.00	1.91	7,712.0	46.7	-1,318.6	0.00	0.00	0.00	0.00	LP 300'FSL & 2220'FI
18,041.5	90.00	1.92	7,712.0	9,755.5	-993.7	0.00	0.00	0.00	90.00	BHL 572'FNL & 2220'

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<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
<b>SHL 250'FSL &amp; 900'FEL, Sec.29</b>									
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
<b>KOP - Start Build 1.50</b>									
900.0	1.50	243.48	900.0	-0.6	-1.2	-0.5	1.50	1.50	0.00
1,000.0	3.00	243.48	999.9	-2.3	-4.7	-1.9	1.50	1.50	0.00
1,100.0	4.50	243.48	1,099.7	-5.3	-10.5	-4.2	1.50	1.50	0.00
1,200.0	6.00	243.48	1,199.3	-9.3	-18.7	-7.4	1.50	1.50	0.00
1,300.0	7.50	243.48	1,298.6	-14.6	-29.2	-11.6	1.50	1.50	0.00
1,400.0	9.00	243.48	1,397.5	-21.0	-42.1	-16.6	1.50	1.50	0.00
1,500.0	10.50	243.48	1,496.1	-28.6	-57.2	-22.6	1.50	1.50	0.00
1,600.0	12.00	243.48	1,594.2	-37.3	-74.7	-29.5	1.50	1.50	0.00
1,624.4	12.37	243.48	1,618.0	-39.6	-79.3	-31.3	1.50	1.50	0.00
<b>Pierre C&amp;D Sand</b>									
1,700.0	13.50	243.48	1,691.7	-47.1	-94.4	-37.3	1.50	1.50	0.00
1,800.0	15.00	243.48	1,788.6	-58.1	-116.5	-46.0	1.50	1.50	0.00
1,900.0	16.50	243.48	1,884.9	-70.2	-140.7	-55.6	1.50	1.50	0.00
1,908.8	16.63	243.48	1,893.3	-71.4	-143.0	-56.5	1.50	1.50	0.00
2,000.0	16.63	243.48	1,980.7	-83.0	-166.3	-65.7	0.00	0.00	0.00
2,100.0	16.63	243.48	2,076.5	-95.8	-192.0	-75.9	0.00	0.00	0.00
2,200.0	16.63	243.48	2,172.3	-108.6	-217.6	-86.0	0.00	0.00	0.00
2,300.0	16.63	243.48	2,268.1	-121.4	-243.2	-96.1	0.00	0.00	0.00
2,400.0	16.63	243.48	2,363.9	-134.1	-268.8	-106.2	0.00	0.00	0.00
2,432.4	16.63	243.48	2,395.0	-138.3	-277.1	-109.5	0.00	0.00	0.00
<b>Base Pierre C&amp;D Sand</b>									
2,500.0	16.63	243.48	2,459.8	-146.9	-294.4	-116.3	0.00	0.00	0.00
2,600.0	16.63	243.48	2,555.6	-159.7	-320.0	-126.5	0.00	0.00	0.00
2,700.0	16.63	243.48	2,651.4	-172.5	-345.6	-136.6	0.00	0.00	0.00
2,800.0	16.63	243.48	2,747.2	-185.3	-371.2	-146.7	0.00	0.00	0.00
2,871.8	16.63	243.48	2,816.0	-194.4	-389.6	-154.0	0.00	0.00	0.00
<b>Pierre B Sand</b>									
2,900.0	16.63	243.48	2,843.0	-198.0	-396.8	-156.8	0.00	0.00	0.00
2,944.8	16.63	243.48	2,886.0	-203.8	-408.3	-161.3	0.00	0.00	0.00
<b>Base Pierre B Sand</b>									
3,000.0	16.63	243.48	2,938.8	-210.8	-422.4	-166.9	0.00	0.00	0.00
3,100.0	16.63	243.48	3,034.7	-223.6	-448.0	-177.0	0.00	0.00	0.00
3,200.0	16.63	243.48	3,130.5	-236.4	-473.7	-187.2	0.00	0.00	0.00
3,300.0	16.63	243.48	3,226.3	-249.2	-499.3	-197.3	0.00	0.00	0.00
3,400.0	16.63	243.48	3,322.1	-261.9	-524.9	-207.4	0.00	0.00	0.00
3,500.0	16.63	243.48	3,417.9	-274.7	-550.5	-217.5	0.00	0.00	0.00
3,600.0	16.63	243.48	3,513.7	-287.5	-576.1	-227.6	0.00	0.00	0.00
3,700.0	16.63	243.48	3,609.6	-300.3	-601.7	-237.8	0.00	0.00	0.00
3,715.1	16.63	243.48	3,624.0	-302.2	-605.6	-239.3	0.00	0.00	0.00
<b>Pierre A Sand</b>									

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<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad	<b>North Reference:</b>	True
	Sec.29-T12N-R62W		
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	16.63	243.48	3,705.4	-313.1	-627.3	-247.9	0.00	0.00	0.00
3,900.0	16.63	243.48	3,801.2	-325.9	-652.9	-258.0	0.00	0.00	0.00
4,000.0	16.63	243.48	3,897.0	-338.6	-678.5	-268.1	0.00	0.00	0.00
4,100.0	16.63	243.48	3,992.8	-351.4	-704.1	-278.2	0.00	0.00	0.00
4,181.6	16.63	243.48	4,071.0	-361.8	-725.0	-286.5	0.00	0.00	0.00
Base Pierre A Sand									
4,200.0	16.63	243.48	4,088.6	-364.2	-729.7	-288.4	0.00	0.00	0.00
4,300.0	16.63	243.48	4,184.5	-377.0	-755.4	-298.5	0.00	0.00	0.00
4,400.0	16.63	243.48	4,280.3	-389.8	-781.0	-308.6	0.00	0.00	0.00
4,499.9	16.63	243.48	4,376.0	-402.5	-806.5	-318.7	0.00	0.00	0.00
Parkman									
4,500.0	16.63	243.48	4,376.1	-402.5	-806.6	-318.7	0.00	0.00	0.00
4,600.0	16.63	243.48	4,471.9	-415.3	-832.2	-328.8	0.00	0.00	0.00
4,700.0	16.63	243.48	4,567.7	-428.1	-857.8	-339.0	0.00	0.00	0.00
4,800.0	16.63	243.48	4,663.5	-440.9	-883.4	-349.1	0.00	0.00	0.00
4,900.0	16.63	243.48	4,759.4	-453.7	-909.0	-359.2	0.00	0.00	0.00
4,987.3	16.63	243.48	4,843.0	-464.8	-931.4	-368.0	0.00	0.00	0.00
Base Parkman									
5,000.0	16.63	243.48	4,855.2	-466.4	-934.6	-369.3	0.00	0.00	0.00
5,100.0	16.63	243.48	4,951.0	-479.2	-960.2	-379.4	0.00	0.00	0.00
5,200.0	16.63	243.48	5,046.8	-492.0	-985.8	-389.6	0.00	0.00	0.00
5,300.0	16.63	243.48	5,142.6	-504.8	-1,011.4	-399.7	0.00	0.00	0.00
5,400.0	16.63	243.48	5,238.4	-517.6	-1,037.1	-409.8	0.00	0.00	0.00
5,500.0	16.63	243.48	5,334.3	-530.3	-1,062.7	-419.9	0.00	0.00	0.00
5,600.0	16.63	243.48	5,430.1	-543.1	-1,088.3	-430.0	0.00	0.00	0.00
5,700.0	16.63	243.48	5,525.9	-555.9	-1,113.9	-440.2	0.00	0.00	0.00
5,800.0	16.63	243.48	5,621.7	-568.7	-1,139.5	-450.3	0.00	0.00	0.00
5,900.0	16.63	243.48	5,717.5	-581.5	-1,165.1	-460.4	0.00	0.00	0.00
6,000.0	16.63	243.48	5,813.3	-594.2	-1,190.7	-470.5	0.00	0.00	0.00
6,100.0	16.63	243.48	5,909.2	-607.0	-1,216.3	-480.6	0.00	0.00	0.00
6,174.0	16.63	243.48	5,980.1	-616.5	-1,235.3	-488.1	0.00	0.00	0.00
Start Drop -2.00									
6,200.0	16.11	243.48	6,005.0	-619.8	-1,241.8	-490.7	2.00	-2.00	0.00
6,300.0	14.11	243.48	6,101.5	-631.4	-1,265.2	-499.9	2.00	-2.00	0.00
6,400.0	12.11	243.48	6,198.9	-641.5	-1,285.4	-508.0	2.00	-2.00	0.00
6,500.0	10.11	243.48	6,297.1	-650.1	-1,302.7	-514.8	2.00	-2.00	0.00
6,600.0	8.11	243.48	6,395.8	-657.2	-1,316.9	-520.4	2.00	-2.00	0.00
6,700.0	6.11	243.48	6,495.0	-662.7	-1,327.9	-524.7	2.00	-2.00	0.00
6,800.0	4.11	243.48	6,594.6	-666.7	-1,335.9	-527.9	2.00	-2.00	0.00
6,900.0	2.11	243.48	6,694.5	-669.1	-1,340.8	-529.8	2.00	-2.00	0.00
7,000.0	0.11	243.48	6,794.4	-670.0	-1,342.5	-530.5	2.00	-2.00	0.00
7,005.6	0.00	0.00	6,800.0	-670.0	-1,342.5	-530.5	2.00	-2.00	0.00
7,100.0	0.00	0.00	6,894.4	-670.0	-1,342.5	-530.5	0.00	0.00	0.00
7,200.0	0.00	0.00	6,994.4	-670.0	-1,342.5	-530.5	0.00	0.00	0.00
7,201.4	0.00	0.00	6,995.8	-670.0	-1,342.5	-530.5	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
7,300.0	7.89	1.91	7,094.1	-663.2	-1,342.3	-523.8	8.00	8.00	0.00
7,400.0	15.89	1.91	7,191.9	-642.6	-1,341.6	-503.4	8.00	8.00	0.00
7,500.0	23.89	1.91	7,285.9	-608.7	-1,340.5	-469.7	8.00	8.00	0.00
7,535.6	26.74	1.91	7,318.0	-593.5	-1,339.9	-454.6	8.00	8.00	0.00
Lower Sharon Springs									
7,600.0	31.89	1.91	7,374.2	-562.0	-1,338.9	-423.4	8.00	8.00	0.00

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<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad	<b>North Reference:</b>	True
	Sec.29-T12N-R62W		
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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)	
7,671.6	37.62	1.91	7,433.0	-521.2	-1,337.5	-382.9	8.00	8.00	0.00	
Lower Sharon Springs GR Marker										
7,700.0	39.89	1.91	7,455.1	-503.4	-1,336.9	-365.3	8.00	8.00	0.00	
7,726.3	42.00	1.91	7,475.0	-486.2	-1,336.4	-348.2	8.00	8.00	0.00	
Niobrara A Chalk										
7,735.8	42.75	1.91	7,482.0	-479.8	-1,336.2	-341.9	8.00	8.00	0.00	
Niobrara A Marl GR Marker										
7,738.5	42.97	1.91	7,484.0	-477.9	-1,336.1	-340.1	8.00	8.00	0.00	
Niobrara B1 Chalk										
7,782.2	46.46	1.91	7,515.0	-447.3	-1,335.1	-309.7	8.00	8.00	0.00	
Niobrara B1 Marl										
7,800.0	47.89	1.91	7,527.1	-434.2	-1,334.6	-296.7	8.00	8.00	0.00	
7,801.3	48.00	1.91	7,528.0	-433.2	-1,334.6	-295.7	8.00	8.00	0.00	
Niobrara B Chalk										
7,838.2	50.95	1.91	7,552.0	-405.2	-1,333.7	-267.9	8.00	8.00	0.00	
Niobrara B Marl										
7,900.0	55.89	1.91	7,588.8	-355.6	-1,332.0	-218.8	8.00	8.00	0.00	
7,943.3	59.36	1.91	7,612.0	-319.0	-1,330.8	-182.5	8.00	8.00	0.00	
Niobrara M Zone										
8,000.0	63.89	1.91	7,638.9	-269.2	-1,329.1	-133.1	8.00	8.00	0.00	
8,018.9	65.40	1.91	7,647.0	-252.2	-1,328.6	-116.2	8.00	8.00	0.00	
Niobrara M Zone Base										
8,100.0	71.89	1.91	7,676.5	-176.7	-1,326.0	-41.4	8.00	8.00	0.00	
8,111.5	72.81	1.91	7,680.0	-165.8	-1,325.7	-30.6	8.00	8.00	0.00	
Ft Hays										
8,200.0	79.89	1.91	7,700.9	-79.8	-1,322.8	54.6	8.00	8.00	0.00	
8,206.5	80.41	1.91	7,702.0	-73.4	-1,322.6	61.0	8.00	8.00	0.00	
Codell										
8,300.0	87.89	1.91	7,711.5	19.5	-1,319.5	153.1	8.00	8.00	0.00	
8,326.4	90.00	1.91	7,712.0	45.8	-1,318.6	179.2	8.00	8.00	0.00	
Codell target										
8,327.2	90.00	1.91	7,712.0	46.7	-1,318.6	180.1	0.00	0.00	0.00	
LP 300'FSL & 2220'FEL, Sec.26										
8,400.0	90.00	1.91	7,712.0	119.4	-1,316.1	252.2	0.00	0.00	0.00	
8,500.0	90.00	1.91	7,712.0	219.3	-1,312.8	351.2	0.00	0.00	0.00	
8,600.0	90.00	1.91	7,712.0	319.3	-1,309.5	450.3	0.00	0.00	0.00	
8,700.0	90.00	1.91	7,712.0	419.2	-1,306.1	549.4	0.00	0.00	0.00	
8,800.0	90.00	1.91	7,712.0	519.2	-1,302.8	648.5	0.00	0.00	0.00	
8,900.0	90.00	1.91	7,712.0	619.1	-1,299.5	747.6	0.00	0.00	0.00	
9,000.0	90.00	1.91	7,712.0	719.1	-1,296.1	846.7	0.00	0.00	0.00	
9,100.0	90.00	1.91	7,712.0	819.0	-1,292.8	945.8	0.00	0.00	0.00	
9,200.0	90.00	1.91	7,712.0	918.9	-1,289.5	1,044.9	0.00	0.00	0.00	
9,300.0	90.00	1.91	7,712.0	1,018.9	-1,286.1	1,144.0	0.00	0.00	0.00	
9,400.0	90.00	1.91	7,712.0	1,118.8	-1,282.8	1,243.1	0.00	0.00	0.00	
9,500.0	90.00	1.91	7,712.0	1,218.8	-1,279.4	1,342.2	0.00	0.00	0.00	
9,600.0	90.00	1.91	7,712.0	1,318.7	-1,276.1	1,441.3	0.00	0.00	0.00	
9,700.0	90.00	1.91	7,712.0	1,418.7	-1,272.8	1,540.3	0.00	0.00	0.00	
9,800.0	90.00	1.91	7,712.0	1,518.6	-1,269.4	1,639.4	0.00	0.00	0.00	
9,900.0	90.00	1.91	7,712.0	1,618.6	-1,266.1	1,738.5	0.00	0.00	0.00	
10,000.0	90.00	1.91	7,712.0	1,718.5	-1,262.7	1,837.6	0.00	0.00	0.00	
10,100.0	90.00	1.91	7,712.0	1,818.4	-1,259.4	1,936.7	0.00	0.00	0.00	
10,200.0	90.00	1.91	7,712.0	1,918.4	-1,256.1	2,035.8	0.00	0.00	0.00	

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	2,018.3	-1,252.7	2,134.9	0.00	0.00	0.00
10,400.0	90.00	1.91	7,712.0	2,118.3	-1,249.4	2,234.0	0.00	0.00	0.00
10,500.0	90.00	1.91	7,712.0	2,218.2	-1,246.1	2,333.1	0.00	0.00	0.00
10,600.0	90.00	1.91	7,712.0	2,318.2	-1,242.7	2,432.2	0.00	0.00	0.00
10,700.0	90.00	1.91	7,712.0	2,418.1	-1,239.4	2,531.3	0.00	0.00	0.00
10,800.0	90.00	1.91	7,712.0	2,518.1	-1,236.0	2,630.3	0.00	0.00	0.00
10,900.0	90.00	1.91	7,712.0	2,618.0	-1,232.7	2,729.4	0.00	0.00	0.00
11,000.0	90.00	1.91	7,712.0	2,717.9	-1,229.3	2,828.5	0.00	0.00	0.00
11,100.0	90.00	1.91	7,712.0	2,817.9	-1,226.0	2,927.6	0.00	0.00	0.00
11,200.0	90.00	1.91	7,712.0	2,917.8	-1,222.7	3,026.7	0.00	0.00	0.00
11,300.0	90.00	1.91	7,712.0	3,017.8	-1,219.3	3,125.8	0.00	0.00	0.00
11,400.0	90.00	1.91	7,712.0	3,117.7	-1,216.0	3,224.9	0.00	0.00	0.00
11,500.0	90.00	1.91	7,712.0	3,217.7	-1,212.6	3,324.0	0.00	0.00	0.00
11,600.0	90.00	1.91	7,712.0	3,317.6	-1,209.3	3,423.1	0.00	0.00	0.00
11,700.0	90.00	1.92	7,712.0	3,417.6	-1,206.0	3,522.2	0.00	0.00	0.00
11,800.0	90.00	1.92	7,712.0	3,517.5	-1,202.6	3,621.3	0.00	0.00	0.00
11,900.0	90.00	1.92	7,712.0	3,617.4	-1,199.3	3,720.3	0.00	0.00	0.00
12,000.0	90.00	1.92	7,712.0	3,717.4	-1,195.9	3,819.4	0.00	0.00	0.00
12,100.0	90.00	1.92	7,712.0	3,817.3	-1,192.6	3,918.5	0.00	0.00	0.00
12,200.0	90.00	1.92	7,712.0	3,917.3	-1,189.3	4,017.6	0.00	0.00	0.00
12,300.0	90.00	1.92	7,712.0	4,017.2	-1,185.9	4,116.7	0.00	0.00	0.00
12,400.0	90.00	1.92	7,712.0	4,117.2	-1,182.6	4,215.8	0.00	0.00	0.00
12,500.0	90.00	1.92	7,712.0	4,217.1	-1,179.2	4,314.9	0.00	0.00	0.00
12,600.0	90.00	1.92	7,712.0	4,317.0	-1,175.9	4,414.0	0.00	0.00	0.00
12,700.0	90.00	1.92	7,712.0	4,417.0	-1,172.5	4,513.1	0.00	0.00	0.00
12,800.0	90.00	1.92	7,712.0	4,516.9	-1,169.2	4,612.2	0.00	0.00	0.00
12,900.0	90.00	1.92	7,712.0	4,616.9	-1,165.8	4,711.3	0.00	0.00	0.00
13,000.0	90.00	1.92	7,712.0	4,716.8	-1,162.5	4,810.3	0.00	0.00	0.00
13,100.0	90.00	1.92	7,712.0	4,816.8	-1,159.2	4,909.4	0.00	0.00	0.00
13,200.0	90.00	1.92	7,712.0	4,916.7	-1,155.8	5,008.5	0.00	0.00	0.00
13,300.0	90.00	1.92	7,712.0	5,016.7	-1,152.5	5,107.6	0.00	0.00	0.00
13,400.0	90.00	1.92	7,712.0	5,116.6	-1,149.1	5,206.7	0.00	0.00	0.00
13,500.0	90.00	1.92	7,712.0	5,216.5	-1,145.8	5,305.8	0.00	0.00	0.00
13,600.0	90.00	1.92	7,712.0	5,316.5	-1,142.4	5,404.9	0.00	0.00	0.00
13,700.0	90.00	1.92	7,712.0	5,416.4	-1,139.1	5,504.0	0.00	0.00	0.00
13,800.0	90.00	1.92	7,712.0	5,516.4	-1,135.7	5,603.1	0.00	0.00	0.00
13,900.0	90.00	1.92	7,712.0	5,616.3	-1,132.4	5,702.2	0.00	0.00	0.00
14,000.0	90.00	1.92	7,712.0	5,716.3	-1,129.1	5,801.3	0.00	0.00	0.00
14,100.0	90.00	1.92	7,712.0	5,816.2	-1,125.7	5,900.3	0.00	0.00	0.00
14,200.0	90.00	1.92	7,712.0	5,916.2	-1,122.4	5,999.4	0.00	0.00	0.00
14,300.0	90.00	1.92	7,712.0	6,016.1	-1,119.0	6,098.5	0.00	0.00	0.00
14,400.0	90.00	1.92	7,712.0	6,116.0	-1,115.7	6,197.6	0.00	0.00	0.00
14,500.0	90.00	1.92	7,712.0	6,216.0	-1,112.3	6,296.7	0.00	0.00	0.00
14,600.0	90.00	1.92	7,712.0	6,315.9	-1,109.0	6,395.8	0.00	0.00	0.00
14,700.0	90.00	1.92	7,712.0	6,415.9	-1,105.6	6,494.9	0.00	0.00	0.00
14,800.0	90.00	1.92	7,712.0	6,515.8	-1,102.3	6,594.0	0.00	0.00	0.00
14,900.0	90.00	1.92	7,712.0	6,615.8	-1,098.9	6,693.1	0.00	0.00	0.00
15,000.0	90.00	1.92	7,712.0	6,715.7	-1,095.6	6,792.2	0.00	0.00	0.00
15,100.0	90.00	1.92	7,712.0	6,815.6	-1,092.2	6,891.2	0.00	0.00	0.00
15,200.0	90.00	1.92	7,712.0	6,915.6	-1,088.9	6,990.3	0.00	0.00	0.00
15,300.0	90.00	1.92	7,712.0	7,015.5	-1,085.6	7,089.4	0.00	0.00	0.00
15,400.0	90.00	1.92	7,712.0	7,115.5	-1,082.2	7,188.5	0.00	0.00	0.00
15,500.0	90.00	1.92	7,712.0	7,215.4	-1,078.9	7,287.6	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (3-13-17)		

### Planned Survey

[illegible]

## Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 250'FSL & 900'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,599,808.96	3,320,860.69	40.974064	-104.338067
LP 300'FSL & 2220'FEL, - plan hits target center - Point	0.00	0.00	7,712.0	46.7	-1,318.6	1,599,838.35	3,319,541.57	40.974192	-104.342842
BHL 572'FNL & 2220'FE - plan hits target center - Point	0.00	0.00	7,712.0	9,755.5	-993.7	1,609,550.94	3,319,739.19	41.000839	-104.341667



<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Project:</b>	Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (3-13-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,624.4	1,618.0	Pierre C&D Sand				
2,432.4	2,395.0	Base Pierre C&D Sand				
2,871.8	2,816.0	Pierre B Sand				
2,944.8	2,886.0	Base Pierre B Sand				
3,715.1	3,624.0	Pierre A Sand				
4,181.6	4,071.0	Base Pierre A Sand				
4,499.9	4,376.0	Parkman				
4,987.3	4,843.0	Base Parkman				
7,535.6	7,318.0	Lower Sharon Springs				
7,671.6	7,433.0	Lower Sharon Springs GR Marker				
7,726.3	7,475.0	Niobrara A Chalk				
7,735.8	7,482.0	Niobrara A Marl GR Marker				
7,738.5	7,484.0	Niobrara B1 Chalk				
7,782.2	7,515.0	Niobrara B1 Marl				
7,801.3	7,528.0	Niobrara B Chalk				
7,838.2	7,552.0	Niobrara B Marl				
7,943.3	7,612.0	Niobrara M Zone				
8,018.9	7,647.0	Niobrara M Zone Base				
8,111.5	7,680.0	Ft Hays				
8,206.5	7,702.0	Codell				
8,326.4	7,712.0	Codell target				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50	
6,174.0	5,980.1	-71.4	-143.0	Start Drop -2.00	
7,201.4	6,995.8	-616.5	-1,235.3	KOP #2 - Start Build 8.00	
18,041.5	7,712.0	-670.0	-1,342.5	TD at 18041.5	



# **Fifth Creek Energy Company, LLC**

**Sec.29-T12N-R62W**

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

**Randall Creek 505-2920H**

**Wellbore #1**

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

## **Anticollision Report**

**14 March, 2017**

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1 (3-13-17)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,200.0 ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

Survey Tool Program		Date	3/14/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	18,041.5	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	10,542.9	9,628.2	416.3	374.8	10.022	CC
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	10,600.0	9,687.1	417.5	373.7	9.534	ES
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	11,100.0	10,012.0	575.9	499.0	7.485	SF
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	10,542.9	9,628.2	416.3	374.8	10.022	CC
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	10,600.0	9,687.1	417.5	373.7	9.534	ES
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	11,100.0	10,030.0	575.5	496.7	7.306	SF
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	3,636.9	3,549.5	536.7	515.4	25.217	CC
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	3,700.0	3,608.9	537.0	515.3	24.644	ES
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	4,400.0	4,276.4	586.9	560.4	22.126	SF
Randall Creek 29 SESE Pad Sec.29-T12N-R62W						
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	800.0	800.0	25.4	22.0	7.535	CC, ES
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	18,041.5	17,832.9	587.2	217.0	1.586	SF
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	75.4	72.0	22.360	CC, ES
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	1,100.0	1,099.7	86.1	81.4	18.532	SF
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	125.1	121.7	37.103	CC, ES
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	1,300.0	1,298.6	155.0	149.5	28.128	SF
Randall Creek 503-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	100.5	97.1	29.813	CC, ES
Randall Creek 503-2920H - Wellbore #1 - Plan #1 (3-13-	1,200.0	1,199.3	119.6	114.5	23.563	SF
Randall Creek 504-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	50.8	47.4	15.071	CC, ES
Randall Creek 504-2920H - Wellbore #1 - Plan #1 (3-13-	18,041.5	17,898.6	759.5	382.7	2.016	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	58.48	252.1	411.2	482.3						
100.0	100.0	100.0	100.0	0.1	0.1	58.48	252.1	411.2	482.3	482.1	0.22	2,144.113			
200.0	200.0	200.0	200.0	0.3	0.2	58.48	252.1	411.2	482.3	481.8	0.56	858.092			
300.0	300.0	300.0	300.0	0.6	0.3	58.48	252.1	411.2	482.3	481.4	0.90	536.378			
400.0	400.0	400.0	400.0	0.8	0.4	58.48	252.1	411.2	482.3	481.1	1.24	390.116			
500.0	500.0	500.0	500.0	1.0	0.6	58.48	252.1	411.2	482.3	480.7	1.57	306.530			

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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 (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		
600.0	600.0	600.0	600.0	1.2	0.7	58.48	252.1	411.2	482.3	480.4	1.91	252.442		
700.0	700.0	700.0	700.0	1.5	0.8	58.48	252.1	411.2	482.3	480.1	2.25	214.579		
800.0	800.0	800.0	800.0	1.7	0.9	58.48	252.1	411.2	482.3	479.7	2.58	186.593		
900.0	900.0	900.0	900.0	1.9	1.0	175.02	252.1	411.2	483.6	480.7	2.90	166.566		
1,000.0	999.9	999.9	999.9	2.1	1.1	175.05	252.1	411.2	487.5	484.3	3.21	151.843		
1,100.0	1,099.7	1,099.7	1,099.7	2.3	1.2	175.11	252.1	411.2	494.1	490.5	3.53	140.065		
1,200.0	1,199.3	1,199.3	1,199.3	2.5	1.3	175.19	252.1	411.2	503.2	499.3	3.85	130.613		
1,300.0	1,298.6	1,298.6	1,298.6	2.8	1.5	175.28	252.1	411.2	514.9	510.7	4.19	123.004		
1,400.0	1,397.5	1,397.5	1,397.5	3.0	1.6	175.39	252.1	411.2	529.2	524.7	4.53	116.864		
1,500.0	1,496.1	1,494.4	1,494.4	3.4	1.8	175.48	252.5	411.2	546.2	541.3	4.95	110.336		
1,600.0	1,594.2	1,591.6	1,591.6	3.7	2.0	175.53	253.3	411.1	566.0	560.7	5.39	104.991		
1,700.0	1,691.7	1,688.2	1,688.2	4.1	2.2	175.56	254.6	410.9	588.6	582.7	5.83	100.905		
1,800.0	1,788.6	1,783.9	1,783.9	4.5	2.4	175.57	256.1	410.7	613.8	607.5	6.27	97.831		
1,900.0	1,884.9	1,878.9	1,878.8	5.0	2.6	175.57	257.9	410.6	641.7	634.9	6.71	95.556		
2,000.0	1,980.7	1,973.3	1,973.3	5.6	2.8	175.61	259.8	410.6	671.2	664.0	7.17	93.650		
2,100.0	2,076.5	2,068.0	2,067.9	6.1	3.1	175.63	261.9	410.7	700.8	693.2	7.63	91.893		
2,200.0	2,172.3	2,162.6	2,162.5	6.7	3.3	175.64	264.2	410.7	730.6	722.5	8.09	90.284		
2,300.0	2,268.1	2,256.9	2,256.7	7.3	3.5	175.65	266.6	410.8	760.5	751.9	8.56	88.818		
2,400.0	2,363.9	2,350.4	2,350.2	7.8	3.7	175.64	269.2	411.0	790.6	781.6	9.04	87.497		
2,500.0	2,459.8	2,443.8	2,443.6	8.4	3.9	175.62	272.1	411.4	820.9	811.4	9.51	86.306		
2,600.0	2,555.6	2,541.8	2,541.5	9.0	4.1	175.60	275.1	411.8	851.3	841.3	9.99	85.254		
2,700.0	2,651.4	2,644.5	2,644.2	9.6	4.3	175.65	277.1	412.1	881.0	870.6	10.46	84.241		
2,800.0	2,747.2	2,744.6	2,744.3	10.2	4.5	175.75	277.9	412.1	910.0	899.1	10.92	83.310		
2,900.0	2,843.0	2,839.6	2,839.3	10.8	4.7	175.86	278.2	412.3	938.9	927.5	11.37	82.559		
3,000.0	2,938.8	2,934.6	2,934.3	11.4	4.8	175.98	278.5	412.7	967.9	956.1	11.82	81.863		
3,100.0	3,034.7	3,029.3	3,029.0	12.0	5.0	176.11	278.6	413.2	996.9	984.6	12.29	81.144		
3,200.0	3,130.5	3,123.8	3,123.5	12.6	5.2	176.23	278.6	413.8	1,026.1	1,013.3	12.75	80.447		
3,300.0	3,226.3	3,218.3	3,218.0	13.2	5.4	176.35	278.7	414.6	1,055.4	1,042.1	13.22	79.802		
3,400.0	3,322.1	3,314.5	3,314.2	13.8	5.6	176.47	278.7	415.4	1,084.7	1,071.0	13.70	79.183		
3,500.0	3,417.9	3,410.7	3,410.4	14.4	5.8	176.60	278.4	416.4	1,113.9	1,099.7	14.17	78.597		
3,600.0	3,513.7	3,506.7	3,506.4	15.0	6.0	176.73	277.9	417.4	1,143.1	1,128.5	14.65	78.039		
3,700.0	3,609.6	3,602.2	3,601.8	15.6	6.2	176.85	277.6	418.3	1,172.3	1,157.2	15.13	77.506		
9,000.0	7,712.0	8,401.8	7,282.7	32.1	34.3	63.68	1,352.4	-406.6	1,173.3	1,127.7	45.63	25.716		
9,100.0	7,712.0	8,500.2	7,279.5	32.7	36.5	61.79	1,431.4	-465.4	1,116.5	1,069.3	47.28	23.616		
9,200.0	7,712.0	8,581.5	7,277.5	33.5	38.3	60.09	1,496.1	-514.5	1,059.4	1,010.7	48.77	21.722		
9,300.0	7,712.0	8,672.5	7,278.9	34.5	40.2	58.20	1,569.1	-568.9	1,002.3	952.0	50.31	19.923		
9,400.0	7,712.0	8,762.0	7,279.9	35.5	42.3	56.01	1,639.5	-624.1	944.3	892.7	51.63	18.289		
9,500.0	7,712.0	8,825.0	7,278.9	36.7	43.7	54.19	1,689.0	-663.1	888.0	835.3	52.73	16.841		
9,600.0	7,712.0	9,012.7	7,279.0	37.9	48.1	47.39	1,828.7	-788.1	828.1	776.0	52.10	15.894		
9,700.0	7,712.0	9,061.7	7,280.4	39.2	49.2	45.26	1,863.8	-822.1	766.5	714.0	52.46	14.610		
9,800.0	7,712.0	9,160.2	7,286.8	40.5	51.5	40.64	1,934.4	-890.4	705.2	653.7	51.44	13.709		
9,900.0	7,712.0	9,234.8	7,290.8	41.9	53.3	36.37	1,986.8	-943.5	645.8	595.7	50.16	12.875		
10,000.0	7,712.0	9,282.9	7,292.1	43.4	54.5	33.13	2,019.6	-978.5	589.7	540.5	49.26	11.973		
10,100.0	7,712.0	9,332.0	7,290.9	44.9	55.7	29.42	2,053.6	-1,014.0	541.2	493.3	47.92	11.294		
10,200.0	7,712.0	9,427.9	7,292.7	46.4	58.0	21.66	2,120.5	-1,082.7	496.7	452.6	44.07	11.269		
10,300.0	7,712.0	9,496.2	7,295.6	47.9	59.6	15.56	2,167.9	-1,131.7	458.7	416.9	41.85	10.960		
10,400.0	7,712.0	9,557.0	7,297.8	49.5	61.1	9.75	2,210.5	-1,175.1	430.8	390.0	40.76	10.570		
10,500.0	7,712.0	9,598.7	7,297.2	51.1	62.1	5.59	2,239.8	-1,204.7	417.4	376.4	41.03	10.172		
10,542.9	7,712.0	9,628.2	7,296.1	51.8	62.8	2.59	2,260.5	-1,225.8	416.3	374.8	41.54	10.022 CC		
10,600.0	7,712.0	9,687.1	7,295.6	52.7	64.2	-3.37	2,301.7	-1,267.8	417.5	373.7	43.79	9.534 ES		
10,700.0	7,712.0	9,753.6	7,296.6	54.4	65.9	-10.06	2,348.1	-1,315.5	428.1	379.3	48.73	8.783		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>													Offset Site Error:	0.0 ft
Survey Program: 1415-MWD Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1													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		
10,800.0	7,712.0	9,816.6	7,297.1	56.0	67.4	-16.14	2,392.2	-1,360.4	451.1	396.1	54.95	8.208		
10,900.0	7,712.0	9,882.4	7,297.3	57.7	69.0	-22.15	2,437.9	-1,407.7	484.8	422.5	62.25	7.788		
11,000.0	7,712.0	9,950.7	7,297.8	59.4	70.7	-27.96	2,485.1	-1,457.1	526.9	456.9	70.07	7.520		
11,100.0	7,712.0	10,012.0	7,297.5	61.1	72.2	-32.61	2,527.7	-1,501.1	575.9	499.0	76.94	7.485 SF		
11,200.0	7,712.0	10,078.8	7,295.9	62.8	73.8	-37.06	2,574.7	-1,548.6	630.2	546.3	83.84	7.516		
11,300.0	7,712.0	10,163.6	7,294.8	64.6	75.9	-42.04	2,634.8	-1,608.5	687.2	595.6	91.62	7.501		
11,400.0	7,712.0	10,246.9	7,296.1	66.3	77.9	-46.37	2,694.3	-1,666.7	745.2	646.6	98.69	7.551		
11,500.0	7,712.0	10,315.0	7,298.1	68.1	79.6	-49.55	2,743.1	-1,714.2	805.0	700.7	104.32	7.717		
11,600.0	7,712.0	10,378.0	7,299.7	69.8	81.1	-52.17	2,788.0	-1,758.3	867.1	757.8	109.31	7.932		
11,700.0	7,712.0	10,441.2	7,300.9	71.6	82.7	-54.53	2,832.8	-1,802.8	931.2	817.1	114.04	8.166		
11,800.0	7,712.0	10,493.0	7,302.2	73.4	83.9	-56.32	2,869.4	-1,839.5	996.8	878.8	118.04	8.445		
11,900.0	7,712.0	10,493.0	7,302.2	75.1	83.9	-56.32	2,869.4	-1,839.5	1,066.5	946.9	119.60	8.917		
12,000.0	7,712.0	10,493.0	7,302.2	76.9	83.9	-56.32	2,869.4	-1,839.5	1,140.7	1,019.5	121.17	9.414		

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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 (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	58.48	252.1	411.2	482.3				
100.0	100.0	100.0	100.0	0.1	0.1	58.48	252.1	411.2	482.3	482.1	0.22	2,144.113	
200.0	200.0	200.0	200.0	0.3	0.2	58.48	252.1	411.2	482.3	481.8	0.56	858.092	
300.0	300.0	300.0	300.0	0.6	0.3	58.48	252.1	411.2	482.3	481.4	0.90	536.378	
400.0	400.0	400.0	400.0	0.8	0.4	58.48	252.1	411.2	482.3	481.1	1.24	390.116	
500.0	500.0	500.0	500.0	1.0	0.6	58.48	252.1	411.2	482.3	480.7	1.57	306.530	
600.0	600.0	600.0	600.0	1.2	0.7	58.48	252.1	411.2	482.3	480.4	1.91	252.442	
700.0	700.0	700.0	700.0	1.5	0.8	58.48	252.1	411.2	482.3	480.1	2.25	214.579	
800.0	800.0	800.0	800.0	1.7	0.9	58.48	252.1	411.2	482.3	479.7	2.58	186.593	
900.0	900.0	900.0	900.0	1.9	1.0	175.02	252.1	411.2	483.6	480.7	2.90	166.566	
1,000.0	999.9	999.9	999.9	2.1	1.1	175.05	252.1	411.2	487.5	484.3	3.21	151.843	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	1.2	175.11	252.1	411.2	494.1	490.5	3.53	140.065	
1,200.0	1,199.3	1,199.3	1,199.3	2.5	1.3	175.19	252.1	411.2	503.2	499.3	3.85	130.613	
1,300.0	1,298.6	1,298.6	1,298.6	2.8	1.5	175.28	252.1	411.2	514.9	510.7	4.19	123.004	
1,400.0	1,397.5	1,397.5	1,397.5	3.0	1.6	175.39	252.1	411.2	529.2	524.7	4.53	116.864	
1,500.0	1,496.1	1,494.4	1,494.4	3.4	1.8	175.48	252.5	411.2	546.2	541.3	4.95	110.336	
1,600.0	1,594.2	1,591.6	1,591.6	3.7	2.0	175.53	253.3	411.1	566.0	560.7	5.39	104.991	
1,700.0	1,691.7	1,688.2	1,688.2	4.1	2.2	175.56	254.6	410.9	588.6	582.7	5.83	100.905	
1,800.0	1,788.6	1,783.9	1,783.9	4.5	2.4	175.57	256.1	410.7	613.8	607.5	6.27	97.831	
1,900.0	1,884.9	1,878.9	1,878.8	5.0	2.6	175.57	257.9	410.6	641.7	634.9	6.71	95.556	
2,000.0	1,980.7	1,973.3	1,973.3	5.6	2.8	175.61	259.8	410.6	671.2	664.0	7.17	93.650	
2,100.0	2,076.5	2,068.0	2,067.9	6.1	3.1	175.63	261.9	410.7	700.8	693.2	7.63	91.893	
2,200.0	2,172.3	2,162.6	2,162.5	6.7	3.3	175.64	264.2	410.7	730.6	722.5	8.09	90.284	
2,300.0	2,268.1	2,256.9	2,256.7	7.3	3.5	175.65	266.6	410.8	760.5	751.9	8.56	88.818	
2,400.0	2,363.9	2,350.4	2,350.2	7.8	3.7	175.64	269.2	411.0	790.6	781.6	9.04	87.497	
2,500.0	2,459.8	2,443.8	2,443.6	8.4	3.9	175.62	272.1	411.4	820.9	811.4	9.51	86.306	
2,600.0	2,555.6	2,541.8	2,541.5	9.0	4.1	175.60	275.1	411.8	851.3	841.3	9.99	85.254	
2,700.0	2,651.4	2,644.5	2,644.2	9.6	4.3	175.65	277.1	412.1	881.0	870.6	10.46	84.241	
2,800.0	2,747.2	2,744.6	2,744.3	10.2	4.5	175.75	277.9	412.1	910.0	899.1	10.92	83.310	
2,900.0	2,843.0	2,839.6	2,839.3	10.8	4.7	175.86	278.2	412.3	938.9	927.5	11.37	82.559	
3,000.0	2,938.8	2,934.6	2,934.3	11.4	4.8	175.98	278.5	412.7	967.9	956.1	11.82	81.863	
3,100.0	3,034.7	3,029.3	3,029.0	12.0	5.0	176.11	278.6	413.2	996.9	984.6	12.29	81.144	
3,200.0	3,130.5	3,123.8	3,123.5	12.6	5.2	176.23	278.6	413.8	1,026.1	1,013.3	12.75	80.447	
3,300.0	3,226.3	3,218.3	3,218.0	13.2	5.4	176.35	278.7	414.6	1,055.4	1,042.1	13.22	79.802	
3,400.0	3,322.1	3,314.5	3,314.2	13.8	5.6	176.47	278.7	415.4	1,084.7	1,071.0	13.70	79.183	
3,500.0	3,417.9	3,410.7	3,410.4	14.4	5.8	176.60	278.4	416.4	1,113.9	1,099.7	14.17	78.597	
3,600.0	3,513.7	3,506.7	3,506.4	15.0	6.0	176.73	277.9	417.4	1,143.1	1,128.5	14.65	78.039	
3,700.0	3,609.6	3,602.2	3,601.8	15.6	6.2	176.85	277.6	418.3	1,172.3	1,157.2	15.13	77.506	
9,000.0	7,712.0	8,401.8	7,282.7	32.1	34.3	63.68	1,352.4	-406.6	1,173.3	1,127.7	45.63	25.716	
9,100.0	7,712.0	8,500.2	7,279.5	32.7	36.5	61.79	1,431.4	-465.4	1,116.5	1,069.3	47.28	23.616	
9,200.0	7,712.0	8,581.5	7,277.5	33.5	38.3	60.09	1,496.1	-514.5	1,059.4	1,010.7	48.77	21.722	
9,300.0	7,712.0	8,672.5	7,278.9	34.5	40.2	58.20	1,569.1	-568.9	1,002.3	952.0	50.31	19.923	
9,400.0	7,712.0	8,762.0	7,279.9	35.5	42.3	56.01	1,639.5	-624.1	944.3	892.7	51.63	18.289	
9,500.0	7,712.0	8,825.0	7,278.9	36.7	43.7	54.19	1,689.0	-663.1	888.0	835.3	52.73	16.841	
9,600.0	7,712.0	9,012.7	7,279.0	37.9	48.1	47.39	1,828.7	-788.1	828.1	776.0	52.10	15.894	
9,700.0	7,712.0	9,061.7	7,280.4	39.2	49.2	45.26	1,863.8	-822.1	766.5	714.0	52.46	14.610	
9,800.0	7,712.0	9,160.2	7,286.8	40.5	51.5	40.64	1,934.4	-890.4	705.2	653.7	51.44	13.709	
9,900.0	7,712.0	9,234.8	7,290.8	41.9	53.3	36.37	1,986.8	-943.5	645.8	595.7	50.16	12.875	
10,000.0	7,712.0	9,282.9	7,292.1	43.4	54.5	33.13	2,019.6	-978.5	589.7	540.5	49.26	11.973	
10,100.0	7,712.0	9,332.0	7,290.9	44.9	55.7	29.42	2,053.6	-1,014.0	541.2	493.3	47.92	11.294	
10,200.0	7,712.0	9,427.9	7,292.7	46.4	58.0	21.66	2,120.5	-1,082.7	496.7	452.6	44.07	11.269	

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												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
10,300.0	7,712.0	9,496.2	7,295.6	47.9	59.6	15.56	2,167.9	-1,131.7	458.7	416.9	41.85	10.960	
10,400.0	7,712.0	9,557.0	7,297.8	49.5	61.1	9.75	2,210.5	-1,175.1	430.8	390.0	40.76	10.570	
10,500.0	7,712.0	9,598.7	7,297.2	51.1	62.1	5.59	2,239.8	-1,204.7	417.4	376.4	41.03	10.172	
10,542.9	7,712.0	9,628.2	7,296.1	51.8	62.8	2.59	2,260.5	-1,225.8	416.3	374.8	41.54	10.022 CC	
10,600.0	7,712.0	9,687.1	7,295.6	52.7	64.2	-3.37	2,301.7	-1,267.8	417.5	373.7	43.79	9.534 ES	
10,700.0	7,712.0	9,753.6	7,296.6	54.4	65.9	-10.06	2,348.1	-1,315.5	428.1	379.3	48.73	8.783	
10,800.0	7,712.0	9,816.6	7,297.1	56.0	67.4	-16.14	2,392.2	-1,360.4	451.1	396.1	54.95	8.208	
10,900.0	7,712.0	9,882.4	7,297.3	57.7	69.0	-22.15	2,437.9	-1,407.7	484.8	422.5	62.25	7.788	
11,000.0	7,712.0	9,950.7	7,297.8	59.4	70.7	-27.96	2,485.1	-1,457.1	526.9	456.9	70.07	7.520	
11,100.0	7,712.0	10,030.0	7,300.8	61.1	71.9	-34.28	2,538.3	-1,515.7	575.5	496.7	78.77	7.306 SF	
11,200.0	7,712.0	10,077.0	7,304.3	62.8	72.4	-37.84	2,568.9	-1,551.3	629.2	545.2	84.08	7.484	
11,300.0	7,712.0	10,126.0	7,306.0	64.6	72.9	-41.17	2,600.7	-1,588.5	689.2	600.0	89.19	7.728	
11,400.0	7,712.0	10,197.2	7,307.1	66.3	73.7	-45.38	2,647.5	-1,642.2	752.8	657.5	95.35	7.895	
11,500.0	7,712.0	10,295.3	7,308.5	68.1	74.8	-50.16	2,715.1	-1,713.2	816.1	713.9	102.19	7.986	
11,600.0	7,712.0	10,350.3	7,309.1	69.8	75.4	-52.46	2,753.4	-1,752.7	880.9	774.6	106.25	8.290	
11,700.0	7,712.0	10,427.0	7,309.8	71.6	76.4	-55.31	2,806.7	-1,807.8	947.2	836.2	110.96	8.536	
11,800.0	7,712.0	10,482.9	7,310.1	73.4	77.1	-57.15	2,845.6	-1,847.9	1,014.6	900.0	114.58	8.855	
11,900.0	7,712.0	10,571.0	7,309.5	75.1	78.3	-59.65	2,907.4	-1,910.8	1,082.8	963.8	119.00	9.099	
12,000.0	7,712.0	10,620.4	7,309.2	76.9	78.9	-60.90	2,942.1	-1,946.0	1,151.5	1,029.4	122.07	9.433	

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	-157.63	-756.0	-311.2	817.6					
100.0	100.0	101.0	101.0	0.1	0.1	-157.63	-756.0	-311.2	817.6	817.3	0.23	3,616.373		
200.0	200.0	201.0	201.0	0.3	0.2	-157.63	-756.0	-311.2	817.6	817.0	0.56	1,451.631		
300.0	300.0	301.0	301.0	0.6	0.3	-157.63	-756.0	-311.2	817.6	816.7	0.90	908.067		
400.0	400.0	401.0	401.0	0.8	0.5	-157.63	-756.0	-311.2	817.6	816.3	1.24	660.676		
500.0	500.0	501.0	501.0	1.0	0.6	-157.63	-756.0	-311.2	817.6	816.0	1.57	519.221		
600.0	600.0	601.0	601.0	1.2	0.7	-157.63	-756.0	-311.2	817.6	815.7	1.91	427.657		
700.0	700.0	701.0	701.0	1.5	0.8	-157.63	-756.0	-311.2	817.6	815.3	2.25	363.546		
800.0	800.0	801.0	801.0	1.7	0.9	-157.63	-756.0	-311.2	817.6	815.0	2.59	316.151		
900.0	900.0	901.0	901.0	1.9	1.0	-41.17	-756.0	-311.2	816.6	813.7	2.90	281.149		
1,000.0	999.9	1,000.9	1,000.9	2.1	1.1	-41.38	-756.0	-311.2	813.6	810.4	3.21	253.317		
1,100.0	1,099.7	1,100.7	1,100.7	2.3	1.2	-41.74	-756.0	-311.2	808.7	805.2	3.53	229.070		
1,200.0	1,199.3	1,200.3	1,200.3	2.5	1.3	-42.24	-756.0	-311.2	801.9	798.1	3.86	207.662		
1,300.0	1,298.6	1,299.6	1,299.6	2.8	1.5	-42.90	-756.0	-311.2	793.2	789.0	4.21	188.502		
1,400.0	1,397.5	1,398.5	1,398.5	3.0	1.6	-43.72	-756.0	-311.2	782.7	778.2	4.57	171.147		
1,500.0	1,496.1	1,497.4	1,497.4	3.4	1.7	-44.56	-756.5	-312.3	771.4	766.4	5.00	154.383		
1,600.0	1,594.2	1,594.4	1,594.4	3.7	1.9	-45.59	-757.5	-313.7	759.0	753.5	5.46	139.013		
1,700.0	1,691.7	1,696.8	1,696.7	4.1	2.1	-46.83	-759.0	-315.4	745.6	739.6	5.97	124.918		
1,800.0	1,788.6	1,776.3	1,776.2	4.5	2.3	-48.30	-760.6	-317.3	730.7	724.2	6.54	111.718		
1,900.0	1,884.9	1,874.7	1,874.6	5.0	2.5	-50.01	-761.8	-319.0	714.3	707.1	7.16	99.699		
2,000.0	1,980.7	1,972.4	1,972.3	5.6	2.7	-51.73	-763.0	-320.4	697.2	689.4	7.83	89.053		
2,100.0	2,076.5	2,068.0	2,067.8	6.1	2.9	-53.46	-764.0	-321.8	680.8	672.3	8.52	79.899		
2,200.0	2,172.3	2,163.5	2,163.4	6.7	3.1	-55.26	-765.1	-323.5	665.1	655.9	9.24	71.989		
2,300.0	2,268.1	2,259.8	2,259.6	7.3	3.3	-57.12	-766.3	-325.5	650.2	640.3	9.99	65.115		
2,400.0	2,363.9	2,357.6	2,357.4	7.8	3.5	-59.10	-767.4	-327.5	636.0	625.2	10.76	59.093		
2,500.0	2,459.8	2,455.3	2,455.1	8.4	3.7	-61.16	-768.3	-329.4	622.4	610.8	11.56	53.825		
2,600.0	2,555.6	2,552.7	2,552.4	9.0	4.0	-63.30	-769.0	-331.3	609.4	597.0	12.39	49.185		
2,700.0	2,651.4	2,650.1	2,649.8	9.6	4.2	-65.52	-769.5	-333.4	597.2	583.9	13.24	45.118		
2,800.0	2,747.2	2,746.9	2,746.6	10.2	4.4	-67.80	-769.9	-335.5	585.8	571.7	14.09	41.573		
2,900.0	2,843.0	2,842.8	2,842.5	10.8	4.6	-70.13	-770.4	-337.7	575.4	560.4	14.95	38.496		
3,000.0	2,938.8	2,938.8	2,938.4	11.4	4.8	-72.55	-770.9	-339.8	566.1	550.3	15.81	35.803		
3,100.0	3,034.7	3,034.9	3,034.6	12.0	5.0	-75.04	-771.5	-341.8	558.0	541.4	16.68	33.455		
3,200.0	3,130.5	3,131.2	3,130.8	12.6	5.2	-77.61	-772.0	-343.8	551.2	533.6	17.55	31.406		
3,300.0	3,226.3	3,227.3	3,226.9	13.2	5.4	-80.24	-772.6	-345.6	545.5	527.1	18.42	29.621		
3,400.0	3,322.1	3,323.5	3,323.0	13.8	5.6	-82.95	-773.1	-347.1	541.2	521.9	19.29	28.063		
3,500.0	3,417.9	3,419.4	3,419.0	14.4	5.8	-85.73	-773.6	-348.3	538.3	518.1	20.14	26.725		
3,600.0	3,513.7	3,514.7	3,514.2	15.0	6.0	-88.55	-773.9	-349.0	536.8	515.8	20.98	25.588		
3,636.9	3,549.1	3,549.5	3,549.1	15.2	6.1	-89.61	-774.0	-349.0	536.7	515.4	21.28	25.217 CC		
3,700.0	3,609.6	3,608.9	3,608.5	15.6	6.2	-91.44	-774.1	-348.8	537.0	515.3	21.79	24.644 ES		
3,800.0	3,705.4	3,702.6	3,702.2	16.2	6.4	-94.39	-774.0	-347.7	539.2	516.6	22.58	23.881		
3,900.0	3,801.2	3,796.9	3,796.5	16.8	6.6	-97.40	-773.9	-345.9	543.2	519.9	23.33	23.288		
4,000.0	3,897.0	3,891.5	3,891.0	17.4	6.8	-100.36	-773.9	-344.0	549.0	525.0	24.04	22.841		
4,100.0	3,992.8	3,986.3	3,985.7	18.1	7.0	-103.27	-774.0	-342.0	556.6	531.9	24.71	22.521		
4,200.0	4,088.6	4,083.2	4,082.6	18.7	7.2	-106.15	-774.1	-340.2	565.5	540.2	25.35	22.307		
4,300.0	4,184.5	4,180.2	4,179.7	19.3	7.3	-108.94	-774.0	-338.6	575.7	549.7	25.96	22.179		
4,400.0	4,280.3	4,276.4	4,275.9	19.9	7.5	-111.60	-773.8	-337.2	586.9	560.4	26.53	22.126 SF		
4,500.0	4,376.1	4,371.5	4,370.9	20.5	7.7	-114.15	-773.6	-335.8	599.5	572.4	27.07	22.145		
4,600.0	4,471.9	4,466.5	4,465.9	21.1	7.9	-116.60	-773.2	-334.2	613.3	585.7	27.58	22.235		
4,700.0	4,567.7	4,561.7	4,561.1	21.7	8.1	-118.97	-772.8	-332.6	628.3	600.2	28.07	22.383		
4,800.0	4,663.5	4,656.9	4,656.3	22.3	8.4	-121.25	-772.2	-330.8	644.4	615.8	28.53	22.583		
4,900.0	4,759.4	4,751.9	4,751.3	23.0	8.6	-123.44	-771.4	-328.9	661.5	632.5	28.97	22.832		

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



<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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		
5,000.0	4,855.2	4,846.3	4,845.7	23.6	8.8	-125.52	-770.5	-326.9	679.7	650.3	29.39	23.126		
5,100.0	4,951.0	4,940.7	4,940.0	24.2	9.0	-127.49	-769.7	-324.8	698.8	669.0	29.79	23.455		
5,200.0	5,046.8	5,035.3	5,034.6	24.8	9.2	-129.37	-768.9	-322.6	718.9	688.7	30.18	23.816		
5,300.0	5,142.6	5,130.0	5,129.3	25.4	9.4	-131.16	-768.1	-320.3	739.7	709.1	30.56	24.203		
5,400.0	5,238.4	5,224.7	5,223.9	26.0	9.6	-132.87	-767.1	-318.0	761.3	730.4	30.93	24.611		
5,500.0	5,334.3	5,319.2	5,318.4	26.6	9.8	-134.48	-766.1	-315.6	783.6	752.3	31.29	25.040		
5,600.0	5,430.1	5,413.9	5,413.0	27.3	10.0	-135.99	-765.5	-313.2	806.5	774.9	31.65	25.480		
5,700.0	5,525.9	5,508.6	5,507.8	27.9	10.2	-137.39	-765.2	-310.9	830.1	798.0	32.02	25.926		
5,800.0	5,621.7	5,604.0	5,603.1	28.5	10.3	-138.71	-765.1	-308.6	854.0	821.7	32.37	26.381		
5,900.0	5,717.5	5,699.4	5,698.5	29.1	10.5	-139.95	-765.3	-306.4	878.4	845.7	32.73	26.834		
6,000.0	5,813.3	5,795.6	5,794.6	29.7	10.7	-141.11	-765.8	-304.3	903.1	870.0	33.10	27.283		
6,100.0	5,909.2	5,892.8	5,891.9	30.3	10.9	-142.21	-766.3	-302.3	928.0	894.5	33.47	27.724		
6,200.0	6,005.0	5,990.2	5,989.3	30.9	11.1	-143.33	-766.8	-300.6	952.8	919.0	33.83	28.167		
6,300.0	6,101.5	6,084.6	6,083.6	31.3	11.3	-144.49	-767.2	-298.9	975.9	941.8	34.10	28.619		
6,400.0	6,198.9	6,181.8	6,180.8	31.7	11.5	-145.49	-767.4	-296.9	996.7	962.3	34.38	28.993		
6,500.0	6,297.1	6,280.8	6,279.7	32.0	11.7	-146.31	-767.6	-295.0	1,014.6	980.0	34.65	29.280		
6,600.0	6,395.8	6,375.3	6,374.2	32.3	11.9	-146.94	-768.0	-293.1	1,030.0	995.0	34.93	29.490		
6,700.0	6,495.0	6,477.4	6,476.3	32.6	12.1	-147.45	-768.4	-291.2	1,042.3	1,007.1	35.20	29.611		
6,800.0	6,594.6	6,577.1	6,576.0	32.7	12.3	-147.79	-768.9	-289.4	1,051.7	1,016.2	35.46	29.655		
6,900.0	6,694.5	6,674.7	6,673.6	32.9	12.6	-148.00	-769.4	-287.5	1,058.2	1,022.5	35.72	29.627		
7,000.0	6,794.4	6,774.2	6,773.0	33.0	12.8	-148.09	-769.7	-285.7	1,061.7	1,025.7	35.96	29.520		
7,100.0	6,894.4	6,831.0	6,829.8	33.1	12.9	95.51	-772.1	-283.9	1,065.5	1,029.8	35.74	29.815		
7,200.0	6,994.4	6,876.3	6,874.4	33.2	13.0	95.86	-778.9	-280.7	1,074.2	1,038.2	36.05	29.800		
7,300.0	7,094.1	6,925.0	6,921.1	33.2	13.1	93.63	-791.5	-275.3	1,088.7	1,052.1	36.64	29.713		
7,400.0	7,191.9	6,967.0	6,959.9	33.2	13.2	93.15	-806.5	-269.5	1,109.3	1,072.7	36.54	30.359		
7,500.0	7,285.9	7,012.8	7,000.8	33.1	13.3	92.64	-826.0	-263.3	1,135.5	1,099.2	36.32	31.264		
7,600.0	7,374.2	7,037.7	7,022.4	32.9	13.4	90.91	-837.9	-259.7	1,168.5	1,132.8	35.70	32.734		

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	90.04	0.0	25.4	25.4				
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	25.4	25.4	25.2	0.22	113.029	
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	25.4	25.4	24.7	0.67	37.676	
300.0	300.0	300.0	300.0	0.6	0.6	90.04	0.0	25.4	25.4	24.3	1.12	22.606	
400.0	400.0	400.0	400.0	0.8	0.8	90.04	0.0	25.4	25.4	23.8	1.57	16.147	
500.0	500.0	500.0	500.0	1.0	1.0	90.04	0.0	25.4	25.4	23.4	2.02	12.559	
600.0	600.0	600.0	600.0	1.2	1.2	90.04	0.0	25.4	25.4	22.9	2.47	10.275	
700.0	700.0	700.0	700.0	1.5	1.5	90.04	0.0	25.4	25.4	22.5	2.92	8.695	
800.0	800.0	800.0	800.0	1.7	1.7	90.04	0.0	25.4	25.4	22.0	3.37	7.535 CC, ES	
900.0	900.0	900.0	900.0	1.9	1.9	-154.70	0.0	25.4	26.6	22.8	3.80	6.991	
1,000.0	999.9	999.9	999.9	2.1	2.1	-157.86	0.0	25.4	30.2	26.0	4.22	7.151	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	-161.72	0.0	25.4	36.3	31.7	4.65	7.819	
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	-165.34	0.0	25.4	45.1	40.0	5.07	8.889	
1,300.0	1,298.6	1,298.6	1,298.6	2.8	2.8	-168.32	0.0	25.4	56.6	51.0	5.51	10.272	
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	-170.64	0.0	25.4	70.7	64.7	5.94	11.902	
1,500.0	1,496.1	1,496.1	1,496.1	3.4	3.3	-172.41	0.0	25.4	87.4	81.1	6.37	13.724	
1,600.0	1,594.2	1,596.7	1,596.7	3.7	3.5	-173.56	-0.8	24.5	105.7	98.9	6.78	15.578	
1,700.0	1,691.7	1,697.8	1,697.8	4.1	3.6	-174.09	-3.3	21.5	124.1	116.9	7.18	17.286	
1,800.0	1,788.6	1,799.5	1,799.2	4.5	3.8	-174.22	-7.6	16.4	142.6	135.0	7.58	18.806	
1,900.0	1,884.9	1,901.6	1,900.8	5.0	4.0	-174.09	-13.6	9.3	161.1	153.2	8.00	20.155	
2,000.0	1,980.7	2,004.3	2,002.8	5.6	4.3	-173.76	-21.4	0.0	178.7	170.3	8.45	21.150	
2,100.0	2,076.5	2,107.9	2,105.3	6.1	4.5	-173.21	-31.1	-11.5	193.8	184.9	8.93	21.706	
2,200.0	2,172.3	2,212.2	2,208.1	6.7	4.8	-172.47	-42.7	-25.2	206.4	197.0	9.43	21.885	
2,300.0	2,268.1	2,317.0	2,310.8	7.3	5.1	-171.52	-56.1	-41.2	216.5	206.6	9.96	21.737	
2,400.0	2,363.9	2,420.3	2,411.4	7.8	5.5	-170.42	-71.0	-58.9	224.3	213.8	10.51	21.333	
2,500.0	2,459.8	2,519.9	2,508.4	8.4	5.9	-169.38	-85.7	-76.4	231.6	220.5	11.09	20.893	
2,600.0	2,555.6	2,619.6	2,605.4	9.0	6.3	-168.39	-100.4	-93.9	239.0	227.3	11.68	20.467	
2,700.0	2,651.4	2,719.2	2,702.4	9.6	6.7	-167.47	-115.2	-111.4	246.5	234.2	12.29	20.056	
2,800.0	2,747.2	2,818.9	2,799.4	10.2	7.1	-166.60	-129.9	-128.9	254.0	241.1	12.92	19.660	
2,900.0	2,843.0	2,918.5	2,896.3	10.8	7.5	-165.78	-144.7	-146.4	261.5	248.0	13.57	19.280	
3,000.0	2,938.8	3,018.1	2,993.3	11.4	8.0	-165.01	-159.4	-163.9	269.2	254.9	14.23	18.918	
3,100.0	3,034.7	3,117.8	3,090.3	12.0	8.4	-164.28	-174.1	-181.4	276.8	261.9	14.91	18.572	
3,200.0	3,130.5	3,217.4	3,187.3	12.6	8.9	-163.59	-188.9	-198.9	284.5	268.9	15.60	18.242	
3,300.0	3,226.3	3,317.1	3,284.3	13.2	9.3	-162.93	-203.6	-216.4	292.3	276.0	16.30	17.929	
3,400.0	3,322.1	3,416.7	3,381.3	13.8	9.8	-162.31	-218.3	-233.9	300.1	283.1	17.02	17.632	
3,500.0	3,417.9	3,516.4	3,478.2	14.4	10.2	-161.72	-233.1	-251.4	307.9	290.2	17.75	17.350	
3,600.0	3,513.7	3,616.0	3,575.2	15.0	10.7	-161.16	-247.8	-268.9	315.7	297.3	18.48	17.082	
3,700.0	3,609.6	3,715.7	3,672.2	15.6	11.2	-160.63	-262.6	-286.4	323.6	304.4	19.23	16.828	
3,800.0	3,705.4	3,815.3	3,769.2	16.2	11.7	-160.12	-277.3	-304.0	331.5	311.5	19.99	16.588	
3,900.0	3,801.2	3,915.0	3,866.2	16.8	12.1	-159.64	-292.0	-321.5	339.5	318.7	20.75	16.359	
4,000.0	3,897.0	4,014.6	3,963.1	17.4	12.6	-159.17	-306.8	-339.0	347.4	325.9	21.52	16.142	
4,100.0	3,992.8	4,114.2	4,060.1	18.1	13.1	-158.73	-321.5	-356.5	355.4	333.1	22.30	15.937	
4,200.0	4,088.6	4,213.9	4,157.1	18.7	13.6	-158.31	-336.3	-374.0	363.4	340.3	23.08	15.741	
4,300.0	4,184.5	4,313.5	4,254.1	19.3	14.1	-157.91	-351.0	-391.5	371.4	347.5	23.88	15.555	
4,400.0	4,280.3	4,413.2	4,351.1	19.9	14.5	-157.52	-365.7	-409.0	379.4	354.7	24.67	15.379	
4,500.0	4,376.1	4,512.8	4,448.1	20.5	15.0	-157.15	-380.5	-426.5	387.5	362.0	25.47	15.211	
4,600.0	4,471.9	4,612.5	4,545.0	21.1	15.5	-156.79	-395.2	-444.0	395.5	369.2	26.28	15.051	
4,700.0	4,567.7	4,712.1	4,642.0	21.7	16.0	-156.45	-409.9	-461.5	403.6	376.5	27.09	14.898	
4,800.0	4,663.5	4,811.8	4,739.0	22.3	16.5	-156.12	-424.7	-479.0	411.7	383.8	27.91	14.753	
4,900.0	4,759.4	4,911.4	4,836.0	23.0	17.0	-155.81	-439.4	-496.5	419.8	391.1	28.73	14.614	
5,000.0	4,855.2	5,011.0	4,933.0	23.6	17.5	-155.51	-454.2	-514.0	427.9	398.4	29.55	14.482	

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	4,951.0	5,110.7	5,029.9	24.2	18.0	-155.21	-468.9	-531.5	436.0	405.7	30.37	14.355		
5,200.0	5,046.8	5,210.3	5,126.9	24.8	18.5	-154.93	-483.6	-549.0	444.2	413.0	31.20	14.234		
5,300.0	5,142.6	5,310.0	5,223.9	25.4	19.0	-154.66	-498.4	-566.5	452.3	420.3	32.04	14.119		
5,400.0	5,238.4	5,409.6	5,320.9	26.0	19.5	-154.40	-513.1	-584.0	460.5	427.6	32.87	14.008		
5,500.0	5,334.3	5,509.3	5,417.9	26.6	20.0	-154.15	-527.8	-601.5	468.6	434.9	33.71	13.902		
5,600.0	5,430.1	5,608.9	5,514.9	27.3	20.4	-153.90	-542.6	-619.1	476.8	442.3	34.55	13.800		
5,700.0	5,525.9	5,708.6	5,611.8	27.9	20.9	-153.67	-557.3	-636.6	485.0	449.6	35.40	13.702		
5,800.0	5,621.7	5,808.2	5,708.8	28.5	21.4	-153.44	-572.1	-654.1	493.2	457.0	36.24	13.609		
5,900.0	5,717.5	5,907.9	5,805.8	29.1	21.9	-153.22	-586.8	-671.6	501.4	464.3	37.09	13.519		
6,000.0	5,813.3	6,007.5	5,902.8	29.7	22.4	-153.01	-601.5	-689.1	509.6	471.7	37.94	13.432		
6,100.0	5,909.2	6,107.1	5,999.8	30.3	22.9	-152.80	-616.3	-706.6	517.8	479.0	38.79	13.349		
6,200.0	6,005.0	6,200.0	6,090.2	30.9	23.4	-152.66	-629.7	-722.6	526.3	486.7	39.58	13.298		
6,300.0	6,101.5	6,287.3	6,175.8	31.3	23.6	-152.65	-640.9	-735.8	534.6	494.5	40.17	13.310		
6,400.0	6,198.9	6,374.6	6,261.8	31.7	23.9	-152.67	-650.3	-747.0	542.2	501.5	40.68	13.329		
6,500.0	6,297.1	6,461.7	6,348.2	32.0	24.1	-152.72	-658.0	-756.2	548.9	507.8	41.11	13.353		
6,600.0	6,395.8	6,548.8	6,434.7	32.3	24.3	-152.79	-664.1	-763.4	554.9	513.4	41.46	13.384		
6,700.0	6,495.0	6,635.8	6,521.5	32.6	24.5	-152.89	-668.4	-768.5	560.1	518.3	41.73	13.422		
6,800.0	6,594.6	6,722.8	6,608.3	32.7	24.6	-153.02	-671.1	-771.7	564.4	522.5	41.92	13.465		
6,900.0	6,694.5	6,809.7	6,695.2	32.9	24.7	-153.17	-672.0	-772.8	568.0	526.0	42.03	13.515		
7,000.0	6,794.4	6,908.9	6,794.4	33.0	24.9	-153.27	-672.0	-772.8	569.7	527.6	42.13	13.522		
7,100.0	6,894.4	7,008.9	6,894.4	33.1	25.0	90.20	-672.0	-772.8	569.7	528.1	41.63	13.685		
7,200.0	6,994.4	7,106.0	6,991.3	33.2	25.0	89.56	-665.6	-772.6	569.9	528.4	41.59	13.705		
7,300.0	7,094.1	7,200.0	7,083.3	33.2	25.0	86.35	-647.0	-772.0	570.7	528.8	41.84	13.640		
7,400.0	7,191.9	7,294.7	7,172.8	33.2	24.9	85.10	-616.3	-770.9	571.6	530.4	41.16	13.886		
7,500.0	7,285.9	7,386.9	7,255.4	33.1	24.7	83.96	-575.3	-769.5	572.7	532.3	40.40	14.175		
7,600.0	7,374.2	7,478.0	7,331.0	32.9	24.5	82.93	-524.7	-767.8	573.9	534.3	39.61	14.487		
7,700.0	7,455.1	7,568.1	7,398.9	32.7	24.2	82.04	-465.6	-765.9	575.1	536.2	38.86	14.799		
7,800.0	7,527.1	7,657.4	7,458.4	32.4	23.8	81.29	-399.2	-763.6	576.2	538.0	38.19	15.086		
7,900.0	7,588.8	7,746.0	7,508.8	32.1	23.5	80.70	-326.4	-761.2	577.1	539.5	37.67	15.321		
8,000.0	7,638.9	7,834.1	7,549.6	31.7	23.2	80.27	-248.4	-758.6	577.9	540.5	37.35	15.473		
8,100.0	7,676.5	7,921.9	7,580.5	31.4	22.9	80.00	-166.3	-755.8	578.4	541.1	37.26	15.524		
8,200.0	7,700.9	8,009.5	7,601.0	31.1	22.6	79.90	-81.3	-752.9	578.5	541.1	37.43	15.458		
8,300.0	7,711.5	8,100.0	7,611.1	30.9	22.3	79.98	8.5	-749.9	578.4	540.6	37.87	15.273		
8,342.7	7,712.7	8,134.5	7,612.0	30.8	22.2	79.97	43.0	-748.8	578.5	540.4	38.06	15.197		
8,400.0	7,712.0	8,191.4	7,611.8	30.8	22.1	80.02	99.8	-746.9	578.4	540.0	38.41	15.058		
8,500.0	7,712.0	8,291.4	7,611.4	30.7	21.9	79.98	199.8	-743.5	578.5	539.6	38.91	14.868		
8,600.0	7,712.0	8,391.4	7,610.9	30.7	22.1	79.94	299.7	-740.1	578.6	539.1	39.48	14.653		
8,700.0	7,712.0	8,491.4	7,610.5	30.9	22.6	79.90	399.7	-736.8	578.7	538.3	40.39	14.325		
8,800.0	7,712.0	8,591.4	7,610.1	31.1	23.2	79.86	499.6	-733.4	578.8	537.1	41.65	13.897		
8,900.0	7,712.0	8,691.4	7,609.7	31.5	24.0	79.82	599.6	-730.1	578.8	535.6	43.21	13.397		
9,000.0	7,712.0	8,791.4	7,609.3	32.1	25.0	79.78	699.5	-726.7	578.9	533.9	45.05	12.851		
9,100.0	7,712.0	8,891.4	7,608.9	32.7	26.0	79.74	799.4	-723.4	579.0	531.9	47.14	12.284		
9,200.0	7,712.0	8,991.4	7,608.4	33.5	27.1	79.70	899.4	-720.0	579.1	529.7	49.44	11.714		
9,300.0	7,712.0	9,091.4	7,608.0	34.5	28.3	79.66	999.3	-716.6	579.2	527.3	51.93	11.155		
9,400.0	7,712.0	9,191.4	7,607.6	35.5	29.6	79.62	1,099.3	-713.3	579.3	524.7	54.57	10.615		
9,500.0	7,712.0	9,291.4	7,607.2	36.7	31.0	79.58	1,199.2	-709.9	579.4	522.1	57.36	10.102		
9,600.0	7,712.0	9,391.4	7,606.8	37.9	32.4	79.54	1,299.2	-706.6	579.5	519.2	60.26	9.616		
9,700.0	7,712.0	9,491.4	7,606.3	39.2	33.8	79.50	1,399.1	-703.2	579.6	516.3	63.27	9.161		
9,800.0	7,712.0	9,591.4	7,605.9	40.5	35.3	79.46	1,499.0	-699.9	579.7	513.3	66.36	8.735		
9,900.0	7,712.0	9,691.4	7,605.5	41.9	36.9	79.42	1,599.0	-696.5	579.8	510.3	69.53	8.339		
10,000.0	7,712.0	9,791.4	7,605.1	43.4	38.5	79.38	1,698.9	-693.1	579.9	507.1	72.77	7.969		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	9,891.4	7,604.7	44.9	40.1	79.34	1,798.9	-689.8	580.0	503.9	76.06	7.625		
10,200.0	7,712.0	9,991.4	7,604.3	46.4	41.7	79.30	1,898.8	-686.4	580.1	500.7	79.40	7.306		
10,300.0	7,712.0	10,091.4	7,603.8	47.9	43.4	79.26	1,998.8	-683.1	580.2	497.4	82.78	7.008		
10,400.0	7,712.0	10,191.4	7,603.4	49.5	45.1	79.22	2,098.7	-679.7	580.2	494.0	86.21	6.731		
10,500.0	7,712.0	10,291.4	7,603.0	51.1	46.8	79.18	2,198.6	-676.4	580.3	490.7	89.66	6.472		
10,600.0	7,712.0	10,391.4	7,602.6	52.7	48.6	79.14	2,298.6	-673.0	580.4	487.3	93.15	6.231		
10,700.0	7,712.0	10,491.4	7,602.2	54.4	50.3	79.10	2,398.5	-669.7	580.5	483.9	96.66	6.006		
10,800.0	7,712.0	10,591.4	7,601.8	56.0	52.1	79.06	2,498.5	-666.3	580.6	480.4	100.20	5.795		
10,900.0	7,712.0	10,691.4	7,601.4	57.7	53.9	79.02	2,598.4	-663.0	580.7	477.0	103.76	5.597		
11,000.0	7,712.0	10,791.4	7,600.9	59.4	55.7	78.98	2,698.4	-659.6	580.8	473.5	107.34	5.411		
11,100.0	7,712.0	10,891.4	7,600.5	61.1	57.5	78.94	2,798.3	-656.2	580.9	470.0	110.93	5.237		
11,200.0	7,712.0	10,991.4	7,600.1	62.8	59.4	78.90	2,898.2	-652.9	581.0	466.5	114.54	5.072		
11,300.0	7,712.0	11,091.4	7,599.7	64.6	61.2	78.86	2,998.2	-649.5	581.1	462.9	118.16	4.918		
11,400.0	7,712.0	11,191.4	7,599.3	66.3	63.1	78.82	3,098.1	-646.2	581.2	459.4	121.80	4.772		
11,500.0	7,712.0	11,291.4	7,598.9	68.1	64.9	78.78	3,198.1	-642.8	581.3	455.8	125.44	4.634		
11,600.0	7,712.0	11,391.4	7,598.5	69.8	66.8	78.74	3,298.0	-639.5	581.4	452.3	129.10	4.503		
11,700.0	7,712.0	11,491.4	7,598.0	71.6	68.7	78.70	3,398.0	-636.1	581.5	448.7	132.77	4.379		
11,800.0	7,712.0	11,591.4	7,597.6	73.4	70.5	78.66	3,497.9	-632.8	581.5	445.1	136.44	4.262		
11,900.0	7,712.0	11,691.4	7,597.2	75.1	72.4	78.62	3,597.8	-629.4	581.6	441.5	140.12	4.151		
12,000.0	7,712.0	11,791.4	7,596.8	76.9	74.3	78.58	3,697.8	-626.1	581.7	437.9	143.81	4.045		
12,100.0	7,712.0	11,891.4	7,596.4	78.7	76.2	78.54	3,797.7	-622.7	581.8	434.3	147.51	3.944		
12,200.0	7,712.0	11,991.4	7,596.0	80.5	78.1	78.50	3,897.7	-619.4	581.9	430.7	151.21	3.848		
12,300.0	7,712.0	12,091.4	7,595.6	82.3	80.0	78.46	3,997.6	-616.0	582.0	427.1	154.92	3.757		
12,400.0	7,712.0	12,191.4	7,595.1	84.1	81.9	78.42	4,097.6	-612.7	582.1	423.5	158.63	3.670		
12,500.0	7,712.0	12,291.4	7,594.7	86.0	83.9	78.38	4,197.5	-609.3	582.2	419.8	162.35	3.586		
12,600.0	7,712.0	12,391.4	7,594.3	87.8	85.8	78.34	4,297.4	-606.0	582.3	416.2	166.07	3.506		
12,700.0	7,712.0	12,491.4	7,593.9	89.6	87.7	78.30	4,397.4	-602.6	582.4	412.6	169.79	3.430		
12,800.0	7,712.0	12,591.4	7,593.5	91.4	89.6	78.26	4,497.3	-599.2	582.5	408.9	173.52	3.357		
12,900.0	7,712.0	12,691.4	7,593.1	93.2	91.6	78.22	4,597.3	-595.9	582.6	405.3	177.25	3.287		
13,000.0	7,712.0	12,791.4	7,592.7	95.1	93.5	78.18	4,697.2	-592.5	582.6	401.7	180.99	3.219		
13,100.0	7,712.0	12,891.4	7,592.3	96.9	95.4	78.14	4,797.2	-589.2	582.7	398.0	184.72	3.155		
13,200.0	7,712.0	12,991.4	7,591.8	98.8	97.4	78.10	4,897.1	-585.8	582.8	394.4	188.46	3.093		
13,300.0	7,712.0	13,091.4	7,591.4	100.6	99.3	78.06	4,997.1	-582.5	582.9	390.7	192.20	3.033		
13,400.0	7,712.0	13,191.4	7,591.0	102.4	101.2	78.02	5,097.0	-579.1	583.0	387.1	195.95	2.975		
13,500.0	7,712.0	13,291.4	7,590.6	104.3	103.2	77.98	5,196.9	-575.8	583.1	383.4	199.69	2.920		
13,600.0	7,712.0	13,391.4	7,590.2	106.1	105.1	77.95	5,296.9	-572.4	583.2	379.8	203.44	2.867		
13,700.0	7,712.0	13,491.4	7,589.8	108.0	107.1	77.91	5,396.8	-569.1	583.3	376.1	207.19	2.815		
13,800.0	7,712.0	13,591.4	7,589.4	109.9	109.0	77.87	5,496.8	-565.7	583.4	372.4	210.94	2.766		
13,900.0	7,712.0	13,691.4	7,589.0	111.7	111.0	77.83	5,596.7	-562.4	583.5	368.8	214.69	2.718		
14,000.0	7,712.0	13,791.4	7,588.6	113.6	112.9	77.79	5,696.7	-559.0	583.6	365.1	218.44	2.671		
14,100.0	7,712.0	13,891.4	7,588.1	115.4	114.9	77.75	5,796.6	-555.7	583.6	361.5	222.20	2.627		
14,200.0	7,712.0	13,991.4	7,587.7	117.3	116.9	77.71	5,896.5	-552.3	583.7	357.8	225.95	2.583		
14,300.0	7,712.0	14,091.4	7,587.3	119.2	118.8	77.67	5,996.5	-549.0	583.8	354.1	229.71	2.542		
14,400.0	7,712.0	14,191.4	7,586.9	121.0	120.8	77.63	6,096.4	-545.6	583.9	350.5	233.46	2.501		
14,500.0	7,712.0	14,291.4	7,586.5	122.9	122.7	77.59	6,196.4	-542.3	584.0	346.8	237.22	2.462		
14,600.0	7,712.0	14,391.4	7,586.1	124.8	124.7	77.55	6,296.3	-539.0	584.1	343.1	240.98	2.424		
14,700.0	7,712.0	14,491.4	7,585.7	126.6	126.7	77.51	6,396.3	-535.6	584.2	339.5	244.74	2.387		
14,800.0	7,712.0	14,591.4	7,585.3	128.5	128.6	77.47	6,496.2	-532.3	584.3	335.8	248.49	2.351		
14,900.0	7,712.0	14,691.4	7,584.9	130.4	130.6	77.43	6,596.1	-528.9	584.4	332.1	252.25	2.317		
15,000.0	7,712.0	14,791.4	7,584.5	132.3	132.6	77.40	6,696.1	-525.6	584.5	328.4	256.01	2.283		
15,100.0	7,712.0	14,891.4	7,584.0	134.1	134.5	77.36	6,796.0	-522.2	584.5	324.8	259.77	2.250		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	14,991.4	7,583.6	136.0	136.5	77.32	6,896.0	-518.9	584.6	321.1	263.53	2.218		
15,300.0	7,712.0	15,091.4	7,583.2	137.9	138.5	77.28	6,995.9	-515.5	584.7	317.4	267.29	2.188		
15,400.0	7,712.0	15,191.4	7,582.8	139.8	140.4	77.24	7,095.9	-512.2	584.8	313.8	271.05	2.158		
15,500.0	7,712.0	15,291.4	7,582.4	141.6	142.4	77.20	7,195.8	-508.8	584.9	310.1	274.81	2.128		
15,600.0	7,712.0	15,391.4	7,582.0	143.5	144.4	77.16	7,295.7	-505.5	585.0	306.4	278.57	2.100		
15,700.0	7,712.0	15,491.4	7,581.6	145.4	146.3	77.12	7,395.7	-502.1	585.1	302.8	282.33	2.072		
15,800.0	7,712.0	15,591.4	7,581.2	147.3	148.3	77.08	7,495.6	-498.8	585.2	299.1	286.09	2.045		
15,900.0	7,712.0	15,691.4	7,580.8	149.2	150.3	77.04	7,595.6	-495.4	585.3	295.4	289.85	2.019		
16,000.0	7,712.0	15,791.4	7,580.4	151.1	152.3	77.00	7,695.5	-492.1	585.4	291.7	293.60	1.994		
16,100.0	7,712.0	15,891.4	7,580.0	152.9	154.2	76.97	7,795.5	-488.7	585.4	288.1	297.36	1.969		
16,200.0	7,712.0	15,991.4	7,579.6	154.8	156.2	76.93	7,895.4	-485.4	585.5	284.4	301.12	1.945		
16,300.0	7,712.0	16,091.4	7,579.1	156.7	158.2	76.89	7,995.4	-482.1	585.6	280.7	304.88	1.921		
16,400.0	7,712.0	16,191.4	7,578.7	158.6	160.2	76.85	8,095.3	-478.7	585.7	277.1	308.64	1.898		
16,500.0	7,712.0	16,291.4	7,578.3	160.5	162.1	76.81	8,195.2	-475.4	585.8	273.4	312.39	1.875		
16,600.0	7,712.0	16,391.4	7,577.9	162.4	164.1	76.77	8,295.2	-472.0	585.9	269.7	316.15	1.853		
16,700.0	7,712.0	16,491.4	7,577.5	164.3	166.1	76.73	8,395.1	-468.7	586.0	266.1	319.91	1.832		
16,800.0	7,712.0	16,591.4	7,577.1	166.2	168.1	76.69	8,495.1	-465.3	586.1	262.4	323.66	1.811		
16,900.0	7,712.0	16,691.4	7,576.7	168.1	170.1	76.66	8,595.0	-462.0	586.2	258.7	327.42	1.790		
17,000.0	7,712.0	16,791.4	7,576.3	170.0	172.0	76.62	8,695.0	-458.6	586.2	255.1	331.17	1.770		
17,100.0	7,712.0	16,891.4	7,575.9	171.8	174.0	76.58	8,794.9	-455.3	586.3	251.4	334.93	1.751		
17,200.0	7,712.0	16,991.4	7,575.5	173.7	176.0	76.54	8,894.8	-451.9	586.4	247.7	338.68	1.731		
17,300.0	7,712.0	17,091.4	7,575.1	175.6	178.0	76.50	8,994.8	-448.6	586.5	244.1	342.43	1.713		
17,400.0	7,712.0	17,191.4	7,574.7	177.5	180.0	76.46	9,094.7	-445.3	586.6	240.4	346.19	1.694		
17,500.0	7,712.0	17,291.4	7,574.3	179.4	181.9	76.42	9,194.7	-441.9	586.7	236.7	349.94	1.677		
17,600.0	7,712.0	17,391.4	7,573.9	181.3	183.9	76.38	9,294.6	-438.6	586.8	233.1	353.69	1.659		
17,700.0	7,712.0	17,491.4	7,573.5	183.2	185.9	76.35	9,394.6	-435.2	586.9	229.4	357.44	1.642		
17,800.0	7,712.0	17,591.4	7,573.1	185.1	187.9	76.31	9,494.5	-431.9	586.9	225.8	361.19	1.625		
17,900.0	7,712.0	17,691.4	7,572.7	187.0	189.9	76.27	9,594.4	-428.5	587.0	222.1	364.94	1.609		
18,000.0	7,712.0	17,791.4	7,572.2	188.9	191.9	76.23	9,694.4	-425.2	587.1	218.4	368.69	1.592		
18,041.5	7,712.0	17,832.9	7,572.1	189.6	192.6	76.21	9,735.9	-423.8	587.2	217.0	370.11	1.586 SF		

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 215-2920H - 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	90.02	0.0	75.4	75.4						
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	75.4	75.4	75.2	0.22	335.401			
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	75.4	75.4	74.7	0.67	111.800			
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	75.4	75.4	74.3	1.12	67.080			
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	75.4	75.4	73.8	1.57	47.914			
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	75.4	75.4	73.4	2.02	37.267			
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	75.4	75.4	72.9	2.47	30.491			
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	75.4	75.4	72.5	2.92	25.800			
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	75.4	75.4	72.0	3.37	22.360	CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	-153.88	0.0	75.4	76.6	72.8	3.80	20.136			
1,000.0	999.9	999.9	999.9	2.1	2.1	-155.10	0.0	75.4	80.1	75.9	4.22	18.982			
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	-156.90	0.0	75.4	86.1	81.4	4.65	18.532	SF		
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	-159.02	0.0	75.4	94.6	89.5	5.08	18.633			
1,300.0	1,298.6	1,298.6	1,298.6	2.8	2.8	-161.25	0.0	75.4	105.6	100.1	5.51	19.174			
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	-163.41	0.0	75.4	119.3	113.4	5.95	20.071			
1,500.0	1,496.1	1,496.1	1,496.1	3.4	3.3	-165.38	0.0	75.4	135.7	129.3	6.38	21.257			
1,600.0	1,594.2	1,594.2	1,594.2	3.7	3.5	-167.14	0.0	75.4	154.6	147.8	6.82	22.679			
1,700.0	1,691.7	1,691.7	1,691.7	4.1	3.7	-168.67	0.0	75.4	176.2	169.0	7.25	24.294			
1,800.0	1,788.6	1,788.6	1,788.6	4.5	3.9	-169.99	0.0	75.4	200.4	192.8	7.69	26.068			
1,900.0	1,884.9	1,884.9	1,884.9	5.0	4.1	-171.11	0.0	75.4	227.2	219.1	8.12	27.973			
2,000.0	1,980.7	1,983.9	1,983.9	5.6	4.3	-171.95	-0.9	75.1	255.1	246.5	8.57	29.769			
2,100.0	2,076.5	2,084.4	2,084.4	6.1	4.5	-172.19	-4.3	74.1	281.5	272.5	9.00	31.273			
2,200.0	2,172.3	2,185.8	2,185.5	6.7	4.7	-171.97	-10.3	72.4	306.4	297.0	9.45	32.439			
2,300.0	2,268.1	2,287.8	2,287.2	7.3	4.9	-171.39	-18.9	69.8	329.9	320.0	9.91	33.281			
2,400.0	2,363.9	2,390.4	2,389.1	7.8	5.1	-170.51	-30.2	66.5	351.9	341.5	10.40	33.827			
2,500.0	2,459.8	2,493.4	2,491.0	8.4	5.3	-169.37	-44.2	62.4	372.6	361.7	10.93	34.098			
2,600.0	2,555.6	2,594.4	2,590.6	9.0	5.5	-168.06	-60.2	57.6	392.1	380.6	11.48	34.147			
2,700.0	2,651.4	2,692.1	2,686.9	9.6	5.8	-166.85	-76.2	52.9	411.5	399.5	12.06	34.122			
2,800.0	2,747.2	2,789.9	2,783.2	10.2	6.1	-165.75	-92.2	48.2	431.1	418.5	12.66	34.049			
2,900.0	2,843.0	2,887.6	2,879.5	10.8	6.3	-164.75	-108.2	43.5	450.8	437.6	13.28	33.942			
3,000.0	2,938.8	2,985.4	2,975.8	11.4	6.6	-163.83	-124.2	38.8	470.7	456.8	13.92	33.808			
3,100.0	3,034.7	3,083.1	3,072.1	12.0	6.9	-162.98	-140.3	34.0	490.7	476.1	14.58	33.656			
3,200.0	3,130.5	3,180.8	3,168.4	12.6	7.2	-162.20	-156.3	29.3	510.7	495.5	15.25	33.490			
3,300.0	3,226.3	3,278.6	3,264.8	13.2	7.6	-161.48	-172.3	24.6	530.9	514.9	15.93	33.316			
3,400.0	3,322.1	3,376.3	3,361.1	13.8	7.9	-160.82	-188.3	19.9	551.1	534.5	16.63	33.138			
3,500.0	3,417.9	3,474.1	3,457.4	14.4	8.2	-160.20	-204.3	15.2	571.4	554.0	17.34	32.957			
3,600.0	3,513.7	3,571.8	3,553.7	15.0	8.6	-159.62	-220.3	10.4	591.7	573.7	18.05	32.777			
3,700.0	3,609.6	3,669.5	3,650.0	15.6	8.9	-159.08	-236.3	5.7	612.1	593.3	18.78	32.599			
3,800.0	3,705.4	3,767.3	3,746.3	16.2	9.2	-158.57	-252.3	1.0	632.6	613.0	19.51	32.423			
3,900.0	3,801.2	3,865.0	3,842.6	16.8	9.6	-158.10	-268.3	-3.7	653.0	632.8	20.25	32.252			
4,000.0	3,897.0	3,962.8	3,938.9	17.4	9.9	-157.66	-284.3	-8.5	673.6	652.6	20.99	32.085			
4,100.0	3,992.8	4,060.5	4,035.2	18.1	10.3	-157.24	-300.3	-13.2	694.1	672.4	21.74	31.923			
4,200.0	4,088.6	4,158.2	4,131.5	18.7	10.6	-156.84	-316.3	-17.9	714.7	692.2	22.50	31.767			
4,300.0	4,184.5	4,256.0	4,227.8	19.3	11.0	-156.47	-332.3	-22.6	735.4	712.1	23.26	31.615			
4,400.0	4,280.3	4,353.7	4,324.1	19.9	11.4	-156.12	-348.3	-27.3	756.0	732.0	24.03	31.469			
4,500.0	4,376.1	4,451.5	4,420.4	20.5	11.7	-155.79	-364.3	-32.1	776.7	751.9	24.79	31.328			
4,600.0	4,471.9	4,549.2	4,516.7	21.1	12.1	-155.47	-380.3	-36.8	797.4	771.9	25.57	31.192			
4,700.0	4,567.7	4,646.9	4,613.0	21.7	12.5	-155.17	-396.4	-41.5	818.2	791.8	26.34	31.061			
4,800.0	4,663.5	4,744.7	4,709.3	22.3	12.8	-154.88	-412.4	-46.2	838.9	811.8	27.12	30.935			
4,900.0	4,759.4	4,842.4	4,805.6	23.0	13.2	-154.61	-428.4	-50.9	859.7	831.8	27.90	30.814			
5,000.0	4,855.2	4,940.2	4,901.9	23.6	13.6	-154.35	-444.4	-55.7	880.5	851.8	28.68	30.697			

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	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	4,951.0	5,037.9	4,998.2	24.2	13.9	-154.11	-460.4	-60.4	901.3	871.8	29.47	30.585		
5,200.0	5,046.8	5,135.6	5,094.5	24.8	14.3	-153.87	-476.4	-65.1	922.1	891.9	30.26	30.477		
5,300.0	5,142.6	5,233.4	5,190.8	25.4	14.7	-153.65	-492.4	-69.8	942.9	911.9	31.05	30.372		
5,400.0	5,238.4	5,331.1	5,287.1	26.0	15.1	-153.43	-508.4	-74.5	963.8	932.0	31.84	30.272		
5,500.0	5,334.3	5,428.9	5,383.5	26.6	15.4	-153.22	-524.4	-79.3	984.7	952.0	32.63	30.176		
5,600.0	5,430.1	5,526.6	5,479.8	27.3	15.8	-153.03	-540.4	-84.0	1,005.5	972.1	33.43	30.083		
5,700.0	5,525.9	5,624.3	5,576.1	27.9	16.2	-152.84	-556.4	-88.7	1,026.4	992.2	34.22	29.993		
5,800.0	5,621.7	5,722.1	5,672.4	28.5	16.6	-152.65	-572.4	-93.4	1,047.3	1,012.3	35.02	29.906		
5,900.0	5,717.5	5,819.8	5,768.7	29.1	17.0	-152.48	-588.4	-98.1	1,068.2	1,032.4	35.82	29.823		
6,000.0	5,813.3	5,917.6	5,865.0	29.7	17.3	-152.31	-604.4	-102.9	1,089.1	1,052.5	36.62	29.742		
6,100.0	5,909.2	6,015.3	5,961.3	30.3	17.7	-152.15	-620.4	-107.6	1,110.0	1,072.6	37.42	29.665		
6,200.0	6,005.0	6,108.4	6,053.1	30.9	18.0	-152.07	-635.4	-112.0	1,131.0	1,092.8	38.18	29.623		
6,300.0	6,101.5	6,200.0	6,143.8	31.3	18.3	-152.19	-647.7	-115.6	1,150.4	1,111.6	38.78	29.663		
6,400.0	6,198.9	6,285.7	6,228.9	31.7	18.5	-152.35	-656.7	-118.3	1,167.7	1,128.4	39.29	29.721		
6,500.0	6,297.1	6,374.6	6,317.6	32.0	18.7	-152.55	-663.5	-120.3	1,182.7	1,143.0	39.72	29.778		
6,600.0	6,395.8	6,463.7	6,406.5	32.3	18.8	-152.78	-667.6	-121.5	1,195.5	1,155.4	40.06	29.843		



<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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
0.0	0.0	0.0	0.0	0.0	0.0	90.02	0.0	125.1	125.1				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	125.1	125.1	124.9	0.22	556.545	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	125.1	125.1	124.4	0.67	185.515	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	0.0	125.1	125.1	124.0	1.12	111.309	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	0.0	125.1	125.1	123.5	1.57	79.506	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	0.0	125.1	125.1	123.1	2.02	61.838	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	0.0	125.1	125.1	122.6	2.47	50.595	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	0.0	125.1	125.1	122.2	2.92	42.811	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	0.0	125.1	125.1	121.7	3.37	37.103 CC, ES	
900.0	900.0	900.0	900.0	1.9	1.9	-153.72	0.0	125.1	126.3	122.5	3.80	33.209	
1,000.0	999.9	999.9	999.9	2.1	2.1	-154.46	0.0	125.1	129.8	125.6	4.22	30.757	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	-155.62	0.0	125.1	135.7	131.1	4.65	29.219	
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	-157.07	0.0	125.1	144.1	139.0	5.08	28.392	
1,300.0	1,298.6	1,298.6	1,298.6	2.8	2.8	-158.70	0.0	125.1	155.0	149.5	5.51	28.128 SF	
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	-160.40	0.0	125.1	168.5	162.5	5.95	28.320	
1,500.0	1,496.1	1,496.1	1,496.1	3.4	3.3	-162.09	0.0	125.1	184.5	178.2	6.39	28.884	
1,600.0	1,594.2	1,592.4	1,592.4	3.7	3.4	-163.37	-1.0	125.7	203.6	196.8	6.80	29.927	
1,700.0	1,691.7	1,687.9	1,687.9	4.1	3.6	-163.99	-4.0	127.5	226.1	218.9	7.20	31.383	
1,800.0	1,788.6	1,782.5	1,782.3	4.5	3.8	-164.11	-9.0	130.5	251.9	244.3	7.62	33.071	
1,900.0	1,884.9	1,876.0	1,875.4	5.0	4.0	-163.86	-15.9	134.7	280.9	272.8	8.05	34.914	
2,000.0	1,980.7	1,968.5	1,967.3	5.6	4.2	-163.42	-24.6	139.9	312.1	303.6	8.52	36.647	
2,100.0	2,076.5	2,060.3	2,058.3	6.1	4.4	-162.70	-35.1	146.3	344.2	335.1	9.02	38.164	
2,200.0	2,172.3	2,151.4	2,148.2	6.7	4.6	-161.78	-47.4	153.8	377.1	367.5	9.55	39.489	
2,300.0	2,268.1	2,244.7	2,240.1	7.3	4.9	-160.78	-61.3	162.2	410.7	400.6	10.12	40.596	
2,400.0	2,363.9	2,338.6	2,332.6	7.8	5.1	-159.93	-75.3	170.6	444.4	433.7	10.71	41.500	
2,500.0	2,459.8	2,432.6	2,425.1	8.4	5.4	-159.19	-89.3	179.1	478.2	466.9	11.32	42.261	
2,600.0	2,555.6	2,526.5	2,517.6	9.0	5.7	-158.55	-103.3	187.6	512.1	500.1	11.94	42.894	
2,700.0	2,651.4	2,620.5	2,610.2	9.6	6.0	-157.99	-117.3	196.0	546.0	533.4	12.57	43.423	
2,800.0	2,747.2	2,714.4	2,702.7	10.2	6.3	-157.49	-131.3	204.5	579.9	566.7	13.22	43.868	
2,900.0	2,843.0	2,808.4	2,795.2	10.8	6.7	-157.05	-145.3	213.0	613.9	600.1	13.88	44.243	
3,000.0	2,938.8	2,902.3	2,887.7	11.4	7.0	-156.65	-159.3	221.4	647.9	633.4	14.54	44.561	
3,100.0	3,034.7	2,996.3	2,980.2	12.0	7.3	-156.30	-173.3	229.9	682.0	666.8	15.21	44.831	
3,200.0	3,130.5	3,090.2	3,072.7	12.6	7.7	-155.98	-187.3	238.4	716.0	700.2	15.89	45.062	
3,300.0	3,226.3	3,184.2	3,165.2	13.2	8.0	-155.68	-201.3	246.8	750.1	733.6	16.57	45.260	
3,400.0	3,322.1	3,278.1	3,257.7	13.8	8.4	-155.42	-215.3	255.3	784.2	767.0	17.26	45.431	
3,500.0	3,417.9	3,372.1	3,350.3	14.4	8.7	-155.17	-229.4	263.8	818.3	800.4	17.95	45.579	
3,600.0	3,513.7	3,466.0	3,442.8	15.0	9.1	-154.95	-243.4	272.2	852.4	833.8	18.65	45.707	
3,700.0	3,609.6	3,560.0	3,535.3	15.6	9.4	-154.74	-257.4	280.7	886.6	867.2	19.35	45.819	
3,800.0	3,705.4	3,653.9	3,627.8	16.2	9.8	-154.55	-271.4	289.2	920.7	900.7	20.05	45.916	
3,900.0	3,801.2	3,747.9	3,720.3	16.8	10.2	-154.37	-285.4	297.7	954.9	934.1	20.76	46.002	
4,000.0	3,897.0	3,841.8	3,812.8	17.4	10.5	-154.20	-299.4	306.1	989.0	967.6	21.46	46.077	
4,100.0	3,992.8	3,935.8	3,905.3	18.1	10.9	-154.04	-313.4	314.6	1,023.2	1,001.0	22.17	46.142	
4,200.0	4,088.6	4,029.7	3,997.8	18.7	11.2	-153.90	-327.4	323.1	1,057.4	1,034.5	22.89	46.200	
4,300.0	4,184.5	4,123.7	4,090.4	19.3	11.6	-153.76	-341.4	331.5	1,091.5	1,067.9	23.60	46.251	
4,400.0	4,280.3	4,217.6	4,182.9	19.9	12.0	-153.64	-355.4	340.0	1,125.7	1,101.4	24.32	46.296	
4,500.0	4,376.1	4,311.5	4,275.4	20.5	12.3	-153.51	-369.4	348.5	1,159.9	1,134.9	25.03	46.336	
4,600.0	4,471.9	4,405.5	4,367.9	21.1	12.7	-153.40	-383.4	356.9	1,194.1	1,168.3	25.75	46.371	



<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	-0.1	100.5	100.5					
100.0	100.0	100.0	100.0	0.1	0.1	90.03	-0.1	100.5	100.5	100.3	0.22	447.202		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	-0.1	100.5	100.5	99.8	0.67	149.067		
300.0	300.0	300.0	300.0	0.6	0.6	90.03	-0.1	100.5	100.5	99.4	1.12	89.440		
400.0	400.0	400.0	400.0	0.8	0.8	90.03	-0.1	100.5	100.5	98.9	1.57	63.886		
500.0	500.0	500.0	500.0	1.0	1.0	90.03	-0.1	100.5	100.5	98.5	2.02	49.689		
600.0	600.0	600.0	600.0	1.2	1.2	90.03	-0.1	100.5	100.5	98.0	2.47	40.655		
700.0	700.0	700.0	700.0	1.5	1.5	90.03	-0.1	100.5	100.5	97.6	2.92	34.400		
800.0	800.0	800.0	800.0	1.7	1.7	90.03	-0.1	100.5	100.5	97.1	3.37	29.813 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	-153.77	-0.1	100.5	101.7	97.9	3.80	26.745		
1,000.0	999.9	999.9	999.9	2.1	2.1	-154.69	-0.1	100.5	105.2	101.0	4.22	24.934		
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	-156.10	-0.1	100.5	111.2	106.5	4.65	23.933		
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	-157.82	-0.1	100.5	119.6	114.5	5.08	23.563 SF		
1,300.0	1,298.6	1,298.6	1,298.6	2.8	2.8	-159.71	-0.1	100.5	130.6	125.1	5.51	23.695		
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	-161.62	-0.1	100.5	144.1	138.2	5.95	24.233		
1,500.0	1,496.1	1,496.1	1,496.1	3.4	3.3	-163.46	-0.1	100.5	160.3	153.9	6.39	25.103		
1,600.0	1,594.2	1,594.2	1,594.2	3.7	3.5	-165.16	-0.1	100.5	179.1	172.3	6.82	26.246		
1,700.0	1,691.7	1,691.7	1,691.7	4.1	3.7	-166.70	-0.1	100.5	200.6	193.3	7.26	27.613		
1,800.0	1,788.6	1,789.4	1,789.3	4.5	3.9	-167.80	-1.1	100.6	224.5	216.8	7.68	29.233		
1,900.0	1,884.9	1,886.7	1,886.7	5.0	4.1	-168.22	-4.6	101.0	250.6	242.5	8.08	31.023		
2,000.0	1,980.7	1,984.0	1,983.7	5.6	4.2	-168.16	-10.5	101.7	277.7	269.2	8.51	32.634		
2,100.0	2,076.5	2,081.3	2,080.7	6.1	4.4	-167.64	-18.9	102.7	304.6	295.6	8.97	33.954		
2,200.0	2,172.3	2,178.7	2,177.4	6.7	4.6	-166.77	-29.8	104.0	331.1	321.7	9.46	35.007		
2,300.0	2,268.1	2,275.9	2,273.7	7.3	4.8	-165.61	-43.1	105.6	357.5	347.5	9.98	35.812		
2,400.0	2,363.9	2,372.5	2,369.1	7.8	5.0	-164.29	-58.4	107.4	383.7	373.2	10.54	36.403		
2,500.0	2,459.8	2,468.6	2,463.9	8.4	5.3	-163.10	-74.0	109.2	410.2	399.0	11.13	36.851		
2,600.0	2,555.6	2,564.8	2,558.8	9.0	5.6	-162.05	-89.5	111.1	436.7	425.0	11.74	37.200		
2,700.0	2,651.4	2,660.9	2,653.6	9.6	5.8	-161.13	-105.1	112.9	463.4	451.1	12.37	37.465		
2,800.0	2,747.2	2,757.0	2,748.4	10.2	6.1	-160.30	-120.7	114.7	490.2	477.2	13.02	37.664		
2,900.0	2,843.0	2,853.1	2,843.2	10.8	6.4	-159.56	-136.2	116.6	517.1	503.4	13.68	37.810		
3,000.0	2,938.8	2,949.2	2,938.1	11.4	6.7	-158.89	-151.8	118.4	544.0	529.7	14.35	37.914		
3,100.0	3,034.7	3,045.3	3,032.9	12.0	7.0	-158.28	-167.4	120.2	571.0	556.0	15.03	37.986		
3,200.0	3,130.5	3,141.4	3,127.7	12.6	7.3	-157.73	-182.9	122.1	598.1	582.4	15.73	38.032		
3,300.0	3,226.3	3,237.6	3,222.6	13.2	7.7	-157.23	-198.5	123.9	625.2	608.8	16.43	38.057		
3,400.0	3,322.1	3,333.7	3,317.4	13.8	8.0	-156.76	-214.1	125.7	652.4	635.2	17.14	38.067		
3,500.0	3,417.9	3,429.8	3,412.2	14.4	8.3	-156.34	-229.6	127.5	679.6	661.7	17.85	38.064		
3,600.0	3,513.7	3,525.9	3,507.1	15.0	8.7	-155.95	-245.2	129.4	706.8	688.2	18.57	38.051		
3,700.0	3,609.6	3,622.0	3,601.9	15.6	9.0	-155.58	-260.8	131.2	734.0	714.7	19.30	38.030		
3,800.0	3,705.4	3,718.1	3,696.7	16.2	9.3	-155.25	-276.3	133.0	761.3	741.3	20.03	38.004		
3,900.0	3,801.2	3,814.3	3,791.5	16.8	9.7	-154.93	-291.9	134.9	788.6	767.8	20.77	37.973		
4,000.0	3,897.0	3,910.4	3,886.4	17.4	10.0	-154.64	-307.5	136.7	815.9	794.4	21.51	37.939		
4,100.0	3,992.8	4,006.5	3,981.2	18.1	10.4	-154.37	-323.0	138.5	843.2	821.0	22.25	37.902		
4,200.0	4,088.6	4,102.6	4,076.0	18.7	10.7	-154.11	-338.6	140.4	870.6	847.6	22.99	37.864		
4,300.0	4,184.5	4,198.7	4,170.9	19.3	11.1	-153.87	-354.2	142.2	898.0	874.2	23.74	37.824		
4,400.0	4,280.3	4,294.8	4,265.7	19.9	11.4	-153.64	-369.7	144.0	925.3	900.8	24.49	37.783		
4,500.0	4,376.1	4,391.0	4,360.5	20.5	11.8	-153.43	-385.3	145.9	952.7	927.5	25.24	37.742		
4,600.0	4,471.9	4,487.1	4,455.3	21.1	12.1	-153.22	-400.9	147.7	980.1	954.1	26.00	37.701		
4,700.0	4,567.7	4,583.2	4,550.2	21.7	12.5	-153.03	-416.4	149.5	1,007.6	980.8	26.75	37.660		
4,800.0	4,663.5	4,679.3	4,645.0	22.3	12.8	-152.85	-432.0	151.4	1,035.0	1,007.5	27.51	37.620		
4,900.0	4,759.4	4,775.4	4,739.8	23.0	13.2	-152.68	-447.6	153.2	1,062.4	1,034.1	28.27	37.579		
5,000.0	4,855.2	4,871.5	4,834.7	23.6	13.5	-152.52	-463.1	155.0	1,089.9	1,060.8	29.03	37.540		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>													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	4,951.0	4,967.6	4,929.5	24.2	13.9	-152.36	-478.7	156.9	1,117.3	1,087.5	29.79	37.500		
5,200.0	5,046.8	5,063.8	5,024.3	24.8	14.3	-152.22	-494.3	158.7	1,144.8	1,114.2	30.56	37.462		
5,300.0	5,142.6	5,159.9	5,119.1	25.4	14.6	-152.08	-509.8	160.5	1,172.2	1,140.9	31.32	37.424		
5,400.0	5,238.4	5,256.0	5,214.0	26.0	15.0	-151.94	-525.4	162.4	1,199.7	1,167.6	32.09	37.387		

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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 504-2920H - 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
0.0	0.0	0.0	0.0	0.0	0.0	90.03	0.0	50.8	50.8				
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	50.8	50.8	50.6	0.22	226.058	
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	50.8	50.8	50.1	0.67	75.353	
300.0	300.0	300.0	300.0	0.6	0.6	90.03	0.0	50.8	50.8	49.7	1.12	45.212	
400.0	400.0	400.0	400.0	0.8	0.8	90.03	0.0	50.8	50.8	49.2	1.57	32.294	
500.0	500.0	500.0	500.0	1.0	1.0	90.03	0.0	50.8	50.8	48.8	2.02	25.118	
600.0	600.0	600.0	600.0	1.2	1.2	90.03	0.0	50.8	50.8	48.3	2.47	20.551	
700.0	700.0	700.0	700.0	1.5	1.5	90.03	0.0	50.8	50.8	47.9	2.92	17.389	
800.0	800.0	800.0	800.0	1.7	1.7	90.03	0.0	50.8	50.8	47.4	3.37	15.071 CC, ES	
900.0	900.0	900.0	900.0	1.9	1.9	-154.09	0.0	50.8	52.0	48.2	3.80	13.672	
1,000.0	999.9	999.9	999.9	2.1	2.1	-155.84	0.0	50.8	55.5	51.3	4.22	13.161	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	-158.29	0.0	50.8	61.6	56.9	4.65	13.255	
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	-161.02	0.0	50.8	70.2	65.1	5.07	13.824	
1,300.0	1,298.6	1,298.6	1,298.6	2.8	2.8	-163.66	0.0	50.8	81.4	75.9	5.51	14.773	
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	-166.04	0.0	50.8	95.2	89.3	5.94	16.026	
1,500.0	1,496.1	1,496.1	1,496.1	3.4	3.3	-168.08	0.0	50.8	111.7	105.4	6.38	17.525	
1,600.0	1,594.2	1,594.2	1,594.2	3.7	3.5	-169.79	0.0	50.8	130.9	124.1	6.81	19.220	
1,700.0	1,691.7	1,691.7	1,691.7	4.1	3.7	-171.21	0.0	50.8	152.7	145.4	7.24	21.076	
1,800.0	1,788.6	1,792.4	1,792.4	4.5	3.9	-172.25	-0.8	50.0	176.1	168.5	7.66	22.987	
1,900.0	1,884.9	1,894.0	1,893.9	5.0	4.1	-172.78	-3.6	47.4	199.8	191.8	8.06	24.794	
2,000.0	1,980.7	1,996.4	1,996.1	5.6	4.3	-172.96	-8.4	42.9	222.7	214.2	8.49	26.220	
2,100.0	2,076.5	2,099.9	2,099.1	6.1	4.5	-172.81	-15.2	36.4	243.2	234.3	8.95	27.182	
2,200.0	2,172.3	2,204.3	2,202.9	6.7	4.7	-172.40	-24.2	27.9	261.4	252.0	9.42	27.739	
2,300.0	2,268.1	2,309.6	2,307.0	7.3	4.9	-171.75	-35.3	17.4	277.2	267.3	9.92	27.939	
2,400.0	2,363.9	2,415.6	2,411.4	7.8	5.2	-170.91	-48.5	4.8	290.6	280.2	10.45	27.820	
2,500.0	2,459.8	2,519.6	2,513.3	8.4	5.5	-169.90	-63.5	-9.3	301.8	290.8	10.99	27.454	
2,600.0	2,555.6	2,618.8	2,610.5	9.0	5.9	-168.94	-78.2	-23.3	312.6	301.0	11.56	27.047	
2,700.0	2,651.4	2,718.1	2,707.7	9.6	6.2	-168.06	-92.9	-37.2	323.4	311.3	12.14	26.643	
2,800.0	2,747.2	2,817.4	2,804.9	10.2	6.5	-167.23	-107.7	-51.2	334.3	321.6	12.74	26.244	
2,900.0	2,843.0	2,916.7	2,902.1	10.8	6.9	-166.45	-122.4	-65.1	345.3	331.9	13.36	25.854	
3,000.0	2,938.8	3,016.0	2,999.3	11.4	7.3	-165.72	-137.1	-79.1	356.3	342.3	13.99	25.475	
3,100.0	3,034.7	3,115.3	3,096.5	12.0	7.7	-165.03	-151.8	-93.0	367.4	352.8	14.63	25.107	
3,200.0	3,130.5	3,214.6	3,193.7	12.6	8.0	-164.39	-166.6	-107.0	378.6	363.3	15.29	24.752	
3,300.0	3,226.3	3,313.9	3,290.9	13.2	8.4	-163.78	-181.3	-120.9	389.8	373.8	15.97	24.411	
3,400.0	3,322.1	3,413.2	3,388.1	13.8	8.8	-163.20	-196.0	-134.9	401.0	384.3	16.65	24.084	
3,500.0	3,417.9	3,512.5	3,485.3	14.4	9.3	-162.66	-210.7	-148.8	412.2	394.9	17.34	23.770	
3,600.0	3,513.7	3,611.7	3,582.5	15.0	9.7	-162.15	-225.4	-162.8	423.5	405.5	18.05	23.471	
3,700.0	3,609.6	3,711.0	3,679.7	15.6	10.1	-161.66	-240.2	-176.7	434.9	416.1	18.76	23.184	
3,800.0	3,705.4	3,810.3	3,776.9	16.2	10.5	-161.20	-254.9	-190.7	446.2	426.8	19.48	22.911	
3,900.0	3,801.2	3,909.6	3,874.1	16.8	10.9	-160.75	-269.6	-204.7	457.6	437.4	20.20	22.650	
4,000.0	3,897.0	4,008.9	3,971.3	17.4	11.3	-160.34	-284.3	-218.6	469.0	448.1	20.94	22.401	
4,100.0	3,992.8	4,108.2	4,068.4	18.1	11.8	-159.94	-299.1	-232.6	480.5	458.8	21.68	22.164	
4,200.0	4,088.6	4,207.5	4,165.6	18.7	12.2	-159.56	-313.8	-246.5	491.9	469.5	22.42	21.937	
4,300.0	4,184.5	4,306.8	4,262.8	19.3	12.6	-159.19	-328.5	-260.5	503.4	480.2	23.18	21.721	
4,400.0	4,280.3	4,406.1	4,360.0	19.9	13.1	-158.85	-343.2	-274.4	514.9	491.0	23.93	21.515	
4,500.0	4,376.1	4,505.3	4,457.2	20.5	13.5	-158.52	-357.9	-288.4	526.4	501.7	24.69	21.318	
4,600.0	4,471.9	4,604.6	4,554.4	21.1	13.9	-158.20	-372.7	-302.3	537.9	512.5	25.46	21.130	
4,700.0	4,567.7	4,703.9	4,651.6	21.7	14.4	-157.89	-387.4	-316.3	549.5	523.3	26.23	20.950	
4,800.0	4,663.5	4,803.2	4,748.8	22.3	14.8	-157.60	-402.1	-330.2	561.1	534.1	27.00	20.778	
4,900.0	4,759.4	4,902.5	4,846.0	23.0	15.2	-157.32	-416.8	-344.2	572.6	544.9	27.78	20.614	
5,000.0	4,855.2	5,001.8	4,943.2	23.6	15.7	-157.05	-431.6	-358.1	584.2	555.7	28.56	20.456	

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	4,951.0	5,101.1	5,040.4	24.2	16.1	-156.80	-446.3	-372.1	595.8	566.5	29.34	20.305		
5,200.0	5,046.8	5,200.4	5,137.6	24.8	16.6	-156.55	-461.0	-386.0	607.4	577.3	30.13	20.161		
5,300.0	5,142.6	5,299.7	5,234.8	25.4	17.0	-156.31	-475.7	-400.0	619.1	588.1	30.92	20.022		
5,400.0	5,238.4	5,399.0	5,332.0	26.0	17.5	-156.08	-490.5	-413.9	630.7	599.0	31.71	19.890		
5,500.0	5,334.3	5,498.2	5,429.2	26.6	17.9	-155.86	-505.2	-427.9	642.3	609.8	32.50	19.762		
5,600.0	5,430.1	5,597.5	5,526.4	27.3	18.3	-155.64	-519.9	-441.8	654.0	620.7	33.30	19.640		
5,700.0	5,525.9	5,696.8	5,623.6	27.9	18.8	-155.44	-534.6	-455.8	665.7	631.6	34.10	19.522		
5,800.0	5,621.7	5,796.1	5,720.8	28.5	19.2	-155.24	-549.3	-469.7	677.3	642.4	34.90	19.409		
5,900.0	5,717.5	5,895.4	5,818.0	29.1	19.7	-155.04	-564.1	-483.7	689.0	653.3	35.70	19.300		
6,000.0	5,813.3	5,994.7	5,915.2	29.7	20.1	-154.86	-578.8	-497.6	700.7	664.2	36.50	19.195		
6,100.0	5,909.2	6,094.0	6,012.4	30.3	20.6	-154.68	-593.5	-511.6	712.4	675.1	37.31	19.094		
6,200.0	6,005.0	6,193.3	6,109.6	30.9	21.0	-154.52	-608.2	-525.5	724.0	685.9	38.12	18.991		
6,300.0	6,101.5	6,292.8	6,207.0	31.3	21.5	-154.35	-623.0	-539.5	733.3	694.4	38.91	18.845		
6,400.0	6,198.9	6,378.4	6,291.0	31.7	21.8	-154.15	-634.9	-550.8	740.4	700.8	39.57	18.711		
6,500.0	6,297.1	6,462.9	6,374.3	32.0	22.1	-153.99	-644.9	-560.3	746.4	706.3	40.11	18.608		
6,600.0	6,395.8	6,547.4	6,458.1	32.3	22.3	-153.86	-653.2	-568.1	751.4	710.8	40.57	18.521		
6,700.0	6,495.0	6,631.9	6,542.1	32.6	22.5	-153.76	-659.6	-574.2	755.2	714.3	40.95	18.445		
6,800.0	6,594.6	6,716.4	6,626.4	32.7	22.6	-153.69	-664.2	-578.6	758.0	716.8	41.24	18.379		
6,900.0	6,694.5	6,800.0	6,709.9	32.9	22.8	-153.64	-667.0	-581.2	759.7	718.2	41.46	18.325		
7,000.0	6,794.4	6,890.1	6,800.0	33.0	22.9	-153.63	-668.0	-582.2	760.3	718.7	41.62	18.268		
7,035.3	6,829.7	6,919.9	6,829.7	33.0	22.9	-153.63	-668.0	-582.2	760.4	718.7	41.71	18.231		
7,100.0	6,894.4	6,984.6	6,894.4	33.1	23.0	89.85	-668.0	-582.2	760.3	719.1	41.18	18.464		
7,200.0	6,994.4	7,084.6	6,994.4	33.2	23.1	89.85	-668.0	-582.2	760.3	718.9	41.45	18.342		
7,300.0	7,094.1	7,181.0	7,090.6	33.2	23.2	87.96	-661.7	-582.0	760.3	718.0	42.29	17.978		
7,400.0	7,191.9	7,277.4	7,185.0	33.2	23.2	88.02	-642.6	-581.3	760.3	718.0	42.23	18.005		
7,500.0	7,285.9	7,373.9	7,276.1	33.1	23.1	88.11	-610.9	-580.3	760.2	718.3	41.98	18.111		
7,600.0	7,374.2	7,470.6	7,362.3	32.9	22.9	88.24	-567.2	-578.8	760.2	718.6	41.58	18.284		
7,700.0	7,455.1	7,567.6	7,442.0	32.7	22.6	88.40	-512.2	-577.0	760.1	719.0	41.07	18.506		
7,800.0	7,527.1	7,664.9	7,513.7	32.4	22.3	88.60	-446.6	-574.8	760.0	719.5	40.53	18.753		
7,900.0	7,588.8	7,762.5	7,576.1	32.1	21.9	88.82	-371.7	-572.3	759.9	719.9	40.02	18.991		
8,000.0	7,638.9	7,860.5	7,628.0	31.7	21.6	89.06	-288.6	-569.6	759.9	720.3	39.62	19.181		
8,100.0	7,676.5	7,959.0	7,668.1	31.4	21.2	89.32	-198.9	-566.6	759.8	720.4	39.41	19.281		
8,200.0	7,700.9	8,057.9	7,695.7	31.1	20.9	89.60	-104.0	-563.4	759.8	720.3	39.46	19.256		
8,300.0	7,711.5	8,157.4	7,710.0	30.9	20.6	89.89	-5.7	-560.2	759.7	719.9	39.81	19.085		
8,400.0	7,712.0	8,257.3	7,712.0	30.8	20.3	90.00	94.1	-556.8	759.7	719.4	40.37	18.817		
8,500.0	7,712.0	8,357.3	7,712.0	30.7	20.0	90.00	194.1	-553.5	759.7	718.7	41.04	18.510		
8,600.0	7,712.0	8,457.3	7,712.0	30.7	20.4	90.00	294.0	-550.2	759.7	717.7	42.02	18.081		
8,700.0	7,712.0	8,557.3	7,712.0	30.9	21.3	90.00	394.0	-546.9	759.7	716.4	43.30	17.546		
8,800.0	7,712.0	8,657.3	7,712.0	31.1	22.2	90.00	493.9	-543.5	759.7	714.8	44.87	16.929		
8,900.0	7,712.0	8,757.3	7,712.0	31.5	23.3	90.00	593.8	-540.2	759.7	713.0	46.71	16.263		
9,000.0	7,712.0	8,857.3	7,712.0	32.1	24.4	90.00	693.8	-536.9	759.7	710.9	48.78	15.572		
9,100.0	7,712.0	8,957.3	7,712.0	32.7	25.6	90.00	793.7	-533.6	759.6	708.6	51.06	14.877		
9,200.0	7,712.0	9,057.3	7,712.0	33.5	26.9	90.00	893.7	-530.2	759.6	706.1	53.52	14.194		
9,300.0	7,712.0	9,157.3	7,712.0	34.5	28.3	90.00	993.6	-526.9	759.6	703.5	56.13	13.534		
9,400.0	7,712.0	9,257.3	7,712.0	35.5	29.7	90.00	1,093.6	-523.6	759.6	700.7	58.87	12.902		
9,500.0	7,712.0	9,357.3	7,712.0	36.7	31.1	90.00	1,193.5	-520.3	759.6	697.9	61.74	12.304		
9,600.0	7,712.0	9,457.3	7,712.0	37.9	32.6	90.00	1,293.4	-516.9	759.6	694.9	64.70	11.740		
9,700.0	7,712.0	9,557.3	7,712.0	39.2	34.1	90.00	1,393.4	-513.6	759.6	691.8	67.75	11.211		
9,800.0	7,712.0	9,657.3	7,712.0	40.5	35.7	90.00	1,493.3	-510.3	759.6	688.7	70.88	10.716		
9,900.0	7,712.0	9,757.3	7,712.0	41.9	37.3	90.00	1,593.3	-506.9	759.6	685.5	74.07	10.254		
10,000.0	7,712.0	9,857.3	7,712.0	43.4	38.9	90.00	1,693.2	-503.6	759.6	682.2	77.33	9.823		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 504-2920H - 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		
10,100.0	7,712.0	9,957.3	7,712.0	44.9	40.6	90.00	1,793.1	-500.3	759.6	678.9	80.63	9.420		
10,200.0	7,712.0	10,057.3	7,712.0	46.4	42.3	90.00	1,893.1	-496.9	759.5	675.6	83.98	9.044		
10,300.0	7,712.0	10,157.3	7,712.0	47.9	43.9	90.00	1,993.0	-493.6	759.5	672.2	87.37	8.693		
10,400.0	7,712.0	10,257.3	7,712.0	49.5	45.7	90.00	2,093.0	-490.3	759.5	668.7	90.80	8.365		
10,500.0	7,712.0	10,357.3	7,712.0	51.1	47.4	90.00	2,192.9	-487.0	759.5	665.3	94.26	8.058		
10,600.0	7,712.0	10,457.3	7,712.0	52.7	49.1	90.00	2,292.9	-483.6	759.5	661.8	97.74	7.771		
10,700.0	7,712.0	10,557.3	7,712.0	54.4	50.9	90.00	2,392.8	-480.3	759.5	658.2	101.25	7.501		
10,800.0	7,712.0	10,657.2	7,712.0	56.0	52.6	90.00	2,492.7	-477.0	759.5	654.7	104.79	7.248		
10,900.0	7,712.0	10,757.2	7,712.0	57.7	54.4	90.00	2,592.7	-473.6	759.5	651.1	108.34	7.010		
11,000.0	7,712.0	10,857.2	7,712.0	59.4	56.2	90.00	2,692.6	-470.3	759.5	647.6	111.92	6.786		
11,100.0	7,712.0	10,957.2	7,712.0	61.1	58.0	90.00	2,792.6	-467.0	759.5	644.0	115.51	6.575		
11,200.0	7,712.0	11,057.2	7,712.0	62.8	59.8	90.00	2,892.5	-463.6	759.5	640.4	119.11	6.376		
11,300.0	7,712.0	11,157.2	7,712.0	64.6	61.6	90.00	2,992.4	-460.3	759.5	636.7	122.73	6.188		
11,400.0	7,712.0	11,257.2	7,712.0	66.3	63.4	90.00	3,092.4	-457.0	759.5	633.1	126.37	6.010		
11,500.0	7,712.0	11,357.2	7,712.0	68.1	65.2	90.00	3,192.3	-453.6	759.4	629.4	130.01	5.841		
11,600.0	7,712.0	11,457.2	7,712.0	69.8	67.0	90.00	3,292.3	-450.3	759.4	625.8	133.67	5.682		
11,700.0	7,712.0	11,557.2	7,712.0	71.6	68.8	90.00	3,392.2	-446.9	759.4	622.1	137.33	5.530		
11,800.0	7,712.0	11,657.2	7,712.0	73.4	70.7	90.00	3,492.2	-443.6	759.4	618.4	141.01	5.386		
11,900.0	7,712.0	11,757.2	7,712.0	75.1	72.5	90.00	3,592.1	-440.3	759.4	614.7	144.69	5.249		
12,000.0	7,712.0	11,857.2	7,712.0	76.9	74.3	90.00	3,692.0	-436.9	759.4	611.0	148.38	5.118		
12,100.0	7,712.0	11,957.2	7,712.0	78.7	76.2	90.00	3,792.0	-433.6	759.4	607.3	152.08	4.993		
12,200.0	7,712.0	12,057.2	7,712.0	80.5	78.0	90.00	3,891.9	-430.3	759.4	603.6	155.79	4.875		
12,300.0	7,712.0	12,157.2	7,712.0	82.3	79.9	90.00	3,991.9	-426.9	759.4	599.9	159.50	4.761		
12,400.0	7,712.0	12,257.2	7,712.0	84.1	81.7	90.00	4,091.8	-423.6	759.4	596.2	163.22	4.653		
12,500.0	7,712.0	12,357.2	7,712.0	86.0	83.6	90.00	4,191.7	-420.2	759.4	592.5	166.94	4.549		
12,600.0	7,712.0	12,457.2	7,712.0	87.8	85.4	90.00	4,291.7	-416.9	759.4	588.7	170.67	4.450		
12,700.0	7,712.0	12,557.2	7,712.0	89.6	87.3	90.00	4,391.6	-413.6	759.4	585.0	174.40	4.354		
12,800.0	7,712.0	12,657.2	7,712.0	91.4	89.2	90.00	4,491.6	-410.2	759.4	581.3	178.14	4.263		
12,900.0	7,712.0	12,757.2	7,712.0	93.2	91.0	90.00	4,591.5	-406.9	759.4	577.5	181.88	4.175		
13,000.0	7,712.0	12,857.2	7,712.0	95.1	92.9	90.00	4,691.5	-403.5	759.4	573.8	185.62	4.091		
13,100.0	7,712.0	12,957.2	7,712.0	96.9	94.8	90.00	4,791.4	-400.2	759.4	570.0	189.37	4.010		
13,200.0	7,712.0	13,057.2	7,712.0	98.8	96.7	90.00	4,891.3	-396.9	759.4	566.3	193.12	3.932		
13,300.0	7,712.0	13,157.2	7,712.0	100.6	98.5	90.00	4,991.3	-393.5	759.4	562.5	196.88	3.857		
13,400.0	7,712.0	13,257.2	7,712.0	102.4	100.4	90.00	5,091.2	-390.2	759.4	558.7	200.64	3.785		
13,500.0	7,712.0	13,357.2	7,712.0	104.3	102.3	90.00	5,191.2	-386.8	759.4	555.0	204.40	3.715		
13,600.0	7,712.0	13,457.2	7,712.0	106.1	104.2	90.00	5,291.1	-383.5	759.4	551.2	208.17	3.648		
13,700.0	7,712.0	13,557.2	7,712.0	108.0	106.0	90.00	5,391.0	-380.2	759.4	547.4	211.93	3.583		
13,800.0	7,712.0	13,657.2	7,712.0	109.9	107.9	90.00	5,491.0	-376.8	759.4	543.7	215.70	3.520		
13,900.0	7,712.0	13,757.2	7,712.0	111.7	109.8	90.00	5,590.9	-373.5	759.4	539.9	219.47	3.460		
14,000.0	7,712.0	13,857.2	7,712.0	113.6	111.7	90.00	5,690.9	-370.1	759.4	536.1	223.25	3.401		
14,100.0	7,712.0	13,957.2	7,712.0	115.4	113.6	90.00	5,790.8	-366.8	759.4	532.3	227.03	3.345		
14,200.0	7,712.0	14,057.2	7,712.0	117.3	115.5	90.00	5,890.8	-363.4	759.4	528.6	230.80	3.290		
14,300.0	7,712.0	14,157.2	7,712.0	119.2	117.3	90.00	5,990.7	-360.1	759.4	524.8	234.58	3.237		
14,400.0	7,712.0	14,257.1	7,712.0	121.0	119.2	90.00	6,090.6	-356.7	759.4	521.0	238.37	3.186		
14,471.8	7,712.0	14,328.9	7,712.0	122.4	120.6	90.00	6,162.4	-354.3	759.4	518.3	241.08	3.150		
14,500.0	7,712.0	14,357.1	7,712.0	122.9	121.1	90.00	6,190.6	-353.4	759.4	517.2	242.15	3.136		
14,600.0	7,712.0	14,457.1	7,712.0	124.8	123.0	90.00	6,290.5	-350.0	759.4	513.4	245.94	3.088		
14,700.0	7,712.0	14,557.1	7,712.0	126.6	124.9	90.00	6,390.5	-346.7	759.4	509.6	249.72	3.041		
14,800.0	7,712.0	14,657.1	7,712.0	128.5	126.8	90.00	6,490.4	-343.4	759.4	505.8	253.51	2.995		
14,900.0	7,712.0	14,757.1	7,712.0	130.4	128.7	90.00	6,590.3	-340.0	759.4	502.1	257.30	2.951		
15,000.0	7,712.0	14,857.1	7,712.0	132.3	130.6	90.00	6,690.3	-336.7	759.4	498.3	261.10	2.908		

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

<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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	14,957.1	7,712.0	134.1	132.5	90.00	6,790.2	-333.3	759.4	494.5	264.89	2.867			
15,200.0	7,712.0	15,057.1	7,712.0	136.0	134.4	90.00	6,890.2	-330.0	759.4	490.7	268.68	2.826			
15,300.0	7,712.0	15,157.1	7,712.0	137.9	136.3	90.00	6,990.1	-326.6	759.4	486.9	272.48	2.787			
15,400.0	7,712.0	15,257.1	7,712.0	139.8	138.2	90.00	7,090.0	-323.3	759.4	483.1	276.27	2.749			
15,500.0	7,712.0	15,357.1	7,712.0	141.6	140.1	90.00	7,190.0	-319.9	759.4	479.3	280.07	2.711			
15,600.0	7,712.0	15,457.1	7,712.0	143.5	142.0	90.00	7,289.9	-316.6	759.4	475.5	283.87	2.675			
15,700.0	7,712.0	15,557.1	7,712.0	145.4	143.9	90.00	7,389.9	-313.2	759.4	471.7	287.67	2.640			
15,800.0	7,712.0	15,657.1	7,712.0	147.3	145.8	90.00	7,489.8	-309.9	759.4	467.9	291.47	2.605			
15,900.0	7,712.0	15,757.1	7,712.0	149.2	147.7	90.00	7,589.8	-306.5	759.4	464.1	295.27	2.572			
16,000.0	7,712.0	15,857.1	7,712.0	151.1	149.6	90.00	7,689.7	-303.2	759.4	460.3	299.08	2.539			
16,100.0	7,712.0	15,957.1	7,712.0	152.9	151.5	90.00	7,789.6	-299.8	759.4	456.5	302.88	2.507			
16,200.0	7,712.0	16,057.1	7,712.0	154.8	153.4	90.00	7,889.6	-296.5	759.4	452.7	306.69	2.476			
16,300.0	7,712.0	16,157.1	7,712.0	156.7	155.3	90.00	7,989.5	-293.1	759.4	448.9	310.49	2.446			
16,400.0	7,712.0	16,257.1	7,712.0	158.6	157.2	90.00	8,089.5	-289.7	759.4	445.1	314.30	2.416			
16,500.0	7,712.0	16,357.1	7,712.0	160.5	159.1	90.00	8,189.4	-286.4	759.4	441.3	318.10	2.387			
16,600.0	7,712.0	16,457.1	7,712.0	162.4	161.0	90.00	8,289.3	-283.0	759.4	437.5	321.91	2.359			
16,700.0	7,712.0	16,557.1	7,712.0	164.3	162.9	90.00	8,389.3	-279.7	759.4	433.7	325.72	2.331			
16,800.0	7,712.0	16,657.1	7,712.0	166.2	164.8	90.00	8,489.2	-276.3	759.4	429.9	329.53	2.305			
16,900.0	7,712.0	16,757.1	7,712.0	168.1	166.7	90.00	8,589.2	-273.0	759.4	426.1	333.34	2.278			
17,000.0	7,712.0	16,857.1	7,712.0	170.0	168.6	90.00	8,689.1	-269.6	759.4	422.3	337.15	2.252			
17,100.0	7,712.0	16,957.1	7,712.0	171.8	170.5	90.00	8,789.0	-266.3	759.4	418.5	340.96	2.227			
17,200.0	7,712.0	17,057.1	7,712.0	173.7	172.4	90.00	8,889.0	-262.9	759.4	414.7	344.77	2.203			
17,300.0	7,712.0	17,157.1	7,712.0	175.6	174.3	90.00	8,988.9	-259.6	759.4	410.9	348.58	2.179			
17,400.0	7,712.0	17,257.1	7,712.0	177.5	176.2	90.00	9,088.9	-256.2	759.4	407.0	352.40	2.155			
17,500.0	7,712.0	17,357.1	7,712.0	179.4	178.1	90.00	9,188.8	-252.8	759.5	403.2	356.21	2.132			
17,600.0	7,712.0	17,457.1	7,712.0	181.3	180.0	90.00	9,288.7	-249.5	759.5	399.4	360.02	2.109			
17,700.0	7,712.0	17,557.1	7,712.0	183.2	181.9	90.00	9,388.7	-246.1	759.5	395.6	363.84	2.087			
17,800.0	7,712.0	17,657.1	7,712.0	185.1	183.8	90.00	9,488.6	-242.8	759.5	391.8	367.65	2.066			
17,900.0	7,712.0	17,757.1	7,712.0	187.0	185.7	90.00	9,588.6	-239.4	759.5	388.0	371.47	2.045			
18,000.0	7,712.0	17,857.1	7,712.0	188.9	187.6	90.00	9,688.5	-236.1	759.5	384.2	375.29	2.024			
18,041.5	7,712.0	17,898.6	7,712.0	189.6	188.4	90.00	9,730.0	-234.7	759.5	382.7	376.82	2.016 SF			

Reference Depths are relative to WELL @ 5369.0ft (Original Well Elev)	Coordinates are relative to: Randall Creek 505-2920H
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°



<b>Company:</b>	Fifth Creek Energy Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Randall Creek 505-2920H
<b>Project:</b>	Sec.29-T12N-R62W	<b>TVD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Reference Site:</b>	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	<b>MD Reference:</b>	WELL @ 5369.0ft (Original Well Elev)
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Randall Creek 505-2920H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (3-13-17)	<b>Offset TVD Reference:</b>	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 505-2920H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.75°

