

Synergy Resources

Well Name: **SRC Kiehn 32-4NHZ**

Surface Location: SRC Kiehn Pad Sec.4-T4N-R68W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 5064.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1365560.77	3137931.67	40.335809	-105.005218	
RKB - 13' WELL @ 5077.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 201'FSL & 1761'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 1812'FEL	7000.0	4424.2	-269.0	Point



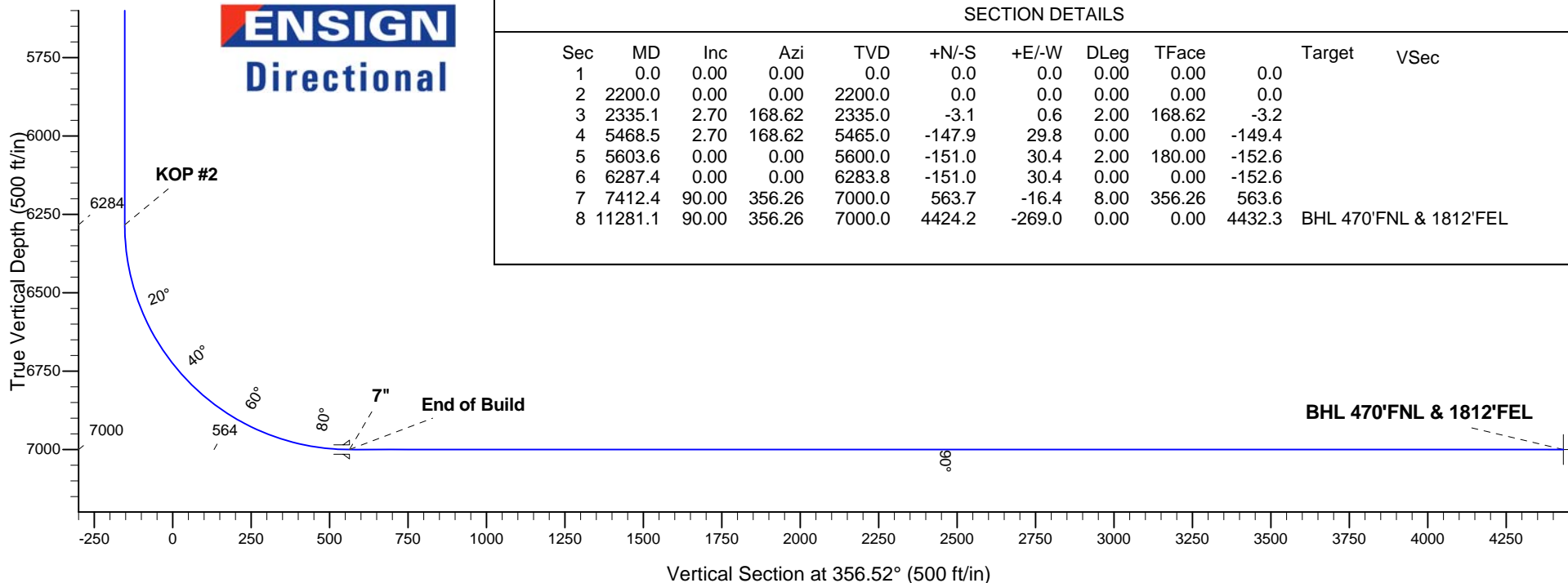
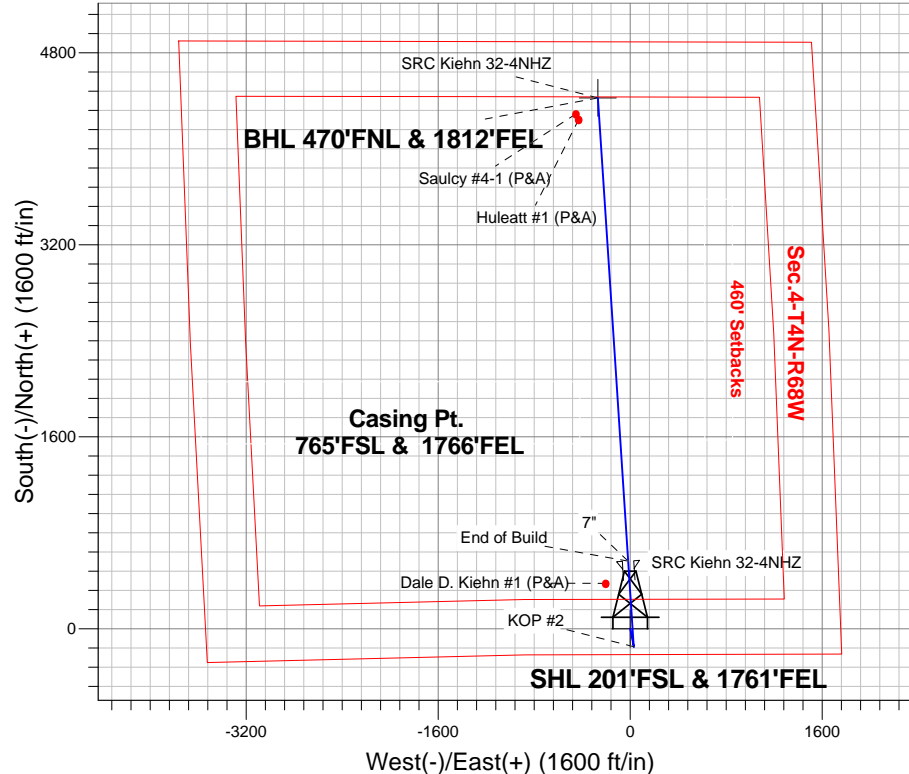
Azimuths to True North
Magnetic North: 8.60°

Magnetic Field
Strength: 52768.9snT
Dip Angle: 66.86°
Date: 4/25/2014
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
2200.0	2200.0	KOP #1
6283.8	6287.4	KOP #2
7000.0	7412.4	End of Build

SRC Kiehn Pad Sec.4-T4N-R68W
SRC Kiehn 32-4NHZ
Plan #2 (4-25-14)
10:43, April 29 2014



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	Target	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2200.0	0.00	0.00	2200.0	0.0	0.0	0.00	0.00	0.0	
3	2335.1	2.70	168.62	2335.0	-3.1	0.6	2.00	168.62	-3.2	
4	5468.5	2.70	168.62	5465.0	-147.9	29.8	0.00	0.00	-149.4	
5	5603.6	0.00	0.00	5600.0	-151.0	30.4	2.00	180.00	-152.6	
6	6287.4	0.00	0.00	6283.8	-151.0	30.4	0.00	0.00	-152.6	
7	7412.4	90.00	356.26	7000.0	563.7	-16.4	8.00	356.26	563.6	
8	11281.1	90.00	356.26	7000.0	4424.2	-269.0	0.00	0.00	4432.3	BHL 470'FNL & 1812'FEL



Synergy Resources

SEC.4-T4N-R68W

SRC Kiehn Pad Sec.4-T4N-R68W

SRC Kiehn 32-4NHZ

Wellbore #1

Plan: Plan #2 (4-25-14)

Standard Planning Report

29 April, 2014

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,335.1	2.70	168.62	2,335.0	-3.1	0.6	2.00	2.00	0.00	168.62	
5,468.5	2.70	168.62	5,465.0	-147.9	29.8	0.00	0.00	0.00	0.00	
5,603.6	0.00	0.00	5,600.0	-151.0	30.4	2.00	-2.00	0.00	180.00	
6,287.4	0.00	0.00	6,283.8	-151.0	30.4	0.00	0.00	0.00	0.00	
7,412.4	90.00	356.26	7,000.0	563.7	-16.4	8.00	8.00	0.00	356.26	
11,281.1	90.00	356.26	7,000.0	4,424.2	-269.0	0.00	0.00	0.00	0.00	BHL 470°FNL & 181°

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Project:	SEC.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site:	SRC Kiehn Pad Sec.4-T4N-R68W	North Reference:	True
Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-25-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 201'FSL & 1761'FEL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
2,300.0	2.00	168.62	2,300.0	-1.7	0.3	-1.7	2.00	2.00	0.00
2,335.1	2.70	168.62	2,335.0	-3.1	0.6	-3.2	2.00	2.00	0.00
2,400.0	2.70	168.62	2,399.9	-6.1	1.2	-6.2	0.00	0.00	0.00
2,500.0	2.70	168.62	2,499.8	-10.7	2.2	-10.9	0.00	0.00	0.00
2,600.0	2.70	168.62	2,599.7	-15.4	3.1	-15.5	0.00	0.00	0.00
2,700.0	2.70	168.62	2,699.5	-20.0	4.0	-20.2	0.00	0.00	0.00
2,800.0	2.70	168.62	2,799.4	-24.6	5.0	-24.9	0.00	0.00	0.00
2,900.0	2.70	168.62	2,899.3	-29.2	5.9	-29.5	0.00	0.00	0.00
3,000.0	2.70	168.62	2,999.2	-33.8	6.8	-34.2	0.00	0.00	0.00
3,100.0	2.70	168.62	3,099.1	-38.5	7.7	-38.9	0.00	0.00	0.00
3,200.0	2.70	168.62	3,199.0	-43.1	8.7	-43.5	0.00	0.00	0.00
3,300.0	2.70	168.62	3,298.9	-47.7	9.6	-48.2	0.00	0.00	0.00
3,400.0	2.70	168.62	3,398.8	-52.3	10.5	-52.9	0.00	0.00	0.00
3,500.0	2.70	168.62	3,498.7	-56.9	11.5	-57.5	0.00	0.00	0.00
3,600.0	2.70	168.62	3,598.5	-61.6	12.4	-62.2	0.00	0.00	0.00
3,700.0	2.70	168.62	3,698.4	-66.2	13.3	-66.9	0.00	0.00	0.00
3,800.0	2.70	168.62	3,798.3	-70.8	14.3	-71.5	0.00	0.00	0.00
3,900.0	2.70	168.62	3,898.2	-75.4	15.2	-76.2	0.00	0.00	0.00
4,000.0	2.70	168.62	3,998.1	-80.0	16.1	-80.9	0.00	0.00	0.00
4,100.0	2.70	168.62	4,098.0	-84.7	17.0	-85.5	0.00	0.00	0.00
4,200.0	2.70	168.62	4,197.9	-89.3	18.0	-90.2	0.00	0.00	0.00
4,300.0	2.70	168.62	4,297.8	-93.9	18.9	-94.9	0.00	0.00	0.00
4,400.0	2.70	168.62	4,397.7	-98.5	19.8	-99.5	0.00	0.00	0.00
4,500.0	2.70	168.62	4,497.5	-103.1	20.8	-104.2	0.00	0.00	0.00
4,600.0	2.70	168.62	4,597.4	-107.8	21.7	-108.9	0.00	0.00	0.00
4,700.0	2.70	168.62	4,697.3	-112.4	22.6	-113.5	0.00	0.00	0.00
4,800.0	2.70	168.62	4,797.2	-117.0	23.6	-118.2	0.00	0.00	0.00
4,900.0	2.70	168.62	4,897.1	-121.6	24.5	-122.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Project:	SEC.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site:	SRC Kiehn Pad Sec.4-T4N-R68W	North Reference:	True
Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-25-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,000.0	2.70	168.62	4,997.0	-126.2	25.4	-127.5	0.00	0.00	0.00
5,100.0	2.70	168.62	5,096.9	-130.9	26.3	-132.2	0.00	0.00	0.00
5,200.0	2.70	168.62	5,196.8	-135.5	27.3	-136.9	0.00	0.00	0.00
5,300.0	2.70	168.62	5,296.7	-140.1	28.2	-141.5	0.00	0.00	0.00
5,400.0	2.70	168.62	5,396.5	-144.7	29.1	-146.2	0.00	0.00	0.00
5,468.5	2.70	168.62	5,465.0	-147.9	29.8	-149.4	0.00	0.00	0.00
5,500.0	2.07	168.62	5,496.4	-149.2	30.0	-150.7	2.00	-2.00	0.00
5,600.0	0.07	168.62	5,596.4	-151.0	30.4	-152.6	2.00	-2.00	0.00
5,603.6	0.00	0.00	5,600.0	-151.0	30.4	-152.6	2.00	-2.00	0.00
5,700.0	0.00	0.00	5,696.4	-151.0	30.4	-152.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,796.4	-151.0	30.4	-152.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,896.4	-151.0	30.4	-152.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,996.4	-151.0	30.4	-152.6	0.00	0.00	0.00
6,100.0	0.00	0.00	6,096.4	-151.0	30.4	-152.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,196.4	-151.0	30.4	-152.6	0.00	0.00	0.00
6,287.4	0.00	0.00	6,283.8	-151.0	30.4	-152.6	0.00	0.00	0.00
KOP #2									
6,300.0	1.01	356.26	6,296.4	-150.9	30.4	-152.5	8.01	8.01	0.00
6,400.0	9.01	356.26	6,396.0	-142.2	29.8	-143.7	8.00	8.00	0.00
6,500.0	17.01	356.26	6,493.3	-119.7	28.4	-121.2	8.00	8.00	0.00
6,600.0	25.01	356.26	6,586.6	-84.0	26.0	-85.4	8.00	8.00	0.00
6,700.0	33.01	356.26	6,674.0	-35.6	22.9	-37.0	8.00	8.00	0.00
6,800.0	41.01	356.26	6,753.8	24.4	18.9	23.2	8.00	8.00	0.00
6,900.0	49.01	356.26	6,824.4	94.9	14.3	93.8	8.00	8.00	0.00
7,000.0	57.01	356.26	6,884.5	174.5	9.1	173.7	8.00	8.00	0.00
7,100.0	65.01	356.26	6,932.9	261.7	3.4	261.1	8.00	8.00	0.00
7,200.0	73.01	356.26	6,968.7	354.8	-2.7	354.3	8.00	8.00	0.00
7,300.0	81.01	356.26	6,991.2	452.0	-9.1	451.7	8.00	8.00	0.00
7,400.0	89.01	356.26	6,999.9	551.3	-15.6	551.2	8.00	8.00	0.00
7,412.4	90.00	356.26	7,000.0	563.7	-16.4	563.6	7.99	7.99	0.00
End of Build - 7"									
7,500.0	90.00	356.26	7,000.0	651.1	-22.1	651.2	0.00	0.00	0.00
7,600.0	90.00	356.26	7,000.0	750.9	-28.6	751.2	0.00	0.00	0.00
7,700.0	90.00	356.26	7,000.0	850.7	-35.1	851.2	0.00	0.00	0.00
7,800.0	90.00	356.26	7,000.0	950.5	-41.7	951.2	0.00	0.00	0.00
7,900.0	90.00	356.26	7,000.0	1,050.2	-48.2	1,051.2	0.00	0.00	0.00
8,000.0	90.00	356.26	7,000.0	1,150.0	-54.7	1,151.2	0.00	0.00	0.00
8,100.0	90.00	356.26	7,000.0	1,249.8	-61.3	1,251.2	0.00	0.00	0.00
8,200.0	90.00	356.26	7,000.0	1,349.6	-67.8	1,351.2	0.00	0.00	0.00
8,300.0	90.00	356.26	7,000.0	1,449.4	-74.3	1,451.2	0.00	0.00	0.00
8,400.0	90.00	356.26	7,000.0	1,549.2	-80.9	1,551.2	0.00	0.00	0.00
8,500.0	90.00	356.26	7,000.0	1,649.0	-87.4	1,651.2	0.00	0.00	0.00
8,600.0	90.00	356.26	7,000.0	1,748.8	-93.9	1,751.2	0.00	0.00	0.00
8,700.0	90.00	356.26	7,000.0	1,848.5	-100.4	1,851.2	0.00	0.00	0.00
8,800.0	90.00	356.26	7,000.0	1,948.3	-107.0	1,951.2	0.00	0.00	0.00
8,900.0	90.00	356.26	7,000.0	2,048.1	-113.5	2,051.2	0.00	0.00	0.00
9,000.0	90.00	356.26	7,000.0	2,147.9	-120.0	2,151.2	0.00	0.00	0.00
9,100.0	90.00	356.26	7,000.0	2,247.7	-126.6	2,251.2	0.00	0.00	0.00
9,200.0	90.00	356.26	7,000.0	2,347.5	-133.1	2,351.2	0.00	0.00	0.00
9,300.0	90.00	356.26	7,000.0	2,447.3	-139.6	2,451.2	0.00	0.00	0.00
9,400.0	90.00	356.26	7,000.0	2,547.0	-146.1	2,551.2	0.00	0.00	0.00
9,500.0	90.00	356.26	7,000.0	2,646.8	-152.7	2,651.2	0.00	0.00	0.00
9,600.0	90.00	356.26	7,000.0	2,746.6	-159.2	2,751.2	0.00	0.00	0.00
9,700.0	90.00	356.26	7,000.0	2,846.4	-165.7	2,851.2	0.00	0.00	0.00

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Project:	SEC.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site:	SRC Kiehn Pad Sec.4-T4N-R68W	North Reference:	True
Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-25-14)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,800.0	90.00	356.26	7,000.0	2,946.2	-172.3	2,951.2	0.00	0.00	0.00	
9,900.0	90.00	356.26	7,000.0	3,046.0	-178.8	3,051.2	0.00	0.00	0.00	
10,000.0	90.00	356.26	7,000.0	3,145.8	-185.3	3,151.2	0.00	0.00	0.00	
10,100.0	90.00	356.26	7,000.0	3,245.5	-191.9	3,251.2	0.00	0.00	0.00	
10,200.0	90.00	356.26	7,000.0	3,345.3	-198.4	3,351.2	0.00	0.00	0.00	
10,300.0	90.00	356.26	7,000.0	3,445.1	-204.9	3,451.2	0.00	0.00	0.00	
10,400.0	90.00	356.26	7,000.0	3,544.9	-211.4	3,551.2	0.00	0.00	0.00	
10,500.0	90.00	356.26	7,000.0	3,644.7	-218.0	3,651.2	0.00	0.00	0.00	
10,600.0	90.00	356.26	7,000.0	3,744.5	-224.5	3,751.2	0.00	0.00	0.00	
10,700.0	90.00	356.26	7,000.0	3,844.3	-231.0	3,851.2	0.00	0.00	0.00	
10,800.0	90.00	356.26	7,000.0	3,944.1	-237.6	3,951.2	0.00	0.00	0.00	
10,900.0	90.00	356.26	7,000.0	4,043.8	-244.1	4,051.2	0.00	0.00	0.00	
11,000.0	90.00	356.26	7,000.0	4,143.6	-250.6	4,151.2	0.00	0.00	0.00	
11,100.0	90.00	356.26	7,000.0	4,243.4	-257.2	4,251.2	0.00	0.00	0.00	
11,200.0	90.00	356.26	7,000.0	4,343.2	-263.7	4,351.2	0.00	0.00	0.00	
11,281.1	90.00	356.26	7,000.0	4,424.2	-269.0	4,432.3	0.00	0.00	0.00	
BHL 470'FNL & 1812'FEL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,412.4	7,000.0	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,200.0	2,200.0	0.0	0.0	KOP #1	
6,287.4	6,283.8	-151.0	30.4	KOP #2	
7,412.4	7,000.0	563.7	-16.4	End of Build	



Synergy Resources

SEC.4-T4N-R68W

SRC Kiehn Pad Sec.4-T4N-R68W

SRC Kiehn 32-4NHZ

Wellbore #1

Plan #2 (4-25-14)

Anticollision Report

29 April, 2014

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 7790-UNKNOWN													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		
1,000.0	1,000.0	3,673.0	3,673.0	2.1	73.5	-28.36	377.0	-203.5	428.5	352.9	75.60	5.668		
1,100.0	1,100.0	3,773.0	3,773.0	2.4	75.5	-28.36	377.0	-203.5	428.5	350.6	77.82	5.506		
1,200.0	1,200.0	3,873.0	3,873.0	2.6	77.5	-28.36	377.0	-203.5	428.5	348.4	80.04	5.353		
1,300.0	1,300.0	3,973.0	3,973.0	2.8	79.5	-28.36	377.0	-203.5	428.5	346.2	82.27	5.208		
1,400.0	1,400.0	4,073.0	4,073.0	3.0	81.5	-28.36	377.0	-203.5	428.5	344.0	84.49	5.071		
1,500.0	1,500.0	4,173.0	4,173.0	3.3	83.5	-28.36	377.0	-203.5	428.5	341.7	86.72	4.941		
1,600.0	1,600.0	4,273.0	4,273.0	3.5	85.5	-28.36	377.0	-203.5	428.5	339.5	88.94	4.817		
1,700.0	1,700.0	4,373.0	4,373.0	3.7	87.5	-28.36	377.0	-203.5	428.5	337.3	91.17	4.700		
1,800.0	1,800.0	4,473.0	4,473.0	3.9	89.5	-28.36	377.0	-203.5	428.5	335.1	93.39	4.588		
1,900.0	1,900.0	4,573.0	4,573.0	4.2	91.5	-28.36	377.0	-203.5	428.5	332.8	95.62	4.481		
2,000.0	2,000.0	4,673.0	4,673.0	4.4	93.5	-28.36	377.0	-203.5	428.5	330.6	97.84	4.379		
2,100.0	2,100.0	4,773.0	4,773.0	4.6	95.5	-28.36	377.0	-203.5	428.5	328.4	100.07	4.282		
2,200.0	2,200.0	4,873.0	4,873.0	4.8	97.5	-28.36	377.0	-203.5	428.5	326.2	102.29	4.189 CC		
2,300.0	2,300.0	4,973.0	4,973.0	5.0	99.5	163.08	377.0	-203.5	430.1	325.7	104.43	4.119 ES		
2,400.0	2,399.9	5,072.9	5,072.9	5.2	101.5	163.25	377.0	-203.5	434.4	327.9	106.55	4.077		
2,500.0	2,499.8	5,172.8	5,172.8	5.4	103.5	163.42	377.0	-203.5	439.0	330.2	108.72	4.038		
2,600.0	2,599.7	5,272.7	5,272.7	5.6	105.5	163.60	377.0	-203.5	443.5	332.6	110.89	3.999		
2,700.0	2,699.5	5,372.5	5,372.5	5.7	107.5	163.77	377.0	-203.5	448.0	334.9	113.07	3.962		
2,800.0	2,799.4	5,472.4	5,472.4	5.9	109.4	163.94	377.0	-203.5	452.5	337.3	115.25	3.926		
2,900.0	2,899.3	5,572.3	5,572.3	6.1	111.4	164.10	377.0	-203.5	457.1	339.6	117.43	3.892		
3,000.0	2,999.2	5,672.2	5,672.2	6.3	113.4	164.26	377.0	-203.5	461.6	342.0	119.62	3.859		
3,100.0	3,099.1	5,772.1	5,772.1	6.5	115.4	164.42	377.0	-203.5	466.1	344.3	121.81	3.827		
3,200.0	3,199.0	5,872.0	5,872.0	6.7	117.4	164.57	377.0	-203.5	470.7	346.7	124.00	3.796		
3,300.0	3,298.9	5,971.9	5,971.9	6.9	119.4	164.72	377.0	-203.5	475.2	349.0	126.19	3.766		
3,400.0	3,398.8	6,071.8	6,071.8	7.1	121.4	164.87	377.0	-203.5	479.8	351.4	128.39	3.737		
3,500.0	3,498.7	6,171.7	6,171.7	7.3	123.4	165.02	377.0	-203.5	484.3	353.7	130.59	3.709		
3,600.0	3,598.5	6,271.5	6,271.5	7.6	125.4	165.16	377.0	-203.5	488.9	356.1	132.78	3.682		
3,700.0	3,698.4	6,371.4	6,371.4	7.8	127.4	165.30	377.0	-203.5	493.4	358.4	134.98	3.655		
3,800.0	3,798.3	6,471.3	6,471.3	8.0	129.4	165.44	377.0	-203.5	498.0	360.8	137.18	3.630		
3,900.0	3,898.2	6,571.2	6,571.2	8.2	131.4	165.57	377.0	-203.5	502.5	363.2	139.39	3.605		
4,000.0	3,998.1	6,671.1	6,671.1	8.4	133.4	165.70	377.0	-203.5	507.1	365.5	141.59	3.582		
4,100.0	4,098.0	6,771.0	6,771.0	8.6	135.4	165.83	377.0	-203.5	511.7	367.9	143.79	3.558		
4,200.0	4,197.9	6,870.9	6,870.9	8.9	137.4	165.96	377.0	-203.5	516.2	370.2	146.00	3.536		
4,300.0	4,297.8	6,970.8	6,970.8	9.1	139.4	166.09	377.0	-203.5	520.8	372.6	148.21	3.514		
4,400.0	4,397.7	7,070.7	7,070.7	9.3	141.4	166.21	377.0	-203.5	525.4	375.0	150.41	3.493		
4,500.0	4,497.5	7,170.5	7,170.5	9.5	143.4	166.33	377.0	-203.5	530.0	377.4	152.62	3.473		
4,600.0	4,597.4	7,270.4	7,270.4	9.8	145.4	166.45	377.0	-203.5	534.6	379.7	154.83	3.453		
4,700.0	4,697.3	7,370.3	7,370.3	10.0	147.4	166.57	377.0	-203.5	539.1	382.1	157.04	3.433		
4,800.0	4,797.2	7,470.2	7,470.2	10.2	149.4	166.68	377.0	-203.5	543.7	384.5	159.25	3.414		
4,900.0	4,897.1	7,570.1	7,570.1	10.4	151.4	166.80	377.0	-203.5	548.3	386.9	161.46	3.396		
5,000.0	4,997.0	7,670.0	7,670.0	10.7	153.4	166.91	377.0	-203.5	552.9	389.2	163.67	3.378		
5,100.0	5,096.9	7,769.9	7,769.9	10.9	155.4	167.02	377.0	-203.5	557.5	391.6	165.88	3.361 SF		
5,200.0	5,196.8	7,790.0	7,790.0	11.1	155.8	167.04	377.0	-203.5	567.7	401.2	166.50	3.410		
5,300.0	5,296.7	7,790.0	7,790.0	11.4	155.8	167.04	377.0	-203.5	594.5	427.8	166.72	3.566		
5,400.0	5,396.5	7,790.0	7,790.0	11.6	155.8	167.04	377.0	-203.5	636.0	469.1	166.93	3.810		
5,500.0	5,496.4	7,790.0	7,790.0	11.8	155.8	167.14	377.0	-203.5	689.5	522.3	167.22	4.123		
5,600.0	5,596.4	7,790.0	7,790.0	12.0	155.8	167.48	377.0	-203.5	750.6	583.1	167.52	4.481		
5,700.0	5,696.4	7,790.0	7,790.0	12.2	155.8	-23.89	377.0	-203.5	818.1	650.4	167.72	4.878		
5,800.0	5,796.4	7,790.0	7,790.0	12.4	155.8	-23.89	377.0	-203.5	891.7	723.8	167.92	5.310		
5,900.0	5,896.4	7,790.0	7,790.0	12.6	155.8	-23.89	377.0	-203.5	970.1	801.9	168.13	5.770		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn (Existing) Pad Sec.4-T4N-R68W - Huleatt #1 (P&A) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7000-UNKNOWN												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
10,200.0	7,000.0	7,000.0	7,000.0	67.6	140.0	-89.00	4,242.4	-429.5	926.3	718.8	207.58	4.463	
10,300.0	7,000.0	7,000.0	7,000.0	69.5	140.0	-89.00	4,242.4	-429.5	828.3	618.8	209.48	3.954	
10,400.0	7,000.0	7,000.0	7,000.0	71.4	140.0	-89.00	4,242.4	-429.5	730.8	519.4	211.38	3.457	
10,500.0	7,000.0	7,000.0	7,000.0	73.3	140.0	-89.00	4,242.4	-429.5	634.0	420.7	213.29	2.973	
10,600.0	7,000.0	7,000.0	7,000.0	75.2	140.0	-89.00	4,242.4	-429.5	538.5	323.3	215.20	2.502	
10,700.0	7,000.0	7,000.0	7,000.0	77.1	140.0	-89.00	4,242.4	-429.5	444.9	227.7	217.11	2.049	
10,800.0	7,000.0	7,000.0	7,000.0	79.1	140.0	-89.00	4,242.4	-429.5	354.8	135.7	219.02	1.620	
10,900.0	7,000.0	7,000.0	7,000.0	81.0	140.0	-89.00	4,242.4	-429.5	271.7	50.7	220.94	1.230	Level 2
11,000.0	7,000.0	7,000.0	7,000.0	82.9	140.0	-89.00	4,242.4	-429.5	204.4	-18.5	222.85	0.917	Level 1
11,100.0	7,000.0	7,000.0	7,000.0	84.8	140.0	-89.00	4,242.4	-429.5	172.4	-52.4	224.77	0.767	Level 1
11,110.2	7,000.0	7,000.0	7,000.0	85.0	140.0	-89.00	4,242.4	-429.5	172.1	-52.9	224.97	0.765	Level 1, CC, ES, SF
11,200.0	7,000.0	7,000.0	7,000.0	86.7	140.0	-89.00	4,242.4	-429.5	194.1	-32.6	226.69	0.856	Level 1
11,281.5	7,000.0	7,000.0	7,000.0	88.3	140.0	-89.00	4,242.4	-429.5	242.8	14.6	228.25	1.064	Level 2

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design		SRC Kiehn (Existing) Pad Sec.4-T4N-R68W - Saulcy #4-1 (P&A) - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0 ft
Survey Program: 8163-UNKNOWN													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 +N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
10,200.0	7,000.0	7,043.0	7,043.0	67.6	140.9	-90.00	4,289.7	-451.8	977.8	769.3	208.47	4.690		
10,300.0	7,000.0	7,043.0	7,043.0	69.5	140.9	-90.00	4,289.7	-451.8	880.0	669.6	210.37	4.183		
10,400.0	7,000.0	7,043.0	7,043.0	71.4	140.9	-90.00	4,289.7	-451.8	782.7	570.4	212.27	3.687		
10,500.0	7,000.0	7,043.0	7,043.0	73.3	140.9	-90.00	4,289.7	-451.8	686.1	471.9	214.18	3.203		
10,600.0	7,000.0	7,043.0	7,043.0	75.2	140.9	-90.00	4,289.7	-451.8	590.7	374.6	216.09	2.734		
10,700.0	7,000.0	7,043.0	7,043.0	77.1	140.9	-90.00	4,289.7	-451.8	497.2	279.2	218.00	2.281		
10,800.0	7,000.0	7,043.0	7,043.0	79.1	140.9	-90.00	4,289.7	-451.8	406.7	186.8	219.92	1.849		
10,900.0	7,000.0	7,043.0	7,043.0	81.0	140.9	-90.00	4,289.7	-451.8	321.9	100.1	221.83	1.451 Level 3		
11,000.0	7,000.0	7,043.0	7,043.0	82.9	140.9	-90.00	4,289.7	-451.8	248.7	24.9	223.75	1.111 Level 2		
11,100.0	7,000.0	7,043.0	7,043.0	84.8	140.9	-90.00	4,289.7	-451.8	200.1	-25.6	225.66	0.887 Level 1		
11,158.9	7,000.0	7,043.0	7,043.0	85.9	140.9	-90.00	4,289.7	-451.8	191.2	-35.6	226.80	0.843 Level 1, CC, ES, SF		
11,200.0	7,000.0	7,043.0	7,043.0	86.7	140.9	-90.00	4,289.7	-451.8	195.6	-32.0	227.58	0.859 Level 1		
11,281.5	7,000.0	7,043.0	7,043.0	88.3	140.9	-90.00	4,289.7	-451.8	227.2	-2.0	229.15	0.991 Level 1		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.93	-1.1	-67.5	67.5					
100.0	100.0	100.0	100.0	0.1	0.1	-90.93	-1.1	-67.5	67.5	67.3	0.22	300.202		
200.0	200.0	200.0	200.0	0.3	0.3	-90.93	-1.1	-67.5	67.5	66.8	0.67	100.067		
300.0	300.0	300.0	300.0	0.6	0.6	-90.93	-1.1	-67.5	67.5	66.4	1.12	60.040		
400.0	400.0	400.0	400.0	0.8	0.8	-90.93	-1.1	-67.5	67.5	65.9	1.57	42.886		
500.0	500.0	500.0	500.0	1.0	1.0	-90.93	-1.1	-67.5	67.5	65.5	2.02	33.356		
600.0	600.0	600.0	600.0	1.2	1.2	-90.93	-1.1	-67.5	67.5	65.0	2.47	27.291		
700.0	700.0	700.0	700.0	1.5	1.5	-90.93	-1.1	-67.5	67.5	64.6	2.92	23.092		
800.0	800.0	800.0	800.0	1.7	1.7	-90.93	-1.1	-67.5	67.5	64.1	3.37	20.013		
900.0	900.0	900.0	900.0	1.9	1.9	-90.93	-1.1	-67.5	67.5	63.7	3.82	17.659		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.93	-1.1	-67.5	67.5	63.2	4.27	15.800		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.93	-1.1	-67.5	67.5	62.8	4.72	14.295		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.93	-1.1	-67.5	67.5	62.3	5.17	13.052		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.93	-1.1	-67.5	67.5	61.9	5.62	12.008		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.93	-1.1	-67.5	67.5	61.4	6.07	11.119		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.93	-1.1	-67.5	67.5	61.0	6.52	10.352		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-90.93	-1.1	-67.5	67.5	60.5	6.97	9.684 CC, ES		
1,700.0	1,700.0	1,697.7	1,697.7	3.7	3.7	-91.26	-1.5	-69.1	69.1	61.7	7.39	9.349		
1,800.0	1,800.0	1,795.2	1,795.1	3.9	3.9	-92.18	-2.8	-73.9	74.1	66.3	7.81	9.491		
1,900.0	1,900.0	1,892.3	1,891.8	4.2	4.1	-93.46	-5.0	-81.9	82.4	74.2	8.23	10.019		
2,000.0	2,000.0	1,988.7	1,987.5	4.4	4.3	-94.87	-7.9	-92.9	94.1	85.4	8.65	10.878		
2,100.0	2,100.0	2,087.1	2,085.0	4.6	4.5	-96.18	-11.5	-106.2	107.9	98.8	9.08	11.888		
2,200.0	2,200.0	2,186.2	2,183.0	4.8	4.8	-97.20	-15.1	-119.7	121.8	112.3	9.51	12.813		
2,300.0	2,300.0	2,285.1	2,281.0	5.0	5.0	93.83	-18.7	-133.2	135.9	126.0	9.90	13.725		
2,400.0	2,399.9	2,384.1	2,379.0	5.2	5.3	94.74	-22.3	-146.6	150.2	139.9	10.28	14.606		
2,500.0	2,499.8	2,483.0	2,476.9	5.4	5.6	95.64	-26.0	-160.1	164.6	153.9	10.67	15.416		
2,600.0	2,599.7	2,582.0	2,574.9	5.6	5.9	96.40	-29.6	-173.5	178.9	167.9	11.07	16.160		
2,700.0	2,699.5	2,680.9	2,672.8	5.7	6.2	97.05	-33.2	-187.0	193.3	181.9	11.48	16.843		
2,800.0	2,799.4	2,779.8	2,770.8	5.9	6.5	97.60	-36.8	-200.5	207.8	195.9	11.89	17.471		
2,900.0	2,899.3	2,878.8	2,868.7	6.1	6.8	98.09	-40.4	-213.9	222.2	209.9	12.31	18.048		
3,000.0	2,999.2	2,977.7	2,966.7	6.3	7.1	98.51	-44.0	-227.4	236.6	223.9	12.74	18.581		
3,100.0	3,099.1	3,076.6	3,064.6	6.5	7.4	98.89	-47.6	-240.8	251.1	237.9	13.17	19.072		
3,200.0	3,199.0	3,175.6	3,162.6	6.7	7.7	99.23	-51.2	-254.3	265.6	252.0	13.60	19.526		
3,300.0	3,298.9	3,274.5	3,260.5	6.9	8.1	99.53	-54.9	-267.7	280.1	266.0	14.04	19.947		
3,400.0	3,398.8	3,373.4	3,358.5	7.1	8.4	99.80	-58.5	-281.2	294.6	280.1	14.48	20.337		
3,500.0	3,498.7	3,472.4	3,456.4	7.3	8.7	100.04	-62.1	-294.6	309.1	294.1	14.93	20.699		
3,600.0	3,598.5	3,571.3	3,554.4	7.6	9.0	100.27	-65.7	-308.1	323.6	308.2	15.38	21.036		
3,700.0	3,698.4	3,670.3	3,652.3	7.8	9.4	100.47	-69.3	-321.6	338.1	322.2	15.83	21.350		
3,800.0	3,798.3	3,769.2	3,750.3	8.0	9.7	100.66	-72.9	-335.0	352.6	336.3	16.29	21.643		
3,900.0	3,898.2	3,868.1	3,848.2	8.2	10.0	100.83	-76.5	-348.5	367.1	350.3	16.75	21.917		
4,000.0	3,998.1	3,967.1	3,946.2	8.4	10.4	100.99	-80.1	-361.9	381.6	364.4	17.21	22.174		
4,100.0	4,098.0	4,066.0	4,044.1	8.6	10.7	101.14	-83.8	-375.4	396.1	378.4	17.67	22.414		
4,200.0	4,197.9	4,164.9	4,142.1	8.9	11.0	101.28	-87.4	-388.8	410.6	392.5	18.14	22.640		
4,300.0	4,297.8	4,263.9	4,240.0	9.1	11.4	101.40	-91.0	-402.3	425.2	406.5	18.60	22.853		
4,400.0	4,397.7	4,362.8	4,338.0	9.3	11.7	101.52	-94.6	-415.8	439.7	420.6	19.07	23.053		
4,500.0	4,497.5	4,461.7	4,435.9	9.5	12.0	101.64	-98.2	-429.2	454.2	434.7	19.54	23.242		
4,600.0	4,597.4	4,560.7	4,533.9	9.8	12.4	101.74	-101.8	-442.7	468.7	448.7	20.01	23.420		
4,700.0	4,697.3	4,659.6	4,631.8	10.0	12.7	101.84	-105.4	-456.1	483.3	462.8	20.49	23.589		
4,800.0	4,797.2	4,758.5	4,729.8	10.2	13.0	101.93	-109.0	-469.6	497.8	476.8	20.96	23.748		
4,900.0	4,897.1	4,857.5	4,827.7	10.4	13.4	102.02	-112.6	-483.0	512.3	490.9	21.44	23.899		
5,000.0	4,997.0	4,956.4	4,925.7	10.7	13.7	102.10	-116.3	-496.5	526.8	504.9	21.91	24.043		
5,100.0	5,096.9	5,055.4	5,023.6	10.9	14.1	102.18	-119.9	-509.9	541.4	519.0	22.39	24.179		

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,196.8	5,154.3	5,121.6	11.1	14.4	102.26	-123.5	-523.4	555.9	533.0	22.87	24.308	
5,300.0	5,296.7	5,253.2	5,219.5	11.4	14.7	102.33	-127.1	-536.9	570.5	547.1	23.35	24.431	
5,400.0	5,396.5	5,352.2	5,317.5	11.6	15.1	102.39	-130.7	-550.3	585.0	561.2	23.83	24.549	
5,500.0	5,496.4	5,451.1	5,415.4	11.8	15.4	102.53	-134.3	-563.8	599.5	575.2	24.31	24.658	
5,600.0	5,596.4	5,550.1	5,513.4	12.0	15.8	102.60	-137.9	-577.2	613.4	588.6	24.78	24.756	
5,700.0	5,696.4	5,649.1	5,611.4	12.2	16.1	-89.13	-141.6	-590.7	627.0	601.6	25.36	24.721	
5,800.0	5,796.4	5,751.7	5,713.0	12.4	16.5	-89.48	-145.3	-604.6	640.5	614.7	25.80	24.824	
5,900.0	5,896.4	5,878.7	5,839.2	12.6	16.8	-89.82	-149.0	-618.5	651.4	625.2	26.25	24.818	
6,000.0	5,996.4	6,006.7	5,966.9	12.8	17.0	-90.03	-151.3	-627.0	658.0	631.4	26.68	24.667	
6,100.0	6,096.4	6,135.3	6,095.4	13.0	17.2	-90.09	-152.1	-630.0	660.4	633.3	27.10	24.366	
6,200.0	6,196.4	6,236.3	6,196.4	13.2	17.4	-90.09	-152.1	-630.0	660.4	632.9	27.49	24.020	
6,300.0	6,296.4	6,335.6	6,295.7	13.4	17.6	-86.35	-152.0	-630.0	660.4	632.6	27.74	23.804	
6,400.0	6,396.0	6,430.0	6,389.8	13.6	17.7	-86.39	-144.2	-630.5	660.3	632.3	28.08	23.515	
6,500.0	6,493.3	6,524.6	6,482.1	13.7	17.8	-86.50	-124.1	-631.8	660.3	631.9	28.35	23.288	
6,600.0	6,586.6	6,619.4	6,571.2	13.9	17.9	-86.68	-92.0	-633.9	660.1	631.6	28.59	23.087	
6,700.0	6,674.0	6,714.4	6,655.5	14.0	18.0	-86.91	-48.3	-636.8	660.0	631.1	28.87	22.863	
6,800.0	6,753.8	6,809.8	6,733.5	14.2	18.1	-87.20	6.3	-640.4	659.8	630.6	29.25	22.555	
6,900.0	6,824.4	6,905.7	6,803.8	14.6	18.3	-87.55	71.2	-644.6	659.7	629.8	29.84	22.109	
7,000.0	6,884.5	7,002.1	6,865.2	15.0	18.5	-87.94	145.3	-649.5	659.5	628.8	30.70	21.485	
7,100.0	6,932.9	7,099.1	6,916.4	15.7	18.8	-88.37	227.4	-654.9	659.3	627.5	31.89	20.679	
7,200.0	6,968.7	7,196.7	6,956.1	16.5	19.2	-88.84	316.3	-660.7	659.2	625.8	33.43	19.719	
7,300.0	6,991.2	7,295.1	6,983.6	17.5	19.9	-89.33	410.5	-666.9	659.2	623.8	35.32	18.664	
7,400.0	6,999.9	7,394.3	6,997.9	18.6	20.7	-89.83	508.3	-673.3	659.1	621.6	37.50	17.578	
7,403.6	7,000.0	7,397.9	6,998.2	18.7	20.7	-89.85	511.9	-673.5	659.1	621.5	37.58	17.538	
7,500.0	7,000.0	7,494.2	7,000.0	19.9	21.7	-90.00	608.0	-679.8	659.1	619.2	39.93	16.508	
7,600.0	7,000.0	7,594.2	7,000.0	21.3	22.9	-90.00	707.7	-686.4	659.2	616.6	42.58	15.480	
7,700.0	7,000.0	7,694.2	7,000.0	22.7	24.2	-90.00	807.5	-692.9	659.2	613.8	45.41	14.515	
7,800.0	7,000.0	7,794.2	7,000.0	24.2	25.6	-90.00	907.3	-699.4	659.2	610.8	48.39	13.622	
7,900.0	7,000.0	7,894.2	7,000.0	25.8	27.0	-90.00	1,007.1	-706.0	659.2	607.7	51.49	12.801	
8,000.0	7,000.0	7,994.2	7,000.0	27.4	28.5	-90.00	1,106.9	-712.5	659.2	604.5	54.70	12.052	
8,100.0	7,000.0	8,094.2	7,000.0	29.1	30.1	-90.00	1,206.7	-719.1	659.2	601.2	57.99	11.369	
8,200.0	7,000.0	8,194.2	7,000.0	30.8	31.7	-90.00	1,306.5	-725.6	659.2	597.9	61.35	10.746	
8,300.0	7,000.0	8,294.2	7,000.0	32.5	33.3	-90.00	1,406.2	-732.2	659.3	594.5	64.77	10.179	
8,400.0	7,000.0	8,394.2	7,000.0	34.2	35.0	-90.00	1,506.0	-738.7	659.3	591.0	68.24	9.661	
8,500.0	7,000.0	8,494.2	7,000.0	36.0	36.7	-90.00	1,605.8	-745.3	659.3	587.5	71.75	9.188	
8,600.0	7,000.0	8,594.2	7,000.0	37.8	38.4	-90.00	1,705.6	-751.8	659.3	584.0	75.30	8.755	
8,700.0	7,000.0	8,694.2	7,000.0	39.6	40.2	-90.00	1,805.4	-758.3	659.3	580.4	78.89	8.358	
8,800.0	7,000.0	8,794.2	7,000.0	41.4	41.9	-90.00	1,905.2	-764.9	659.3	576.8	82.50	7.992	
8,900.0	7,000.0	8,894.2	7,000.0	43.2	43.7	-90.00	2,005.0	-771.4	659.3	573.2	86.14	7.654	
9,000.0	7,000.0	8,994.2	7,000.0	45.1	45.5	-90.00	2,104.7	-778.0	659.4	569.6	89.80	7.343	
9,100.0	7,000.0	9,094.2	7,000.0	46.9	47.3	-90.00	2,204.5	-784.5	659.4	565.9	93.48	7.054	
9,200.0	7,000.0	9,194.2	7,000.0	48.8	49.1	-90.00	2,304.3	-791.1	659.4	562.2	97.17	6.786	
9,300.0	7,000.0	9,294.2	7,000.0	50.6	50.9	-90.00	2,404.1	-797.6	659.4	558.5	100.88	6.536	
9,400.0	7,000.0	9,394.2	7,000.0	52.5	52.8	-90.00	2,503.9	-804.1	659.4	554.8	104.61	6.304	
9,500.0	7,000.0	9,494.2	7,000.0	54.4	54.6	-90.00	2,603.7	-810.7	659.4	551.1	108.34	6.087	
9,600.0	7,000.0	9,594.2	7,000.0	56.3	56.5	-90.00	2,703.5	-817.2	659.4	547.4	112.09	5.883	
9,700.0	7,000.0	9,694.2	7,000.0	58.1	58.3	-90.00	2,803.2	-823.8	659.5	543.6	115.85	5.693	
9,800.0	7,000.0	9,794.2	7,000.0	60.0	60.2	-90.00	2,903.0	-830.3	659.5	539.9	119.61	5.513	
9,900.0	7,000.0	9,894.2	7,000.0	61.9	62.0	-90.00	3,002.8	-836.9	659.5	536.1	123.39	5.345	
10,000.0	7,000.0	9,994.2	7,000.0	63.8	63.9	-90.00	3,102.6	-843.4	659.5	532.3	127.17	5.186	
10,100.0	7,000.0	10,094.2	7,000.0	65.7	65.8	-90.00	3,202.4	-850.0	659.5	528.6	130.96	5.036	
10,200.0	7,000.0	10,194.2	7,000.0	67.6	67.7	-90.00	3,302.2	-856.5	659.5	524.8	134.75	4.894	

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design												SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 31-4CHZ - Wellbore #1 - Plan #2 (4-25-14)		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)					
10,300.0	7,000.0	10,294.2	7,000.0	69.5	69.6	-90.00	3,402.0	-863.0	659.5	521.0	138.55	4.760				
10,400.0	7,000.0	10,394.2	7,000.0	71.4	71.4	-90.00	3,501.7	-869.6	659.6	517.2	142.35	4.633				
10,500.0	7,000.0	10,494.2	7,000.0	73.3	73.3	-90.00	3,601.5	-876.1	659.6	513.4	146.16	4.513				
10,600.0	7,000.0	10,594.2	7,000.0	75.2	75.2	-90.00	3,701.3	-882.7	659.6	509.6	149.98	4.398				
10,700.0	7,000.0	10,694.2	7,000.0	77.1	77.1	-90.00	3,801.1	-889.2	659.6	505.8	153.80	4.289				
10,800.0	7,000.0	10,794.2	7,000.0	79.1	79.0	-90.00	3,900.9	-895.8	659.6	502.0	157.62	4.185				
10,900.0	7,000.0	10,894.2	7,000.0	81.0	80.9	-90.00	4,000.7	-902.3	659.6	498.2	161.44	4.086				
11,000.0	7,000.0	10,994.2	7,000.0	82.9	82.8	-90.00	4,100.5	-908.9	659.6	494.4	165.27	3.991				
11,100.0	7,000.0	11,094.2	7,000.0	84.8	84.7	-90.00	4,200.2	-915.4	659.7	490.6	169.11	3.901				
11,200.0	7,000.0	11,194.2	7,000.0	86.7	86.6	-90.00	4,300.0	-921.9	659.7	486.7	172.94	3.814				
11,281.5	7,000.0	11,275.7	7,000.0	88.3	88.2	-90.00	4,381.4	-927.3	659.7	483.6	176.07	3.747 SF				

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 31-4NHZ - Wellbore #1 - Plan #2 (4-25-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	-90.92	-0.7	-45.2	45.2					
100.0	100.0	100.0	100.0	0.1	0.1	-90.92	-0.7	-45.2	45.2	44.9	0.22	200.961		
200.0	200.0	200.0	200.0	0.3	0.3	-90.92	-0.7	-45.2	45.2	44.5	0.67	66.987		
300.0	300.0	300.0	300.0	0.6	0.6	-90.92	-0.7	-45.2	45.2	44.0	1.12	40.192		
400.0	400.0	400.0	400.0	0.8	0.8	-90.92	-0.7	-45.2	45.2	43.6	1.57	28.709		
500.0	500.0	500.0	500.0	1.0	1.0	-90.92	-0.7	-45.2	45.2	43.1	2.02	22.329		
600.0	600.0	600.0	600.0	1.2	1.2	-90.92	-0.7	-45.2	45.2	42.7	2.47	18.269		
700.0	700.0	700.0	700.0	1.5	1.5	-90.92	-0.7	-45.2	45.2	42.2	2.92	15.459		
800.0	800.0	800.0	800.0	1.7	1.7	-90.92	-0.7	-45.2	45.2	41.8	3.37	13.397		
900.0	900.0	900.0	900.0	1.9	1.9	-90.92	-0.7	-45.2	45.2	41.3	3.82	11.821		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.92	-0.7	-45.2	45.2	40.9	4.27	10.577		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.92	-0.7	-45.2	45.2	40.4	4.72	9.570		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.92	-0.7	-45.2	45.2	40.0	5.17	8.737		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.92	-0.7	-45.2	45.2	39.6	5.62	8.038		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.92	-0.7	-45.2	45.2	39.1	6.07	7.443		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.92	-0.7	-45.2	45.2	38.7	6.52	6.930		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-90.92	-0.7	-45.2	45.2	38.2	6.97	6.483		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-90.92	-0.7	-45.2	45.2	37.8	7.42	6.090		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-90.92	-0.7	-45.2	45.2	37.3	7.87	5.742 CC, ES		
1,900.0	1,900.0	1,898.5	1,898.5	4.2	4.1	-91.68	-1.4	-46.7	46.8	38.5	8.29	5.640		
2,000.0	2,000.0	1,996.8	1,996.8	4.4	4.3	-93.68	-3.3	-51.4	51.6	42.9	8.70	5.931		
2,100.0	2,100.0	2,094.9	2,094.4	4.6	4.5	-96.28	-6.5	-59.1	59.8	50.6	9.12	6.553		
2,200.0	2,200.0	2,194.4	2,193.4	4.8	4.7	-98.54	-10.2	-68.1	69.2	59.7	9.54	7.254		
2,300.0	2,300.0	2,294.0	2,292.5	5.0	5.0	92.21	-14.0	-77.1	78.8	68.8	9.93	7.933		
2,400.0	2,399.9	2,393.5	2,391.5	5.2	5.2	93.59	-17.7	-86.1	88.5	78.2	10.30	8.590		
2,500.0	2,499.8	2,493.0	2,490.5	5.4	5.4	94.87	-21.4	-95.1	98.3	87.6	10.68	9.200		
2,600.0	2,599.7	2,592.5	2,589.6	5.6	5.6	95.92	-25.1	-104.1	108.1	97.0	11.07	9.764		
2,700.0	2,699.5	2,692.0	2,688.6	5.7	5.9	96.80	-28.8	-113.1	117.9	106.5	11.47	10.285		
2,800.0	2,799.4	2,791.5	2,787.6	5.9	6.1	97.54	-32.6	-122.0	127.8	115.9	11.87	10.767		
2,900.0	2,899.3	2,891.0	2,886.6	6.1	6.4	98.18	-36.3	-131.0	137.7	125.4	12.28	11.213		
3,000.0	2,999.2	2,990.5	2,985.7	6.3	6.6	98.73	-40.0	-140.0	147.6	134.9	12.69	11.626		
3,100.0	3,099.1	3,090.0	3,084.7	6.5	6.9	99.21	-43.7	-149.0	157.5	144.4	13.11	12.009		
3,200.0	3,199.0	3,189.5	3,183.7	6.7	7.2	99.63	-47.4	-158.0	167.4	153.9	13.54	12.364		
3,300.0	3,298.9	3,289.0	3,282.7	6.9	7.4	100.01	-51.2	-167.0	177.3	163.4	13.97	12.694		
3,400.0	3,398.8	3,388.5	3,381.7	7.1	7.7	100.34	-54.9	-176.0	187.3	172.9	14.40	13.002		
3,500.0	3,498.7	3,488.0	3,480.8	7.3	8.0	100.65	-58.6	-184.9	197.2	182.4	14.84	13.289		
3,600.0	3,598.5	3,587.5	3,579.8	7.6	8.2	100.92	-62.3	-193.9	207.2	191.9	15.28	13.556		
3,700.0	3,698.4	3,687.0	3,678.8	7.8	8.5	101.17	-66.0	-202.9	217.1	201.4	15.73	13.806		
3,800.0	3,798.3	3,786.5	3,777.8	8.0	8.8	101.39	-69.8	-211.9	227.1	210.9	16.17	14.040		
3,900.0	3,898.2	3,886.0	3,876.9	8.2	9.0	101.60	-73.5	-220.9	237.0	220.4	16.62	14.260		
4,000.0	3,998.1	3,985.5	3,975.9	8.4	9.3	101.79	-77.2	-229.9	247.0	229.9	17.07	14.466		
4,100.0	4,098.0	4,085.0	4,074.9	8.6	9.6	101.97	-80.9	-238.8	257.0	239.4	17.53	14.660		
4,200.0	4,197.9	4,184.5	4,173.9	8.9	9.9	102.13	-84.6	-247.8	266.9	248.9	17.98	14.842		
4,300.0	4,297.8	4,284.0	4,273.0	9.1	10.2	102.28	-88.4	-256.8	276.9	258.4	18.44	15.014		
4,400.0	4,397.7	4,383.5	4,372.0	9.3	10.4	102.42	-92.1	-265.8	286.9	268.0	18.90	15.177		
4,500.0	4,497.5	4,483.0	4,471.0	9.5	10.7	102.55	-95.8	-274.8	296.8	277.5	19.36	15.330		
4,600.0	4,597.4	4,582.5	4,570.0	9.8	11.0	102.68	-99.5	-283.8	306.8	287.0	19.83	15.476		
4,700.0	4,697.3	4,682.0	4,669.0	10.0	11.3	102.79	-103.2	-292.8	316.8	296.5	20.29	15.613		
4,800.0	4,797.2	4,781.5	4,768.1	10.2	11.6	102.90	-107.0	-301.7	326.8	306.0	20.75	15.744		
4,900.0	4,897.1	4,881.0	4,867.1	10.4	11.8	103.00	-110.7	-310.7	336.7	315.5	21.22	15.867		
5,000.0	4,997.0	4,980.5	4,966.1	10.7	12.1	103.10	-114.4	-319.7	346.7	325.0	21.69	15.985		
5,100.0	5,096.9	5,079.9	5,065.1	10.9	12.4	103.19	-118.1	-328.7	356.7	334.5	22.16	16.097		

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

Offset Design													Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,196.8	5,179.4	5,164.2	11.1	12.7	103.27	-121.8	-337.7	366.7	344.0	22.63	16.204			
5,300.0	5,296.7	5,278.9	5,263.2	11.4	13.0	103.35	-125.6	-346.7	376.6	353.5	23.10	16.305			
5,400.0	5,396.5	5,378.4	5,362.2	11.6	13.2	103.43	-129.3	-355.7	386.6	363.1	23.57	16.402			
5,500.0	5,496.4	5,478.0	5,461.2	11.8	13.5	103.54	-133.0	-364.6	396.6	372.5	24.04	16.495			
5,600.0	5,596.4	5,577.5	5,560.3	12.0	13.8	103.40	-136.7	-373.6	405.9	381.4	24.49	16.572			
5,700.0	5,696.4	5,677.0	5,659.3	12.2	14.1	-88.54	-140.4	-382.6	414.8	389.8	25.01	16.587			
5,800.0	5,796.4	5,776.5	5,758.4	12.4	14.4	-89.07	-144.2	-391.6	423.8	398.3	25.44	16.660			
5,900.0	5,896.4	5,882.1	5,863.5	12.6	14.7	-89.60	-148.0	-400.8	432.5	406.6	25.87	16.720			
6,000.0	5,996.4	5,998.2	5,979.4	12.8	14.9	-89.97	-150.8	-407.5	438.2	412.0	26.28	16.676			
6,100.0	6,096.4	6,114.7	6,095.8	13.0	15.1	-90.09	-151.7	-409.9	440.3	413.6	26.69	16.496			
6,200.0	6,196.4	6,215.3	6,196.4	13.2	15.3	-90.09	-151.7	-409.9	440.3	413.2	27.08	16.256			
6,300.0	6,296.4	6,314.8	6,295.9	13.4	15.5	-86.35	-151.6	-409.9	440.3	412.9	27.39	16.073			
6,400.0	6,396.0	6,411.1	6,391.8	13.6	15.6	-86.39	-143.6	-410.4	440.2	412.5	27.73	15.873			
6,500.0	6,493.3	6,507.4	6,485.7	13.7	15.8	-86.50	-122.7	-411.8	440.2	412.2	28.01	15.716			
6,600.0	6,586.6	6,603.9	6,576.2	13.9	15.9	-86.68	-89.5	-413.9	440.1	411.9	28.25	15.577			
6,700.0	6,674.0	6,700.0	6,661.0	14.0	16.0	-86.92	-44.5	-416.9	440.0	411.5	28.53	15.420			
6,703.1	6,676.5	6,703.5	6,664.0	14.0	16.0	-86.93	-42.7	-417.0	440.0	411.5	28.55	15.414			
6,800.0	6,753.8	6,797.4	6,740.1	14.2	16.1	-87.22	12.1	-420.6	439.9	411.0	28.93	15.204			
6,900.0	6,824.4	6,894.7	6,810.6	14.6	16.2	-87.57	78.8	-425.0	439.8	410.3	29.53	14.892			
7,000.0	6,884.5	6,992.3	6,871.7	15.0	16.4	-87.96	154.7	-429.9	439.7	409.3	30.41	14.456			
7,100.0	6,932.9	7,090.3	6,922.0	15.7	16.8	-88.40	238.6	-435.4	439.6	407.9	31.63	13.896			
7,200.0	6,968.7	7,188.8	6,960.5	16.5	17.4	-88.87	328.9	-441.4	439.5	406.3	33.21	13.234			
7,300.0	6,991.2	7,287.8	6,986.4	17.5	18.3	-89.36	424.2	-447.6	439.4	404.3	35.13	12.510			
7,400.0	6,999.9	7,387.3	6,998.9	18.6	19.3	-89.87	522.6	-454.0	439.4	402.1	37.34	11.768			
7,403.4	7,000.0	7,390.7	6,999.0	18.7	19.3	-89.88	526.1	-454.3	439.4	402.0	37.42	11.743			
7,500.0	7,000.0	7,487.2	7,000.0	19.9	20.5	-90.00	622.4	-460.6	439.4	399.6	39.80	11.041			
7,600.0	7,000.0	7,587.2	7,000.0	21.3	21.8	-90.00	722.2	-467.1	439.4	397.0	42.48	10.345			
7,700.0	7,000.0	7,687.2	7,000.0	22.7	23.1	-90.00	821.9	-473.6	439.4	394.1	45.33	9.695			
7,800.0	7,000.0	7,787.2	7,000.0	24.2	24.6	-90.00	921.7	-480.2	439.4	391.1	48.33	9.093			
7,900.0	7,000.0	7,887.2	7,000.0	25.8	26.1	-90.00	1,021.5	-486.7	439.5	388.0	51.44	8.542			
8,000.0	7,000.0	7,987.2	7,000.0	27.4	27.7	-90.00	1,121.3	-493.3	439.5	384.8	54.66	8.040			
8,100.0	7,000.0	8,087.2	7,000.0	29.1	29.3	-90.00	1,221.1	-499.8	439.5	381.5	57.96	7.582			
8,200.0	7,000.0	8,187.2	7,000.0	30.8	31.0	-90.00	1,320.9	-506.3	439.5	378.1	61.34	7.165			
8,300.0	7,000.0	8,287.2	7,000.0	32.5	32.7	-90.00	1,420.7	-512.9	439.5	374.7	64.77	6.786			
8,400.0	7,000.0	8,387.2	7,000.0	34.2	34.4	-90.00	1,520.4	-519.4	439.5	371.2	68.25	6.440			
8,500.0	7,000.0	8,487.2	7,000.0	36.0	36.1	-90.00	1,620.2	-525.9	439.5	367.7	71.77	6.124			
8,600.0	7,000.0	8,587.2	7,000.0	37.8	37.9	-90.00	1,720.0	-532.5	439.5	364.2	75.33	5.834			
8,700.0	7,000.0	8,687.2	7,000.0	39.6	39.6	-90.00	1,819.8	-539.0	439.5	360.6	78.92	5.569			
8,800.0	7,000.0	8,787.2	7,000.0	41.4	41.4	-90.00	1,919.6	-545.6	439.5	357.0	82.54	5.325			
8,900.0	7,000.0	8,887.2	7,000.0	43.2	43.2	-90.00	2,019.4	-552.1	439.5	353.3	86.18	5.100			
9,000.0	7,000.0	8,987.2	7,000.0	45.1	45.1	-90.00	2,119.2	-558.6	439.5	349.7	89.85	4.892			
9,100.0	7,000.0	9,087.2	7,000.0	46.9	46.9	-90.00	2,219.0	-565.2	439.5	346.0	93.53	4.699			
9,200.0	7,000.0	9,187.2	7,000.0	48.8	48.7	-90.00	2,318.7	-571.7	439.5	342.3	97.23	4.521			
9,300.0	7,000.0	9,287.2	7,000.0	50.6	50.6	-90.00	2,418.5	-578.2	439.6	338.6	100.95	4.354			
9,400.0	7,000.0	9,387.2	7,000.0	52.5	52.4	-90.00	2,518.3	-584.8	439.6	334.9	104.67	4.199			
9,500.0	7,000.0	9,487.2	7,000.0	54.4	54.3	-90.00	2,618.1	-591.3	439.6	331.2	108.41	4.055			
9,600.0	7,000.0	9,587.2	7,000.0	56.3	56.1	-90.00	2,717.9	-597.8	439.6	327.4	112.16	3.919			
9,700.0	7,000.0	9,687.2	7,000.0	58.1	58.0	-90.00	2,817.7	-604.4	439.6	323.7	115.92	3.792			
9,800.0	7,000.0	9,787.2	7,000.0	60.0	59.9	-90.00	2,917.5	-610.9	439.6	319.9	119.69	3.673			
9,900.0	7,000.0	9,887.2	7,000.0	61.9	61.8	-90.00	3,017.2	-617.5	439.6	316.1	123.47	3.560			
10,000.0	7,000.0	9,987.2	7,000.0	63.8	63.7	-90.00	3,117.0	-624.0	439.6	312.4	127.25	3.455			
10,100.0	7,000.0	10,087.2	7,000.0	65.7	65.5	-90.00	3,216.8	-630.5	439.6	308.6	131.04	3.355			

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design												SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 31-4NHZ - Wellbore #1 - Plan #2 (4-25-14)		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)				
10,200.0	7,000.0	10,187.2	7,000.0	67.6	67.4	-90.00	3,316.6	-637.1	439.6	304.8	134.84	3.260			
10,300.0	7,000.0	10,287.2	7,000.0	69.5	69.3	-90.00	3,416.4	-643.6	439.6	301.0	138.64	3.171			
10,400.0	7,000.0	10,387.2	7,000.0	71.4	71.2	-90.00	3,516.2	-650.1	439.6	297.2	142.45	3.086			
10,500.0	7,000.0	10,487.2	7,000.0	73.3	73.1	-90.00	3,616.0	-656.7	439.6	293.4	146.26	3.006			
10,600.0	7,000.0	10,587.2	7,000.0	75.2	75.0	-90.00	3,715.7	-663.2	439.7	289.6	150.08	2.929			
10,700.0	7,000.0	10,687.2	7,000.0	77.1	76.9	-90.00	3,815.5	-669.8	439.7	285.8	153.90	2.857			
10,800.0	7,000.0	10,787.2	7,000.0	79.1	78.8	-90.00	3,915.3	-676.3	439.7	281.9	157.72	2.788			
10,900.0	7,000.0	10,887.2	7,000.0	81.0	80.7	-90.00	4,015.1	-682.8	439.7	278.1	161.55	2.722			
11,000.0	7,000.0	10,987.2	7,000.0	82.9	82.7	-90.00	4,114.9	-689.4	439.7	274.3	165.38	2.659			
11,100.0	7,000.0	11,087.2	7,000.0	84.8	84.6	-90.00	4,214.7	-695.9	439.7	270.5	169.21	2.598			
11,200.0	7,000.0	11,187.2	7,000.0	86.7	86.5	-90.00	4,314.5	-702.4	439.7	266.6	173.05	2.541			
11,281.5	7,000.0	11,268.8	7,000.0	88.3	88.0	-90.00	4,395.8	-707.8	439.7	263.5	176.18	2.496 SF			

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 32-4CHZ - Wellbore #1 - Plan #2 (4-25-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	-90.92	-0.4	-22.6	22.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.92	-0.4	-22.6	22.6	22.4	0.22	100.481		
200.0	200.0	200.0	200.0	0.3	0.3	-90.92	-0.4	-22.6	22.6	21.9	0.67	33.494		
300.0	300.0	300.0	300.0	0.6	0.6	-90.92	-0.4	-22.6	22.6	21.5	1.12	20.096		
400.0	400.0	400.0	400.0	0.8	0.8	-90.92	-0.4	-22.6	22.6	21.0	1.57	14.354		
500.0	500.0	500.0	500.0	1.0	1.0	-90.92	-0.4	-22.6	22.6	20.6	2.02	11.165		
600.0	600.0	600.0	600.0	1.2	1.2	-90.92	-0.4	-22.6	22.6	20.1	2.47	9.135		
700.0	700.0	700.0	700.0	1.5	1.5	-90.92	-0.4	-22.6	22.6	19.7	2.92	7.729		
800.0	800.0	800.0	800.0	1.7	1.7	-90.92	-0.4	-22.6	22.6	19.2	3.37	6.699		
900.0	900.0	900.0	900.0	1.9	1.9	-90.92	-0.4	-22.6	22.6	18.8	3.82	5.911		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.92	-0.4	-22.6	22.6	18.3	4.27	5.288		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.92	-0.4	-22.6	22.6	17.9	4.72	4.785		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.92	-0.4	-22.6	22.6	17.4	5.17	4.369		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.92	-0.4	-22.6	22.6	17.0	5.62	4.019		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.92	-0.4	-22.6	22.6	16.5	6.07	3.722		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.92	-0.4	-22.6	22.6	16.1	6.52	3.465		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-90.92	-0.4	-22.6	22.6	15.6	6.97	3.241		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-90.92	-0.4	-22.6	22.6	15.2	7.42	3.045		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-90.92	-0.4	-22.6	22.6	14.7	7.87	2.871		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-90.92	-0.4	-22.6	22.6	14.3	8.32	2.716		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-90.92	-0.4	-22.6	22.6	13.8	8.77	2.576 CC, ES		
2,100.0	2,100.0	2,099.4	2,099.4	4.6	4.6	-93.72	-1.5	-23.8	23.9	14.7	9.19	2.600		
2,200.0	2,200.0	2,198.7	2,198.6	4.8	4.8	-100.35	-5.0	-27.5	28.0	18.4	9.59	2.918		
2,300.0	2,300.0	2,298.6	2,298.3	5.0	5.0	88.24	-9.2	-31.9	33.1	23.2	9.97	3.323		
2,400.0	2,399.9	2,398.4	2,397.9	5.2	5.1	90.37	-13.3	-36.3	38.2	27.9	10.33	3.703		
2,500.0	2,499.8	2,498.3	2,497.6	5.4	5.3	92.30	-17.5	-40.6	43.4	32.7	10.69	4.058		
2,600.0	2,599.7	2,598.2	2,597.3	5.6	5.5	93.83	-21.6	-45.0	48.6	37.5	11.07	4.390		
2,700.0	2,699.5	2,698.0	2,697.0	5.7	5.7	95.06	-25.8	-49.4	53.8	42.4	11.45	4.699		
2,800.0	2,799.4	2,797.9	2,796.6	5.9	6.0	96.07	-29.9	-53.8	59.0	47.2	11.84	4.986		
2,900.0	2,899.3	2,897.7	2,896.3	6.1	6.2	96.91	-34.1	-58.2	64.3	52.1	12.24	5.254		
3,000.0	2,999.2	2,997.6	2,996.0	6.3	6.4	97.63	-38.2	-62.5	69.6	56.9	12.64	5.503		
3,100.0	3,099.1	3,097.4	3,095.7	6.5	6.6	98.25	-42.4	-66.9	74.9	61.8	13.05	5.734		
3,200.0	3,199.0	3,197.3	3,195.3	6.7	6.8	98.78	-46.5	-71.3	80.1	66.7	13.47	5.950		
3,300.0	3,298.9	3,297.2	3,295.0	6.9	7.1	99.25	-50.7	-75.7	85.4	71.5	13.89	6.151		
3,400.0	3,398.8	3,397.0	3,394.7	7.1	7.3	99.67	-54.8	-80.1	90.7	76.4	14.31	6.339		
3,500.0	3,498.7	3,496.9	3,494.4	7.3	7.5	100.04	-59.0	-84.5	96.0	81.3	14.74	6.514		
3,600.0	3,598.5	3,596.7	3,594.0	7.6	7.7	100.37	-63.1	-88.8	101.3	86.2	15.17	6.678		
3,700.0	3,698.4	3,696.6	3,693.7	7.8	8.0	100.66	-67.3	-93.2	106.6	91.0	15.61	6.832		
3,800.0	3,798.3	3,796.5	3,793.4	8.0	8.2	100.93	-71.4	-97.6	112.0	95.9	16.05	6.977		
3,900.0	3,898.2	3,896.3	3,893.1	8.2	8.4	101.18	-75.6	-102.0	117.3	100.8	16.49	7.112		
4,000.0	3,998.1	3,996.2	3,992.7	8.4	8.7	101.40	-79.7	-106.4	122.6	105.7	16.93	7.240		
4,100.0	4,098.0	4,096.0	4,092.4	8.6	8.9	101.61	-83.9	-110.7	127.9	110.5	17.38	7.360		
4,200.0	4,197.9	4,195.9	4,192.1	8.9	9.1	101.79	-88.0	-115.1	133.2	115.4	17.83	7.473		
4,300.0	4,297.8	4,295.7	4,291.8	9.1	9.4	101.97	-92.2	-119.5	138.5	120.3	18.28	7.580		
4,400.0	4,397.7	4,395.6	4,391.4	9.3	9.6	102.13	-96.3	-123.9	143.9	125.1	18.73	7.681		
4,500.0	4,497.5	4,495.5	4,491.1	9.5	9.9	102.28	-100.5	-128.3	149.2	130.0	19.18	7.777		
4,600.0	4,597.4	4,595.3	4,590.8	9.8	10.1	102.42	-104.6	-132.6	154.5	134.9	19.64	7.868		
4,700.0	4,697.3	4,695.2	4,690.5	10.0	10.3	102.55	-108.8	-137.0	159.8	139.7	20.10	7.954		
4,800.0	4,797.2	4,795.0	4,790.1	10.2	10.6	102.67	-112.9	-141.4	165.2	144.6	20.55	8.035		
4,900.0	4,897.1	4,894.9	4,889.8	10.4	10.8	102.78	-117.1	-145.8	170.5	149.5	21.01	8.113		
5,000.0	4,997.0	4,994.7	4,989.5	10.7	11.1	102.89	-121.2	-150.2	175.8	154.3	21.48	8.187		
5,100.0	5,096.9	5,094.6	5,089.2	10.9	11.3	102.99	-125.4	-154.5	181.1	159.2	21.94	8.257		

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,196.8	5,194.5	5,188.8	11.1	11.6	103.09	-129.5	-158.9	186.5	164.1	22.40	8.324	
5,300.0	5,296.7	5,294.3	5,288.5	11.4	11.8	103.18	-133.7	-163.3	191.8	168.9	22.87	8.388	
5,400.0	5,396.5	5,394.2	5,388.2	11.6	12.0	103.26	-137.8	-167.7	197.1	173.8	23.33	8.449	
5,500.0	5,496.4	5,494.0	5,487.9	11.8	12.3	103.33	-142.0	-172.1	202.4	178.6	23.79	8.507	
5,600.0	5,596.4	5,593.9	5,587.5	12.0	12.5	102.73	-146.1	-176.5	207.1	182.9	24.23	8.546	
5,700.0	5,696.4	5,697.1	5,690.6	12.2	12.8	-89.71	-149.9	-180.5	210.9	186.3	24.69	8.544	
5,800.0	5,796.4	5,802.7	5,796.2	12.4	13.0	-90.10	-151.4	-182.0	212.4	187.3	25.09	8.464	
5,900.0	5,896.4	5,903.0	5,896.4	12.6	13.2	-90.10	-151.4	-182.0	212.4	186.9	25.49	8.332	
6,000.0	5,996.4	6,003.0	5,996.4	12.8	13.4	-90.10	-151.4	-182.0	212.4	186.5	25.88	8.205	
6,100.0	6,096.4	6,103.0	6,096.4	13.0	13.6	-90.10	-151.4	-182.0	212.4	186.1	26.28	8.082	
6,200.0	6,196.4	6,203.0	6,196.4	13.2	13.8	-90.10	-151.4	-182.0	212.4	185.7	26.68	7.962	
6,266.9	6,263.3	6,269.8	6,263.3	13.4	13.9	-86.46	-151.4	-182.0	212.4	185.4	26.91	7.891	
6,300.0	6,296.4	6,302.7	6,296.1	13.4	14.0	-86.35	-151.3	-182.0	212.4	185.3	27.04	7.854	
6,337.7	6,334.1	6,339.6	6,333.0	13.5	14.0	-86.36	-149.7	-182.1	212.4	185.2	27.18	7.815	
6,400.0	6,396.0	6,400.0	6,393.0	13.6	14.1	-86.40	-143.0	-182.6	212.5	185.1	27.39	7.758	
6,500.0	6,493.3	6,498.4	6,489.0	13.7	14.3	-86.52	-121.4	-184.3	212.7	185.0	27.67	7.687	
6,600.0	6,586.6	6,596.4	6,580.6	13.9	14.4	-86.70	-87.2	-186.9	213.0	185.1	27.92	7.629	
6,700.0	6,674.0	6,694.5	6,666.8	14.0	14.5	-86.95	-40.7	-190.5	213.5	185.3	28.22	7.566	
6,800.0	6,753.8	6,792.7	6,746.0	14.2	14.6	-87.25	17.2	-194.9	214.1	185.4	28.63	7.477	
6,900.0	6,824.4	6,891.1	6,816.6	14.6	14.7	-87.61	85.5	-200.1	214.8	185.5	29.26	7.341	
7,000.0	6,884.5	6,989.8	6,877.3	15.0	15.2	-88.02	163.0	-206.1	215.6	185.4	30.17	7.146	
7,100.0	6,932.9	7,088.7	6,926.8	15.7	15.8	-88.46	248.2	-212.6	216.5	185.1	31.42	6.890	
7,200.0	6,968.7	7,187.9	6,964.2	16.5	16.6	-88.92	339.7	-219.6	217.5	184.4	33.04	6.583	
7,300.0	6,991.2	7,287.3	6,988.6	17.5	17.6	-89.40	435.8	-227.0	218.5	183.5	35.00	6.244	
7,400.0	6,999.9	7,387.1	6,999.4	18.6	18.7	-89.89	534.6	-234.5	219.6	182.4	37.25	5.896	
7,500.0	7,000.0	7,487.0	7,000.0	19.9	19.9	-90.00	634.2	-242.2	220.7	181.0	39.74	5.554	
7,600.0	7,000.0	7,587.0	7,000.0	21.3	21.3	-90.00	733.9	-249.8	221.8	179.4	42.45	5.226	
7,700.0	7,000.0	7,687.0	7,000.0	22.7	22.7	-90.00	833.6	-257.4	222.9	177.6	45.33	4.918	
7,800.0	7,000.0	7,787.0	7,000.0	24.2	24.2	-90.00	933.3	-265.1	224.0	175.7	48.35	4.634	
7,900.0	7,000.0	7,887.0	7,000.0	25.8	25.8	-90.00	1,033.0	-272.7	225.2	173.7	51.49	4.373	
8,000.0	7,000.0	7,987.0	7,000.0	27.4	27.4	-90.00	1,132.8	-280.3	226.3	171.5	54.73	4.134	
8,100.0	7,000.0	8,087.0	7,000.0	29.1	29.1	-90.00	1,232.5	-288.0	227.4	169.3	58.05	3.917	
8,200.0	7,000.0	8,187.0	7,000.0	30.8	30.7	-90.00	1,332.2	-295.6	228.5	167.0	61.44	3.719	
8,300.0	7,000.0	8,287.0	7,000.0	32.5	32.5	-90.00	1,431.9	-303.3	229.6	164.7	64.89	3.538	
8,400.0	7,000.0	8,387.0	7,000.0	34.2	34.2	-90.00	1,531.6	-310.9	230.7	162.3	68.38	3.374	
8,500.0	7,000.0	8,487.0	7,000.0	36.0	36.0	-90.00	1,631.3	-318.5	231.8	159.9	71.92	3.223	
8,600.0	7,000.0	8,587.0	7,000.0	37.8	37.8	-90.00	1,731.0	-326.2	232.9	157.4	75.49	3.085	
8,700.0	7,000.0	8,687.0	7,000.0	39.6	39.6	-90.00	1,830.7	-333.8	234.0	154.9	79.10	2.959	
8,800.0	7,000.0	8,787.0	7,000.0	41.4	41.4	-90.00	1,930.4	-341.4	235.2	152.4	82.73	2.842	
8,900.0	7,000.0	8,887.0	7,000.0	43.2	43.2	-90.00	2,030.1	-349.1	236.3	149.9	86.38	2.735	
9,000.0	7,000.0	8,987.0	7,000.0	45.1	45.0	-90.00	2,129.8	-356.7	237.4	147.3	90.06	2.636	
9,100.0	7,000.0	9,086.9	7,000.0	46.9	46.9	-90.00	2,229.5	-364.3	238.5	144.7	93.75	2.544	
9,200.0	7,000.0	9,186.9	7,000.0	48.8	48.8	-90.00	2,329.2	-372.0	239.6	142.1	97.46	2.458	
9,300.0	7,000.0	9,286.9	7,000.0	50.6	50.6	-90.00	2,428.9	-379.6	240.7	139.5	101.19	2.379	
9,400.0	7,000.0	9,386.9	7,000.0	52.5	52.5	-90.00	2,528.6	-387.3	241.8	136.9	104.92	2.305	
9,500.0	7,000.0	9,486.9	7,000.0	54.4	54.4	-90.00	2,628.3	-394.9	242.9	134.3	108.67	2.235	
9,600.0	7,000.0	9,586.9	7,000.0	56.3	56.2	-90.00	2,728.0	-402.5	244.0	131.6	112.43	2.171	
9,700.0	7,000.0	9,686.9	7,000.0	58.1	58.1	-90.00	2,827.7	-410.2	245.1	128.9	116.20	2.110	
9,800.0	7,000.0	9,786.9	7,000.0	60.0	60.0	-90.00	2,927.4	-417.8	246.3	126.3	119.98	2.053	
9,900.0	7,000.0	9,886.9	7,000.0	61.9	61.9	-90.00	3,027.1	-425.4	247.4	123.6	123.76	1.999	
10,000.0	7,000.0	9,986.9	7,000.0	63.8	63.8	-90.00	3,126.8	-433.1	248.5	120.9	127.55	1.948	
10,100.0	7,000.0	10,086.9	7,000.0	65.7	65.7	-90.00	3,226.5	-440.7	249.6	118.2	131.35	1.900	

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 32-4CHZ - Wellbore #1 - Plan #2 (4-25-14)												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
10,200.0	7,000.0	10,186.9	7,000.0	67.6	67.6	-90.00	3,326.2	-448.4	250.7	115.5	135.16	1.855	
10,300.0	7,000.0	10,286.9	7,000.0	69.5	69.5	-90.00	3,425.9	-456.0	251.8	112.8	138.96	1.812	
10,400.0	7,000.0	10,386.9	7,000.0	71.4	71.4	-90.00	3,525.6	-463.6	252.9	110.1	142.78	1.771	
10,500.0	7,000.0	10,486.9	7,000.0	73.3	73.3	-90.00	3,625.3	-471.3	254.0	107.4	146.60	1.733	
10,600.0	7,000.0	10,586.9	7,000.0	75.2	75.2	-90.00	3,725.0	-478.9	255.1	104.7	150.42	1.696	
10,700.0	7,000.0	10,686.8	7,000.0	77.1	77.2	-90.00	3,824.7	-486.5	256.2	102.0	154.25	1.661	
10,800.0	7,000.0	10,786.8	7,000.0	79.1	79.1	-90.00	3,924.4	-494.2	257.4	99.3	158.08	1.628	
10,900.0	7,000.0	10,886.8	7,000.0	81.0	81.0	-90.00	4,024.1	-501.8	258.5	96.6	161.91	1.596	
11,000.0	7,000.0	10,986.8	7,000.0	82.9	82.9	-90.00	4,123.8	-509.4	259.6	93.8	165.75	1.566	
11,100.0	7,000.0	11,086.8	7,000.0	84.8	84.8	-90.00	4,223.5	-517.1	260.7	91.1	169.59	1.537	
11,200.0	7,000.0	11,186.8	7,000.0	86.7	86.8	-90.00	4,323.2	-524.7	261.8	88.4	173.43	1.510	
11,281.5	7,000.0	11,268.3	7,000.0	88.3	88.1	-90.00	4,404.5	-530.9	262.7	86.4	176.30	1.490 Level 3, SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4CHZ - Wellbore #1 - Plan #2 (4-25-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis 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	89.08	0.4	22.6	22.6					
100.0	100.0	100.0	100.0	0.1	0.1	89.08	0.4	22.6	22.6	22.4	0.22	100.481		
200.0	200.0	200.0	200.0	0.3	0.3	89.08	0.4	22.6	22.6	21.9	0.67	33.494		
300.0	300.0	300.0	300.0	0.6	0.6	89.08	0.4	22.6	22.6	21.5	1.12	20.096		
400.0	400.0	400.0	400.0	0.8	0.8	89.08	0.4	22.6	22.6	21.0	1.57	14.354		
500.0	500.0	500.0	500.0	1.0	1.0	89.08	0.4	22.6	22.6	20.6	2.02	11.165		
600.0	600.0	600.0	600.0	1.2	1.2	89.08	0.4	22.6	22.6	20.1	2.47	9.135		
700.0	700.0	700.0	700.0	1.5	1.5	89.08	0.4	22.6	22.6	19.7	2.92	7.729		
800.0	800.0	800.0	800.0	1.7	1.7	89.08	0.4	22.6	22.6	19.2	3.37	6.699		
900.0	900.0	900.0	900.0	1.9	1.9	89.08	0.4	22.6	22.6	18.8	3.82	5.911		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.08	0.4	22.6	22.6	18.3	4.27	5.288		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.08	0.4	22.6	22.6	17.9	4.72	4.785		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.08	0.4	22.6	22.6	17.4	5.17	4.369		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.08	0.4	22.6	22.6	17.0	5.62	4.019		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.08	0.4	22.6	22.6	16.5	6.07	3.722		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.08	0.4	22.6	22.6	16.1	6.52	3.465		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.08	0.4	22.6	22.6	15.6	6.97	3.241		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	89.08	0.4	22.6	22.6	15.2	7.42	3.045		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	89.08	0.4	22.6	22.6	14.7	7.87	2.871		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	89.08	0.4	22.6	22.6	14.3	8.32	2.716		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	89.08	0.4	22.6	22.6	13.8	8.77	2.576		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	89.08	0.4	22.6	22.6	13.4	9.22	2.451		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	89.08	0.4	22.6	22.6	12.9	9.66	2.337		
2,300.0	2,300.0	2,300.0	2,300.0	5.0	5.1	-83.95	0.4	22.6	22.3	12.2	10.08	2.215		
2,361.2	2,361.2	2,361.2	2,361.2	5.1	5.2	-90.03	0.4	22.6	22.2	11.9	10.33	2.151 CC		
2,400.0	2,399.9	2,399.9	2,399.9	5.2	5.3	-95.51	0.4	22.6	22.3	11.8	10.48	2.129 ES		
2,500.0	2,499.8	2,499.8	2,499.8	5.4	5.5	-107.14	0.4	22.6	23.2	12.4	10.88	2.137		
2,600.0	2,599.7	2,599.7	2,599.7	5.6	5.7	-117.49	0.4	22.6	25.0	13.8	11.28	2.219		
2,700.0	2,699.5	2,699.5	2,699.5	5.7	6.0	-126.21	0.4	22.6	27.5	15.8	11.69	2.356		
2,800.0	2,799.4	2,799.4	2,799.4	5.9	6.2	-133.36	0.4	22.6	30.6	18.5	12.10	2.525		
2,900.0	2,899.3	2,899.3	2,899.3	6.1	6.4	-139.14	0.4	22.6	34.0	21.5	12.51	2.715		
3,000.0	2,999.2	2,999.2	2,999.2	6.3	6.6	-143.84	0.4	22.6	37.7	24.7	12.93	2.913		
3,100.0	3,099.1	3,099.4	3,099.4	6.5	6.8	-145.34	-0.6	24.0	41.2	27.9	13.33	3.093		
3,200.0	3,199.0	3,199.5	3,199.4	6.7	7.0	-142.16	-3.5	28.4	44.2	30.5	13.71	3.226		
3,300.0	3,298.9	3,299.4	3,298.9	6.9	7.2	-135.17	-8.3	35.6	47.2	33.1	14.11	3.348		
3,400.0	3,398.8	3,398.9	3,397.7	7.1	7.4	-125.50	-14.8	45.5	51.3	36.8	14.52	3.532		
3,500.0	3,498.7	3,498.4	3,496.4	7.3	7.6	-116.70	-21.8	56.1	56.8	41.9	14.94	3.802		
3,600.0	3,598.5	3,597.9	3,595.1	7.6	7.8	-109.59	-28.8	66.6	63.4	48.1	15.37	4.128		
3,700.0	3,698.4	3,697.4	3,693.8	7.8	8.1	-103.89	-35.8	77.1	70.8	55.1	15.79	4.486		
3,800.0	3,798.3	3,797.0	3,792.5	8.0	8.3	-99.30	-42.8	87.7	78.8	62.6	16.22	4.859		
3,900.0	3,898.2	3,896.5	3,891.2	8.2	8.5	-95.57	-49.8	98.2	87.2	70.5	16.65	5.237		
4,000.0	3,998.1	3,996.0	3,989.9	8.4	8.8	-92.50	-56.7	108.8	95.9	78.8	17.09	5.612		
4,100.0	4,098.0	4,095.5	4,088.6	8.6	9.0	-89.95	-63.7	119.3	104.8	87.3	17.52	5.981		
4,200.0	4,197.9	4,195.0	4,187.2	8.9	9.3	-87.80	-70.7	129.8	113.9	95.9	17.96	6.341		
4,300.0	4,297.8	4,294.5	4,285.9	9.1	9.6	-85.97	-77.7	140.4	123.1	104.7	18.40	6.690		
4,400.0	4,397.7	4,394.0	4,384.6	9.3	9.8	-84.39	-84.7	150.9	132.4	113.6	18.85	7.028		
4,500.0	4,497.5	4,493.5	4,483.3	9.5	10.1	-83.03	-91.6	161.4	141.9	122.6	19.29	7.353		
4,600.0	4,597.4	4,593.0	4,582.0	9.8	10.4	-81.83	-98.6	172.0	151.4	131.6	19.74	7.667		
4,700.0	4,697.3	4,692.5	4,680.7	10.0	10.6	-80.78	-105.6	182.5	160.9	140.7	20.19	7.969		
4,800.0	4,797.2	4,792.0	4,779.4	10.2	10.9	-79.84	-112.6	193.1	170.5	149.8	20.64	8.259		
4,900.0	4,897.1	4,891.5	4,878.1	10.4	11.2	-79.00	-119.6	203.6	180.1	159.0	21.10	8.538		
5,000.0	4,997.0	4,991.0	4,976.8	10.7	11.5	-78.25	-126.6	214.1	189.8	168.2	21.55	8.806		

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4CHZ - Wellbore #1 - Plan #2 (4-25-14)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.0	5,096.9	5,090.5	5,075.5	10.9	11.8	-77.57	-133.5	224.7	199.5	177.5	22.01	9.063	
5,200.0	5,196.8	5,192.5	5,176.8	11.1	12.1	-76.98	-140.5	235.2	209.0	186.5	22.47	9.299	
5,300.0	5,296.7	5,299.0	5,282.7	11.4	12.3	-76.87	-146.1	243.6	215.9	193.0	22.93	9.416	
5,400.0	5,396.5	5,405.8	5,389.4	11.6	12.5	-77.31	-149.5	248.7	219.7	196.3	23.39	9.393	
5,500.0	5,496.4	5,512.6	5,496.2	11.8	12.8	-78.24	-150.6	250.5	220.5	196.6	23.85	9.243	
5,600.0	5,596.4	5,612.9	5,596.4	12.0	12.9	-78.71	-150.6	250.5	220.1	195.8	24.27	9.070	
5,639.6	5,636.0	5,652.4	5,636.0	12.1	13.0	-78.72	-150.6	250.5	220.1	195.6	24.43	9.009	
5,700.0	5,696.4	5,712.9	5,696.4	12.2	13.1	89.91	-150.6	250.5	220.1	195.5	24.61	8.943	
5,800.0	5,796.4	5,812.9	5,796.4	12.4	13.3	89.91	-150.6	250.5	220.1	195.1	25.02	8.798	
5,900.0	5,896.4	5,912.9	5,896.4	12.6	13.5	89.91	-150.6	250.5	220.1	194.7	25.42	8.656	
6,000.0	5,996.4	6,012.9	5,996.4	12.8	13.7	89.91	-150.6	250.5	220.1	194.2	25.83	8.519	
6,100.0	6,096.4	6,112.9	6,096.4	13.0	13.9	89.91	-150.6	250.5	220.1	193.8	26.24	8.386	
6,200.0	6,196.4	6,212.9	6,196.4	13.2	14.2	89.91	-150.6	250.5	220.1	193.4	26.66	8.256	
6,300.0	6,296.4	6,313.1	6,296.7	13.4	14.4	93.65	-150.5	250.5	220.1	193.0	27.13	8.112	
6,400.0	6,396.0	6,415.1	6,398.2	13.6	14.5	93.60	-141.5	249.9	220.1	192.6	27.49	8.006	
6,500.0	6,493.3	6,517.0	6,497.3	13.7	14.7	93.49	-118.1	248.4	220.0	192.3	27.77	7.923	
6,600.0	6,586.6	6,618.9	6,592.0	13.9	14.8	93.30	-81.1	245.9	220.0	192.0	28.03	7.849	
6,700.0	6,674.0	6,720.6	6,680.4	14.0	14.9	93.05	-31.0	242.7	220.0	191.6	28.33	7.764	
6,800.0	6,753.8	6,822.2	6,760.7	14.2	15.0	92.74	30.9	238.6	219.9	191.1	28.75	7.648	
6,900.0	6,824.4	6,923.6	6,831.4	14.6	15.1	92.37	103.4	233.9	219.8	190.5	29.39	7.481	
7,000.0	6,884.5	7,024.7	6,890.9	15.0	15.4	91.96	184.9	228.6	219.8	189.5	30.31	7.252	
7,100.0	6,932.9	7,125.7	6,938.2	15.7	16.0	91.51	273.7	222.7	219.7	188.2	31.57	6.960	
7,200.0	6,968.7	7,226.3	6,972.5	16.5	16.8	91.03	368.1	216.6	219.7	186.5	33.20	6.618	
7,300.0	6,991.2	7,326.7	6,993.2	17.5	17.8	90.54	466.0	210.2	219.7	184.5	35.16	6.249	
7,360.9	6,998.2	7,387.8	6,999.0	18.2	18.4	90.23	526.6	206.2	219.7	183.2	36.51	6.017	
7,400.0	6,999.9	7,426.9	7,000.0	18.6	18.9	90.03	565.6	203.7	219.7	182.3	37.40	5.874	
7,500.0	7,000.0	7,526.9	7,000.0	19.9	20.1	90.00	665.4	197.1	219.7	179.8	39.89	5.508	
7,600.0	7,000.0	7,626.9	7,000.0	21.3	21.5	90.00	765.2	190.6	219.7	177.1	42.57	5.161	
7,700.0	7,000.0	7,726.9	7,000.0	22.7	22.9	90.00	865.0	184.1	219.7	174.3	45.44	4.836	
7,800.0	7,000.0	7,826.9	7,000.0	24.2	24.4	90.00	964.8	177.6	219.7	171.3	48.44	4.536	
7,900.0	7,000.0	7,926.9	7,000.0	25.8	25.9	90.00	1,064.6	171.1	219.7	168.2	51.57	4.261	
8,000.0	7,000.0	8,026.9	7,000.0	27.4	27.5	90.00	1,164.4	164.5	219.7	164.9	54.80	4.010	
8,100.0	7,000.0	8,126.9	7,000.0	29.1	29.1	90.00	1,264.1	158.0	219.7	161.6	58.10	3.782	
8,200.0	7,000.0	8,226.9	7,000.0	30.8	30.8	90.00	1,363.9	151.5	219.8	158.3	61.48	3.574	
8,300.0	7,000.0	8,326.9	7,000.0	32.5	32.5	90.00	1,463.7	145.0	219.8	154.8	64.91	3.385	
8,400.0	7,000.0	8,426.9	7,000.0	34.2	34.3	90.00	1,563.5	138.4	219.8	151.4	68.40	3.213	
8,500.0	7,000.0	8,526.9	7,000.0	36.0	36.0	90.00	1,663.3	131.9	219.8	147.9	71.93	3.056	
8,600.0	7,000.0	8,626.9	7,000.0	37.8	37.8	90.00	1,763.1	125.4	219.8	144.3	75.49	2.911	
8,700.0	7,000.0	8,726.9	7,000.0	39.6	39.6	90.00	1,862.9	118.9	219.8	140.7	79.08	2.779	
8,800.0	7,000.0	8,826.9	7,000.0	41.4	41.4	90.00	1,962.7	112.4	219.8	137.1	82.70	2.658	
8,900.0	7,000.0	8,926.9	7,000.0	43.2	43.2	90.00	2,062.4	105.8	219.8	133.5	86.35	2.546	
9,000.0	7,000.0	9,026.9	7,000.0	45.1	45.0	90.00	2,162.2	99.3	219.8	129.8	90.02	2.442	
9,100.0	7,000.0	9,126.9	7,000.0	46.9	46.9	90.00	2,262.0	92.8	219.8	126.1	93.70	2.346	
9,200.0	7,000.0	9,226.9	7,000.0	48.8	48.7	90.00	2,361.8	86.3	219.8	122.4	97.40	2.257	
9,300.0	7,000.0	9,326.9	7,000.0	50.6	50.6	90.00	2,461.6	79.8	219.8	118.7	101.12	2.174	
9,400.0	7,000.0	9,426.9	7,000.0	52.5	52.4	90.00	2,561.4	73.2	219.8	115.0	104.85	2.097	
9,500.0	7,000.0	9,526.9	7,000.0	54.4	54.3	90.00	2,661.2	66.7	219.9	111.3	108.59	2.025	
9,600.0	7,000.0	9,626.9	7,000.0	56.3	56.2	90.00	2,761.0	60.2	219.9	107.5	112.34	1.957	
9,700.0	7,000.0	9,726.9	7,000.0	58.1	58.0	90.00	2,860.7	53.7	219.9	103.8	116.10	1.894	
9,800.0	7,000.0	9,826.9	7,000.0	60.0	59.9	90.00	2,960.5	47.1	219.9	100.0	119.87	1.834	
9,900.0	7,000.0	9,926.9	7,000.0	61.9	61.8	90.00	3,060.3	40.6	219.9	96.2	123.65	1.778	
10,000.0	7,000.0	10,026.9	7,000.0	63.8	63.7	90.00	3,160.1	34.1	219.9	92.5	127.43	1.726	

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design												SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4CHZ - Wellbore #1 - Plan #2 (4-25-14)		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	7,000.0	10,126.9	7,000.0	65.7	65.6	90.00	3,259.9	27.6	219.9	88.7	131.23	1.676				
10,200.0	7,000.0	10,226.9	7,000.0	67.6	67.5	90.00	3,359.7	21.1	219.9	84.9	135.02	1.629				
10,300.0	7,000.0	10,326.9	7,000.0	69.5	69.4	90.00	3,459.5	14.5	219.9	81.1	138.82	1.584				
10,400.0	7,000.0	10,426.9	7,000.0	71.4	71.3	90.00	3,559.3	8.0	219.9	77.3	142.63	1.542				
10,500.0	7,000.0	10,526.9	7,000.0	73.3	73.2	90.00	3,659.0	1.5	219.9	73.5	146.44	1.502				
10,600.0	7,000.0	10,626.9	7,000.0	75.2	75.1	90.00	3,758.8	-5.0	219.9	69.7	150.26	1.464	Level 3			
10,700.0	7,000.0	10,726.9	7,000.0	77.1	77.0	90.00	3,858.6	-11.6	219.9	65.9	154.08	1.427	Level 3			
10,800.0	7,000.0	10,826.9	7,000.0	79.1	78.9	90.00	3,958.4	-18.1	220.0	62.0	157.91	1.393	Level 3			
10,900.0	7,000.0	10,926.9	7,000.0	81.0	80.8	90.00	4,058.2	-24.6	220.0	58.2	161.73	1.360	Level 3			
11,000.0	7,000.0	11,026.9	7,000.0	82.9	82.7	90.00	4,158.0	-31.1	220.0	54.4	165.56	1.329	Level 3			
11,100.0	7,000.0	11,126.9	7,000.0	84.8	84.6	90.00	4,257.8	-37.6	220.0	50.6	169.40	1.299	Level 3			
11,200.0	7,000.0	11,226.9	7,000.0	86.7	86.6	90.00	4,357.5	-44.2	220.0	46.8	173.23	1.270	Level 3			
11,242.5	7,000.0	11,269.4	7,000.0	87.5	87.4	90.00	4,400.0	-46.9	220.0	45.1	174.87	1.258	Level 3			
11,281.5	7,000.0	11,293.3	7,000.0	88.3	87.8	90.00	4,423.8	-48.5	220.5	44.4	176.07	1.252	Level 3, SF			

SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4NHZ - Wellbore #1 - Plan #2 (4-25-14)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
0.0	0.0	0.0	0.0	0.0	0.0	89.02	0.7	42.4	42.4				
100.0	100.0	100.0	100.0	0.1	0.1	89.02	0.7	42.4	42.4	42.2	0.22	188.559	
200.0	200.0	200.0	200.0	0.3	0.3	89.02	0.7	42.4	42.4	41.7	0.67	62.853	
300.0	300.0	300.0	300.0	0.6	0.6	89.02	0.7	42.4	42.4	41.3	1.12	37.712	
400.0	400.0	400.0	400.0	0.8	0.8	89.02	0.7	42.4	42.4	40.8	1.57	26.937	
500.0	500.0	500.0	500.0	1.0	1.0	89.02	0.7	42.4	42.4	40.4	2.02	20.951	
600.0	600.0	600.0	600.0	1.2	1.2	89.02	0.7	42.4	42.4	39.9	2.47	17.142	
700.0	700.0	700.0	700.0	1.5	1.5	89.02	0.7	42.4	42.4	39.5	2.92	14.505	
800.0	800.0	800.0	800.0	1.7	1.7	89.02	0.7	42.4	42.4	39.0	3.37	12.571	
900.0	900.0	900.0	900.0	1.9	1.9	89.02	0.7	42.4	42.4	38.6	3.82	11.092	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.02	0.7	42.4	42.4	38.1	4.27	9.924	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.02	0.7	42.4	42.4	37.7	4.72	8.979	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.02	0.7	42.4	42.4	37.2	5.17	8.198	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.02	0.7	42.4	42.4	36.8	5.62	7.542	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.02	0.7	42.4	42.4	36.3	6.07	6.984	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.02	0.7	42.4	42.4	35.9	6.52	6.502 CC, ES	
1,600.0	1,600.0	1,598.6	1,598.6	3.5	3.5	89.79	0.2	44.0	44.0	37.1	6.95	6.334	
1,700.0	1,700.0	1,697.0	1,696.8	3.7	3.7	91.79	-1.5	48.8	48.9	41.5	7.36	6.642	
1,800.0	1,800.0	1,794.9	1,794.3	3.9	3.9	94.36	-4.3	56.7	57.1	49.3	7.78	7.344	
1,900.0	1,900.0	1,892.1	1,890.8	4.2	4.1	96.90	-8.2	67.6	68.7	60.5	8.20	8.384	
2,000.0	2,000.0	1,990.4	1,988.1	4.4	4.3	99.05	-12.9	81.0	82.9	74.3	8.63	9.612	
2,100.0	2,100.0	2,089.3	2,086.0	4.6	4.6	100.60	-17.7	94.6	97.3	88.2	9.05	10.746	
2,200.0	2,200.0	2,188.2	2,183.9	4.8	4.8	101.75	-22.5	108.2	111.7	102.2	9.49	11.779	
2,300.0	2,300.0	2,287.3	2,281.8	5.0	5.1	-66.47	-27.3	121.9	125.5	115.6	9.89	12.686	
2,400.0	2,399.9	2,386.4	2,379.9	5.2	5.4	-67.32	-32.1	135.5	138.2	127.9	10.28	13.446	
2,500.0	2,499.8	2,485.6	2,478.1	5.4	5.7	-68.17	-36.9	149.1	150.9	140.2	10.67	14.133	
2,600.0	2,599.7	2,584.8	2,576.2	5.6	6.0	-68.89	-41.7	162.8	163.5	152.5	11.08	14.763	
2,700.0	2,699.5	2,683.9	2,674.3	5.7	6.3	-69.51	-46.6	176.4	176.2	164.8	11.49	15.341	
2,800.0	2,799.4	2,783.1	2,772.4	5.9	6.6	-70.04	-51.4	190.0	189.0	177.1	11.91	15.871	
2,900.0	2,899.3	2,882.3	2,870.5	6.1	7.0	-70.51	-56.2	203.7	201.7	189.4	12.33	16.358	
3,000.0	2,999.2	2,981.5	2,968.6	6.3	7.3	-70.92	-61.0	217.3	214.4	201.7	12.76	16.806	
3,100.0	3,099.1	3,080.6	3,066.7	6.5	7.6	-71.29	-65.8	231.0	227.2	214.0	13.19	17.219	
3,200.0	3,199.0	3,179.8	3,164.8	6.7	7.9	-71.61	-70.6	244.6	240.0	226.3	13.63	17.600	
3,300.0	3,298.9	3,279.0	3,263.0	6.9	8.3	-71.91	-75.4	258.2	252.7	238.7	14.08	17.953	
3,400.0	3,398.8	3,378.2	3,361.1	7.1	8.6	-72.17	-80.2	271.9	265.5	251.0	14.52	18.280	
3,500.0	3,498.7	3,477.3	3,459.2	7.3	8.9	-72.41	-85.0	285.5	278.3	263.3	14.98	18.583	
3,600.0	3,598.5	3,576.5	3,557.3	7.6	9.3	-72.63	-89.8	299.1	291.1	275.6	15.43	18.865	
3,700.0	3,698.4	3,675.7	3,655.4	7.8	9.6	-72.83	-94.7	312.8	303.9	288.0	15.89	19.127	
3,800.0	3,798.3	3,774.9	3,753.5	8.0	9.9	-73.02	-99.5	326.4	316.7	300.3	16.35	19.372	
3,900.0	3,898.2	3,874.0	3,851.6	8.2	10.3	-73.19	-104.3	340.0	329.5	312.6	16.81	19.601	
4,000.0	3,998.1	3,973.2	3,949.8	8.4	10.6	-73.35	-109.1	353.7	342.3	325.0	17.27	19.814	
4,100.0	4,098.0	4,072.4	4,047.9	8.6	11.0	-73.49	-113.9	367.3	355.1	337.3	17.74	20.015	
4,200.0	4,197.9	4,171.5	4,146.0	8.9	11.3	-73.63	-118.7	381.0	367.9	349.6	18.21	20.203	
4,300.0	4,297.8	4,270.7	4,244.1	9.1	11.6	-73.76	-123.5	394.6	380.7	362.0	18.68	20.380	
4,400.0	4,397.7	4,369.9	4,342.2	9.3	12.0	-73.88	-128.3	408.2	393.5	374.3	19.15	20.546	
4,500.0	4,497.5	4,469.1	4,440.3	9.5	12.3	-73.99	-133.1	421.9	406.3	386.7	19.62	20.703	
4,600.0	4,597.4	4,568.2	4,538.4	9.8	12.7	-74.09	-137.9	435.5	419.1	399.0	20.10	20.851	
4,700.0	4,697.3	4,676.7	4,645.9	10.0	13.0	-74.22	-143.0	449.8	431.3	410.7	20.58	20.954	
4,800.0	4,797.2	4,793.5	4,762.0	10.2	13.3	-74.50	-147.0	461.1	440.0	419.0	21.06	20.898	
4,900.0	4,897.1	4,910.8	4,879.0	10.4	13.5	-74.94	-149.4	468.1	444.8	423.3	21.52	20.670	
5,000.0	4,997.0	5,028.2	4,996.5	10.7	13.7	-75.54	-150.3	470.5	445.7	423.7	21.98	20.276	
5,100.0	5,096.9	5,128.7	5,096.9	10.9	13.9	-76.13	-150.3	470.5	444.6	422.1	22.42	19.827	

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Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4NHZ - Wellbore #1 - Plan #2 (4-25-14)													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	
5,200.0	5,196.8	5,228.5	5,196.8	11.1	14.1	-76.72	-150.3	470.5	443.4	420.6	22.86	19.395		
5,300.0	5,296.7	5,328.4	5,296.7	11.4	14.2	-77.31	-150.3	470.5	442.4	419.1	23.31	18.980		
5,400.0	5,396.5	5,428.3	5,396.5	11.6	14.4	-77.91	-150.3	470.5	441.4	417.6	23.75	18.581		
5,500.0	5,496.4	5,528.2	5,496.4	11.8	14.6	-78.48	-150.3	470.5	440.4	416.3	24.20	18.204		
5,600.0	5,596.4	5,628.2	5,596.4	12.0	14.7	-78.71	-150.3	470.5	440.1	415.5	24.60	17.888		
5,639.6	5,636.0	5,667.8	5,636.0	12.1	14.8	-78.72	-150.3	470.5	440.1	415.3	24.76	17.773		
5,700.0	5,696.4	5,728.2	5,696.4	12.2	14.9	89.91	-150.3	470.5	440.1	415.2	24.89	17.682		
5,800.0	5,796.4	5,828.2	5,796.4	12.4	15.1	89.91	-150.3	470.5	440.1	414.8	25.29	17.404		
5,900.0	5,896.4	5,928.2	5,896.4	12.6	15.3	89.91	-150.3	470.5	440.1	414.4	25.68	17.134		
6,000.0	5,996.4	6,028.2	5,996.4	12.8	15.4	89.91	-150.3	470.5	440.1	414.0	26.09	16.871		
6,100.0	6,096.4	6,128.2	6,096.4	13.0	15.6	89.91	-150.3	470.5	440.1	413.6	26.49	16.614		
6,200.0	6,196.4	6,228.2	6,196.4	13.2	15.8	89.91	-150.3	470.5	440.1	413.2	26.89	16.365		
6,300.0	6,296.4	6,328.7	6,296.9	13.4	16.0	93.65	-150.2	470.5	440.1	412.7	27.40	16.062		
6,400.0	6,396.0	6,432.7	6,400.5	13.6	16.2	93.60	-140.7	469.9	440.1	412.3	27.75	15.859		
6,500.0	6,493.3	6,536.7	6,501.4	13.7	16.3	93.48	-116.5	468.3	440.0	412.0	28.03	15.699		
6,600.0	6,586.6	6,640.4	6,597.6	13.9	16.4	93.29	-78.0	465.8	439.9	411.6	28.28	15.555		
6,700.0	6,674.0	6,743.9	6,687.1	14.0	16.4	93.04	-26.2	462.4	439.8	411.2	28.58	15.391		
6,800.0	6,753.8	6,847.1	6,767.9	14.2	16.5	92.72	37.7	458.2	439.7	410.7	29.00	15.164		
6,900.0	6,824.4	6,949.8	6,838.4	14.6	16.6	92.35	112.1	453.3	439.6	410.0	29.63	14.835		
7,000.0	6,884.5	7,052.1	6,897.2	15.0	16.7	91.94	195.5	447.9	439.5	408.9	30.56	14.382		
7,100.0	6,932.9	7,154.0	6,943.4	15.7	17.1	91.48	286.0	442.0	439.4	407.6	31.83	13.804		
7,200.0	6,968.7	7,255.2	6,976.2	16.5	17.7	91.00	381.5	435.7	439.3	405.9	33.46	13.130		
7,300.0	6,991.2	7,356.0	6,995.0	17.5	18.6	90.50	480.2	429.3	439.3	403.9	35.42	12.401		
7,365.9	6,998.5	7,422.0	6,999.8	18.3	19.3	90.17	545.9	425.0	439.3	402.4	36.89	11.908		
7,400.0	6,999.9	7,456.2	7,000.0	18.6	19.6	90.01	579.9	422.8	439.3	401.6	37.67	11.661		
7,500.0	7,000.0	7,556.2	7,000.0	19.9	20.9	90.00	679.7	416.3	439.3	399.1	40.15	10.941		
7,600.0	7,000.0	7,656.2	7,000.0	21.3	22.2	90.00	779.5	409.7	439.3	396.5	42.83	10.257		
7,700.0	7,000.0	7,756.2	7,000.0	22.7	23.5	90.00	879.3	403.2	439.3	393.6	45.69	9.616		
7,800.0	7,000.0	7,856.2	7,000.0	24.2	25.0	90.00	979.1	396.7	439.3	390.6	48.69	9.023		
7,900.0	7,000.0	7,956.2	7,000.0	25.8	26.5	90.00	1,078.9	390.2	439.3	387.5	51.81	8.480		
8,000.0	7,000.0	8,056.2	7,000.0	27.4	28.1	90.00	1,178.7	383.7	439.3	384.3	55.03	7.984		
8,100.0	7,000.0	8,156.2	7,000.0	29.1	29.7	90.00	1,278.5	377.1	439.3	381.0	58.33	7.532		
8,200.0	7,000.0	8,256.2	7,000.0	30.8	31.4	90.00	1,378.2	370.6	439.4	377.7	61.70	7.121		
8,300.0	7,000.0	8,356.2	7,000.0	32.5	33.1	90.00	1,478.0	364.1	439.4	374.2	65.13	6.746		
8,400.0	7,000.0	8,456.2	7,000.0	34.2	34.8	90.00	1,577.8	357.6	439.4	370.8	68.61	6.404		
8,500.0	7,000.0	8,556.2	7,000.0	36.0	36.5	90.00	1,677.6	351.1	439.4	367.3	72.13	6.092		
8,600.0	7,000.0	8,656.2	7,000.0	37.8	38.3	90.00	1,777.4	344.6	439.4	363.7	75.69	5.805		
8,700.0	7,000.0	8,756.2	7,000.0	39.6	40.1	90.00	1,877.2	338.0	439.4	360.1	79.28	5.543		
8,800.0	7,000.0	8,856.2	7,000.0	41.4	41.8	90.00	1,977.0	331.5	439.4	356.5	82.90	5.301		
8,900.0	7,000.0	8,956.2	7,000.0	43.2	43.6	90.00	2,076.8	325.0	439.4	352.9	86.54	5.078		
9,000.0	7,000.0	9,056.2	7,000.0	45.1	45.5	90.00	2,176.5	318.5	439.4	349.2	90.20	4.872		
9,100.0	7,000.0	9,156.2	7,000.0	46.9	47.3	90.00	2,276.3	312.0	439.5	345.6	93.89	4.681		
9,200.0	7,000.0	9,256.2	7,000.0	48.8	49.1	90.00	2,376.1	305.4	439.5	341.9	97.59	4.503		
9,300.0	7,000.0	9,356.2	7,000.0	50.6	51.0	90.00	2,475.9	298.9	439.5	338.2	101.30	4.338		
9,400.0	7,000.0	9,456.2	7,000.0	52.5	52.8	90.00	2,575.7	292.4	439.5	334.5	105.03	4.185		
9,500.0	7,000.0	9,556.2	7,000.0	54.4	54.7	90.00	2,675.5	285.9	439.5	330.7	108.76	4.041		
9,600.0	7,000.0	9,656.2	7,000.0	56.3	56.5	90.00	2,775.3	279.4	439.5	327.0	112.51	3.906		
9,700.0	7,000.0	9,756.2	7,000.0	58.1	58.4	90.00	2,875.1	272.9	439.5	323.3	116.27	3.780		
9,800.0	7,000.0	9,856.2	7,000.0	60.0	60.3	90.00	2,974.8	266.3	439.5	319.5	120.04	3.662		
9,900.0	7,000.0	9,956.2	7,000.0	61.9	62.2	90.00	3,074.6	259.8	439.5	315.7	123.82	3.550		
10,000.0	7,000.0	10,056.2	7,000.0	63.8	64.0	90.00	3,174.4	253.3	439.6	312.0	127.60	3.445		
10,100.0	7,000.0	10,156.2	7,000.0	65.7	65.9	90.00	3,274.2	246.8	439.6	308.2	131.39	3.346		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4NHZ
Project:	SEC.4-T4N-R68W	TVD Reference:	WELL @ 5077.0ft (RKB - 13')
Reference Site:	SRC Kiehn Pad Sec.4-T4N-R68W	MD Reference:	WELL @ 5077.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Kiehn 32-4NHZ	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-25-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn C-4NHZ - Wellbore #1 - Plan #2 (4-25-14)												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
10,200.0	7,000.0	10,256.2	7,000.0	67.6	67.8	90.00	3,374.0	240.3	439.6	304.4	135.19	3.252	
10,300.0	7,000.0	10,356.2	7,000.0	69.5	69.7	90.00	3,473.8	233.7	439.6	300.6	138.99	3.163	
10,400.0	7,000.0	10,456.2	7,000.0	71.4	71.6	90.00	3,573.6	227.2	439.6	296.8	142.79	3.079	
10,500.0	7,000.0	10,556.2	7,000.0	73.3	73.5	90.00	3,673.4	220.7	439.6	293.0	146.60	2.999	
10,600.0	7,000.0	10,656.2	7,000.0	75.2	75.4	90.00	3,773.1	214.2	439.6	289.2	150.42	2.923	
10,700.0	7,000.0	10,756.2	7,000.0	77.1	77.3	90.00	3,872.9	207.7	439.6	285.4	154.24	2.850	
10,800.0	7,000.0	10,856.2	7,000.0	79.1	79.2	90.00	3,972.7	201.2	439.7	281.6	158.06	2.782	
10,900.0	7,000.0	10,956.2	7,000.0	81.0	81.1	90.00	4,072.5	194.6	439.7	277.8	161.89	2.716	
11,000.0	7,000.0	11,056.2	7,000.0	82.9	83.0	90.00	4,172.3	188.1	439.7	274.0	165.72	2.653	
11,100.0	7,000.0	11,156.2	7,000.0	84.8	84.9	90.00	4,272.1	181.6	439.7	270.1	169.55	2.593	
11,200.0	7,000.0	11,256.2	7,000.0	86.7	86.9	90.00	4,371.9	175.1	439.7	266.3	173.39	2.536	
11,233.3	7,000.0	11,289.4	7,000.0	87.4	87.5	90.00	4,405.1	172.9	439.7	265.0	174.66	2.517	
11,281.5	7,000.0	11,308.2	7,000.0	88.3	87.9	90.00	4,423.8	171.7	440.7	264.7	175.95	2.505 SF	

Reference Depths are relative to WELL @ 5077.0ft (RKB - 13')	Coordinates are relative to: SRC Kiehn 32-4NHZ
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: 0.32°



Coordinates are relative to: SRC Kiehn 32-4NHZ
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.32°

