

Synergy Resources

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

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	1365560.28	3137909.10	40.335808	-105.005299	
RKB - 13' WELL @ 5077.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 201'FSL & 1783'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 2075'FEL	7000.0	4424.9	-509.9	Point



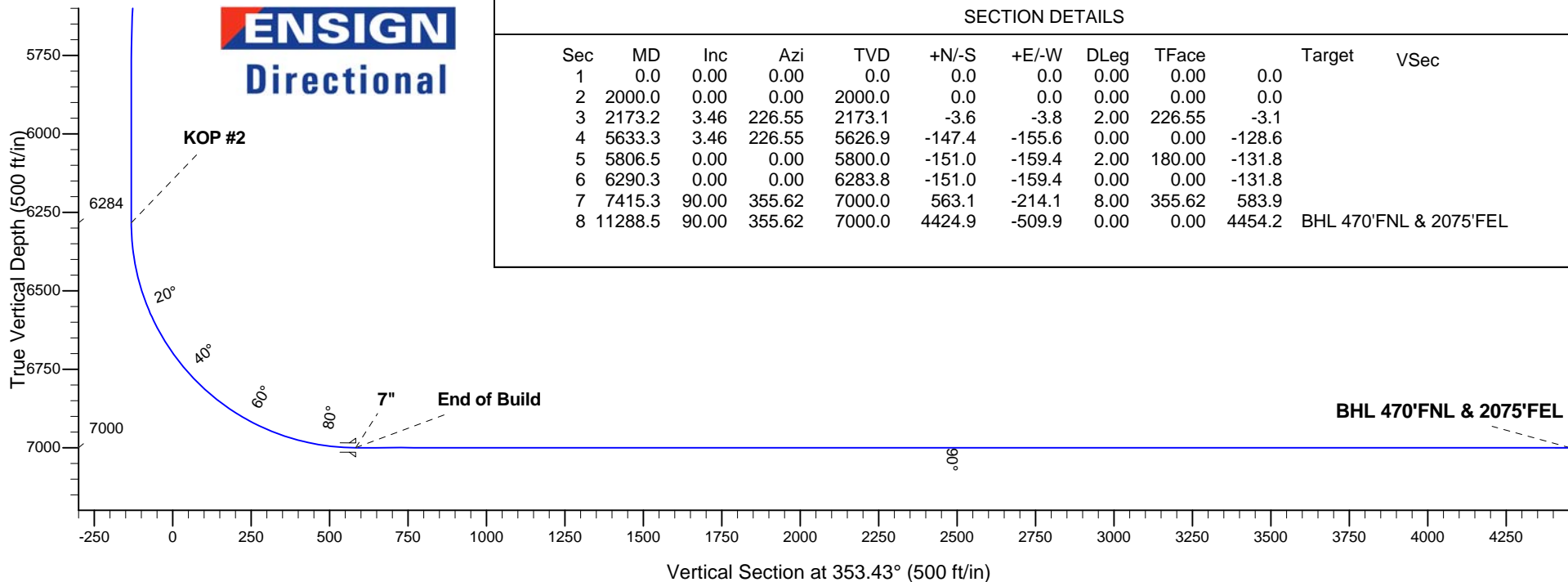
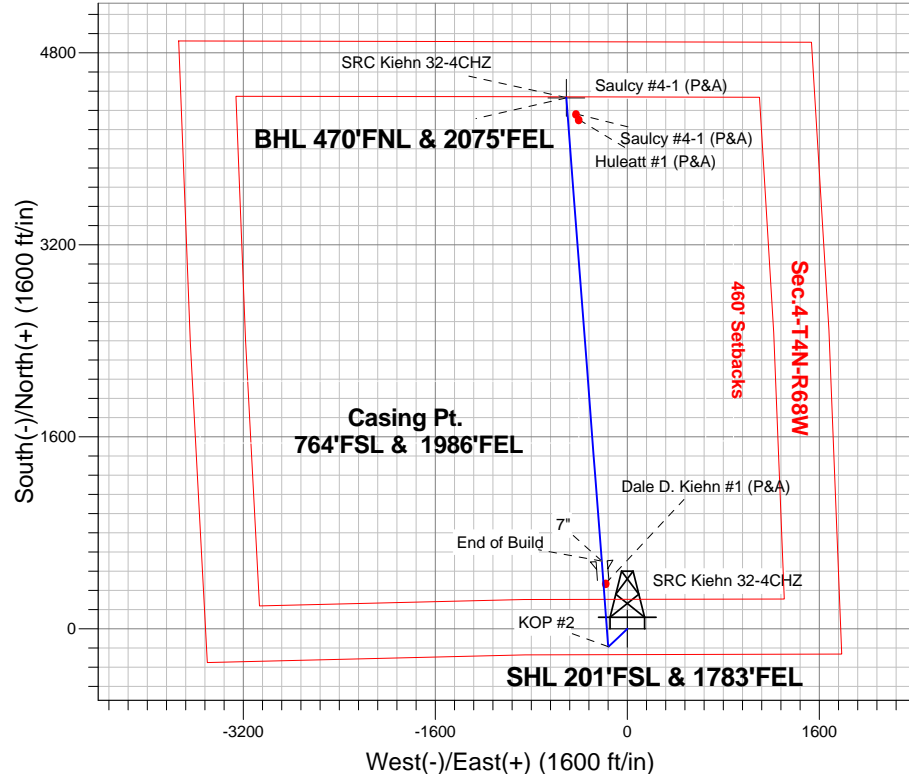
Azimuths to True North
Magnetic North: 8.60°

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

ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
6283.8	6290.3	KOP #2
7000.0	7415.3	End of Build

SRC Kiehn Pad Sec.4-T4N-R68W
SRC Kiehn 32-4CHZ
Plan #2 (4-25-14)
10:56, 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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2173.2	3.46	226.55	2173.1	-3.6	-3.8	2.00	226.55	-3.1	
4	5633.3	3.46	226.55	5626.9	-147.4	-155.6	0.00	0.00	-128.6	
5	5806.5	0.00	0.00	5800.0	-151.0	-159.4	2.00	180.00	-131.8	
6	6290.3	0.00	0.00	6283.8	-151.0	-159.4	0.00	0.00	-131.8	
7	7415.3	90.00	355.62	7000.0	563.1	-214.1	8.00	355.62	583.9	
8	11288.5	90.00	355.62	7000.0	4424.9	-509.9	0.00	0.00	4454.2	BHL 470'FNL & 2075'FEL



Synergy Resources

SEC.4-T4N-R68W

SRC Kiehn Pad Sec.4-T4N-R68W

SRC Kiehn 32-4CHZ

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,173.2	3.46	226.55	2,173.1	-3.6	-3.8	2.00	2.00	0.00	226.55	
5,633.3	3.46	226.55	5,626.9	-147.4	-155.6	0.00	0.00	0.00	0.00	
5,806.5	0.00	0.00	5,800.0	-151.0	-159.4	2.00	-2.00	0.00	180.00	
6,290.3	0.00	0.00	6,283.8	-151.0	-159.4	0.00	0.00	0.00	0.00	
7,415.3	90.00	355.62	7,000.0	563.1	-214.1	8.00	8.00	0.00	355.62	
11,288.5	90.00	355.62	7,000.0	4,424.9	-509.9	0.00	0.00	0.00	0.00	BHL 470'FNL & 207'

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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 & 1783'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
KOP #1									
2,100.0	2.00	226.55	2,100.0	-1.2	-1.3	-1.0	2.00	2.00	0.00
2,173.2	3.46	226.55	2,173.1	-3.6	-3.8	-3.1	2.00	2.00	0.00
2,200.0	3.46	226.55	2,199.8	-4.7	-5.0	-4.1	0.00	0.00	0.00
2,300.0	3.46	226.55	2,299.7	-8.9	-9.4	-7.7	0.00	0.00	0.00
2,400.0	3.46	226.55	2,399.5	-13.0	-13.7	-11.4	0.00	0.00	0.00
2,500.0	3.46	226.55	2,499.3	-17.2	-18.1	-15.0	0.00	0.00	0.00
2,600.0	3.46	226.55	2,599.1	-21.3	-22.5	-18.6	0.00	0.00	0.00
2,700.0	3.46	226.55	2,698.9	-25.5	-26.9	-22.2	0.00	0.00	0.00
2,800.0	3.46	226.55	2,798.7	-29.6	-31.3	-25.9	0.00	0.00	0.00
2,900.0	3.46	226.55	2,898.6	-33.8	-35.7	-29.5	0.00	0.00	0.00
3,000.0	3.46	226.55	2,998.4	-38.0	-40.1	-33.1	0.00	0.00	0.00
3,100.0	3.46	226.55	3,098.2	-42.1	-44.5	-36.8	0.00	0.00	0.00
3,200.0	3.46	226.55	3,198.0	-46.3	-48.8	-40.4	0.00	0.00	0.00
3,300.0	3.46	226.55	3,297.8	-50.4	-53.2	-44.0	0.00	0.00	0.00
3,400.0	3.46	226.55	3,397.7	-54.6	-57.6	-47.6	0.00	0.00	0.00
3,500.0	3.46	226.55	3,497.5	-58.7	-62.0	-51.3	0.00	0.00	0.00
3,600.0	3.46	226.55	3,597.3	-62.9	-66.4	-54.9	0.00	0.00	0.00
3,700.0	3.46	226.55	3,697.1	-67.1	-70.8	-58.5	0.00	0.00	0.00
3,800.0	3.46	226.55	3,796.9	-71.2	-75.2	-62.1	0.00	0.00	0.00
3,900.0	3.46	226.55	3,896.7	-75.4	-79.6	-65.8	0.00	0.00	0.00
4,000.0	3.46	226.55	3,996.6	-79.5	-83.9	-69.4	0.00	0.00	0.00
4,100.0	3.46	226.55	4,096.4	-83.7	-88.3	-73.0	0.00	0.00	0.00
4,200.0	3.46	226.55	4,196.2	-87.8	-92.7	-76.6	0.00	0.00	0.00
4,300.0	3.46	226.55	4,296.0	-92.0	-97.1	-80.3	0.00	0.00	0.00
4,400.0	3.46	226.55	4,395.8	-96.1	-101.5	-83.9	0.00	0.00	0.00
4,500.0	3.46	226.55	4,495.6	-100.3	-105.9	-87.5	0.00	0.00	0.00
4,600.0	3.46	226.55	4,595.5	-104.5	-110.3	-91.1	0.00	0.00	0.00
4,700.0	3.46	226.55	4,695.3	-108.6	-114.7	-94.8	0.00	0.00	0.00
4,800.0	3.46	226.55	4,795.1	-112.8	-119.0	-98.4	0.00	0.00	0.00
4,900.0	3.46	226.55	4,894.9	-116.9	-123.4	-102.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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	3.46	226.55	4,994.7	-121.1	-127.8	-105.7	0.00	0.00	0.00
5,100.0	3.46	226.55	5,094.5	-125.2	-132.2	-109.3	0.00	0.00	0.00
5,200.0	3.46	226.55	5,194.4	-129.4	-136.6	-112.9	0.00	0.00	0.00
5,300.0	3.46	226.55	5,294.2	-133.5	-141.0	-116.5	0.00	0.00	0.00
5,400.0	3.46	226.55	5,394.0	-137.7	-145.4	-120.2	0.00	0.00	0.00
5,500.0	3.46	226.55	5,493.8	-141.9	-149.8	-123.8	0.00	0.00	0.00
5,600.0	3.46	226.55	5,593.6	-146.0	-154.1	-127.4	0.00	0.00	0.00
5,633.3	3.46	226.55	5,626.9	-147.4	-155.6	-128.6	0.00	0.00	0.00
5,700.0	2.13	226.55	5,693.5	-149.6	-158.0	-130.6	2.00	-2.00	0.00
5,800.0	0.13	226.55	5,793.5	-151.0	-159.4	-131.8	2.00	-2.00	0.00
5,806.5	0.00	0.00	5,800.0	-151.0	-159.4	-131.8	2.00	-2.00	0.00
5,900.0	0.00	0.00	5,893.5	-151.0	-159.4	-131.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,993.5	-151.0	-159.4	-131.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,093.5	-151.0	-159.4	-131.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,193.5	-151.0	-159.4	-131.8	0.00	0.00	0.00
6,290.3	0.00	0.00	6,283.8	-151.0	-159.4	-131.8	0.00	0.00	0.00
KOP #2									
6,300.0	0.77	355.62	6,293.5	-150.9	-159.4	-131.7	7.97	7.97	0.00
6,400.0	8.77	355.62	6,393.0	-142.6	-160.0	-123.4	8.00	8.00	0.00
6,500.0	16.77	355.62	6,490.5	-120.6	-161.7	-101.3	8.00	8.00	0.00
6,600.0	24.77	355.62	6,583.9	-85.3	-164.4	-65.9	8.00	8.00	0.00
6,700.0	32.77	355.62	6,671.5	-37.3	-168.1	-17.8	8.00	8.00	0.00
6,800.0	40.77	355.62	6,751.5	22.3	-172.7	41.9	8.00	8.00	0.00
6,900.0	48.77	355.62	6,822.5	92.5	-178.0	112.3	8.00	8.00	0.00
7,000.0	56.77	355.62	6,882.9	171.8	-184.1	191.8	8.00	8.00	0.00
7,100.0	64.77	355.62	6,931.7	258.8	-190.8	278.9	8.00	8.00	0.00
7,200.0	72.77	355.62	6,967.9	351.6	-197.9	372.0	8.00	8.00	0.00
7,300.0	80.77	355.62	6,990.7	448.6	-205.3	469.2	8.00	8.00	0.00
7,400.0	88.77	355.62	6,999.8	547.8	-212.9	568.6	8.00	8.00	0.00
7,415.3	90.00	355.62	7,000.0	563.1	-214.1	583.9	8.00	8.00	0.00
End of Build - 7"									
7,500.0	90.00	355.62	7,000.0	647.5	-220.6	668.5	0.00	0.00	0.00
7,600.0	90.00	355.62	7,000.0	747.2	-228.2	768.4	0.00	0.00	0.00
7,700.0	90.00	355.62	7,000.0	846.9	-235.8	868.4	0.00	0.00	0.00
7,800.0	90.00	355.62	7,000.0	946.6	-243.5	968.3	0.00	0.00	0.00
7,900.0	90.00	355.62	7,000.0	1,046.4	-251.1	1,068.2	0.00	0.00	0.00
8,000.0	90.00	355.62	7,000.0	1,146.1	-258.8	1,168.1	0.00	0.00	0.00
8,100.0	90.00	355.62	7,000.0	1,245.8	-266.4	1,268.1	0.00	0.00	0.00
8,200.0	90.00	355.62	7,000.0	1,345.5	-274.0	1,368.0	0.00	0.00	0.00
8,300.0	90.00	355.62	7,000.0	1,445.2	-281.7	1,467.9	0.00	0.00	0.00
8,400.0	90.00	355.62	7,000.0	1,544.9	-289.3	1,567.9	0.00	0.00	0.00
8,500.0	90.00	355.62	7,000.0	1,644.6	-296.9	1,667.8	0.00	0.00	0.00
8,600.0	90.00	355.62	7,000.0	1,744.3	-304.6	1,767.7	0.00	0.00	0.00
8,700.0	90.00	355.62	7,000.0	1,844.0	-312.2	1,867.6	0.00	0.00	0.00
8,800.0	90.00	355.62	7,000.0	1,943.7	-319.8	1,967.6	0.00	0.00	0.00
8,900.0	90.00	355.62	7,000.0	2,043.4	-327.5	2,067.5	0.00	0.00	0.00
9,000.0	90.00	355.62	7,000.0	2,143.1	-335.1	2,167.4	0.00	0.00	0.00
9,100.0	90.00	355.62	7,000.0	2,242.8	-342.8	2,267.3	0.00	0.00	0.00
9,200.0	90.00	355.62	7,000.0	2,342.6	-350.4	2,367.3	0.00	0.00	0.00
9,300.0	90.00	355.62	7,000.0	2,442.3	-358.0	2,467.2	0.00	0.00	0.00
9,400.0	90.00	355.62	7,000.0	2,542.0	-365.7	2,567.1	0.00	0.00	0.00
9,500.0	90.00	355.62	7,000.0	2,641.7	-373.3	2,667.0	0.00	0.00	0.00
9,600.0	90.00	355.62	7,000.0	2,741.4	-380.9	2,767.0	0.00	0.00	0.00
9,700.0	90.00	355.62	7,000.0	2,841.1	-388.6	2,866.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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	355.62	7,000.0	2,940.8	-396.2	2,966.8	0.00	0.00	0.00	
9,900.0	90.00	355.62	7,000.0	3,040.5	-403.9	3,066.8	0.00	0.00	0.00	
10,000.0	90.00	355.62	7,000.0	3,140.2	-411.5	3,166.7	0.00	0.00	0.00	
10,100.0	90.00	355.62	7,000.0	3,239.9	-419.1	3,266.6	0.00	0.00	0.00	
10,200.0	90.00	355.62	7,000.0	3,339.6	-426.8	3,366.5	0.00	0.00	0.00	
10,300.0	90.00	355.62	7,000.0	3,439.3	-434.4	3,466.5	0.00	0.00	0.00	
10,400.0	90.00	355.62	7,000.0	3,539.1	-442.0	3,566.4	0.00	0.00	0.00	
10,500.0	90.00	355.62	7,000.0	3,638.8	-449.7	3,666.3	0.00	0.00	0.00	
10,600.0	90.00	355.62	7,000.0	3,738.5	-457.3	3,766.2	0.00	0.00	0.00	
10,700.0	90.00	355.62	7,000.0	3,838.2	-465.0	3,866.2	0.00	0.00	0.00	
10,800.0	90.00	355.62	7,000.0	3,937.9	-472.6	3,966.1	0.00	0.00	0.00	
10,900.0	90.00	355.62	7,000.0	4,037.6	-480.2	4,066.0	0.00	0.00	0.00	
11,000.0	90.00	355.62	7,000.0	4,137.3	-487.9	4,165.9	0.00	0.00	0.00	
11,100.0	90.00	355.62	7,000.0	4,237.0	-495.5	4,265.9	0.00	0.00	0.00	
11,200.0	90.00	355.62	7,000.0	4,336.7	-503.1	4,365.8	0.00	0.00	0.00	
11,288.5	90.00	355.62	7,000.0	4,424.9	-509.9	4,454.2	0.00	0.00	0.00	
BHL 470'FNL & 2075'FEL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,415.3	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	
2,000.0	2,000.0	0.0	0.0	KOP #1	
6,290.3	6,283.8	-151.0	-159.4	KOP #2	
7,415.3	7,000.0	563.1	-214.1	End of Build	



Synergy Resources

SEC.4-T4N-R68W

SRC Kiehn Pad Sec.4-T4N-R68W

SRC Kiehn 32-4CHZ

Wellbore #1

Plan #2 (4-25-14)

Anticollision Report

29 April, 2014

Offset Design SRC Kiehn (Existing) Pad Sec.4-T4N-R68W - Dale D. Kiehn #1 (P&A) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 7790-UNKNOWN													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)			
800.0	800.0	3,473.0	3,473.0	1.7	69.5	-25.61	377.4	-180.9	418.5	347.4	71.15	5.883		
900.0	900.0	3,573.0	3,573.0	1.9	71.5	-25.61	377.4	-180.9	418.5	345.2	73.37	5.704		
1,000.0	1,000.0	3,673.0	3,673.0	2.1	73.5	-25.61	377.4	-180.9	418.5	342.9	75.60	5.537		
1,100.0	1,100.0	3,773.0	3,773.0	2.4	75.5	-25.61	377.4	-180.9	418.5	340.7	77.82	5.378		
1,200.0	1,200.0	3,873.0	3,873.0	2.6	77.5	-25.61	377.4	-180.9	418.5	338.5	80.04	5.229		
1,300.0	1,300.0	3,973.0	3,973.0	2.8	79.5	-25.61	377.4	-180.9	418.5	336.3	82.27	5.087		
1,400.0	1,400.0	4,073.0	4,073.0	3.0	81.5	-25.61	377.4	-180.9	418.5	334.0	84.49	4.953		
1,500.0	1,500.0	4,173.0	4,173.0	3.3	83.5	-25.61	377.4	-180.9	418.5	331.8	86.72	4.826		
1,600.0	1,600.0	4,273.0	4,273.0	3.5	85.5	-25.61	377.4	-180.9	418.5	329.6	88.94	4.706		
1,700.0	1,700.0	4,373.0	4,373.0	3.7	87.5	-25.61	377.4	-180.9	418.5	327.4	91.17	4.591		
1,800.0	1,800.0	4,473.0	4,473.0	3.9	89.5	-25.61	377.4	-180.9	418.5	325.1	93.39	4.481		
1,900.0	1,900.0	4,573.0	4,573.0	4.2	91.5	-25.61	377.4	-180.9	418.5	322.9	95.62	4.377		
2,000.0	2,000.0	4,673.0	4,673.0	4.4	93.5	-25.61	377.4	-180.9	418.5	320.7	97.84	4.278	CC	
2,100.0	2,100.0	4,773.0	4,773.0	4.6	95.5	108.05	377.4	-180.9	419.1	319.0	100.04	4.189		
2,200.0	2,199.8	4,872.8	4,872.8	4.8	97.5	108.69	377.4	-180.9	420.7	318.5	102.20	4.116		
2,300.0	2,299.7	4,972.7	4,972.7	5.0	99.5	109.47	377.4	-180.9	422.7	318.3	104.38	4.049		
2,400.0	2,399.5	5,072.5	5,072.5	5.1	101.4	110.24	377.4	-180.9	424.7	318.1	106.57	3.985		
2,500.0	2,499.3	5,172.3	5,172.3	5.3	103.4	111.00	377.4	-180.9	426.9	318.1	108.76	3.925	ES	
2,600.0	2,599.1	5,272.1	5,272.1	5.5	105.4	111.75	377.4	-180.9	429.1	318.1	110.96	3.867		
2,700.0	2,698.9	5,371.9	5,371.9	5.8	107.4	112.49	377.4	-180.9	431.3	318.2	113.16	3.812		
2,800.0	2,798.7	5,471.7	5,471.7	6.0	109.4	113.23	377.4	-180.9	433.7	318.3	115.36	3.759		
2,900.0	2,898.6	5,571.6	5,571.6	6.2	111.4	113.96	377.4	-180.9	436.1	318.5	117.57	3.709		
3,000.0	2,998.4	5,671.4	5,671.4	6.4	113.4	114.68	377.4	-180.9	438.6	318.8	119.78	3.662		
3,100.0	3,098.2	5,771.2	5,771.2	6.6	115.4	115.39	377.4	-180.9	441.2	319.2	121.99	3.617		
3,200.0	3,198.0	5,871.0	5,871.0	6.8	117.4	116.09	377.4	-180.9	443.8	319.6	124.20	3.573		
3,300.0	3,297.8	5,970.8	5,970.8	7.1	119.4	116.79	377.4	-180.9	446.5	320.1	126.41	3.532		
3,400.0	3,397.7	6,070.7	6,070.7	7.3	121.4	117.48	377.4	-180.9	449.2	320.6	128.63	3.493		
3,500.0	3,497.5	6,170.5	6,170.5	7.5	123.4	118.15	377.4	-180.9	452.1	321.2	130.84	3.455		
3,600.0	3,597.3	6,270.3	6,270.3	7.7	125.4	118.82	377.4	-180.9	455.0	321.9	133.06	3.419		
3,700.0	3,697.1	6,370.1	6,370.1	8.0	127.4	119.49	377.4	-180.9	457.9	322.6	135.28	3.385		
3,800.0	3,796.9	6,469.9	6,469.9	8.2	129.4	120.14	377.4	-180.9	460.9	323.4	137.50	3.352		
3,900.0	3,896.7	6,569.7	6,569.7	8.4	131.4	120.78	377.4	-180.9	464.0	324.3	139.72	3.321		
4,000.0	3,996.6	6,669.6	6,669.6	8.7	133.4	121.42	377.4	-180.9	467.1	325.2	141.94	3.291		
4,100.0	4,096.4	6,769.4	6,769.4	8.9	135.4	122.05	377.4	-180.9	470.3	326.1	144.16	3.262		
4,200.0	4,196.2	6,869.2	6,869.2	9.2	137.4	122.67	377.4	-180.9	473.5	327.2	146.38	3.235		
4,300.0	4,296.0	6,969.0	6,969.0	9.4	139.4	123.28	377.4	-180.9	476.8	328.2	148.60	3.209		
4,400.0	4,395.8	7,068.8	7,068.8	9.6	141.4	123.88	377.4	-180.9	480.2	329.3	150.82	3.184		
4,500.0	4,495.6	7,168.6	7,168.6	9.9	143.4	124.47	377.4	-180.9	483.6	330.5	153.04	3.160		
4,600.0	4,595.5	7,268.5	7,268.5	10.1	145.4	125.06	377.4	-180.9	487.0	331.8	155.26	3.137		
4,700.0	4,695.3	7,368.3	7,368.3	10.4	147.4	125.63	377.4	-180.9	490.5	333.0	157.48	3.115		
4,800.0	4,795.1	7,468.1	7,468.1	10.6	149.4	126.20	377.4	-180.9	494.1	334.4	159.71	3.094		
4,900.0	4,894.9	7,567.9	7,567.9	10.8	151.4	126.76	377.4	-180.9	497.7	335.7	161.93	3.073		
5,000.0	4,994.7	7,667.7	7,667.7	11.1	153.4	127.32	377.4	-180.9	501.3	337.2	164.15	3.054		
5,100.0	5,094.5	7,767.5	7,767.5	11.3	155.4	127.86	377.4	-180.9	505.0	338.6	166.37	3.035	SF	
5,200.0	5,194.4	7,790.0	7,790.0	11.6	155.8	127.98	377.4	-180.9	514.6	347.5	167.06	3.080		
5,300.0	5,294.2	7,790.0	7,790.0	11.8	155.8	127.98	377.4	-180.9	542.3	375.0	167.29	3.242		
5,400.0	5,394.0	7,790.0	7,790.0	12.1	155.8	127.98	377.4	-180.9	585.9	418.4	167.53	3.498		
5,500.0	5,493.8	7,790.0	7,790.0	12.3	155.8	127.98	377.4	-180.9	642.3	474.6	167.76	3.829		
5,600.0	5,593.6	7,790.0	7,790.0	12.6	155.8	127.98	377.4	-180.9	708.4	540.4	168.00	4.217		
5,700.0	5,693.5	7,790.0	7,790.0	12.8	155.8	129.13	377.4	-180.9	781.4	613.2	168.27	4.644		
5,800.0	5,793.5	7,790.0	7,790.0	13.0	155.8	130.99	377.4	-180.9	858.6	690.2	168.49	5.096		
5,900.0	5,893.5	7,790.0	7,790.0	13.2	155.8	-2.33	377.4	-180.9	939.5	770.8	168.64	5.571		

COMPASS 2003.21 Build 46

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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
SRC Kiehn (Existing) Pad Sec.4-T4N-R68W - Huleatt #1 (P&A) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 7000-UNKNOWN													
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	67.9	140.0	88.06	4,242.7	-407.0	903.3	695.6	207.70	4.349	
10,300.0	7,000.0	7,000.0	7,000.0	69.8	140.0	88.06	4,242.7	-407.0	803.9	594.3	209.60	3.835	
10,400.0	7,000.0	7,000.0	7,000.0	71.7	140.0	88.06	4,242.7	-407.0	704.6	493.0	211.51	3.331	
10,500.0	7,000.0	7,000.0	7,000.0	73.6	140.0	88.06	4,242.7	-407.0	605.5	392.1	213.42	2.837	
10,600.0	7,000.0	7,000.0	7,000.0	75.5	140.0	88.06	4,242.7	-407.0	506.8	291.4	215.34	2.353	
10,700.0	7,000.0	7,000.0	7,000.0	77.4	140.0	88.06	4,242.7	-407.0	408.7	191.5	217.25	1.881	
10,800.0	7,000.0	7,000.0	7,000.0	79.3	140.0	88.06	4,242.7	-407.0	311.8	92.7	219.17	1.423 Level 3	
10,900.0	7,000.0	7,000.0	7,000.0	81.3	140.0	88.06	4,242.7	-407.0	217.9	-3.2	221.09	0.985 Level 1	
11,000.0	7,000.0	7,000.0	7,000.0	83.2	140.0	88.06	4,242.7	-407.0	132.9	-90.1	223.01	0.596 Level 1	
11,099.0	7,000.0	7,000.0	7,000.0	85.1	140.0	88.06	4,242.7	-407.0	88.8	-136.1	224.91	0.395 Level 1, CC	
11,100.0	7,000.0	7,000.0	7,000.0	85.1	140.0	88.06	4,242.7	-407.0	88.8	-136.1	224.93	0.395 Level 1, ES, SF	
11,200.0	7,000.0	7,000.0	7,000.0	87.0	140.0	88.06	4,242.7	-407.0	134.5	-92.3	226.85	0.593 Level 1	
11,288.8	7,000.0	7,000.0	7,000.0	88.4	140.0	88.06	4,242.7	-407.0	209.6	-18.7	228.22	0.918 Level 1	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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
SRC Kiehn (Existing) Pad Sec.4-T4N-R68W - Saulcy #4-1 (P&A) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 8163-UNKNOWN													
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	7,043.0	7,043.0	67.9	140.9	90.00	4,290.1	-429.3	950.5	741.8	208.68	4.555	
10,300.0	7,000.0	7,043.0	7,043.0	69.8	140.9	90.00	4,290.1	-429.3	850.8	640.2	210.59	4.040	
10,400.0	7,000.0	7,043.0	7,043.0	71.7	140.9	90.00	4,290.1	-429.3	751.1	538.6	212.50	3.535	
10,500.0	7,000.0	7,043.0	7,043.0	73.6	140.9	90.00	4,290.1	-429.3	651.7	437.2	214.41	3.039	
10,600.0	7,000.0	7,043.0	7,043.0	75.5	140.9	90.00	4,290.1	-429.3	552.3	336.0	216.33	2.553	
10,700.0	7,000.0	7,043.0	7,043.0	77.4	140.9	90.00	4,290.1	-429.3	453.3	235.1	218.25	2.077	
10,800.0	7,000.0	7,043.0	7,043.0	79.3	140.9	90.00	4,290.1	-429.3	354.9	134.7	220.16	1.612	
10,900.0	7,000.0	7,043.0	7,043.0	81.3	140.9	90.00	4,290.1	-429.3	257.6	35.5	222.08	1.160	Level 2
11,000.0	7,000.0	7,043.0	7,043.0	83.2	140.9	90.00	4,290.1	-429.3	163.7	-60.4	224.00	0.731	Level 1
11,100.0	7,000.0	7,043.0	7,043.0	85.1	140.9	90.00	4,290.1	-429.3	84.9	-141.0	225.93	0.376	Level 1
11,147.9	7,000.0	7,043.0	7,043.0	86.0	140.9	90.00	4,290.1	-429.3	70.1	-156.7	226.85	0.309	Level 1, CC, ES, SF
11,200.0	7,000.0	7,043.0	7,043.0	87.0	140.9	90.00	4,290.1	-429.3	87.4	-140.5	227.85	0.383	Level 1
11,288.8	7,000.0	7,043.0	7,043.0	88.4	140.9	90.00	4,290.1	-429.3	157.4	-71.8	229.22	0.687	Level 1

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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
0.0	0.0	0.0	0.0	0.0	0.0	-90.93	-0.7	-44.9	44.9				
100.0	100.0	100.0	100.0	0.1	0.1	-90.93	-0.7	-44.9	44.9	44.7	0.22	199.721	
200.0	200.0	200.0	200.0	0.3	0.3	-90.93	-0.7	-44.9	44.9	44.2	0.67	66.574	
300.0	300.0	300.0	300.0	0.6	0.6	-90.93	-0.7	-44.9	44.9	43.8	1.12	39.944	
400.0	400.0	400.0	400.0	0.8	0.8	-90.93	-0.7	-44.9	44.9	43.3	1.57	28.532	
500.0	500.0	500.0	500.0	1.0	1.0	-90.93	-0.7	-44.9	44.9	42.9	2.02	22.191	
600.0	600.0	600.0	600.0	1.2	1.2	-90.93	-0.7	-44.9	44.9	42.4	2.47	18.156	
700.0	700.0	700.0	700.0	1.5	1.5	-90.93	-0.7	-44.9	44.9	42.0	2.92	15.363	
800.0	800.0	800.0	800.0	1.7	1.7	-90.93	-0.7	-44.9	44.9	41.5	3.37	13.315	
900.0	900.0	900.0	900.0	1.9	1.9	-90.93	-0.7	-44.9	44.9	41.1	3.82	11.748	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.93	-0.7	-44.9	44.9	40.6	4.27	10.512	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.93	-0.7	-44.9	44.9	40.2	4.72	9.511	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.93	-0.7	-44.9	44.9	39.7	5.17	8.684	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.93	-0.7	-44.9	44.9	39.3	5.62	7.989	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.93	-0.7	-44.9	44.9	38.8	6.07	7.397	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.93	-0.7	-44.9	44.9	38.4	6.52	6.887	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-90.93	-0.7	-44.9	44.9	37.9	6.97	6.443 CC, ES	
1,700.0	1,700.0	1,698.5	1,698.4	3.7	3.7	-91.44	-1.2	-46.5	46.6	39.2	7.40	6.294	
1,800.0	1,800.0	1,796.7	1,796.5	3.9	3.9	-92.76	-2.5	-51.4	51.6	43.8	7.81	6.601	
1,900.0	1,900.0	1,894.5	1,893.9	4.2	4.1	-94.47	-4.6	-59.5	60.0	51.7	8.24	7.282	
2,000.0	2,000.0	1,991.6	1,990.3	4.4	4.3	-96.18	-7.7	-70.7	71.8	63.1	8.67	8.279	
2,100.0	2,100.0	2,090.4	2,088.2	4.6	4.5	36.38	-11.3	-84.1	84.3	75.2	9.05	9.313	
2,200.0	2,199.8	2,189.9	2,186.7	4.8	4.8	36.94	-14.9	-97.6	94.1	84.7	9.43	9.986	
2,300.0	2,299.7	2,289.5	2,285.3	5.0	5.1	37.79	-18.5	-111.2	103.3	93.5	9.82	10.516	
2,400.0	2,399.5	2,389.1	2,383.9	5.1	5.3	38.49	-22.2	-124.7	112.4	102.2	10.22	10.997	
2,500.0	2,499.3	2,488.6	2,482.5	5.3	5.6	39.09	-25.8	-138.3	121.6	111.0	10.64	11.435	
2,600.0	2,599.1	2,588.2	2,581.1	5.5	5.9	39.61	-29.4	-151.8	130.8	119.7	11.05	11.833	
2,700.0	2,698.9	2,687.8	2,679.6	5.8	6.2	40.06	-33.1	-165.4	140.0	128.5	11.48	12.196	
2,800.0	2,798.7	2,787.4	2,778.2	6.0	6.5	40.45	-36.7	-178.9	149.2	137.3	11.91	12.528	
2,900.0	2,898.6	2,886.9	2,876.8	6.2	6.8	40.80	-40.3	-192.4	158.4	146.0	12.34	12.832	
3,000.0	2,998.4	2,986.5	2,975.4	6.4	7.1	41.11	-44.0	-206.0	167.6	154.8	12.78	13.110	
3,100.0	3,098.2	3,086.1	3,073.9	6.6	7.5	41.39	-47.6	-219.5	176.8	163.6	13.23	13.366	
3,200.0	3,198.0	3,185.6	3,172.5	6.8	7.8	41.64	-51.2	-233.1	186.0	172.4	13.68	13.602	
3,300.0	3,297.8	3,285.2	3,271.1	7.1	8.1	41.86	-54.9	-246.6	195.3	181.1	14.13	13.819	
3,400.0	3,397.7	3,384.8	3,369.7	7.3	8.4	42.07	-58.5	-260.1	204.5	189.9	14.59	14.020	
3,500.0	3,497.5	3,484.4	3,468.3	7.5	8.7	42.26	-62.2	-273.7	213.7	198.7	15.04	14.206	
3,600.0	3,597.3	3,583.9	3,566.8	7.7	9.1	42.43	-65.8	-287.2	222.9	207.4	15.51	14.379	
3,700.0	3,697.1	3,683.5	3,665.4	8.0	9.4	42.59	-69.4	-300.8	232.2	216.2	15.97	14.540	
3,800.0	3,796.9	3,783.1	3,764.0	8.2	9.7	42.74	-73.1	-314.3	241.4	225.0	16.43	14.689	
3,900.0	3,896.7	3,882.6	3,862.6	8.4	10.1	42.87	-76.7	-327.9	250.6	233.7	16.90	14.829	
4,000.0	3,996.6	3,982.2	3,961.2	8.7	10.4	43.00	-80.3	-341.4	259.9	242.5	17.37	14.960	
4,100.0	4,096.4	4,081.8	4,059.7	8.9	10.7	43.11	-84.0	-354.9	269.1	251.3	17.84	15.082	
4,200.0	4,196.2	4,181.3	4,158.3	9.2	11.1	43.22	-87.6	-368.5	278.4	260.0	18.32	15.196	
4,300.0	4,296.0	4,280.9	4,256.9	9.4	11.4	43.33	-91.2	-382.0	287.6	268.8	18.79	15.304	
4,400.0	4,395.8	4,380.5	4,355.5	9.6	11.8	43.42	-94.9	-395.6	296.8	277.6	19.27	15.405	
4,500.0	4,495.6	4,480.1	4,454.1	9.9	12.1	43.51	-98.5	-409.1	306.1	286.3	19.75	15.501	
4,600.0	4,595.5	4,579.6	4,552.6	10.1	12.4	43.60	-102.1	-422.7	315.3	295.1	20.23	15.591	
4,700.0	4,695.3	4,679.2	4,651.2	10.4	12.8	43.68	-105.8	-436.2	324.6	303.9	20.71	15.676	
4,800.0	4,795.1	4,778.8	4,749.8	10.6	13.1	43.76	-109.4	-449.7	333.8	312.6	21.19	15.756	
4,900.0	4,894.9	4,878.3	4,848.4	10.8	13.5	43.83	-113.0	-463.3	343.1	321.4	21.67	15.832	
5,000.0	4,994.7	4,977.9	4,946.9	11.1	13.8	43.90	-116.7	-476.8	352.3	330.1	22.15	15.904	
5,100.0	5,094.5	5,077.5	5,045.5	11.3	14.1	43.96	-120.3	-490.4	361.5	338.9	22.64	15.973	

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 32-4CHZ
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 32-4CHZ	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	
5,200.0	5,194.4	5,177.1	5,144.1	11.6	14.5	44.02	-124.0	-503.9	370.8	347.7	23.12	16.038	
5,300.0	5,294.2	5,276.6	5,242.7	11.8	14.8	44.08	-127.6	-517.5	380.0	356.4	23.61	16.100	
5,400.0	5,394.0	5,376.2	5,341.3	12.1	15.2	44.13	-131.2	-531.0	389.3	365.2	24.09	16.158	
5,500.0	5,493.8	5,475.8	5,439.8	12.3	15.5	44.19	-134.9	-544.5	398.5	373.9	24.58	16.215	
5,600.0	5,593.6	5,575.3	5,538.4	12.6	15.9	44.24	-138.5	-558.1	407.8	382.7	25.07	16.268	
5,700.0	5,693.5	5,674.9	5,636.9	12.8	16.2	44.31	-142.1	-571.6	417.6	392.0	25.53	16.355	
5,800.0	5,793.5	5,780.7	5,741.7	13.0	16.5	44.12	-145.9	-585.7	429.4	403.5	25.95	16.548	
5,900.0	5,893.5	5,897.2	5,857.6	13.2	16.8	-89.75	-149.1	-597.5	439.5	412.9	26.59	16.527	
6,000.0	5,993.5	6,014.4	5,974.6	13.4	17.0	-90.00	-151.0	-604.7	445.7	418.7	26.99	16.513	
6,100.0	6,093.5	6,132.2	6,092.3	13.6	17.2	-90.09	-151.7	-607.4	448.0	420.6	27.39	16.353	
6,200.0	6,193.5	6,233.3	6,193.5	13.8	17.4	-90.09	-151.7	-607.4	448.0	420.2	27.78	16.126	
6,300.0	6,293.5	6,333.0	6,293.1	13.9	17.6	-85.71	-151.7	-607.4	448.0	420.0	27.95	16.030	
6,400.0	6,393.0	6,429.1	6,388.9	14.1	17.7	-85.76	-144.0	-607.9	447.9	419.6	28.29	15.831	
6,500.0	6,490.5	6,525.4	6,482.9	14.3	17.8	-85.89	-123.6	-609.2	447.6	419.0	28.56	15.671	
6,600.0	6,583.9	6,621.8	6,573.4	14.4	17.9	-86.09	-90.7	-611.4	447.1	418.3	28.80	15.527	
6,700.0	6,671.5	6,718.4	6,658.8	14.5	18.0	-86.36	-45.9	-614.3	446.5	417.4	29.06	15.363	
6,800.0	6,751.5	6,815.2	6,737.7	14.6	18.1	-86.71	10.1	-618.0	445.7	416.3	29.44	15.138	
6,900.0	6,822.5	6,912.4	6,808.4	14.8	18.3	-87.12	76.4	-622.3	444.8	414.8	30.03	14.814	
7,000.0	6,882.9	7,009.9	6,869.8	15.2	18.5	-87.58	152.0	-627.3	443.8	412.9	30.90	14.365	
7,100.0	6,931.7	7,107.9	6,920.4	15.9	18.8	-88.10	235.6	-632.8	442.7	410.6	32.10	13.791	
7,200.0	6,967.9	7,206.3	6,959.4	16.7	19.3	-88.65	325.7	-638.7	441.6	408.0	33.67	13.116	
7,300.0	6,990.7	7,305.3	6,985.7	17.7	19.9	-89.23	420.8	-644.9	440.5	404.9	35.58	12.380	
7,400.0	6,999.8	7,404.7	6,998.7	18.8	20.8	-89.83	519.1	-651.4	439.4	401.6	37.78	11.630	
7,500.0	7,000.0	7,504.7	7,000.0	20.1	21.8	-90.00	618.8	-657.9	438.3	398.1	40.23	10.895	
7,600.0	7,000.0	7,604.7	7,000.0	21.5	23.0	-90.00	718.6	-664.5	437.2	394.3	42.90	10.191	
7,700.0	7,000.0	7,704.7	7,000.0	22.9	24.3	-90.00	818.4	-671.0	436.1	390.4	45.74	9.533	
7,800.0	7,000.0	7,804.7	7,000.0	24.4	25.7	-90.00	918.2	-677.6	435.0	386.3	48.74	8.926	
7,900.0	7,000.0	7,904.7	7,000.0	26.0	27.2	-90.00	1,018.0	-684.1	433.9	382.1	51.85	8.369	
8,000.0	7,000.0	8,004.7	7,000.0	27.6	28.7	-90.00	1,117.7	-690.6	432.8	377.8	55.06	7.860	
8,100.0	7,000.0	8,104.7	7,000.0	29.3	30.2	-90.00	1,217.5	-697.2	431.7	373.4	58.36	7.397	
8,200.0	7,000.0	8,204.7	7,000.0	31.0	31.8	-90.00	1,317.3	-703.7	430.6	368.9	61.73	6.976	
8,300.0	7,000.0	8,304.6	7,000.0	32.7	33.5	-90.00	1,417.1	-710.3	429.5	364.4	65.16	6.592	
8,400.0	7,000.0	8,404.6	7,000.0	34.4	35.2	-90.00	1,516.9	-716.8	428.4	359.8	68.63	6.242	
8,500.0	7,000.0	8,504.6	7,000.0	36.2	36.9	-90.00	1,616.6	-723.4	427.3	355.2	72.16	5.922	
8,600.0	7,000.0	8,604.6	7,000.0	38.0	38.6	-90.00	1,716.4	-729.9	426.2	350.5	75.71	5.630	
8,700.0	7,000.0	8,704.6	7,000.0	39.8	40.3	-90.00	1,816.2	-736.4	425.1	345.8	79.31	5.361	
8,800.0	7,000.0	8,804.6	7,000.0	41.6	42.1	-90.00	1,916.0	-743.0	424.0	341.1	82.92	5.114	
8,900.0	7,000.0	8,904.6	7,000.0	43.4	43.9	-90.00	2,015.8	-749.5	423.0	336.4	86.57	4.886	
9,000.0	7,000.0	9,004.6	7,000.0	45.3	45.7	-90.00	2,115.5	-756.1	421.9	331.6	90.23	4.675	
9,100.0	7,000.0	9,104.6	7,000.0	47.1	47.5	-90.00	2,215.3	-762.6	420.8	326.8	93.92	4.480	
9,200.0	7,000.0	9,204.6	7,000.0	49.0	49.3	-90.00	2,315.1	-769.2	419.7	322.0	97.62	4.299	
9,300.0	7,000.0	9,304.6	7,000.0	50.9	51.1	-90.00	2,414.9	-775.7	418.6	317.2	101.33	4.131	
9,400.0	7,000.0	9,404.6	7,000.0	52.7	53.0	-90.00	2,514.7	-782.2	417.5	312.4	105.06	3.973	
9,500.0	7,000.0	9,504.6	7,000.0	54.6	54.8	-90.00	2,614.4	-788.8	416.4	307.6	108.81	3.827	
9,600.0	7,000.0	9,604.6	7,000.0	56.5	56.7	-90.00	2,714.2	-795.3	415.3	302.7	112.56	3.689	
9,700.0	7,000.0	9,704.6	7,000.0	58.4	58.5	-90.00	2,814.0	-801.9	414.2	297.9	116.32	3.561	
9,800.0	7,000.0	9,804.6	7,000.0	60.3	60.4	-90.00	2,913.8	-808.4	413.1	293.0	120.09	3.440	
9,900.0	7,000.0	9,904.5	7,000.0	62.2	62.2	-90.00	3,013.6	-815.0	412.0	288.1	123.87	3.326	
10,000.0	7,000.0	10,004.5	7,000.0	64.1	64.1	-90.00	3,113.3	-821.5	410.9	283.2	127.66	3.219	
10,100.0	7,000.0	10,104.5	7,000.0	66.0	66.0	-90.00	3,213.1	-828.1	409.8	278.3	131.45	3.118	
10,200.0	7,000.0	10,204.5	7,000.0	67.9	67.9	-90.00	3,312.9	-834.6	408.7	273.5	135.25	3.022	
10,300.0	7,000.0	10,304.5	7,000.0	69.8	69.8	-90.00	3,412.7	-841.1	407.6	268.6	139.05	2.931	

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 32-4CHZ
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 32-4CHZ	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						
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
10,400.0	7,000.0	10,404.5	7,000.0	71.7	71.6	-90.00	3,512.4	-847.7	406.5	263.6	142.87	2.845	
10,500.0	7,000.0	10,504.5	7,000.0	73.6	73.5	-90.00	3,612.2	-854.2	405.4	258.7	146.68	2.764	
10,600.0	7,000.0	10,604.5	7,000.0	75.5	75.4	-90.00	3,712.0	-860.8	404.3	253.8	150.50	2.687	
10,700.0	7,000.0	10,704.5	7,000.0	77.4	77.3	-90.00	3,811.8	-867.3	403.2	248.9	154.32	2.613	
10,800.0	7,000.0	10,804.5	7,000.0	79.3	79.2	-90.00	3,911.6	-873.9	402.1	244.0	158.15	2.543	
10,900.0	7,000.0	10,904.5	7,000.0	81.3	81.1	-90.00	4,011.3	-880.4	401.0	239.0	161.98	2.476	
11,000.0	7,000.0	11,004.5	7,000.0	83.2	83.0	-90.00	4,111.1	-886.9	399.9	234.1	165.82	2.412	
11,100.0	7,000.0	11,104.5	7,000.0	85.1	84.9	-90.00	4,210.9	-893.5	398.8	229.2	169.65	2.351	
11,200.0	7,000.0	11,204.5	7,000.0	87.0	86.8	-90.00	4,310.7	-900.0	397.7	224.2	173.49	2.293	
11,288.8	7,000.0	11,293.2	7,000.0	88.4	88.5	-90.00	4,399.3	-905.8	396.8	220.2	176.56	2.247 SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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	-90.91	-0.4	-22.6	22.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.91	-0.4	-22.6	22.6	22.4	0.22	100.480		
200.0	200.0	200.0	200.0	0.3	0.3	-90.91	-0.4	-22.6	22.6	21.9	0.67	33.493		
300.0	300.0	300.0	300.0	0.6	0.6	-90.91	-0.4	-22.6	22.6	21.5	1.12	20.096		
400.0	400.0	400.0	400.0	0.8	0.8	-90.91	-0.4	-22.6	22.6	21.0	1.57	14.354		
500.0	500.0	500.0	500.0	1.0	1.0	-90.91	-0.4	-22.6	22.6	20.6	2.02	11.164		
600.0	600.0	600.0	600.0	1.2	1.2	-90.91	-0.4	-22.6	22.6	20.1	2.47	9.135		
700.0	700.0	700.0	700.0	1.5	1.5	-90.91	-0.4	-22.6	22.6	19.7	2.92	7.729		
800.0	800.0	800.0	800.0	1.7	1.7	-90.91	-0.4	-22.6	22.6	19.2	3.37	6.699		
900.0	900.0	900.0	900.0	1.9	1.9	-90.91	-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	-90.91	-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	-90.91	-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	-90.91	-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	-90.91	-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	-90.91	-0.4	-22.6	22.6	16.5	6.07	3.721		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-90.91	-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	-90.91	-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	-90.91	-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	-90.91	-0.4	-22.6	22.6	14.7	7.87	2.871 CC		
1,900.0	1,900.0	1,899.2	1,899.2	4.2	4.1	-92.41	-1.0	-24.2	24.2	15.9	8.30	2.918		
2,000.0	2,000.0	1,998.2	1,998.1	4.4	4.3	-95.89	-3.0	-28.9	29.1	20.4	8.71	3.345		
2,100.0	2,100.0	2,097.1	2,096.6	4.6	4.5	35.29	-6.2	-36.8	36.0	26.9	9.09	3.959		
2,200.0	2,199.8	2,197.0	2,195.9	4.8	4.7	35.97	-10.0	-45.8	41.3	31.9	9.46	4.368		
2,300.0	2,299.7	2,296.8	2,295.4	5.0	5.0	37.24	-13.7	-54.8	45.9	36.0	9.84	4.662		
2,400.0	2,399.5	2,396.7	2,394.8	5.1	5.2	38.27	-17.4	-63.8	50.5	40.2	10.23	4.932		
2,500.0	2,499.3	2,496.6	2,494.2	5.3	5.4	39.13	-21.2	-72.8	55.1	44.4	10.63	5.180		
2,600.0	2,599.1	2,596.5	2,593.6	5.5	5.7	39.86	-24.9	-81.9	59.7	48.7	11.04	5.407		
2,700.0	2,698.9	2,696.4	2,693.0	5.8	5.9	40.48	-28.6	-90.9	64.3	52.9	11.46	5.615		
2,800.0	2,798.7	2,796.3	2,792.4	6.0	6.2	41.02	-32.4	-99.9	68.9	57.1	11.87	5.806		
2,900.0	2,898.6	2,896.2	2,891.8	6.2	6.4	41.49	-36.1	-108.9	73.6	61.3	12.30	5.982		
3,000.0	2,998.4	2,996.1	2,991.2	6.4	6.7	41.91	-39.8	-117.9	78.2	65.5	12.73	6.144		
3,100.0	3,098.2	3,096.0	3,090.7	6.6	6.9	42.28	-43.6	-127.0	82.9	69.7	13.16	6.294		
3,200.0	3,198.0	3,195.9	3,190.1	6.8	7.2	42.61	-47.3	-136.0	87.5	73.9	13.60	6.432		
3,300.0	3,297.8	3,295.8	3,289.5	7.1	7.4	42.90	-51.0	-145.0	92.1	78.1	14.05	6.560		
3,400.0	3,397.7	3,395.6	3,388.9	7.3	7.7	43.17	-54.8	-154.0	96.8	82.3	14.49	6.679		
3,500.0	3,497.5	3,495.5	3,488.3	7.5	8.0	43.41	-58.5	-163.0	101.4	86.5	14.94	6.790		
3,600.0	3,597.3	3,595.4	3,587.7	7.7	8.3	43.64	-62.3	-172.1	106.1	90.7	15.39	6.893		
3,700.0	3,697.1	3,695.3	3,687.1	8.0	8.5	43.84	-66.0	-181.1	110.8	94.9	15.85	6.989		
3,800.0	3,796.9	3,795.2	3,786.5	8.2	8.8	44.03	-69.7	-190.1	115.4	99.1	16.30	7.078		
3,900.0	3,896.7	3,895.1	3,886.0	8.4	9.1	44.20	-73.5	-199.1	120.1	103.3	16.76	7.162		
4,000.0	3,996.6	3,995.0	3,985.4	8.7	9.3	44.36	-77.2	-208.1	124.7	107.5	17.22	7.241		
4,100.0	4,096.4	4,094.9	4,084.8	8.9	9.6	44.51	-80.9	-217.2	129.4	111.7	17.69	7.315		
4,200.0	4,196.2	4,194.8	4,184.2	9.2	9.9	44.65	-84.7	-226.2	134.0	115.9	18.15	7.384		
4,300.0	4,296.0	4,294.7	4,283.6	9.4	10.2	44.77	-88.4	-235.2	138.7	120.1	18.62	7.450		
4,400.0	4,395.8	4,394.6	4,383.0	9.6	10.5	44.89	-92.1	-244.2	143.4	124.3	19.09	7.511		
4,500.0	4,495.6	4,494.4	4,482.4	9.9	10.7	45.01	-95.9	-253.2	148.0	128.5	19.56	7.569		
4,600.0	4,595.5	4,594.3	4,581.9	10.1	11.0	45.11	-99.6	-262.3	152.7	132.7	20.03	7.624		
4,700.0	4,695.3	4,694.2	4,681.3	10.4	11.3	45.21	-103.3	-271.3	157.3	136.8	20.50	7.676		
4,800.0	4,795.1	4,794.1	4,780.7	10.6	11.6	45.31	-107.1	-280.3	162.0	141.0	20.97	7.726		
4,900.0	4,894.9	4,894.0	4,880.1	10.8	11.9	45.40	-110.8	-289.3	166.7	145.2	21.44	7.772		
5,000.0	4,994.7	4,993.9	4,979.5	11.1	12.2	45.48	-114.5	-298.3	171.3	149.4	21.92	7.817		
5,100.0	5,094.5	5,093.8	5,078.9	11.3	12.4	45.56	-118.3	-307.4	176.0	153.6	22.39	7.859		

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 32-4CHZ
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 32-4CHZ	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-MWDD												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	5,194.4	5,193.7	5,178.3	11.6	12.7	45.63	-122.0	-316.4	180.7	157.8	22.87	7.899	
5,300.0	5,294.2	5,293.6	5,277.7	11.8	13.0	45.70	-125.7	-325.4	185.3	162.0	23.35	7.938	
5,400.0	5,394.0	5,393.5	5,377.2	12.1	13.3	45.77	-129.5	-334.4	190.0	166.2	23.83	7.974	
5,500.0	5,493.8	5,493.4	5,476.6	12.3	13.6	45.84	-133.2	-343.4	194.7	170.3	24.31	8.009	
5,600.0	5,593.6	5,593.2	5,576.0	12.6	13.9	45.90	-136.9	-352.5	199.3	174.5	24.78	8.042	
5,700.0	5,693.5	5,693.1	5,675.4	12.8	14.1	45.85	-140.7	-361.5	204.5	179.3	25.24	8.102	
5,800.0	5,793.5	5,792.8	5,774.6	13.0	14.4	45.23	-144.4	-370.5	212.0	186.4	25.65	8.268	
5,900.0	5,893.5	5,896.4	5,877.7	13.2	14.7	-89.23	-148.1	-379.3	220.5	194.3	26.21	8.412	
6,000.0	5,993.5	6,004.0	5,985.1	13.4	14.9	-89.87	-150.5	-385.2	225.9	199.3	26.59	8.497	
6,100.0	6,093.5	6,111.8	6,092.9	13.6	15.1	-90.09	-151.4	-387.3	227.9	200.9	26.97	8.449	
6,200.0	6,193.5	6,212.4	6,193.5	13.8	15.3	-90.09	-151.4	-387.3	227.9	200.5	27.36	8.329	
6,300.0	6,293.5	6,312.2	6,293.3	13.9	15.5	-85.71	-151.3	-387.3	227.9	200.3	27.59	8.258	
6,400.0	6,393.0	6,410.2	6,390.9	14.1	15.6	-85.76	-143.3	-387.8	227.8	199.8	27.94	8.151	
6,500.0	6,490.5	6,508.2	6,486.5	14.3	15.8	-85.88	-122.1	-389.2	227.5	199.3	28.22	8.063	
6,600.0	6,583.9	6,606.4	6,578.5	14.4	15.9	-86.09	-88.1	-391.4	227.1	198.6	28.46	7.980	
6,700.0	6,671.5	6,704.6	6,665.0	14.5	16.0	-86.36	-41.7	-394.5	226.5	197.8	28.73	7.884	
6,800.0	6,751.5	6,803.0	6,744.4	14.6	16.1	-86.71	16.0	-398.2	225.8	196.7	29.12	7.753	
6,900.0	6,822.5	6,901.6	6,815.3	14.8	16.2	-87.12	84.3	-402.7	224.9	195.2	29.72	7.569	
7,000.0	6,882.9	7,000.3	6,876.2	15.2	16.5	-87.59	161.7	-407.8	224.0	193.4	30.61	7.319	
7,100.0	6,931.7	7,099.3	6,926.0	15.9	16.9	-88.10	247.0	-413.4	223.0	191.1	31.84	7.003	
7,200.0	6,967.9	7,198.5	6,963.6	16.7	17.5	-88.66	338.5	-419.4	221.9	188.5	33.44	6.637	
7,300.0	6,990.7	7,298.0	6,988.3	17.7	18.4	-89.25	434.6	-425.7	220.8	185.4	35.38	6.241	
7,400.0	6,999.8	7,397.8	6,999.4	18.8	19.4	-89.87	533.5	-432.1	219.7	182.1	37.60	5.842	
7,500.0	7,000.0	7,497.8	7,000.0	20.1	20.6	-90.00	633.2	-438.7	218.6	178.5	40.08	5.454	
7,600.0	7,000.0	7,597.8	7,000.0	21.5	21.9	-90.00	733.0	-445.2	217.5	174.7	42.77	5.085	
7,700.0	7,000.0	7,697.8	7,000.0	22.9	23.3	-90.00	832.8	-451.8	216.4	170.7	45.63	4.742	
7,800.0	7,000.0	7,797.7	7,000.0	24.4	24.8	-90.00	932.6	-458.3	215.3	166.6	48.64	4.426	
7,900.0	7,000.0	7,897.7	7,000.0	26.0	26.3	-90.00	1,032.4	-464.8	214.2	162.4	51.77	4.137	
8,000.0	7,000.0	7,997.7	7,000.0	27.6	27.9	-90.00	1,132.1	-471.4	213.1	158.1	55.00	3.874	
8,100.0	7,000.0	8,097.7	7,000.0	29.3	29.5	-90.00	1,231.9	-477.9	212.0	153.7	58.31	3.635	
8,200.0	7,000.0	8,197.7	7,000.0	31.0	31.1	-90.00	1,331.7	-484.4	210.9	149.2	61.69	3.418	
8,300.0	7,000.0	8,297.7	7,000.0	32.7	32.8	-90.00	1,431.5	-491.0	209.8	144.6	65.13	3.221	
8,400.0	7,000.0	8,397.7	7,000.0	34.4	34.6	-90.00	1,531.3	-497.5	208.7	140.0	68.61	3.041	
8,500.0	7,000.0	8,497.7	7,000.0	36.2	36.3	-90.00	1,631.0	-504.0	207.5	135.4	72.14	2.877	
8,600.0	7,000.0	8,597.7	7,000.0	38.0	38.1	-90.00	1,730.8	-510.6	206.4	130.7	75.71	2.727	
8,700.0	7,000.0	8,697.7	7,000.0	39.8	39.8	-90.00	1,830.6	-517.1	205.3	126.0	79.31	2.589	
8,800.0	7,000.0	8,797.7	7,000.0	41.6	41.6	-90.00	1,930.4	-523.7	204.2	121.3	82.93	2.463	
8,900.0	7,000.0	8,897.7	7,000.0	43.4	43.4	-90.00	2,030.2	-530.2	203.1	116.6	86.58	2.346	
9,000.0	7,000.0	8,997.7	7,000.0	45.3	45.2	-90.00	2,129.9	-536.7	202.0	111.8	90.25	2.239	
9,100.0	7,000.0	9,097.7	7,000.0	47.1	47.1	-90.00	2,229.7	-543.3	200.9	107.0	93.94	2.139	
9,200.0	7,000.0	9,197.7	7,000.0	49.0	48.9	-90.00	2,329.5	-549.8	199.8	102.2	97.64	2.046	
9,300.0	7,000.0	9,297.7	7,000.0	50.9	50.8	-90.00	2,429.3	-556.3	198.7	97.4	101.36	1.960	
9,400.0	7,000.0	9,397.7	7,000.0	52.7	52.6	-90.00	2,529.1	-562.9	197.6	92.5	105.10	1.880	
9,500.0	7,000.0	9,497.6	7,000.0	54.6	54.5	-90.00	2,628.8	-569.4	196.5	87.7	108.84	1.806	
9,600.0	7,000.0	9,597.6	7,000.0	56.5	56.3	-90.00	2,728.6	-575.9	195.4	82.8	112.60	1.735	
9,700.0	7,000.0	9,697.6	7,000.0	58.4	58.2	-90.00	2,828.4	-582.5	194.3	77.9	116.36	1.670	
9,800.0	7,000.0	9,797.6	7,000.0	60.3	60.1	-90.00	2,928.2	-589.0	193.2	73.1	120.14	1.608	
9,900.0	7,000.0	9,897.6	7,000.0	62.2	62.0	-90.00	3,028.0	-595.6	192.1	68.2	123.92	1.550	
10,000.0	7,000.0	9,997.6	7,000.0	64.1	63.9	-90.00	3,127.7	-602.1	191.0	63.3	127.71	1.496 Level 3	
10,100.0	7,000.0	10,097.6	7,000.0	66.0	65.7	-90.00	3,227.5	-608.6	189.9	58.4	131.50	1.444 Level 3	
10,200.0	7,000.0	10,197.6	7,000.0	67.9	67.6	-90.00	3,327.3	-615.2	188.8	53.5	135.31	1.395 Level 3	
10,300.0	7,000.0	10,297.6	7,000.0	69.8	69.5	-90.00	3,427.1	-621.7	187.7	48.6	139.11	1.349 Level 3	

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 32-4CHZ
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 32-4CHZ	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						
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
10,400.0	7,000.0	10,397.6	7,000.0	71.7	71.4	-90.00	3,526.9	-628.2	186.6	43.7	142.93	1.305	Level 3
10,500.0	7,000.0	10,497.6	7,000.0	73.6	73.3	-90.00	3,626.6	-634.8	185.5	38.7	146.74	1.264	Level 3
10,600.0	7,000.0	10,597.6	7,000.0	75.5	75.2	-90.00	3,726.4	-641.3	184.4	33.8	150.56	1.225	Level 2
10,700.0	7,000.0	10,697.6	7,000.0	77.4	77.1	-90.00	3,826.2	-647.8	183.3	28.9	154.39	1.187	Level 2
10,800.0	7,000.0	10,797.6	7,000.0	79.3	79.0	-90.00	3,926.0	-654.4	182.2	24.0	158.22	1.151	Level 2
10,900.0	7,000.0	10,897.6	7,000.0	81.3	80.9	-90.00	4,025.8	-660.9	181.1	19.0	162.05	1.117	Level 2
11,000.0	7,000.0	10,997.6	7,000.0	83.2	82.9	-90.00	4,125.5	-667.5	180.0	14.1	165.89	1.085	Level 2
11,100.0	7,000.0	11,097.5	7,000.0	85.1	84.8	-90.00	4,225.3	-674.0	178.9	9.1	169.72	1.054	Level 2
11,200.0	7,000.0	11,197.5	7,000.0	87.0	86.7	-90.00	4,325.1	-680.5	177.8	4.2	173.57	1.024	Level 2
11,288.8	7,000.0	11,286.3	7,000.0	88.4	88.4	-90.00	4,413.7	-686.3	176.8	0.1	176.63	1.001	Level 2, ES, SF

Offset Design SRC Kiehn Pad Sec.4-T4N-R68W - SRC Kiehn 32-4NHZ - 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	89.08	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 CC, ES		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-140.29	0.4	22.6	23.9	14.7	9.19	2.601		
2,200.0	2,199.8	2,199.8	2,199.8	4.8	4.8	-146.94	0.4	22.6	28.0	18.4	9.58	2.924		
2,300.0	2,299.7	2,299.7	2,299.7	5.0	5.0	-149.64	-1.3	22.9	33.2	23.2	9.96	3.329		
2,400.0	2,399.5	2,399.6	2,399.5	5.1	5.2	-147.48	-5.7	23.8	38.3	27.9	10.32	3.709		
2,500.0	2,499.3	2,499.4	2,499.2	5.3	5.4	-145.55	-10.4	24.7	43.4	32.7	10.68	4.064		
2,600.0	2,599.1	2,599.3	2,599.0	5.5	5.6	-144.03	-15.0	25.7	48.6	37.6	11.06	4.396		
2,700.0	2,698.9	2,699.2	2,698.7	5.8	5.7	-142.80	-19.6	26.6	53.8	42.4	11.44	4.704		
2,800.0	2,798.7	2,799.0	2,798.5	6.0	5.9	-141.79	-24.2	27.5	59.1	47.2	11.83	4.992		
2,900.0	2,898.6	2,898.9	2,898.2	6.2	6.1	-140.95	-28.8	28.5	64.3	52.1	12.23	5.259		
3,000.0	2,998.4	2,998.7	2,997.9	6.4	6.3	-140.23	-33.4	29.4	69.6	57.0	12.64	5.507		
3,100.0	3,098.2	3,098.6	3,097.7	6.6	6.5	-139.61	-38.0	30.3	74.9	61.8	13.05	5.739		
3,200.0	3,198.0	3,198.4	3,197.4	6.8	6.7	-139.08	-42.6	31.2	80.2	66.7	13.46	5.954		
3,300.0	3,297.8	3,298.3	3,297.2	7.1	6.9	-138.61	-47.3	32.2	85.5	71.6	13.88	6.155		
3,400.0	3,397.7	3,398.2	3,396.9	7.3	7.1	-138.19	-51.9	33.1	90.8	76.5	14.31	6.343		
3,500.0	3,497.5	3,498.0	3,496.7	7.5	7.3	-137.83	-56.5	34.0	96.1	81.3	14.74	6.518		
3,600.0	3,597.3	3,597.9	3,596.4	7.7	7.6	-137.50	-61.1	35.0	101.4	86.2	15.17	6.682		
3,700.0	3,697.1	3,697.7	3,696.2	8.0	7.8	-137.20	-65.7	35.9	106.7	91.1	15.61	6.836		
3,800.0	3,796.9	3,797.6	3,795.9	8.2	8.0	-136.93	-70.3	36.8	112.0	95.9	16.04	6.980		
3,900.0	3,896.7	3,897.5	3,895.7	8.4	8.2	-136.69	-74.9	37.7	117.3	100.8	16.49	7.116		
4,000.0	3,996.6	3,997.3	3,995.4	8.7	8.4	-136.46	-79.5	38.7	122.6	105.7	16.93	7.243		
4,100.0	4,096.4	4,097.2	4,095.2	8.9	8.6	-136.26	-84.2	39.6	127.9	110.6	17.38	7.363		
4,200.0	4,196.2	4,197.0	4,194.9	9.2	8.9	-136.07	-88.8	40.5	133.3	115.4	17.82	7.476		
4,300.0	4,296.0	4,296.9	4,294.7	9.4	9.1	-135.90	-93.4	41.5	138.6	120.3	18.27	7.583		
4,400.0	4,395.8	4,396.7	4,394.4	9.6	9.3	-135.73	-98.0	42.4	143.9	125.2	18.73	7.684		
4,500.0	4,495.6	4,496.6	4,494.1	9.9	9.5	-135.58	-102.6	43.3	149.2	130.0	19.18	7.780		
4,600.0	4,595.5	4,596.5	4,593.9	10.1	9.8	-135.45	-107.2	44.2	154.5	134.9	19.64	7.870		
4,700.0	4,695.3	4,696.3	4,693.6	10.4	10.0	-135.32	-111.8	45.2	159.9	139.8	20.09	7.956		
4,800.0	4,795.1	4,796.2	4,793.4	10.6	10.2	-135.19	-116.5	46.1	165.2	144.6	20.55	8.038		
4,900.0	4,894.9	4,896.0	4,893.1	10.8	10.4	-135.08	-121.1	47.0	170.5	149.5	21.01	8.115		
5,000.0	4,994.7	4,995.9	4,992.9	11.1	10.7	-134.97	-125.7	48.0	175.8	154.4	21.47	8.189		
5,100.0	5,094.5	5,095.7	5,092.6	11.3	10.9	-134.87	-130.3	48.9	181.2	159.2	21.94	8.259		

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Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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	5,194.4	5,195.6	5,192.4	11.6	11.1	-134.78	-134.9	49.8	186.5	164.1	22.40	8.326	
5,300.0	5,294.2	5,295.5	5,292.1	11.8	11.4	-134.69	-139.5	50.7	191.8	169.0	22.86	8.390	
5,400.0	5,394.0	5,395.3	5,391.9	12.1	11.6	-134.60	-144.1	51.7	197.2	173.8	23.33	8.451	
5,500.0	5,493.8	5,495.6	5,492.1	12.3	11.8	-134.56	-148.6	52.6	202.5	178.7	23.79	8.509	
5,600.0	5,593.6	5,597.1	5,593.5	12.6	12.0	-135.22	-150.6	53.0	207.2	182.9	24.23	8.549	
5,700.0	5,693.5	5,697.1	5,693.5	12.8	12.2	-136.26	-150.6	53.0	210.9	186.3	24.65	8.556	
5,800.0	5,793.5	5,797.0	5,793.5	13.0	12.4	-136.65	-150.6	53.0	212.4	187.3	25.05	8.479	
5,900.0	5,893.5	5,897.0	5,893.5	13.2	12.6	89.90	-150.6	53.0	212.4	186.9	25.48	8.334	
6,000.0	5,993.5	5,997.0	5,993.5	13.4	12.8	89.90	-150.6	53.0	212.4	186.5	25.88	8.207	
6,100.0	6,093.5	6,097.0	6,093.5	13.6	13.0	89.90	-150.6	53.0	212.4	186.1	26.27	8.084	
6,200.0	6,193.5	6,197.0	6,193.5	13.8	13.2	89.90	-150.6	53.0	212.4	185.7	26.67	7.964	
6,263.1	6,256.6	6,260.1	6,256.6	13.9	13.3	94.35	-150.6	53.0	212.4	185.5	26.88	7.901	
6,300.0	6,293.5	6,297.2	6,293.7	13.9	13.4	94.28	-150.6	53.0	212.4	185.4	27.03	7.857	
6,400.0	6,393.0	6,399.1	6,395.1	14.1	13.6	94.23	-142.0	52.4	212.5	185.1	27.39	7.758	
6,500.0	6,490.5	6,501.0	6,494.3	14.3	13.7	94.09	-119.1	50.9	212.7	185.0	27.67	7.686	
6,600.0	6,583.9	6,602.8	6,589.1	14.4	13.9	93.87	-82.4	48.5	213.0	185.1	27.93	7.627	
6,700.0	6,671.5	6,704.5	6,677.7	14.5	14.0	93.57	-32.8	45.3	213.5	185.3	28.23	7.563	
6,800.0	6,751.5	6,806.0	6,758.3	14.6	14.3	93.20	28.7	41.2	214.1	185.5	28.66	7.470	
6,900.0	6,822.5	6,907.3	6,829.2	14.8	14.6	92.77	100.8	36.5	214.8	185.5	29.32	7.328	
7,000.0	6,882.9	7,008.4	6,889.1	15.2	15.1	92.29	182.0	31.2	215.7	185.4	30.27	7.125	
7,100.0	6,931.7	7,109.3	6,936.8	15.9	15.8	91.76	270.6	25.4	216.6	185.0	31.57	6.860	
7,200.0	6,967.9	7,210.0	6,971.6	16.7	16.6	91.21	364.7	19.3	217.6	184.3	33.24	6.545	
7,300.0	6,990.7	7,310.4	6,992.7	17.7	17.6	90.64	462.6	12.9	218.6	183.4	35.25	6.203	
7,400.0	6,999.8	7,410.5	7,000.0	18.8	18.8	90.06	562.2	6.3	219.7	182.2	37.54	5.854	
7,500.0	7,000.0	7,510.5	7,000.0	20.1	20.0	90.00	661.9	-0.2	220.8	180.8	40.06	5.513	
7,600.0	7,000.0	7,610.5	7,000.0	21.5	21.4	90.00	761.7	-6.7	222.0	179.2	42.79	5.187	
7,700.0	7,000.0	7,710.5	7,000.0	22.9	22.9	90.00	861.5	-13.2	223.1	177.4	45.69	4.882	
7,800.0	7,000.0	7,810.5	7,000.0	24.4	24.4	90.00	961.3	-19.8	224.2	175.4	48.73	4.601	
7,900.0	7,000.0	7,910.5	7,000.0	26.0	26.0	90.00	1,061.1	-26.3	225.3	173.4	51.88	4.342	
8,000.0	7,000.0	8,010.5	7,000.0	27.6	27.6	90.00	1,160.8	-32.8	226.4	171.3	55.13	4.106	
8,100.0	7,000.0	8,110.5	7,000.0	29.3	29.3	90.00	1,260.6	-39.4	227.5	169.0	58.46	3.892	
8,200.0	7,000.0	8,210.5	7,000.0	31.0	31.0	90.00	1,360.4	-45.9	228.6	166.8	61.86	3.696	
8,300.0	7,000.0	8,310.5	7,000.0	32.7	32.7	90.00	1,460.2	-52.4	229.7	164.4	65.31	3.517	
8,400.0	7,000.0	8,410.4	7,000.0	34.4	34.4	90.00	1,560.0	-59.0	230.8	162.0	68.81	3.355	
8,500.0	7,000.0	8,510.4	7,000.0	36.2	36.2	90.00	1,659.7	-65.5	232.0	159.6	72.36	3.206	
8,600.0	7,000.0	8,610.4	7,000.0	38.0	38.0	90.00	1,759.5	-72.0	233.1	157.1	75.93	3.069	
8,700.0	7,000.0	8,710.4	7,000.0	39.8	39.8	90.00	1,859.3	-78.5	234.2	154.6	79.54	2.944	
8,800.0	7,000.0	8,810.4	7,000.0	41.6	41.6	90.00	1,959.1	-85.1	235.3	152.1	83.17	2.829	
8,900.0	7,000.0	8,910.4	7,000.0	43.4	43.4	90.00	2,058.9	-91.6	236.4	149.6	86.83	2.722	
9,000.0	7,000.0	9,010.4	7,000.0	45.3	45.3	90.00	2,158.6	-98.1	237.5	147.0	90.51	2.624	
9,100.0	7,000.0	9,110.4	7,000.0	47.1	47.1	90.00	2,258.4	-104.7	238.6	144.4	94.21	2.533	
9,200.0	7,000.0	9,210.4	7,000.0	49.0	49.0	90.00	2,358.2	-111.2	239.7	141.8	97.92	2.448	
9,300.0	7,000.0	9,310.4	7,000.0	50.9	50.8	90.00	2,458.0	-117.7	240.8	139.2	101.64	2.369	
9,400.0	7,000.0	9,410.4	7,000.0	52.7	52.7	90.00	2,557.8	-124.2	241.9	136.6	105.38	2.296	
9,500.0	7,000.0	9,510.4	7,000.0	54.6	54.6	90.00	2,657.6	-130.8	243.1	133.9	109.13	2.227	
9,600.0	7,000.0	9,610.4	7,000.0	56.5	56.5	90.00	2,757.3	-137.3	244.2	131.3	112.89	2.163	
9,700.0	7,000.0	9,710.4	7,000.0	58.4	58.3	90.00	2,857.1	-143.8	245.3	128.6	116.66	2.102	
9,800.0	7,000.0	9,810.4	7,000.0	60.3	60.2	90.00	2,956.9	-150.4	246.4	125.9	120.44	2.046	
9,900.0	7,000.0	9,910.4	7,000.0	62.2	62.1	90.00	3,056.7	-156.9	247.5	123.3	124.23	1.992	
10,000.0	7,000.0	10,010.3	7,000.0	64.1	64.0	90.00	3,156.5	-163.4	248.6	120.6	128.02	1.942	
10,100.0	7,000.0	10,110.3	7,000.0	66.0	65.9	90.00	3,256.2	-169.9	249.7	117.9	131.82	1.894	
10,200.0	7,000.0	10,210.3	7,000.0	67.9	67.8	90.00	3,356.0	-176.5	250.8	115.2	135.62	1.849	

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 32-4CHZ
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 32-4CHZ	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 32-4NHZ - 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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.0	7,000.0	10,310.3	7,000.0	69.8	69.7	90.00	3,455.8	-183.0	251.9	112.5	139.43	1.807		
10,400.0	7,000.0	10,410.3	7,000.0	71.7	71.6	90.00	3,555.6	-189.5	253.0	109.8	143.25	1.767		
10,500.0	7,000.0	10,510.3	7,000.0	73.6	73.5	90.00	3,655.4	-196.1	254.2	107.1	147.07	1.728		
10,600.0	7,000.0	10,610.3	7,000.0	75.5	75.4	90.00	3,755.1	-202.6	255.3	104.4	150.89	1.692		
10,700.0	7,000.0	10,710.3	7,000.0	77.4	77.3	90.00	3,854.9	-209.1	256.4	101.7	154.72	1.657		
10,800.0	7,000.0	10,810.3	7,000.0	79.3	79.3	90.00	3,954.7	-215.7	257.5	98.9	158.55	1.624		
10,900.0	7,000.0	10,910.3	7,000.0	81.3	81.2	90.00	4,054.5	-222.2	258.6	96.2	162.38	1.593		
11,000.0	7,000.0	11,010.3	7,000.0	83.2	83.1	90.00	4,154.3	-228.7	259.7	93.5	166.22	1.562		
11,100.0	7,000.0	11,110.3	7,000.0	85.1	85.0	90.00	4,254.0	-235.2	260.8	90.8	170.06	1.534		
11,200.0	7,000.0	11,210.3	7,000.0	87.0	86.9	90.00	4,353.8	-241.8	261.9	88.0	173.91	1.506		
11,288.8	7,000.0	11,281.5	7,000.0	88.4	88.3	90.00	4,424.9	-246.4	263.5	86.9	176.64	1.492 Level 3, SF		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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	0.7	45.2	45.2					
100.0	100.0	100.0	100.0	0.1	0.1	89.08	0.7	45.2	45.2	44.9	0.22	200.961		
200.0	200.0	200.0	200.0	0.3	0.3	89.08	0.7	45.2	45.2	44.5	0.67	66.987		
300.0	300.0	300.0	300.0	0.6	0.6	89.08	0.7	45.2	45.2	44.0	1.12	40.192		
400.0	400.0	400.0	400.0	0.8	0.8	89.08	0.7	45.2	45.2	43.6	1.57	28.709		
500.0	500.0	500.0	500.0	1.0	1.0	89.08	0.7	45.2	45.2	43.1	2.02	22.329		
600.0	600.0	600.0	600.0	1.2	1.2	89.08	0.7	45.2	45.2	42.7	2.47	18.269		
700.0	700.0	700.0	700.0	1.5	1.5	89.08	0.7	45.2	45.2	42.2	2.92	15.459		
800.0	800.0	800.0	800.0	1.7	1.7	89.08	0.7	45.2	45.2	41.8	3.37	13.397		
900.0	900.0	900.0	900.0	1.9	1.9	89.08	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	89.08	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	89.08	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	89.08	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	89.08	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	89.08	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	89.08	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	89.08	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	89.08	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	89.08	0.7	45.2	45.2	37.3	7.87	5.742		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	89.08	0.7	45.2	45.2	36.9	8.32	5.431		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	89.08	0.7	45.2	45.2	36.4	8.77	5.153 CC, ES		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-138.91	0.7	45.2	46.5	37.3	9.19	5.058		
2,200.0	2,199.8	2,199.8	2,199.8	4.8	4.8	-142.69	0.7	45.2	50.4	40.8	9.58	5.262		
2,300.0	2,299.7	2,299.7	2,299.7	5.0	5.1	-146.49	0.7	45.2	55.4	45.4	9.99	5.542		
2,400.0	2,399.5	2,399.5	2,399.5	5.1	5.3	-149.65	0.7	45.2	60.5	50.1	10.40	5.817		
2,500.0	2,499.3	2,499.3	2,499.3	5.3	5.5	-152.31	0.7	45.2	65.8	55.0	10.81	6.083		
2,600.0	2,599.1	2,599.1	2,599.1	5.5	5.7	-154.57	0.7	45.2	71.2	60.0	11.23	6.338		
2,700.0	2,698.9	2,698.9	2,698.9	5.8	6.0	-156.50	0.7	45.2	76.7	65.0	11.65	6.582		
2,800.0	2,798.7	2,798.7	2,798.7	6.0	6.2	-158.18	0.7	45.2	82.3	70.2	12.07	6.814		
2,900.0	2,898.6	2,898.6	2,898.6	6.2	6.4	-159.65	0.7	45.2	87.9	75.4	12.50	7.034		
3,000.0	2,998.4	2,998.4	2,998.4	6.4	6.6	-160.93	0.7	45.2	93.6	80.7	12.93	7.242		
3,100.0	3,098.2	3,096.4	3,096.4	6.6	6.8	-161.25	-0.2	46.5	100.2	86.9	13.33	7.517		
3,200.0	3,198.0	3,194.2	3,194.0	6.8	7.0	-160.03	-2.9	50.6	108.6	94.9	13.72	7.918		
3,300.0	3,297.8	3,291.3	3,290.8	7.1	7.2	-157.65	-7.4	57.5	119.0	104.9	14.11	8.432		
3,400.0	3,397.7	3,388.4	3,387.2	7.3	7.4	-154.54	-13.7	67.0	131.6	117.0	14.52	9.063		
3,500.0	3,497.5	3,487.2	3,485.3	7.5	7.6	-151.63	-20.7	77.5	145.1	130.2	14.93	9.718		
3,600.0	3,597.3	3,586.1	3,583.3	7.7	7.8	-149.23	-27.6	87.9	158.9	143.6	15.35	10.353		
3,700.0	3,697.1	3,684.9	3,681.3	8.0	8.0	-147.21	-34.5	98.4	173.0	157.2	15.78	10.966		
3,800.0	3,796.9	3,783.8	3,779.4	8.2	8.3	-145.49	-41.5	108.9	187.2	171.0	16.21	11.553		
3,900.0	3,896.7	3,882.6	3,877.4	8.4	8.5	-144.02	-48.4	119.3	201.6	185.0	16.64	12.116		
4,000.0	3,996.6	3,981.4	3,975.4	8.7	8.7	-142.75	-55.3	129.8	216.1	199.1	17.08	12.653		
4,100.0	4,096.4	4,080.3	4,073.5	8.9	9.0	-141.63	-62.3	140.3	230.7	213.2	17.52	13.166		
4,200.0	4,196.2	4,179.1	4,171.5	9.2	9.3	-140.65	-69.2	150.7	245.4	227.4	17.97	13.656		
4,300.0	4,296.0	4,277.9	4,269.5	9.4	9.5	-139.78	-76.2	161.2	260.1	241.7	18.42	14.123		
4,400.0	4,395.8	4,376.8	4,367.6	9.6	9.8	-139.00	-83.1	171.7	274.9	256.1	18.87	14.568		
4,500.0	4,495.6	4,475.6	4,465.6	9.9	10.0	-138.30	-90.0	182.1	289.8	270.4	19.33	14.993		
4,600.0	4,595.5	4,574.4	4,563.7	10.1	10.3	-137.67	-97.0	192.6	304.6	284.8	19.78	15.398		
4,700.0	4,695.3	4,673.3	4,661.7	10.4	10.6	-137.10	-103.9	203.1	319.5	299.3	20.24	15.785		
4,800.0	4,795.1	4,772.1	4,759.7	10.6	10.9	-136.58	-110.8	213.5	334.5	313.8	20.70	16.155		
4,900.0	4,894.9	4,870.9	4,857.8	10.8	11.1	-136.10	-117.8	224.0	349.4	328.2	21.17	16.508		
5,000.0	4,994.7	4,969.8	4,955.8	11.1	11.4	-135.67	-124.7	234.5	364.4	342.8	21.63	16.845		
5,100.0	5,094.5	5,068.6	5,053.8	11.3	11.7	-135.26	-131.6	244.9	379.4	357.3	22.10	17.168		

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 32-4CHZ
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 32-4CHZ	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		
5,200.0	5,194.4	5,169.6	5,154.0	11.6	12.0	-134.89	-138.7	255.6	394.4	371.8	22.57	17.473		
5,300.0	5,294.2	5,282.1	5,265.9	11.8	12.3	-134.71	-145.0	265.1	407.2	384.1	23.05	17.667		
5,400.0	5,394.0	5,395.5	5,379.1	12.1	12.5	-134.87	-148.9	270.9	416.7	393.2	23.52	17.717		
5,500.0	5,493.8	5,509.4	5,492.9	12.3	12.7	-135.35	-150.3	273.1	422.9	398.9	23.99	17.631		
5,600.0	5,593.6	5,610.1	5,593.6	12.6	12.9	-135.93	-150.3	273.1	427.2	402.8	24.42	17.493		
5,700.0	5,693.5	5,709.9	5,693.5	12.8	13.1	-136.45	-150.3	273.1	431.0	406.2	24.87	17.332		
5,800.0	5,793.5	5,809.9	5,793.5	13.0	13.3	-136.65	-150.3	273.1	432.5	407.2	25.29	17.101		
5,900.0	5,893.5	5,909.9	5,893.5	13.2	13.5	89.90	-150.3	273.1	432.5	406.8	25.68	16.839		
6,000.0	5,993.5	6,009.9	5,993.5	13.4	13.7	89.90	-150.3	273.1	432.5	406.4	26.09	16.576		
6,100.0	6,093.5	6,109.9	6,093.5	13.6	13.9	89.90	-150.3	273.1	432.5	406.0	26.50	16.321		
6,200.0	6,193.5	6,209.9	6,193.5	13.8	14.1	89.90	-150.3	273.1	432.5	405.6	26.91	16.072		
6,263.1	6,256.6	6,273.0	6,256.6	13.9	14.3	94.32	-150.3	273.1	432.5	405.3	27.18	15.911		
6,300.0	6,293.5	6,310.3	6,293.9	13.9	14.4	94.28	-150.2	273.1	432.5	405.1	27.33	15.823		
6,400.0	6,393.0	6,414.3	6,397.3	14.1	14.5	94.23	-141.2	272.5	432.5	404.8	27.69	15.618		
6,500.0	6,490.5	6,518.1	6,498.4	14.3	14.7	94.09	-117.5	270.9	432.7	404.7	27.98	15.466		
6,600.0	6,583.9	6,621.8	6,594.7	14.4	14.8	93.87	-79.4	268.4	433.0	404.8	28.23	15.339		
6,700.0	6,671.5	6,725.3	6,684.3	14.5	14.9	93.57	-28.1	265.1	433.5	405.0	28.52	15.198		
6,800.0	6,751.5	6,828.4	6,765.4	14.6	15.0	93.20	35.4	260.9	434.0	405.1	28.94	15.000		
6,900.0	6,822.5	6,931.1	6,836.2	14.8	15.1	92.77	109.5	256.1	434.7	405.1	29.57	14.701		
7,000.0	6,882.9	7,033.4	6,895.4	15.2	15.4	92.28	192.6	250.7	435.5	405.0	30.49	14.281		
7,100.0	6,931.7	7,135.1	6,942.0	15.9	16.1	91.75	282.8	244.8	436.3	404.6	31.77	13.736		
7,200.0	6,967.9	7,236.4	6,975.2	16.7	16.9	91.19	378.1	238.5	437.3	403.9	33.40	13.092		
7,300.0	6,990.7	7,337.2	6,994.6	17.7	17.9	90.61	476.7	232.1	438.3	403.0	35.38	12.391		
7,400.0	6,999.8	7,437.3	7,000.0	18.8	19.0	90.04	576.5	225.6	439.4	401.8	37.63	11.678		
7,500.0	7,000.0	7,537.3	7,000.0	20.1	20.3	90.00	676.3	219.0	440.5	400.4	40.12	10.980		
7,600.0	7,000.0	7,637.3	7,000.0	21.5	21.6	90.00	776.0	212.5	441.7	398.8	42.82	10.315		
7,700.0	7,000.0	7,737.3	7,000.0	22.9	23.0	90.00	875.8	206.0	442.8	397.1	45.69	9.691		
7,800.0	7,000.0	7,837.3	7,000.0	24.4	24.5	90.00	975.6	199.5	443.9	395.2	48.70	9.114		
7,900.0	7,000.0	7,937.3	7,000.0	26.0	26.1	90.00	1,075.4	193.0	445.0	393.2	51.84	8.585		
8,000.0	7,000.0	8,037.3	7,000.0	27.6	27.7	90.00	1,175.2	186.4	446.1	391.1	55.07	8.102		
8,100.0	7,000.0	8,137.3	7,000.0	29.3	29.3	90.00	1,274.9	179.9	447.3	388.9	58.38	7.661		
8,200.0	7,000.0	8,237.3	7,000.0	31.0	31.0	90.00	1,374.7	173.4	448.4	386.6	61.76	7.260		
8,300.0	7,000.0	8,337.3	7,000.0	32.7	32.7	90.00	1,474.5	166.9	449.5	384.3	65.20	6.894		
8,400.0	7,000.0	8,437.3	7,000.0	34.4	34.4	90.00	1,574.3	160.3	450.6	381.9	68.69	6.560		
8,500.0	7,000.0	8,537.3	7,000.0	36.2	36.2	90.00	1,674.1	153.8	451.7	379.5	72.22	6.255		
8,600.0	7,000.0	8,637.3	7,000.0	38.0	38.0	90.00	1,773.8	147.3	452.8	377.1	75.79	5.975		
8,700.0	7,000.0	8,737.3	7,000.0	39.8	39.8	90.00	1,873.6	140.8	454.0	374.6	79.39	5.718		
8,800.0	7,000.0	8,837.3	7,000.0	41.6	41.6	90.00	1,973.4	134.3	455.1	372.1	83.02	5.482		
8,900.0	7,000.0	8,937.3	7,000.0	43.4	43.4	90.00	2,073.2	127.7	456.2	369.5	86.67	5.264		
9,000.0	7,000.0	9,037.2	7,000.0	45.3	45.2	90.00	2,173.0	121.2	457.3	367.0	90.34	5.062		
9,100.0	7,000.0	9,137.2	7,000.0	47.1	47.1	90.00	2,272.7	114.7	458.4	364.4	94.03	4.876		
9,200.0	7,000.0	9,237.2	7,000.0	49.0	48.9	90.00	2,372.5	108.2	459.6	361.8	97.73	4.702		
9,300.0	7,000.0	9,337.2	7,000.0	50.9	50.8	90.00	2,472.3	101.7	460.7	359.2	101.45	4.541		
9,400.0	7,000.0	9,437.2	7,000.0	52.7	52.6	90.00	2,572.1	95.1	461.8	356.6	105.19	4.390		
9,500.0	7,000.0	9,537.2	7,000.0	54.6	54.5	90.00	2,671.9	88.6	462.9	354.0	108.93	4.249		
9,600.0	7,000.0	9,637.2	7,000.0	56.5	56.3	90.00	2,771.7	82.1	464.0	351.3	112.69	4.118		
9,700.0	7,000.0	9,737.2	7,000.0	58.4	58.2	90.00	2,871.4	75.6	465.1	348.7	116.46	3.994		
9,800.0	7,000.0	9,837.2	7,000.0	60.3	60.1	90.00	2,971.2	69.0	466.3	346.0	120.23	3.878		
9,900.0	7,000.0	9,937.2	7,000.0	62.2	62.0	90.00	3,071.0	62.5	467.4	343.4	124.01	3.769		
10,000.0	7,000.0	10,037.2	7,000.0	64.1	63.9	90.00	3,170.8	56.0	468.5	340.7	127.80	3.666		
10,100.0	7,000.0	10,137.2	7,000.0	66.0	65.8	90.00	3,270.6	49.5	469.6	338.0	131.60	3.569		
10,200.0	7,000.0	10,237.2	7,000.0	67.9	67.7	90.00	3,370.3	43.0	470.7	335.3	135.40	3.477		

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 32-4CHZ
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 32-4CHZ	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		
10,300.0	7,000.0	10,337.2	7,000.0	69.8	69.6	90.00	3,470.1	36.4	471.9	332.6	139.21	3.390		
10,400.0	7,000.0	10,437.2	7,000.0	71.7	71.5	90.00	3,569.9	29.9	473.0	330.0	143.02	3.307		
10,500.0	7,000.0	10,537.2	7,000.0	73.6	73.4	90.00	3,669.7	23.4	474.1	327.3	146.84	3.229		
10,600.0	7,000.0	10,637.1	7,000.0	75.5	75.3	90.00	3,769.5	16.9	475.2	324.6	150.66	3.154		
10,700.0	7,000.0	10,737.1	7,000.0	77.4	77.2	90.00	3,869.2	10.4	476.3	321.8	154.48	3.083		
10,800.0	7,000.0	10,837.1	7,000.0	79.3	79.1	90.00	3,969.0	3.8	477.4	319.1	158.31	3.016		
10,900.0	7,000.0	10,937.1	7,000.0	81.3	81.0	90.00	4,068.8	-2.7	478.6	316.4	162.15	2.951		
11,000.0	7,000.0	11,037.1	7,000.0	83.2	82.9	90.00	4,168.6	-9.2	479.7	313.7	165.98	2.890		
11,100.0	7,000.0	11,137.1	7,000.0	85.1	84.8	90.00	4,268.4	-15.7	480.8	311.0	169.82	2.831		
11,200.0	7,000.0	11,237.1	7,000.0	87.0	86.8	90.00	4,368.1	-22.3	481.9	308.3	173.66	2.775		
11,288.8	7,000.0	11,293.3	7,000.0	88.4	87.8	90.00	4,424.2	-25.9	484.0	307.9	176.11	2.748 SF		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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										Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.04	1.1	65.0	65.0					
100.0	100.0	100.0	100.0	0.1	0.1	89.04	1.1	65.0	65.0	64.7	0.22	289.040		
200.0	200.0	200.0	200.0	0.3	0.3	89.04	1.1	65.0	65.0	64.3	0.67	96.347		
300.0	300.0	300.0	300.0	0.6	0.6	89.04	1.1	65.0	65.0	63.8	1.12	57.808		
400.0	400.0	400.0	400.0	0.8	0.8	89.04	1.1	65.0	65.0	63.4	1.57	41.291		
500.0	500.0	500.0	500.0	1.0	1.0	89.04	1.1	65.0	65.0	62.9	2.02	32.116		
600.0	600.0	600.0	600.0	1.2	1.2	89.04	1.1	65.0	65.0	62.5	2.47	26.276		
700.0	700.0	700.0	700.0	1.5	1.5	89.04	1.1	65.0	65.0	62.0	2.92	22.234		
800.0	800.0	800.0	800.0	1.7	1.7	89.04	1.1	65.0	65.0	61.6	3.37	19.269		
900.0	900.0	900.0	900.0	1.9	1.9	89.04	1.1	65.0	65.0	61.1	3.82	17.002		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.04	1.1	65.0	65.0	60.7	4.27	15.213		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.04	1.1	65.0	65.0	60.2	4.72	13.764		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.04	1.1	65.0	65.0	59.8	5.17	12.567		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.04	1.1	65.0	65.0	59.3	5.62	11.562		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.04	1.1	65.0	65.0	58.9	6.07	10.705		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.04	1.1	65.0	65.0	58.4	6.52	9.967 CC, ES		
1,600.0	1,600.0	1,597.9	1,597.9	3.5	3.5	89.54	0.5	66.5	66.6	59.6	6.95	9.585		
1,700.0	1,700.0	1,695.5	1,695.4	3.7	3.7	90.91	-1.1	71.2	71.4	64.0	7.36	9.703		
1,800.0	1,800.0	1,792.7	1,792.2	3.9	3.9	92.81	-3.9	79.0	79.5	71.7	7.78	10.220		
1,900.0	1,900.0	1,889.3	1,888.1	4.2	4.1	94.89	-7.7	89.9	91.0	82.8	8.22	11.073		
2,000.0	2,000.0	1,987.3	1,985.0	4.4	4.3	96.85	-12.4	103.2	105.0	96.3	8.67	12.114		
2,100.0	2,100.0	2,086.1	2,082.8	4.6	4.6	-128.59	-17.2	116.8	120.4	111.3	9.03	13.335		
2,200.0	2,199.8	2,184.5	2,180.2	4.8	4.8	-128.84	-22.0	130.3	137.8	128.4	9.41	14.646		
2,300.0	2,299.7	2,282.9	2,277.5	5.0	5.1	-129.46	-26.7	143.8	155.8	146.0	9.80	15.895		
2,400.0	2,399.5	2,381.2	2,374.8	5.1	5.4	-129.95	-31.5	157.4	173.9	163.7	10.21	17.034		
2,500.0	2,499.3	2,479.6	2,472.1	5.3	5.7	-130.35	-36.3	170.9	191.9	181.3	10.62	18.073		
2,600.0	2,599.1	2,577.9	2,569.4	5.5	6.0	-130.68	-41.0	184.4	210.0	198.9	11.04	19.024		
2,700.0	2,698.9	2,676.3	2,666.7	5.8	6.3	-130.96	-45.8	197.9	228.1	216.6	11.46	19.894		
2,800.0	2,798.7	2,774.6	2,764.0	6.0	6.6	-131.20	-50.6	211.5	246.1	234.2	11.89	20.693		
2,900.0	2,898.6	2,873.0	2,861.3	6.2	6.9	-131.40	-55.4	225.0	264.2	251.9	12.33	21.427		
3,000.0	2,998.4	2,971.3	2,958.6	6.4	7.2	-131.58	-60.1	238.5	282.3	269.5	12.77	22.104		
3,100.0	3,098.2	3,069.7	3,055.9	6.6	7.6	-131.74	-64.9	252.0	300.4	287.1	13.21	22.729		
3,200.0	3,198.0	3,168.0	3,153.2	6.8	7.9	-131.88	-69.7	265.5	318.4	304.8	13.66	23.306		
3,300.0	3,297.8	3,266.4	3,250.5	7.1	8.2	-132.00	-74.4	279.1	336.5	322.4	14.11	23.842		
3,400.0	3,397.7	3,364.7	3,347.8	7.3	8.5	-132.11	-79.2	292.6	354.6	340.0	14.57	24.339		
3,500.0	3,497.5	3,463.1	3,445.1	7.5	8.9	-132.21	-84.0	306.1	372.7	357.7	15.03	24.802		
3,600.0	3,597.3	3,561.4	3,542.4	7.7	9.2	-132.30	-88.7	319.6	390.8	375.3	15.49	25.234		
3,700.0	3,697.1	3,659.8	3,639.7	8.0	9.5	-132.39	-93.5	333.2	408.9	392.9	15.95	25.637		
3,800.0	3,796.9	3,758.1	3,737.0	8.2	9.9	-132.46	-98.3	346.7	427.0	410.5	16.41	26.014		
3,900.0	3,896.7	3,856.5	3,834.3	8.4	10.2	-132.53	-103.1	360.2	445.0	428.2	16.88	26.367		
4,000.0	3,996.6	3,954.8	3,931.6	8.7	10.6	-132.60	-107.8	373.7	463.1	445.8	17.35	26.698		
4,100.0	4,096.4	4,053.2	4,028.9	8.9	10.9	-132.66	-112.6	387.3	481.2	463.4	17.82	27.010		
4,200.0	4,196.2	4,151.5	4,126.1	9.2	11.2	-132.71	-117.4	400.8	499.3	481.0	18.29	27.303		
4,300.0	4,296.0	4,249.9	4,223.4	9.4	11.6	-132.76	-122.1	414.3	517.4	498.7	18.76	27.580		
4,400.0	4,395.8	4,348.2	4,320.7	9.6	11.9	-132.81	-126.9	427.8	535.5	516.3	19.23	27.841		
4,500.0	4,495.6	4,446.5	4,418.0	9.9	12.3	-132.86	-131.7	441.4	553.6	533.9	19.71	28.087		
4,600.0	4,595.5	4,544.9	4,515.3	10.1	12.6	-132.90	-136.4	454.9	571.7	551.5	20.19	28.321		
4,700.0	4,695.3	4,650.8	4,620.2	10.4	12.9	-132.95	-141.5	469.2	589.6	568.9	20.67	28.520		
4,800.0	4,795.1	4,774.5	4,743.0	10.6	13.3	-133.11	-146.1	482.2	604.4	583.2	21.16	28.556		
4,900.0	4,894.9	4,899.4	4,867.7	10.8	13.5	-133.40	-148.9	490.2	615.0	593.4	21.64	28.420		
5,000.0	4,994.7	5,025.1	4,993.3	11.1	13.7	-133.83	-149.9	493.0	621.5	599.4	22.11	28.109		
5,100.0	5,094.5	5,126.3	5,094.5	11.3	13.9	-134.24	-149.9	493.1	625.7	603.2	22.55	27.753		

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 32-4CHZ
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 32-4CHZ	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						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	5,194.4	5,226.1	5,194.4	11.6	14.1	-134.63	-149.9	493.1	630.0	607.0	22.98	27.411	
5,300.0	5,294.2	5,326.0	5,294.2	11.8	14.2	-135.02	-149.9	493.1	634.2	610.8	23.42	27.082	
5,400.0	5,394.0	5,425.8	5,394.0	12.1	14.4	-135.40	-149.9	493.1	638.5	614.7	23.86	26.766	
5,500.0	5,493.8	5,525.6	5,493.8	12.3	14.6	-135.78	-149.9	493.1	642.9	618.6	24.29	26.461	
5,600.0	5,593.6	5,625.4	5,593.6	12.6	14.7	-136.15	-149.9	493.1	647.2	622.5	24.73	26.167	
5,700.0	5,693.5	5,725.3	5,693.5	12.8	14.9	-136.51	-149.9	493.1	651.0	625.8	25.18	25.853	
5,800.0	5,793.5	5,825.2	5,793.5	13.0	15.1	-136.65	-149.9	493.1	652.5	626.8	25.60	25.482	
5,900.0	5,893.5	5,925.2	5,893.5	13.2	15.3	89.90	-149.9	493.1	652.5	626.5	25.94	25.155	
6,000.0	5,993.5	6,025.2	5,993.5	13.4	15.4	89.90	-149.9	493.1	652.5	626.1	26.34	24.775	
6,100.0	6,093.5	6,125.2	6,093.5	13.6	15.6	89.90	-149.9	493.1	652.5	625.7	26.74	24.405	
6,200.0	6,193.5	6,225.2	6,193.5	13.8	15.8	89.90	-149.9	493.1	652.5	625.3	27.14	24.044	
6,263.1	6,256.6	6,288.3	6,256.6	13.9	15.9	94.31	-149.9	493.1	652.5	625.0	27.45	23.767	
6,300.0	6,293.5	6,325.8	6,294.1	13.9	16.0	94.28	-149.8	493.1	652.5	624.9	27.60	23.638	
6,400.0	6,393.0	6,431.9	6,399.7	14.1	16.1	94.23	-140.5	492.4	652.5	624.6	27.96	23.341	
6,500.0	6,490.5	6,537.9	6,502.6	14.3	16.3	94.09	-115.8	490.8	652.7	624.4	28.23	23.117	
6,600.0	6,583.9	6,643.6	6,600.4	14.4	16.4	93.87	-76.3	488.2	653.0	624.5	28.48	22.927	
6,700.0	6,671.5	6,748.8	6,691.1	14.5	16.4	93.56	-23.1	484.8	653.3	624.6	28.77	22.712	
6,800.0	6,751.5	6,853.5	6,772.6	14.6	16.5	93.19	42.4	480.5	653.8	624.6	29.18	22.407	
6,900.0	6,822.5	6,957.6	6,843.2	14.8	16.6	92.75	118.5	475.5	654.4	624.6	29.81	21.952	
7,000.0	6,882.9	7,061.0	6,901.7	15.2	16.8	92.26	203.5	470.0	655.1	624.4	30.74	21.311	
7,100.0	6,931.7	7,163.6	6,947.1	15.9	17.1	91.73	295.2	464.0	656.0	623.9	32.02	20.487	
7,200.0	6,967.9	7,265.4	6,978.7	16.7	17.8	91.16	391.7	457.7	656.9	623.2	33.66	19.518	
7,300.0	6,990.7	7,366.4	6,996.2	17.7	18.7	90.58	490.9	451.2	657.9	622.3	35.63	18.466	
7,400.0	6,999.8	7,466.6	7,000.0	18.8	19.8	90.03	590.8	444.7	659.0	621.1	37.88	17.398	
7,500.0	7,000.0	7,566.6	7,000.0	20.1	21.0	90.00	690.6	438.2	660.1	619.8	40.36	16.355	
7,600.0	7,000.0	7,666.6	7,000.0	21.5	22.3	90.00	790.3	431.6	661.2	618.2	43.05	15.360	
7,700.0	7,000.0	7,766.6	7,000.0	22.9	23.7	90.00	890.1	425.1	662.4	616.5	45.91	14.426	
7,800.0	7,000.0	7,866.6	7,000.0	24.4	25.2	90.00	989.9	418.6	663.5	614.6	48.92	13.563	
7,900.0	7,000.0	7,966.6	7,000.0	26.0	26.7	90.00	1,089.7	412.1	664.6	612.6	52.05	12.770	
8,000.0	7,000.0	8,066.6	7,000.0	27.6	28.3	90.00	1,189.5	405.6	665.7	610.5	55.27	12.045	
8,100.0	7,000.0	8,166.6	7,000.0	29.3	29.9	90.00	1,289.2	399.0	666.9	608.3	58.58	11.384	
8,200.0	7,000.0	8,266.6	7,000.0	31.0	31.6	90.00	1,389.0	392.5	668.0	606.0	61.95	10.782	
8,300.0	7,000.0	8,366.6	7,000.0	32.7	33.2	90.00	1,488.8	386.0	669.1	603.7	65.39	10.233	
8,400.0	7,000.0	8,466.6	7,000.0	34.4	35.0	90.00	1,588.6	379.5	670.2	601.3	68.87	9.732	
8,500.0	7,000.0	8,566.6	7,000.0	36.2	36.7	90.00	1,688.4	373.0	671.3	598.9	72.40	9.273	
8,600.0	7,000.0	8,666.6	7,000.0	38.0	38.5	90.00	1,788.1	366.5	672.5	596.5	75.96	8.853	
8,700.0	7,000.0	8,766.6	7,000.0	39.8	40.2	90.00	1,887.9	359.9	673.6	594.0	79.56	8.467	
8,800.0	7,000.0	8,866.6	7,000.0	41.6	42.0	90.00	1,987.7	353.4	674.7	591.5	83.18	8.111	
8,900.0	7,000.0	8,966.6	7,000.0	43.4	43.8	90.00	2,087.5	346.9	675.8	589.0	86.83	7.784	
9,000.0	7,000.0	9,066.6	7,000.0	45.3	45.7	90.00	2,187.3	340.4	677.0	586.5	90.49	7.481	
9,100.0	7,000.0	9,166.6	7,000.0	47.1	47.5	90.00	2,287.0	333.9	678.1	583.9	94.18	7.200	
9,200.0	7,000.0	9,266.6	7,000.0	49.0	49.3	90.00	2,386.8	327.4	679.2	581.3	97.89	6.939	
9,300.0	7,000.0	9,366.6	7,000.0	50.9	51.2	90.00	2,486.6	320.8	680.3	578.7	101.60	6.696	
9,400.0	7,000.0	9,466.6	7,000.0	52.7	53.0	90.00	2,586.4	314.3	681.4	576.1	105.34	6.469	
9,500.0	7,000.0	9,566.6	7,000.0	54.6	54.9	90.00	2,686.2	307.8	682.6	573.5	109.08	6.257	
9,600.0	7,000.0	9,666.6	7,000.0	56.5	56.7	90.00	2,786.0	301.3	683.7	570.8	112.83	6.059	
9,700.0	7,000.0	9,766.6	7,000.0	58.4	58.6	90.00	2,885.7	294.8	684.8	568.2	116.60	5.873	
9,800.0	7,000.0	9,866.6	7,000.0	60.3	60.5	90.00	2,985.5	288.2	685.9	565.6	120.37	5.699	
9,900.0	7,000.0	9,966.6	7,000.0	62.2	62.4	90.00	3,085.3	281.7	687.0	562.9	124.15	5.534	
10,000.0	7,000.0	10,066.6	7,000.0	64.1	64.2	90.00	3,185.1	275.2	688.2	560.2	127.94	5.379	
10,100.0	7,000.0	10,166.6	7,000.0	66.0	66.1	90.00	3,284.9	268.7	689.3	557.6	131.73	5.233	
10,200.0	7,000.0	10,266.6	7,000.0	67.9	68.0	90.00	3,384.6	262.2	690.4	554.9	135.53	5.094	

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 32-4CHZ
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 32-4CHZ	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							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	10,366.5	7,000.0	69.8	69.9	90.00	3,484.4	255.7	691.5	552.2	139.34	4.963		
10,400.0	7,000.0	10,466.4	7,000.0	71.7	71.8	90.00	3,584.2	249.1	692.7	549.5	143.15	4.839		
10,500.0	7,000.0	10,566.4	7,000.0	73.6	73.7	90.00	3,684.0	242.6	693.8	546.8	146.97	4.721		
10,600.0	7,000.0	10,666.4	7,000.0	75.5	75.6	90.00	3,783.8	236.1	694.9	544.1	150.79	4.609		
10,700.0	7,000.0	10,766.4	7,000.0	77.4	77.5	90.00	3,883.5	229.6	696.0	541.4	154.61	4.502		
10,800.0	7,000.0	10,866.4	7,000.0	79.3	79.4	90.00	3,983.3	223.1	697.1	538.7	158.44	4.400		
10,900.0	7,000.0	10,966.4	7,000.0	81.3	81.3	90.00	4,083.1	216.5	698.3	536.0	162.27	4.303		
11,000.0	7,000.0	11,066.4	7,000.0	83.2	83.2	90.00	4,182.9	210.0	699.4	533.3	166.11	4.211		
11,100.0	7,000.0	11,166.4	7,000.0	85.1	85.1	90.00	4,282.7	203.5	700.5	530.6	169.94	4.122		
11,200.0	7,000.0	11,266.4	7,000.0	87.0	87.0	90.00	4,382.4	197.0	701.6	527.8	173.78	4.037		
11,288.8	7,000.0	11,308.2	7,000.0	88.4	87.9	90.00	4,424.2	194.3	704.2	528.2	175.95	4.002 SF		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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 N-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 (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 CC, ES		
1,500.0	1,500.0	1,497.7	1,497.7	3.3	3.2	-91.18	-1.4	-69.1	69.2	62.7	6.50	10.644		
1,600.0	1,600.0	1,595.2	1,595.0	3.5	3.4	-91.85	-2.4	-74.0	74.2	67.3	6.91	10.729		
1,700.0	1,700.0	1,692.2	1,691.7	3.7	3.6	-92.79	-4.0	-82.1	82.6	75.2	7.34	11.253		
1,800.0	1,800.0	1,788.5	1,787.4	3.9	3.9	-93.81	-6.2	-93.3	94.3	86.6	7.77	12.138		
1,900.0	1,900.0	1,884.0	1,881.7	4.2	4.1	-94.81	-9.0	-107.5	109.4	101.2	8.22	13.315		
2,000.0	2,000.0	1,980.7	1,976.9	4.4	4.4	-95.70	-12.4	-124.5	127.2	118.6	8.68	14.664		
2,100.0	2,100.0	2,079.3	2,073.8	4.6	4.7	37.28	-15.9	-142.2	144.1	135.0	9.02	15.969		
2,200.0	2,199.8	2,178.3	2,171.1	4.8	5.0	37.68	-19.4	-159.9	158.3	148.8	9.41	16.814		
2,300.0	2,299.7	2,277.3	2,268.5	5.0	5.3	38.31	-23.0	-177.6	171.7	161.9	9.82	17.492		
2,400.0	2,399.5	2,376.4	2,365.9	5.1	5.7	38.86	-26.5	-195.4	185.2	175.0	10.23	18.101		
2,500.0	2,499.3	2,475.5	2,463.3	5.3	6.0	39.33	-30.0	-213.1	198.7	188.1	10.66	18.650		
2,600.0	2,599.1	2,574.6	2,560.7	5.5	6.4	39.74	-33.6	-230.9	212.2	201.1	11.09	19.145		
2,700.0	2,698.9	2,673.6	2,658.1	5.8	6.7	40.10	-37.1	-248.6	225.8	214.2	11.52	19.594		
2,800.0	2,798.7	2,772.7	2,755.5	6.0	7.1	40.42	-40.6	-266.4	239.3	227.3	11.96	20.001		
2,900.0	2,898.6	2,871.8	2,852.9	6.2	7.5	40.71	-44.1	-284.1	252.8	240.4	12.41	20.371		
3,000.0	2,998.4	2,970.9	2,950.3	6.4	7.9	40.97	-47.7	-301.9	266.4	253.5	12.86	20.709		
3,100.0	3,098.2	3,069.9	3,047.7	6.6	8.3	41.20	-51.2	-319.6	279.9	266.6	13.32	21.017		
3,200.0	3,198.0	3,169.0	3,145.1	6.8	8.6	41.41	-54.7	-337.4	293.5	279.7	13.78	21.298		
3,300.0	3,297.8	3,268.1	3,242.5	7.1	9.0	41.60	-58.2	-355.1	307.0	292.8	14.24	21.557		
3,400.0	3,397.7	3,367.1	3,339.9	7.3	9.4	41.78	-61.8	-372.9	320.6	305.9	14.71	21.795		
3,500.0	3,497.5	3,466.2	3,437.3	7.5	9.8	41.94	-65.3	-390.6	334.2	319.0	15.18	22.014		
3,600.0	3,597.3	3,565.3	3,534.8	7.7	10.2	42.09	-68.8	-408.4	347.7	332.1	15.65	22.217		
3,700.0	3,697.1	3,664.4	3,632.2	8.0	10.6	42.23	-72.3	-426.1	361.3	345.2	16.13	22.404		
3,800.0	3,796.9	3,763.4	3,729.6	8.2	11.0	42.35	-75.9	-443.9	374.9	358.3	16.60	22.578		
3,900.0	3,896.7	3,862.5	3,827.0	8.4	11.4	42.47	-79.4	-461.6	388.4	371.3	17.08	22.739		
4,000.0	3,996.6	3,961.6	3,924.4	8.7	11.8	42.58	-82.9	-479.4	402.0	384.4	17.56	22.890		
4,100.0	4,096.4	4,060.6	4,021.8	8.9	12.2	42.69	-86.4	-497.1	415.6	397.5	18.04	23.030		
4,200.0	4,196.2	4,159.7	4,119.2	9.2	12.6	42.78	-90.0	-514.9	429.1	410.6	18.53	23.161		
4,300.0	4,296.0	4,258.8	4,216.6	9.4	13.0	42.88	-93.5	-532.6	442.7	423.7	19.01	23.283		
4,400.0	4,395.8	4,357.9	4,314.0	9.6	13.4	42.96	-97.0	-550.4	456.3	436.8	19.50	23.398		
4,500.0	4,495.6	4,456.9	4,411.4	9.9	13.8	43.04	-100.5	-568.1	469.9	449.9	19.99	23.505		
4,600.0	4,595.5	4,556.0	4,508.8	10.1	14.2	43.12	-104.1	-585.9	483.5	463.0	20.48	23.606		
4,700.0	4,695.3	4,655.1	4,606.2	10.4	14.7	43.19	-107.6	-603.6	497.0	476.1	20.97	23.702		
4,800.0	4,795.1	4,754.1	4,703.6	10.6	15.1	43.26	-111.1	-621.4	510.6	489.2	21.46	23.791		
4,900.0	4,894.9	4,853.2	4,801.0	10.8	15.5	43.32	-114.6	-639.1	524.2	502.2	21.95	23.876		
5,000.0	4,994.7	4,952.3	4,898.4	11.1	15.9	43.39	-118.2	-656.9	537.8	515.3	22.45	23.956		
5,100.0	5,094.5	5,051.4	4,995.8	11.3	16.3	43.44	-121.7	-674.6	551.4	528.4	22.94	24.032		

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 32-4CHZ
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 32-4CHZ	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 N-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 (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	5,194.4	5,150.4	5,093.2	11.6	16.7	43.50	-125.2	-692.4	564.9	541.5	23.44	24.103		
5,300.0	5,294.2	5,249.5	5,190.6	11.8	17.1	43.55	-128.7	-710.1	578.5	554.6	23.93	24.171		
5,400.0	5,394.0	5,348.6	5,288.0	12.1	17.5	43.60	-132.3	-727.9	592.1	567.7	24.43	24.236		
5,500.0	5,493.8	5,447.6	5,385.4	12.3	17.9	43.65	-135.8	-745.6	605.7	580.8	24.93	24.297		
5,600.0	5,593.6	5,546.7	5,482.9	12.6	18.3	43.70	-139.3	-763.4	619.3	593.8	25.43	24.356		
5,700.0	5,693.5	5,646.7	5,581.1	12.8	18.8	43.83	-142.9	-781.3	633.4	607.5	25.90	24.456		
5,800.0	5,793.5	5,773.4	5,706.2	13.0	19.1	43.81	-146.8	-801.1	647.6	621.3	26.34	24.589		
5,900.0	5,893.5	5,901.4	5,833.3	13.2	19.4	-89.88	-149.7	-815.6	658.9	631.8	27.08	24.335		
6,000.0	5,993.5	6,030.4	5,962.0	13.4	19.7	-90.04	-151.4	-824.5	665.8	638.4	27.50	24.215		
6,100.0	6,093.5	6,160.0	6,091.5	13.6	19.9	-90.09	-152.1	-827.8	668.4	640.4	27.92	23.942		
6,200.0	6,193.5	6,261.9	6,193.5	13.8	20.0	-90.09	-152.1	-827.8	668.4	640.1	28.30	23.620		
6,300.0	6,293.5	6,361.3	6,292.9	13.9	20.2	-85.71	-152.0	-827.8	668.4	640.0	28.39	23.543		
6,400.0	6,393.0	6,455.8	6,387.0	14.1	20.3	-85.76	-144.6	-828.3	668.2	639.5	28.73	23.258		
6,500.0	6,490.5	6,550.0	6,479.1	14.3	20.4	-85.89	-125.0	-829.5	667.9	638.9	29.00	23.034		
6,600.0	6,583.9	6,645.0	6,568.4	14.4	20.5	-86.09	-93.2	-831.6	667.4	638.2	29.23	22.836		
6,700.0	6,671.5	6,739.9	6,652.8	14.5	20.6	-86.36	-49.9	-834.5	666.7	637.2	29.49	22.611		
6,800.0	6,751.5	6,835.3	6,731.0	14.6	20.7	-86.70	4.4	-838.0	665.9	636.0	29.86	22.300		
6,900.0	6,822.5	6,931.1	6,801.6	14.8	20.8	-87.11	68.9	-842.2	664.9	634.5	30.43	21.853		
7,000.0	6,882.9	7,027.4	6,863.3	15.2	21.0	-87.57	142.6	-847.1	663.9	632.6	31.29	21.220		
7,100.0	6,931.7	7,124.3	6,914.8	15.9	21.3	-88.07	224.5	-852.4	662.8	630.3	32.47	20.410		
7,200.0	6,967.9	7,221.9	6,955.0	16.7	21.7	-88.62	313.2	-858.3	661.6	627.6	34.01	19.450		
7,300.0	6,990.7	7,320.2	6,982.9	17.7	22.2	-89.20	407.2	-864.4	660.4	624.5	35.89	18.399		
7,400.0	6,999.8	7,419.3	6,997.7	18.8	22.9	-89.80	504.9	-870.8	659.3	621.2	38.06	17.321		
7,500.0	7,000.0	7,519.2	7,000.0	20.1	23.8	-90.00	604.5	-877.3	658.2	617.7	40.49	16.256		
7,600.0	7,000.0	7,619.2	7,000.0	21.5	24.8	-90.00	704.3	-883.9	657.1	614.0	43.13	15.234		
7,700.0	7,000.0	7,719.2	7,000.0	22.9	26.0	-90.00	804.0	-890.4	656.0	610.0	45.96	14.274		
7,800.0	7,000.0	7,819.2	7,000.0	24.4	27.2	-90.00	903.8	-897.0	654.9	606.0	48.93	13.384		
7,900.0	7,000.0	7,919.2	7,000.0	26.0	28.6	-90.00	1,003.6	-903.5	653.8	601.8	52.03	12.567		
8,000.0	7,000.0	8,019.2	7,000.0	27.6	30.0	-90.00	1,103.4	-910.0	652.7	597.5	55.22	11.819		
8,100.0	7,000.0	8,119.2	7,000.0	29.3	31.5	-90.00	1,203.2	-916.6	651.6	593.1	58.51	11.137		
8,200.0	7,000.0	8,219.2	7,000.0	31.0	33.0	-90.00	1,302.9	-923.1	650.5	588.6	61.86	10.515		
8,300.0	7,000.0	8,319.2	7,000.0	32.7	34.6	-90.00	1,402.7	-929.7	649.4	584.1	65.28	9.948		
8,400.0	7,000.0	8,419.2	7,000.0	34.4	36.2	-90.00	1,502.5	-936.2	648.3	579.5	68.74	9.430		
8,500.0	7,000.0	8,519.2	7,000.0	36.2	37.9	-90.00	1,602.3	-942.7	647.2	574.9	72.26	8.957		
8,600.0	7,000.0	8,619.2	7,000.0	38.0	39.5	-90.00	1,702.1	-949.3	646.1	570.3	75.81	8.523		
8,700.0	7,000.0	8,719.2	7,000.0	39.8	41.2	-90.00	1,801.8	-955.8	645.0	565.6	79.39	8.124		
8,800.0	7,000.0	8,819.1	7,000.0	41.6	43.0	-90.00	1,901.6	-962.4	643.9	560.9	83.00	7.758		
8,900.0	7,000.0	8,919.1	7,000.0	43.4	44.7	-90.00	2,001.4	-968.9	642.8	556.1	86.64	7.419		
9,000.0	7,000.0	9,019.1	7,000.0	45.3	46.4	-90.00	2,101.2	-975.4	641.7	551.4	90.29	7.106		
9,100.0	7,000.0	9,119.1	7,000.0	47.1	48.2	-90.00	2,201.0	-982.0	640.6	546.6	93.97	6.817		
9,200.0	7,000.0	9,219.1	7,000.0	49.0	50.0	-90.00	2,300.7	-988.5	639.5	541.8	97.67	6.547		
9,300.0	7,000.0	9,319.1	7,000.0	50.9	51.8	-90.00	2,400.5	-995.0	638.4	537.0	101.38	6.297		
9,400.0	7,000.0	9,419.1	7,000.0	52.7	53.6	-90.00	2,500.3	-1,001.6	637.3	532.2	105.10	6.063		
9,500.0	7,000.0	9,519.1	7,000.0	54.6	55.4	-90.00	2,600.1	-1,008.1	636.2	527.3	108.84	5.845		
9,600.0	7,000.0	9,619.1	7,000.0	56.5	57.2	-90.00	2,699.9	-1,014.7	635.1	522.5	112.59	5.641		
9,700.0	7,000.0	9,719.1	7,000.0	58.4	59.1	-90.00	2,799.6	-1,021.2	634.0	517.6	116.35	5.449		
9,800.0	7,000.0	9,819.1	7,000.0	60.3	60.9	-90.00	2,899.4	-1,027.7	632.9	512.8	120.12	5.269		
9,900.0	7,000.0	9,919.1	7,000.0	62.2	62.8	-90.00	2,999.2	-1,034.3	631.8	507.9	123.89	5.099		
10,000.0	7,000.0	10,019.1	7,000.0	64.1	64.6	-90.00	3,099.0	-1,040.8	630.7	503.0	127.68	4.940		
10,100.0	7,000.0	10,119.1	7,000.0	66.0	66.5	-90.00	3,198.8	-1,047.4	629.6	498.1	131.47	4.789		
10,200.0	7,000.0	10,219.1	7,000.0	67.9	68.3	-90.00	3,298.5	-1,053.9	628.5	493.2	135.26	4.646		
10,300.0	7,000.0	10,319.1	7,000.0	69.8	70.2	-90.00	3,398.3	-1,060.4	627.4	488.3	139.06	4.511		

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 32-4CHZ
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 32-4CHZ	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 N-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 (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			
10,400.0	7,000.0	10,419.1	7,000.0	71.7	72.1	-90.00	3,498.1	-1,067.0	626.3	483.4	142.87	4.383			
10,500.0	7,000.0	10,519.0	7,000.0	73.6	74.0	-90.00	3,597.9	-1,073.5	625.2	478.5	146.68	4.262			
10,600.0	7,000.0	10,619.0	7,000.0	75.5	75.8	-90.00	3,697.7	-1,080.0	624.1	473.6	150.50	4.147			
10,700.0	7,000.0	10,719.0	7,000.0	77.4	77.7	-90.00	3,797.4	-1,086.6	623.0	468.6	154.32	4.037			
10,800.0	7,000.0	10,819.0	7,000.0	79.3	79.6	-90.00	3,897.2	-1,093.1	621.9	463.7	158.15	3.932			
10,900.0	7,000.0	10,919.0	7,000.0	81.3	81.5	-90.00	3,997.0	-1,099.7	620.8	458.8	161.98	3.832			
11,000.0	7,000.0	11,019.0	7,000.0	83.2	83.4	-90.00	4,096.8	-1,106.2	619.7	453.9	165.81	3.737			
11,100.0	7,000.0	11,119.0	7,000.0	85.1	85.3	-90.00	4,196.6	-1,112.7	618.6	448.9	169.65	3.646			
11,200.0	7,000.0	11,219.0	7,000.0	87.0	87.2	-90.00	4,296.3	-1,119.3	617.5	444.0	173.48	3.559			
11,288.8	7,000.0	11,307.8	7,000.0	88.4	88.9	-90.00	4,384.9	-1,125.1	616.5	439.9	176.55	3.492 SF			

Company: Synergy Resources
Project: SEC.4-T4N-R68W
Reference Site: SRC Kiehn Pad Sec.4-T4N-R68W
Site Error: 0.0ft
Reference Well: SRC Kiehn 32-4CHZ
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #2 (4-25-14)

Local Co-ordinate Reference: Well SRC Kiehn 32-4CHZ
TVD Reference: WELL @ 5077.0ft (RKB - 13')
MD Reference: WELL @ 5077.0ft (RKB - 13')
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5077.0ft (RKB - 13')

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: SRC Kiehn 32-4CHZ

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.32°



Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Kiehn 32-4CHZ
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 32-4CHZ	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

Reference Depths are relative to WELL @ 5077.0ft (RKB - 13')
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

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

