

Synergy Resources

Well Name: **SRC Markham 31-16-9CHZ**

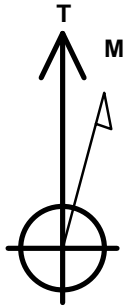
Surface Location: SRC Markham Pad Sec.16-T4N-R68W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4964.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1357580.19	3136500.71	40.313924	-105.010509	
RKB - 13' WELL @ 4977.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2440'FNL & 2032' FWL, SEC.16	1.0	0.0	0.0	Point
BHL 460' FNL & 2020' FEL, SEC.9	6290.0	7307.7	1225.3	Point
LANDING PT. 2198'FNL & 2020'FEL, SEC.16	6290.0	256.9	1236.2	Point



Azimuths to True North
Magnetic North: 8.61°

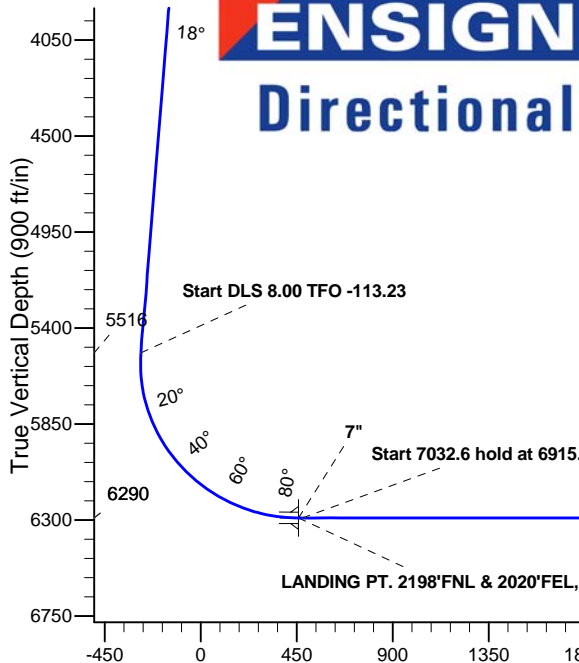
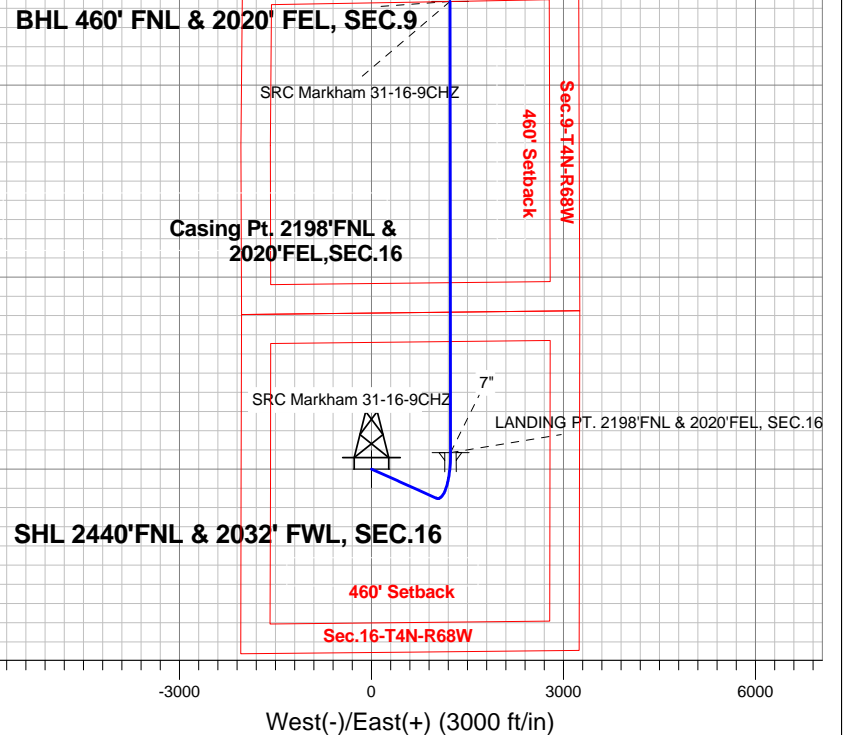
Magnetic Field
Strength: 52762.9snT
Dip Angle: 66.84°
Date: 4/7/2014
Model: IGRF2010

SRC Markham Pad Sec.16-T4N-R68W
SRC Markham 31-16-9CHZ
Plan #1 (3-31-14)
14:48, April 08 2014

ANNOTATIONS

TVD	MD	Annotation
1600.0	1600.0	KOP - Start Build 2.00
5516.4	5682.2	Start DLS 8.00 TFO -113.23
6290.0	6915.2	Start 7032.6 hold at 6915.2 MD
6290.0	13947.9	TD at 13947.9

South(-)/North(+) (3000 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0	
3	2486.3	17.73	114.17	2472.3	-55.7	124.1	2.00	114.17	-34.4	
4	5682.2	17.73	114.17	5516.4	-454.0	1011.9	0.00	0.00	-280.5	
5	6897.0	90.00	359.91	6290.0	256.9	1236.2	8.00	-113.23	457.8	LANDING PT. 2198'FNL & 2020'FEL, SEC.16
6	6915.2	90.00	359.91	6290.0	275.1	1236.2	0.00	0.00	475.7	
7	13947.9	90.00	359.91	6290.0	7307.7	1225.3	0.00	0.00	7409.7	BHL 460' FNL & 2020' FEL, SEC.9

BHL 460' FNL & 2020' FEL, SEC.9

TD at 13947.9

Vertical Section at 9.52° (900 ft/in)



Synergy Resources

Sec.16-T4N-R68W

SRC Markham Pad Sec.16-T4N-R68W

SRC Markham 31-16-9CHZ

Wellbore #1

Plan: Plan #1 (3-31-14)

Standard Planning Report

08 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	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,486.3	17.73	114.17	2,472.3	-55.7	124.1	2.00	2.00	0.00	114.17	
5,682.2	17.73	114.17	5,516.4	-454.0	1,011.9	0.00	0.00	0.00	0.00	
6,897.0	90.00	359.91	6,290.0	256.9	1,236.2	8.00	5.95	-9.41	-113.23	LANDING PT. 2198
6,915.2	90.00	359.91	6,290.0	275.1	1,236.2	0.00	0.00	0.00	0.00	
13,947.9	90.00	359.91	6,290.0	7,307.7	1,225.3	0.00	0.00	0.00	0.00	BHL 460' FNL & 20

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Project:	Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site:	SRC Markham Pad Sec.16-T4N-R68W	North Reference:	True
Well:	SRC Markham 31-16-9CHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-31-14)		

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 2440'FNL & 2032' FWL, SEC.16 - SHL 2440'FNL & 2032'FWL									
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
KOP - Start Build 2.00									
1,700.0	2.00	114.17	1,700.0	-0.7	1.6	-0.4	2.00	2.00	0.00
1,800.0	4.00	114.17	1,799.8	-2.9	6.4	-1.8	2.00	2.00	0.00
1,900.0	6.00	114.17	1,899.5	-6.4	14.3	-4.0	2.00	2.00	0.00
2,000.0	8.00	114.17	1,998.7	-11.4	25.4	-7.1	2.00	2.00	0.00
2,100.0	10.00	114.17	2,097.5	-17.8	39.7	-11.0	2.00	2.00	0.00
2,200.0	12.00	114.17	2,195.6	-25.6	57.1	-15.8	2.00	2.00	0.00
2,300.0	14.00	114.17	2,293.1	-34.8	77.6	-21.5	2.00	2.00	0.00
2,400.0	16.00	114.17	2,389.6	-45.4	101.3	-28.1	2.00	2.00	0.00
2,486.3	17.73	114.17	2,472.3	-55.7	124.1	-34.4	2.00	2.00	0.00
2,500.0	17.73	114.17	2,485.3	-57.4	127.9	-35.4	0.00	0.00	0.00
2,600.0	17.73	114.17	2,580.5	-69.9	155.7	-43.1	0.00	0.00	0.00
2,700.0	17.73	114.17	2,675.8	-82.3	183.5	-50.8	0.00	0.00	0.00
2,800.0	17.73	114.17	2,771.0	-94.8	211.2	-58.5	0.00	0.00	0.00
2,900.0	17.73	114.17	2,866.3	-107.2	239.0	-66.2	0.00	0.00	0.00
3,000.0	17.73	114.17	2,961.5	-119.7	266.8	-73.9	0.00	0.00	0.00
3,100.0	17.73	114.17	3,056.8	-132.2	294.6	-81.6	0.00	0.00	0.00
3,200.0	17.73	114.17	3,152.0	-144.6	322.4	-89.3	0.00	0.00	0.00
3,300.0	17.73	114.17	3,247.3	-157.1	350.1	-97.0	0.00	0.00	0.00
3,400.0	17.73	114.17	3,342.5	-169.6	377.9	-104.7	0.00	0.00	0.00
3,500.0	17.73	114.17	3,437.8	-182.0	405.7	-112.4	0.00	0.00	0.00
3,600.0	17.73	114.17	3,533.0	-194.5	433.5	-120.1	0.00	0.00	0.00
3,700.0	17.73	114.17	3,628.3	-207.0	461.3	-127.8	0.00	0.00	0.00
3,800.0	17.73	114.17	3,723.6	-219.4	489.0	-135.5	0.00	0.00	0.00
3,900.0	17.73	114.17	3,818.8	-231.9	516.8	-143.2	0.00	0.00	0.00
4,000.0	17.73	114.17	3,914.1	-244.4	544.6	-150.9	0.00	0.00	0.00
4,100.0	17.73	114.17	4,009.3	-256.8	572.4	-158.6	0.00	0.00	0.00
4,200.0	17.73	114.17	4,104.6	-269.3	600.2	-166.3	0.00	0.00	0.00
4,300.0	17.73	114.17	4,199.8	-281.8	627.9	-174.0	0.00	0.00	0.00
4,400.0	17.73	114.17	4,295.1	-294.2	655.7	-181.7	0.00	0.00	0.00
4,500.0	17.73	114.17	4,390.3	-306.7	683.5	-189.4	0.00	0.00	0.00
4,600.0	17.73	114.17	4,485.6	-319.2	711.3	-197.1	0.00	0.00	0.00
4,700.0	17.73	114.17	4,580.8	-331.6	739.0	-204.8	0.00	0.00	0.00
4,800.0	17.73	114.17	4,676.1	-344.1	766.8	-212.5	0.00	0.00	0.00
4,900.0	17.73	114.17	4,771.3	-356.5	794.6	-220.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Project:	Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site:	SRC Markham Pad Sec.16-T4N-R68W	North Reference:	True
Well:	SRC Markham 31-16-9CHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-31-14)		

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	17.73	114.17	4,866.6	-369.0	822.4	-227.9	0.00	0.00	0.00
5,100.0	17.73	114.17	4,961.8	-381.5	850.2	-235.6	0.00	0.00	0.00
5,200.0	17.73	114.17	5,057.1	-393.9	877.9	-243.3	0.00	0.00	0.00
5,300.0	17.73	114.17	5,152.3	-406.4	905.7	-251.0	0.00	0.00	0.00
5,400.0	17.73	114.17	5,247.6	-418.9	933.5	-258.7	0.00	0.00	0.00
5,500.0	17.73	114.17	5,342.8	-431.3	961.3	-266.4	0.00	0.00	0.00
5,600.0	17.73	114.17	5,438.1	-443.8	989.1	-274.1	0.00	0.00	0.00
5,682.2	17.73	114.17	5,516.4	-454.0	1,011.9	-280.5	0.00	0.00	0.00
Start DLS 8.00 TFO -113.23									
5,700.0	17.21	109.74	5,533.4	-456.0	1,016.9	-281.6	7.99	-2.88	-24.84
5,800.0	16.40	81.96	5,629.2	-459.1	1,044.8	-280.0	8.00	-0.82	-27.78
5,900.0	19.13	57.07	5,724.6	-448.2	1,072.6	-264.6	8.00	2.73	-24.89
6,000.0	24.24	40.25	5,817.6	-423.6	1,099.6	-235.9	8.00	5.11	-16.82
6,100.0	30.55	29.49	5,906.4	-385.7	1,125.5	-194.3	8.00	6.31	-10.75
6,200.0	37.47	22.26	5,989.3	-335.4	1,149.5	-140.6	8.00	6.91	-7.23
6,300.0	44.70	17.04	6,064.6	-273.5	1,171.4	-76.0	8.00	7.23	-5.22
6,400.0	52.12	13.02	6,131.0	-201.3	1,190.6	-1.6	8.00	7.42	-4.02
6,500.0	59.64	9.74	6,187.0	-120.2	1,206.8	81.0	8.00	7.53	-3.28
6,600.0	67.24	6.93	6,231.7	-31.7	1,219.7	170.4	8.00	7.60	-2.81
6,700.0	74.88	4.43	6,264.1	62.3	1,229.0	264.7	8.00	7.64	-2.51
6,800.0	82.55	2.09	6,283.7	160.1	1,234.6	362.1	8.00	7.67	-2.33
6,897.0	90.00	359.91	6,290.0	256.9	1,236.2	457.8	8.00	7.68	-2.25
7" - LANDING PT. 2198'FNL & 2020'FEL, SEC.16									
6,900.0	90.00	359.91	6,290.0	259.8	1,236.2	460.7	0.11	0.11	-0.03
6,915.2	90.00	359.91	6,290.0	275.0	1,236.2	475.7	0.00	0.00	0.00
Start 7032.6 hold at 6915.2 MD									
7,000.0	90.00	359.91	6,290.0	359.8	1,236.1	559.3	0.00	0.00	0.00
7,100.0	90.00	359.91	6,290.0	459.8	1,235.9	657.9	0.00	0.00	0.00
7,200.0	90.00	359.91	6,290.0	559.8	1,235.8	756.5	0.00	0.00	0.00
7,300.0	90.00	359.91	6,290.0	659.8	1,235.6	855.1	0.00	0.00	0.00
7,400.0	90.00	359.91	6,290.0	759.8	1,235.5	953.7	0.00	0.00	0.00
7,500.0	90.00	359.91	6,290.0	859.8	1,235.3	1,052.3	0.00	0.00	0.00
7,600.0	90.00	359.91	6,290.0	959.8	1,235.1	1,150.9	0.00	0.00	0.00
7,700.0	90.00	359.91	6,290.0	1,059.8	1,235.0	1,249.5	0.00	0.00	0.00
7,800.0	90.00	359.91	6,290.0	1,159.8	1,234.8	1,348.1	0.00	0.00	0.00
7,900.0	90.00	359.91	6,290.0	1,259.8	1,234.7	1,446.7	0.00	0.00	0.00
8,000.0	90.00	359.91	6,290.0	1,359.8	1,234.5	1,545.3	0.00	0.00	0.00
8,100.0	90.00	359.91	6,290.0	1,459.8	1,234.4	1,643.9	0.00	0.00	0.00
8,200.0	90.00	359.91	6,290.0	1,559.8	1,234.2	1,742.5	0.00	0.00	0.00
8,300.0	90.00	359.91	6,290.0	1,659.8	1,234.0	1,841.1	0.00	0.00	0.00
8,400.0	90.00	359.91	6,290.0	1,759.8	1,233.9	1,939.6	0.00	0.00	0.00
8,500.0	90.00	359.91	6,290.0	1,859.8	1,233.7	2,038.2	0.00	0.00	0.00
8,600.0	90.00	359.91	6,290.0	1,959.8	1,233.6	2,136.8	0.00	0.00	0.00
8,700.0	90.00	359.91	6,290.0	2,059.8	1,233.4	2,235.4	0.00	0.00	0.00
8,800.0	90.00	359.91	6,290.0	2,159.8	1,233.3	2,334.0	0.00	0.00	0.00
8,900.0	90.00	359.91	6,290.0	2,259.8	1,233.1	2,432.6	0.00	0.00	0.00
9,000.0	90.00	359.91	6,290.0	2,359.8	1,232.9	2,531.2	0.00	0.00	0.00
9,100.0	90.00	359.91	6,290.0	2,459.8	1,232.8	2,629.8	0.00	0.00	0.00
9,200.0	90.00	359.91	6,290.0	2,559.8	1,232.6	2,728.4	0.00	0.00	0.00
9,300.0	90.00	359.91	6,290.0	2,659.8	1,232.5	2,827.0	0.00	0.00	0.00
9,400.0	90.00	359.91	6,290.0	2,759.8	1,232.3	2,925.6	0.00	0.00	0.00
9,500.0	90.00	359.91	6,290.0	2,859.8	1,232.2	3,024.2	0.00	0.00	0.00
9,600.0	90.00	359.91	6,290.0	2,959.8	1,232.0	3,122.8	0.00	0.00	0.00

Casing Points						
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
	6,897.0	6,290.0	7"		7	7-1/2

Database:	Landmark	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Company:	Synergy Resources	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Project:	Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site:	SRC Markham Pad Sec.16-T4N-R68W	North Reference:	True
Well:	SRC Markham 31-16-9CHZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-31-14)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,600.0	1,600.0	0.0	0.0	KOP - Start Build 2.00
5,682.2	5,516.4	-454.0	1,011.9	Start DLS 8.00 TFO -113.23
6,915.2	6,290.0	275.0	1,236.2	Start 7032.6 hold at 6915.2 MD
13,947.9	6,290.0	7,307.7	1,225.3	TD at 13947.9



Synergy Resources

Sec.16-T4N-R68W

SRC Markham Pad Sec.16-T4N-R68W

SRC Markham 31-16-9CHZ

Wellbore #1

Plan #1 (3-31-14)

Anticollision Report

08 April, 2014

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-31-14)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 4/7/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,947.9	Plan #1 (3-31-14) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SRC Markham Pad Sec.16-T4N-R68W						
SRC Markham 31-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	1,400.0	1,400.0	22.6	16.5	3.722	CC
SRC Markham 31-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	13,947.9	13,861.2	260.8	7.3	1.029	Level 2, ES, SF
SRC Markham 41-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)	400.0	399.0	135.0	133.4	85.916	CC, ES
SRC Markham 41-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)	5,100.0	4,897.7	993.6	961.5	31.000	SF
SRC Markham 41-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	200.0	199.0	157.6	156.9	234.464	CC, ES
SRC Markham 41-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	3,900.0	3,655.3	985.0	962.6	44.000	SF
SRC Markham C-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)	1,200.0	1,199.0	44.9	39.7	8.689	CC, ES
SRC Markham C-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)	13,947.9	14,043.0	440.0	154.2	1.540	SF
SRC Markham C-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	1,000.0	999.0	67.5	63.2	15.812	CC, ES
SRC Markham C-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	13,947.9	13,966.2	674.4	391.7	2.386	SF
SRC Markham R-16-9-CHZ - Wellbore #1 - Plan#1 (3-31-14)	800.0	799.0	90.1	86.7	26.736	CC, ES
SRC Markham R-16-9-CHZ - Wellbore #1 - Plan#1 (3-31-14)	13,947.9	14,148.8	879.9	593.9	3.076	SF
SRC Markham R-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	600.0	599.0	112.4	109.9	45.500	CC, ES
SRC Markham R-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)	5,800.0	5,625.7	962.9	925.1	25.459	SF

Offset Design												
SRC Markham Pad Sec.16-T4N-R68W - SRC Markham 31-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)												
Survey Program: 0-MWD												
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
0.0	0.0	0.0	0.0	0.0	0.0	90.03	0.0	22.6	22.6			
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	22.6	22.6	22.4	0.22	100.500
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	22.6	22.6	21.9	0.67	33.500
300.0	300.0	300.0	300.0	0.6	0.6	90.03	0.0	22.6	22.6	21.5	1.12	20.100
400.0	400.0	400.0	400.0	0.8	0.8	90.03	0.0	22.6	22.6	21.0	1.57	14.357
500.0	500.0	500.0	500.0	1.0	1.0	90.03	0.0	22.6	22.6	20.6	2.02	11.167
600.0	600.0	600.0	600.0	1.2	1.2	90.03	0.0	22.6	22.6	20.1	2.47	9.136
700.0	700.0	700.0	700.0	1.5	1.5	90.03	0.0	22.6	22.6	19.7	2.92	7.731
800.0	800.0	800.0	800.0	1.7	1.7	90.03	0.0	22.6	22.6	19.2	3.37	6.700
900.0	900.0	900.0	900.0	1.9	1.9	90.03	0.0	22.6	22.6	18.8	3.82	5.912
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.03	0.0	22.6	22.6	18.3	4.27	5.289
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.03	0.0	22.6	22.6	17.9	4.72	4.786
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.03	0.0	22.6	22.6	17.4	5.17	4.370
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.03	0.0	22.6	22.6	17.0	5.62	4.020

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 Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Markham Pad Sec.16-T4N-R68W - SRC Markham 31-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)													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		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.03	0.0	22.6	22.6	16.5	6.07	3.722	CC	
1,500.0	1,500.0	1,499.2	1,499.2	3.3	3.2	91.49	-0.6	24.2	24.2	17.7	6.50	3.726		
1,600.0	1,600.0	1,598.2	1,598.1	3.5	3.4	94.87	-2.5	29.0	29.2	22.2	6.92	4.217		
1,700.0	1,700.0	1,696.9	1,696.4	3.7	3.6	-16.37	-5.5	36.9	35.9	28.5	7.31	4.908		
1,800.0	1,799.8	1,795.3	1,794.1	3.9	3.9	-14.63	-9.8	48.0	42.6	34.9	7.68	5.548		
1,900.0	1,899.5	1,893.6	1,891.1	4.1	4.1	-13.59	-15.2	62.2	49.4	41.3	8.06	6.129		
2,000.0	1,998.7	1,991.6	1,987.4	4.3	4.4	-12.99	-21.8	79.4	56.1	47.7	8.44	6.653		
2,100.0	2,097.5	2,089.3	2,082.7	4.6	4.7	-12.70	-29.6	99.6	62.8	54.0	8.82	7.124		
2,200.0	2,195.6	2,186.9	2,177.0	4.8	5.1	-12.62	-38.5	122.8	69.5	60.3	9.21	7.543		
2,300.0	2,293.1	2,284.2	2,270.3	5.2	5.5	-12.70	-48.5	149.0	76.1	66.5	9.62	7.913		
2,400.0	2,389.6	2,381.4	2,362.3	5.5	6.0	-12.89	-59.7	178.0	82.7	72.7	10.04	8.235		
2,500.0	2,485.3	2,480.8	2,455.8	6.0	6.6	-13.33	-71.8	209.5	88.0	77.5	10.50	8.378		
2,600.0	2,580.5	2,580.7	2,549.8	6.5	7.2	-13.93	-84.0	241.3	92.0	81.0	11.05	8.327		
2,700.0	2,675.8	2,680.7	2,643.7	7.0	7.8	-14.48	-96.2	273.0	96.1	84.5	11.63	8.266		
2,800.0	2,771.0	2,780.6	2,737.7	7.5	8.4	-14.99	-108.4	304.7	100.2	88.0	12.22	8.198		
2,900.0	2,866.3	2,880.5	2,831.6	8.0	9.1	-15.46	-120.5	336.5	104.3	91.5	12.83	8.125		
3,000.0	2,961.5	2,980.4	2,925.6	8.6	9.8	-15.89	-132.7	368.2	108.4	94.9	13.46	8.049		
3,100.0	3,056.8	3,080.3	3,019.5	9.2	10.4	-16.29	-144.9	399.9	112.5	98.4	14.11	7.972		
3,200.0	3,152.0	3,180.2	3,113.5	9.8	11.1	-16.66	-157.1	431.7	116.6	101.8	14.77	7.894		
3,300.0	3,247.3	3,280.1	3,207.5	10.4	11.8	-17.00	-169.3	463.4	120.7	105.3	15.44	7.817		
3,400.0	3,342.5	3,380.1	3,301.4	11.0	12.5	-17.33	-181.5	495.1	124.8	108.7	16.12	7.741		
3,500.0	3,437.8	3,480.0	3,395.4	11.6	13.2	-17.63	-193.7	526.9	128.9	112.1	16.82	7.666		
3,600.0	3,533.0	3,579.9	3,489.3	12.2	13.9	-17.91	-205.8	558.6	133.0	115.5	17.52	7.594		
3,700.0	3,628.3	3,679.8	3,583.3	12.8	14.6	-18.18	-218.0	590.3	137.2	118.9	18.23	7.524		
3,800.0	3,723.6	3,779.7	3,677.2	13.4	15.3	-18.43	-230.2	622.1	141.3	122.3	18.95	7.456		
3,900.0	3,818.8	3,879.6	3,771.2	14.1	16.0	-18.67	-242.4	653.8	145.4	125.7	19.68	7.390		
4,000.0	3,914.1	3,979.5	3,865.1	14.7	16.7	-18.89	-254.6	685.5	149.6	129.1	20.41	7.327		
4,100.0	4,009.3	4,079.4	3,959.1	15.3	17.4	-19.10	-266.8	717.3	153.7	132.5	21.15	7.267		
4,200.0	4,104.6	4,179.4	4,053.0	15.9	18.1	-19.30	-279.0	749.0	157.8	135.9	21.89	7.208		
4,300.0	4,199.8	4,279.3	4,147.0	16.6	18.8	-19.49	-291.1	780.7	162.0	139.3	22.64	7.153		
4,400.0	4,295.1	4,379.2	4,240.9	17.2	19.6	-19.67	-303.3	812.5	166.1	142.7	23.40	7.099		
4,500.0	4,390.3	4,479.1	4,334.9	17.8	20.3	-19.85	-315.5	844.2	170.2	146.1	24.16	7.047		
4,600.0	4,485.6	4,579.0	4,428.8	18.5	21.0	-20.01	-327.7	875.9	174.4	149.5	24.92	6.998		
4,700.0	4,580.8	4,678.9	4,522.8	19.1	21.7	-20.17	-339.9	907.7	178.5	152.8	25.69	6.950		
4,800.0	4,676.1	4,778.8	4,616.7	19.8	22.4	-20.32	-352.1	939.4	182.7	156.2	26.46	6.904		
4,900.0	4,771.3	4,878.7	4,710.7	20.4	23.2	-20.46	-364.3	971.1	186.8	159.6	27.23	6.861		
5,000.0	4,866.6	4,978.7	4,804.7	21.0	23.9	-20.59	-376.4	1,002.9	191.0	163.0	28.01	6.819		
5,100.0	4,961.8	5,078.6	4,898.6	21.7	24.6	-20.73	-388.6	1,034.6	195.1	166.3	28.78	6.778		
5,200.0	5,057.1	5,178.5	4,992.6	22.3	25.3	-20.85	-400.8	1,066.3	199.3	169.7	29.57	6.739		
5,300.0	5,152.3	5,278.4	5,086.5	23.0	26.0	-20.97	-413.0	1,098.1	203.4	173.1	30.35	6.702		
5,400.0	5,247.6	5,378.3	5,180.5	23.6	26.8	-21.09	-425.2	1,129.8	207.6	176.4	31.14	6.666		
5,500.0	5,342.8	5,478.2	5,274.4	24.2	27.5	-21.20	-437.4	1,161.5	211.7	179.8	31.93	6.631		
5,600.0	5,438.1	5,578.1	5,368.4	24.9	28.2	-21.30	-449.5	1,193.3	215.9	183.1	32.72	6.598		
5,700.0	5,533.4	5,678.4	5,463.0	25.5	28.8	-18.32	-457.4	1,225.2	219.9	186.1	33.86	6.496		
5,800.0	5,629.2	5,777.6	5,556.7	26.0	29.4	5.74	-451.8	1,256.9	224.2	188.9	35.29	6.354		
5,900.0	5,724.6	5,875.6	5,647.8	26.4	29.8	27.05	-432.8	1,287.6	228.8	192.4	36.42	6.283		
6,000.0	5,817.6	5,972.5	5,734.5	26.7	30.1	40.46	-401.3	1,316.8	233.6	196.4	37.16	6.285		
6,100.0	5,906.4	6,068.4	5,815.7	27.0	30.4	47.97	-358.3	1,344.1	238.3	200.8	37.49	6.357		
6,200.0	5,989.3	6,163.4	5,890.1	27.1	30.6	52.16	-304.7	1,369.1	242.9	205.5	37.41	6.493		
6,300.0	6,064.6	6,257.7	5,956.5	27.2	30.7	54.52	-241.8	1,391.5	247.2	210.2	37.03	6.676		
6,400.0	6,131.0	6,350.0	6,013.5	27.3	30.8	55.87	-171.8	1,410.6	251.1	214.6	36.48	6.883		
6,500.0	6,187.0	6,444.3	6,062.4	27.3	30.9	56.62	-92.9	1,427.0	254.4	218.5	35.96	7.077		

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

Offset Design SRC Markham Pad Sec.16-T4N-R68W - SRC Markham 31-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)													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	
6,600.0	6,231.7	6,536.9	6,100.5	27.3	31.0	57.05	-9.6	1,439.7	257.1	221.5	35.66	7.210		
6,700.0	6,264.1	6,629.2	6,128.0	27.4	31.0	57.29	78.0	1,448.8	259.1	223.3	35.81	7.235		
6,800.0	6,283.7	6,721.3	6,144.5	27.4	31.1	57.43	168.3	1,454.3	260.2	223.7	36.54	7.121		
6,900.0	6,290.0	6,813.4	6,150.0	27.5	31.1	57.50	260.2	1,456.0	260.6	222.7	37.88	6.879		
7,000.0	6,290.0	6,913.4	6,150.0	27.7	31.3	57.50	360.2	1,455.8	260.6	221.3	39.30	6.630		
7,100.0	6,290.0	7,013.4	6,150.0	28.0	31.5	57.50	460.2	1,455.7	260.6	219.5	41.05	6.348		
7,200.0	6,290.0	7,113.4	6,150.0	28.4	31.8	57.50	560.2	1,455.5	260.6	217.6	42.98	6.062		
7,300.0	6,290.0	7,213.4	6,150.0	29.0	32.3	57.50	660.2	1,455.4	260.6	215.5	45.08	5.780		
7,400.0	6,290.0	7,313.4	6,150.0	29.8	32.9	57.50	760.2	1,455.2	260.6	213.3	47.32	5.507		
7,500.0	6,290.0	7,413.4	6,150.0	30.7	33.6	57.50	860.2	1,455.1	260.6	210.9	49.68	5.245		
7,600.0	6,290.0	7,513.4	6,150.0	31.7	34.4	57.50	960.2	1,454.9	260.6	208.4	52.15	4.997		
7,700.0	6,290.0	7,613.4	6,150.0	32.8	35.3	57.50	1,060.2	1,454.8	260.6	205.9	54.72	4.763		
7,800.0	6,290.0	7,713.4	6,150.0	34.1	36.4	57.51	1,160.2	1,454.6	260.6	203.2	57.36	4.543		
7,900.0	6,290.0	7,813.4	6,150.0	35.4	37.5	57.51	1,260.2	1,454.5	260.6	200.5	60.07	4.339		
8,000.0	6,290.0	7,913.4	6,150.0	36.8	38.7	57.51	1,360.2	1,454.3	260.6	197.8	62.84	4.147		
8,100.0	6,290.0	8,013.4	6,150.0	38.2	40.0	57.51	1,460.2	1,454.2	260.6	195.0	65.66	3.969		
8,200.0	6,290.0	8,113.4	6,150.0	39.7	41.4	57.51	1,560.2	1,454.0	260.6	192.1	68.53	3.803		
8,300.0	6,290.0	8,213.4	6,150.0	41.3	42.8	57.51	1,660.2	1,453.9	260.6	189.2	71.44	3.648		
8,400.0	6,290.0	8,313.4	6,150.0	42.8	44.3	57.51	1,760.2	1,453.7	260.6	186.2	74.39	3.504		
8,500.0	6,290.0	8,413.4	6,150.0	44.4	45.8	57.51	1,860.2	1,453.6	260.6	183.3	77.36	3.369		
8,600.0	6,290.0	8,513.4	6,150.0	46.0	47.3	57.51	1,960.2	1,453.4	260.6	180.3	80.37	3.243		
8,700.0	6,290.0	8,613.4	6,150.0	47.7	48.9	57.51	2,060.2	1,453.3	260.6	177.2	83.40	3.125		
8,800.0	6,290.0	8,713.4	6,150.0	49.4	50.5	57.51	2,160.2	1,453.1	260.6	174.2	86.45	3.015		
8,900.0	6,290.0	8,813.4	6,150.0	51.0	52.2	57.51	2,260.2	1,453.0	260.6	171.1	89.53	2.911		
9,000.0	6,290.0	8,913.4	6,150.0	52.8	53.8	57.51	2,360.2	1,452.8	260.7	168.0	92.62	2.814		
9,100.0	6,290.0	9,013.4	6,150.0	54.5	55.5	57.51	2,460.2	1,452.7	260.7	164.9	95.73	2.723		
9,200.0	6,290.0	9,113.4	6,150.0	56.2	57.2	57.51	2,560.2	1,452.5	260.7	161.8	98.85	2.637		
9,300.0	6,290.0	9,213.4	6,150.0	58.0	58.9	57.51	2,660.2	1,452.3	260.7	158.7	101.99	2.556		
9,400.0	6,290.0	9,313.4	6,150.0	59.7	60.6	57.51	2,760.2	1,452.2	260.7	155.5	105.14	2.479		
9,500.0	6,290.0	9,413.4	6,150.0	61.5	62.3	57.52	2,860.2	1,452.0	260.7	152.4	108.30	2.407		
9,600.0	6,290.0	9,513.4	6,150.0	63.2	64.1	57.52	2,960.2	1,451.9	260.7	149.2	111.47	2.339		
9,700.0	6,290.0	9,613.4	6,150.0	65.0	65.8	57.52	3,060.2	1,451.7	260.7	146.0	114.65	2.274		
9,800.0	6,290.0	9,713.4	6,150.0	66.8	67.6	57.52	3,160.2	1,451.6	260.7	142.8	117.84	2.212		
9,900.0	6,290.0	9,813.4	6,150.0	68.6	69.3	57.52	3,260.2	1,451.4	260.7	139.7	121.03	2.154		
10,000.0	6,290.0	9,913.4	6,150.0	70.4	71.1	57.52	3,360.2	1,451.3	260.7	136.5	124.24	2.098		
10,100.0	6,290.0	10,013.4	6,150.0	72.2	72.9	57.52	3,460.2	1,451.1	260.7	133.2	127.45	2.046		
10,200.0	6,290.0	10,113.4	6,150.0	74.0	74.7	57.52	3,560.2	1,451.0	260.7	130.0	130.67	1.995		
10,300.0	6,290.0	10,213.4	6,150.0	75.9	76.5	57.52	3,660.2	1,450.8	260.7	126.8	133.89	1.947		
10,400.0	6,290.0	10,313.4	6,150.0	77.7	78.3	57.52	3,760.2	1,450.7	260.7	123.6	137.12	1.901		
10,500.0	6,290.0	10,413.4	6,150.0	79.5	80.1	57.52	3,860.2	1,450.5	260.7	120.4	140.35	1.858		
10,600.0	6,290.0	10,513.4	6,150.0	81.4	81.9	57.52	3,960.2	1,450.4	260.7	117.1	143.59	1.816		
10,700.0	6,290.0	10,613.4	6,150.0	83.2	83.7	57.52	4,060.2	1,450.2	260.7	113.9	146.83	1.776		
10,800.0	6,290.0	10,713.4	6,150.0	85.0	85.6	57.52	4,160.2	1,450.1	260.7	110.6	150.08	1.737		
10,900.0	6,290.0	10,813.4	6,150.0	86.9	87.4	57.52	4,260.2	1,449.9	260.7	107.4	153.33	1.700		
11,000.0	6,290.0	10,913.4	6,150.0	88.7	89.2	57.52	4,360.2	1,449.8	260.7	104.2	156.58	1.665		
11,100.0	6,290.0	11,013.4	6,150.0	90.6	91.1	57.52	4,460.2	1,449.6	260.7	100.9	159.84	1.631		
11,200.0	6,290.0	11,113.4	6,150.0	92.4	92.9	57.53	4,560.2	1,449.5	260.7	97.6	163.10	1.599		
11,300.0	6,290.0	11,213.4	6,150.0	94.3	94.7	57.53	4,660.2	1,449.3	260.7	94.4	166.37	1.567		
11,400.0	6,290.0	11,313.4	6,150.0	96.1	96.6	57.53	4,760.2	1,449.2	260.8	91.1	169.63	1.537		
11,500.0	6,290.0	11,413.4	6,150.0	98.0	98.4	57.53	4,860.2	1,449.0	260.8	87.9	172.90	1.508		
11,600.0	6,290.0	11,513.4	6,150.0	99.9	100.3	57.53	4,960.2	1,448.8	260.8	84.6	176.18	1.480 Level 3		
11,700.0	6,290.0	11,613.4	6,150.0	101.7	102.1	57.53	5,060.2	1,448.7	260.8	81.3	179.45	1.453 Level 3		

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	
11,800.0	6,290.0	11,713.4	6,150.0	103.6	104.0	57.53	5,160.2	1,448.5	260.8	78.0	182.73	1.427	Level 3
11,900.0	6,290.0	11,813.4	6,150.0	105.5	105.9	57.53	5,260.2	1,448.4	260.8	74.8	186.01	1.402	Level 3
12,000.0	6,290.0	11,913.4	6,150.0	107.3	107.7	57.53	5,360.2	1,448.2	260.8	71.5	189.29	1.378	Level 3
12,100.0	6,290.0	12,013.4	6,150.0	109.2	109.6	57.53	5,460.2	1,448.1	260.8	68.2	192.57	1.354	Level 3
12,200.0	6,290.0	12,113.4	6,150.0	111.1	111.4	57.53	5,560.2	1,447.9	260.8	64.9	195.86	1.332	Level 3
12,300.0	6,290.0	12,213.4	6,150.0	113.0	113.3	57.53	5,660.2	1,447.8	260.8	61.6	199.14	1.310	Level 3
12,400.0	6,290.0	12,313.4	6,150.0	114.8	115.2	57.53	5,760.2	1,447.6	260.8	58.4	202.43	1.288	Level 3
12,500.0	6,290.0	12,413.4	6,150.0	116.7	117.0	57.53	5,860.2	1,447.5	260.8	55.1	205.72	1.268	Level 3
12,600.0	6,290.0	12,513.4	6,150.0	118.6	118.9	57.53	5,960.2	1,447.3	260.8	51.8	209.01	1.248	Level 2
12,700.0	6,290.0	12,613.4	6,150.0	120.5	120.8	57.53	6,060.2	1,447.2	260.8	48.5	212.31	1.228	Level 2
12,800.0	6,290.0	12,713.4	6,150.0	122.4	122.7	57.53	6,160.2	1,447.0	260.8	45.2	215.60	1.210	Level 2
12,900.0	6,290.0	12,813.4	6,150.0	124.2	124.5	57.54	6,260.2	1,446.9	260.8	41.9	218.90	1.191	Level 2
13,000.0	6,290.0	12,913.4	6,150.0	126.1	126.4	57.54	6,360.2	1,446.7	260.8	38.6	222.20	1.174	Level 2
13,100.0	6,290.0	13,013.4	6,150.0	128.0	128.3	57.54	6,460.2	1,446.6	260.8	35.3	225.49	1.157	Level 2
13,200.0	6,290.0	13,113.4	6,150.0	129.9	130.2	57.54	6,560.2	1,446.4	260.8	32.0	228.79	1.140	Level 2
13,300.0	6,290.0	13,213.4	6,150.0	131.8	132.1	57.54	6,660.2	1,446.3	260.8	28.7	232.09	1.124	Level 2
13,400.0	6,290.0	13,313.4	6,150.0	133.7	133.9	57.54	6,760.2	1,446.1	260.8	25.4	235.40	1.108	Level 2
13,500.0	6,290.0	13,413.4	6,150.0	135.6	135.8	57.54	6,860.2	1,446.0	260.8	22.1	238.70	1.093	Level 2
13,600.0	6,290.0	13,513.4	6,150.0	137.5	137.7	57.54	6,960.2	1,445.8	260.8	18.8	242.00	1.078	Level 2
13,700.0	6,290.0	13,613.4	6,150.0	139.3	139.6	57.54	7,060.2	1,445.7	260.8	15.5	245.31	1.063	Level 2
13,800.0	6,290.0	13,713.4	6,150.0	141.2	141.5	57.54	7,160.2	1,445.5	260.9	12.2	248.61	1.049	Level 2
13,900.0	6,290.0	13,813.4	6,150.0	143.1	143.4	57.54	7,260.2	1,445.4	260.9	8.9	251.92	1.035	Level 2
13,947.7	6,290.0	13,861.1	6,150.0	144.0	144.3	57.54	7,307.9	1,445.3	260.9	7.4	253.50	1.029	Level 2
13,947.9	6,290.0	13,861.2	6,150.0	144.0	144.3	57.53	7,308.0	1,445.3	260.8	7.3	253.47	1.029	Level 2, ES, SF

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Markham Pad Sec.16-T4N-R68W - SRC Markham 41-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)													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	89.38	1.5	135.0	135.0					
100.0	100.0	99.0	99.0	0.1	0.1	89.38	1.5	135.0	135.0	134.8	0.22	603.566		
200.0	200.0	199.0	199.0	0.3	0.3	89.38	1.5	135.0	135.0	134.3	0.67	200.854		
300.0	300.0	299.0	299.0	0.6	0.6	89.38	1.5	135.0	135.0	133.9	1.12	120.351		
400.0	400.0	399.0	399.0	0.8	0.8	89.38	1.5	135.0	135.0	133.4	1.57	85.916 CC, ES		
500.0	500.0	494.6	494.6	1.0	1.0	89.52	1.1	136.5	136.6	134.6	2.00	68.387		
600.0	600.0	590.0	589.8	1.2	1.2	89.94	0.1	141.1	141.4	139.0	2.42	58.399		
700.0	700.0	684.9	684.4	1.5	1.4	90.57	-1.5	148.8	149.5	146.7	2.86	52.248		
800.0	800.0	779.2	778.1	1.7	1.7	91.35	-3.8	159.5	160.9	157.6	3.32	48.420		
900.0	900.0	872.7	870.6	1.9	1.9	92.20	-6.6	173.0	175.5	171.7	3.81	46.062		
1,000.0	1,000.0	965.2	961.6	2.1	2.3	93.06	-10.1	189.3	193.3	188.9	4.33	44.656		
1,100.0	1,100.0	1,056.5	1,050.8	2.4	2.6	93.88	-14.1	208.2	214.2	209.3	4.88	43.879		
1,200.0	1,200.0	1,146.5	1,138.1	2.6	3.0	94.65	-18.7	229.6	238.2	232.8	5.47	43.521		
1,300.0	1,300.0	1,235.0	1,223.2	2.8	3.5	95.35	-23.7	253.2	265.3	259.2	6.11	43.448		
1,400.0	1,400.0	1,321.9	1,306.1	3.0	4.0	95.97	-29.2	278.8	295.3	288.6	6.78	43.571		
1,500.0	1,500.0	1,407.1	1,386.4	3.3	4.5	96.52	-35.0	306.3	328.2	320.7	7.49	43.833		
1,600.0	1,600.0	1,490.4	1,464.3	3.5	5.1	97.00	-41.2	335.5	363.9	355.7	8.24	44.163		
1,700.0	1,700.0	1,572.4	1,540.0	3.7	5.8	-16.57	-47.8	366.4	400.7	393.3	7.43	53.949		
1,800.0	1,799.8	1,653.7	1,614.1	3.9	6.4	-16.16	-54.7	399.0	437.1	429.2	7.87	55.543		
1,900.0	1,899.5	1,746.0	1,697.6	4.1	7.2	-15.87	-62.9	437.6	471.9	463.5	8.35	56.518		
2,000.0	1,998.7	1,840.9	1,783.3	4.3	8.1	-15.73	-71.4	477.1	503.6	494.7	8.85	56.933		
2,100.0	2,097.5	1,936.7	1,870.0	4.6	9.0	-15.72	-79.9	517.1	532.1	522.7	9.36	56.856		
2,200.0	2,195.6	2,033.4	1,957.5	4.8	9.8	-15.81	-88.5	557.5	557.3	547.4	9.89	56.361		
2,300.0	2,293.1	2,130.9	2,045.7	5.2	10.7	-15.99	-97.1	598.2	579.3	568.9	10.44	55.507		
2,400.0	2,389.6	2,229.1	2,134.4	5.5	11.6	-16.27	-105.9	639.2	598.0	587.0	11.00	54.344		
2,500.0	2,485.3	2,327.8	2,223.7	6.0	12.5	-16.65	-114.6	680.4	613.5	601.9	11.60	52.887		
2,600.0	2,580.5	2,426.6	2,313.1	6.5	13.4	-17.11	-123.4	721.6	627.8	615.6	12.25	51.242		
2,700.0	2,675.8	2,525.5	2,402.5	7.0	14.3	-17.56	-132.2	762.9	642.2	629.3	12.92	49.697		
2,800.0	2,771.0	2,624.3	2,491.9	7.5	15.2	-17.98	-141.0	804.1	656.6	642.9	13.61	48.249		
2,900.0	2,866.3	2,723.1	2,581.2	8.0	16.2	-18.39	-149.8	845.4	671.0	656.7	14.31	46.894		
3,000.0	2,961.5	2,822.0	2,670.6	8.6	17.1	-18.78	-158.5	886.7	685.4	670.4	15.02	45.624		
3,100.0	3,056.8	2,920.8	2,760.0	9.2	18.0	-19.15	-167.3	927.9	699.9	684.1	15.75	44.435		
3,200.0	3,152.0	3,019.7	2,849.4	9.8	18.9	-19.51	-176.1	969.2	714.4	697.9	16.49	43.321		
3,300.0	3,247.3	3,118.5	2,938.8	10.4	19.8	-19.86	-184.9	1,010.4	728.9	711.7	17.24	42.277		
3,400.0	3,342.5	3,217.4	3,028.2	11.0	20.7	-20.19	-193.7	1,051.7	743.5	725.5	18.00	41.298		
3,500.0	3,437.8	3,316.2	3,117.6	11.6	21.7	-20.51	-202.4	1,092.9	758.0	739.3	18.77	40.378		
3,600.0	3,533.0	3,415.1	3,207.0	12.2	22.6	-20.81	-211.2	1,134.2	772.6	753.1	19.55	39.513		
3,700.0	3,628.3	3,513.9	3,296.4	12.8	23.5	-21.11	-220.0	1,175.5	787.3	766.9	20.34	38.700		
3,800.0	3,723.6	3,612.8	3,385.8	13.4	24.4	-21.39	-228.8	1,216.7	801.9	780.8	21.14	37.934		
3,900.0	3,818.8	3,711.6	3,475.2	14.1	25.3	-21.67	-237.6	1,258.0	816.6	794.6	21.94	37.211		
4,000.0	3,914.1	3,810.4	3,564.6	14.7	26.3	-21.93	-246.4	1,299.2	831.2	808.5	22.76	36.529		
4,100.0	4,009.3	3,909.3	3,654.0	15.3	27.2	-22.19	-255.1	1,340.5	845.9	822.3	23.57	35.885		
4,200.0	4,104.6	4,008.1	3,743.4	15.9	28.1	-22.44	-263.9	1,381.8	860.6	836.2	24.40	35.275		
4,300.0	4,199.8	4,107.0	3,832.7	16.6	29.0	-22.67	-272.7	1,423.0	875.3	850.1	25.23	34.697		
4,400.0	4,295.1	4,205.8	3,922.1	17.2	30.0	-22.90	-281.5	1,464.3	890.1	864.0	26.06	34.150		
4,500.0	4,390.3	4,304.7	4,011.5	17.8	30.9	-23.13	-290.3	1,505.5	904.8	877.9	26.91	33.630		
4,600.0	4,485.6	4,403.5	4,100.9	18.5	31.8	-23.34	-299.0	1,546.8	919.6	891.8	27.75	33.136		
4,700.0	4,580.8	4,502.4	4,190.3	19.1	32.7	-23.55	-307.8	1,588.0	934.4	905.8	28.60	32.667		
4,800.0	4,676.1	4,601.2	4,279.7	19.8	33.6	-23.76	-316.6	1,629.3	949.2	919.7	29.46	32.220		
4,900.0	4,771.3	4,700.1	4,369.1	20.4	34.6	-23.95	-325.4	1,670.6	964.0	933.6	30.32	31.794		
5,000.0	4,866.6	4,798.9	4,458.5	21.0	35.5	-24.14	-334.2	1,711.8	978.8	947.6	31.18	31.387		
5,100.0	4,961.8	4,897.7	4,547.9	21.7	36.4	-24.33	-342.9	1,753.1	993.6	961.5	32.05	31.000 SF		

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 Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

SRC Markham Pad Sec.16-T4N-R68W - SRC Markham 41-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)													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	89.47	1.4	157.6	157.6					
100.0	100.0	99.0	99.0	0.1	0.1	89.47	1.4	157.6	157.6	157.3	0.22	704.565		
200.0	200.0	199.0	199.0	0.3	0.3	89.47	1.4	157.6	157.6	156.9	0.67	234.464	CC, ES	
300.0	300.0	293.9	293.9	0.6	0.5	89.59	1.2	159.1	159.2	158.1	1.10	144.848		
400.0	400.0	388.6	388.4	0.8	0.7	89.91	0.3	163.7	164.0	162.5	1.53	107.098		
500.0	500.0	482.8	482.3	1.0	1.0	90.41	-1.2	171.3	172.1	170.1	1.98	86.804		
600.0	600.0	576.4	575.3	1.2	1.2	91.04	-3.3	181.8	183.4	180.9	2.46	74.668		
700.0	700.0	669.2	667.1	1.5	1.5	91.73	-5.9	195.2	197.9	194.9	2.96	66.919		
800.0	800.0	761.1	757.5	1.7	1.9	92.45	-9.1	211.3	215.5	212.1	3.49	61.757		
900.0	900.0	851.8	846.2	1.9	2.3	93.16	-12.7	230.0	236.4	232.3	4.06	58.225		
1,000.0	1,000.0	941.2	932.9	2.1	2.7	93.83	-16.8	251.1	260.2	255.6	4.67	55.769		
1,100.0	1,100.0	1,029.1	1,017.6	2.4	3.2	94.46	-21.4	274.5	287.1	281.8	5.31	54.055		
1,200.0	1,200.0	1,115.4	1,099.9	2.6	3.7	95.02	-26.4	299.9	316.9	310.9	5.99	52.870		
1,300.0	1,300.0	1,200.0	1,179.8	2.8	4.2	95.53	-31.7	327.1	349.6	342.9	6.71	52.077		
1,400.0	1,400.0	1,283.0	1,257.4	3.0	4.8	95.99	-37.3	356.1	385.0	377.6	7.48	51.491		
1,500.0	1,500.0	1,364.0	1,332.2	3.3	5.5	96.39	-43.3	386.5	423.1	414.9	8.27	51.140		
1,600.0	1,600.0	1,443.1	1,404.4	3.5	6.1	96.75	-49.5	418.1	463.8	454.7	9.10	50.973		
1,700.0	1,700.0	1,520.8	1,474.5	3.7	6.8	-16.89	-55.9	451.2	505.5	497.9	7.57	66.741		
1,800.0	1,799.8	1,608.1	1,552.4	3.9	7.7	-16.49	-63.5	489.8	546.0	537.9	8.05	67.794		
1,900.0	1,899.5	1,700.8	1,635.1	4.1	8.5	-16.23	-71.5	530.9	583.5	575.0	8.55	68.210		
2,000.0	1,998.7	1,794.7	1,718.8	4.3	9.5	-16.09	-79.6	572.6	617.9	608.8	9.07	68.099		
2,100.0	2,097.5	1,889.7	1,803.6	4.6	10.4	-16.06	-87.9	614.7	649.1	639.5	9.61	67.549		
2,200.0	2,195.6	1,985.6	1,889.1	4.8	11.3	-16.12	-96.2	657.3	677.2	667.0	10.16	66.629		
2,300.0	2,293.1	2,082.4	1,975.5	5.2	12.3	-16.27	-104.6	700.3	702.0	691.2	10.73	65.394		
2,400.0	2,389.6	2,180.0	2,062.5	5.5	13.2	-16.49	-113.0	743.6	723.6	712.2	11.33	63.886		
2,500.0	2,485.3	2,278.1	2,150.0	6.0	14.2	-16.81	-121.5	787.1	741.9	730.0	11.94	62.121		
2,600.0	2,580.5	2,376.5	2,237.8	6.5	15.2	-17.23	-130.1	830.8	759.1	746.5	12.61	60.207		
2,700.0	2,675.8	2,474.9	2,325.5	7.0	16.2	-17.63	-138.6	874.4	776.3	763.0	13.29	58.415		
2,800.0	2,771.0	2,573.2	2,413.3	7.5	17.1	-18.01	-147.1	918.1	793.5	779.5	13.99	56.738		
2,900.0	2,866.3	2,671.6	2,501.0	8.0	18.1	-18.37	-155.6	961.8	810.8	796.1	14.70	55.170		
3,000.0	2,961.5	2,770.0	2,588.7	8.6	19.1	-18.72	-164.2	1,005.4	828.1	812.7	15.42	53.703		
3,100.0	3,056.8	2,868.3	2,676.5	9.2	20.1	-19.06	-172.7	1,049.1	845.4	829.3	16.16	52.330		
3,200.0	3,152.0	2,966.7	2,764.2	9.8	21.0	-19.38	-181.2	1,092.7	862.8	845.9	16.90	51.045		
3,300.0	3,247.3	3,065.1	2,851.9	10.4	22.0	-19.69	-189.7	1,136.4	880.2	862.5	17.66	49.841		
3,400.0	3,342.5	3,163.4	2,939.7	11.0	23.0	-19.99	-198.3	1,180.0	897.6	879.2	18.43	48.711		
3,500.0	3,437.8	3,261.8	3,027.4	11.6	24.0	-20.28	-206.8	1,223.7	915.0	895.8	19.20	47.651		
3,600.0	3,533.0	3,360.2	3,115.2	12.2	25.0	-20.55	-215.3	1,267.3	932.5	912.5	19.99	46.654		
3,700.0	3,628.3	3,458.5	3,202.9	12.8	25.9	-20.82	-223.9	1,311.0	950.0	929.2	20.78	45.717		
3,800.0	3,723.6	3,556.9	3,290.6	13.4	26.9	-21.08	-232.4	1,354.6	967.5	945.9	21.58	44.833		
3,900.0	3,818.8	3,655.3	3,378.4	14.1	27.9	-21.32	-240.9	1,398.3	985.0	962.6	22.39	44.000	SF	

SRC Markham Pad Sec.16-T4N-R68W - SRC Markham C-16-9CHZ - Wellbore #1 - Plan #1 (3-31-14)													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	
0.0	0.0	0.0	0.0	0.0	0.0	89.54	0.4	44.9	44.9					
100.0	100.0	99.0	99.0	0.1	0.1	89.54	0.4	44.9	44.9	44.7	0.22	200.768		
200.0	200.0	199.0	199.0	0.3	0.3	89.54	0.4	44.9	44.9	44.2	0.67	66.811		
300.0	300.0	299.0	299.0	0.6	0.6	89.54	0.4	44.9	44.9	43.8	1.12	40.033		
400.0	400.0	399.0	399.0	0.8	0.8	89.54	0.4	44.9	44.9	43.3	1.57	28.579		
500.0	500.0	499.0	499.0	1.0	1.0	89.54	0.4	44.9	44.9	42.9	2.02	22.221		
600.0	600.0	599.0	599.0	1.2	1.2	89.54	0.4	44.9	44.9	42.4	2.47	18.177		
700.0	700.0	699.0	699.0	1.5	1.5	89.54	0.4	44.9	44.9	42.0	2.92	15.378		
800.0	800.0	799.0	799.0	1.7	1.7	89.54	0.4	44.9	44.9	41.5	3.37	13.327		
900.0	900.0	899.0	899.0	1.9	1.9	89.54	0.4	44.9	44.9	41.1	3.82	11.758		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.54	0.4	44.9	44.9	40.6	4.27	10.520		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.54	0.4	44.9	44.9	40.2	4.72	9.517		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.54	0.4	44.9	44.9	39.7	5.17	8.689	CC, ES	
1,300.0	1,300.0	1,297.5	1,297.5	2.8	2.8	90.20	-0.2	46.5	46.5	40.9	5.60	8.309		
1,400.0	1,400.0	1,395.8	1,395.6	3.0	3.0	91.95	-1.7	51.2	51.4	45.4	6.01	8.545		
1,500.0	1,500.0	1,493.6	1,493.1	3.3	3.2	94.22	-4.4	59.2	59.6	53.2	6.44	9.257		
1,600.0	1,600.0	1,590.7	1,589.5	3.5	3.4	96.50	-8.0	70.2	71.2	64.4	6.88	10.353		
1,700.0	1,700.0	1,687.2	1,684.9	3.7	3.7	-15.87	-12.6	84.1	84.6	77.3	7.26	11.649		
1,800.0	1,799.8	1,783.3	1,779.3	3.9	3.9	-14.77	-18.2	101.1	97.9	90.3	7.65	12.808		
1,900.0	1,899.5	1,879.0	1,872.6	4.1	4.3	-14.11	-24.8	120.9	111.2	103.2	8.04	13.841		
2,000.0	1,998.7	1,974.2	1,964.8	4.3	4.6	-13.75	-32.3	143.6	124.4	116.0	8.43	14.759		
2,100.0	2,097.5	2,069.0	2,055.8	4.6	5.1	-13.59	-40.7	169.1	137.5	128.7	8.84	15.568		
2,200.0	2,195.6	2,163.5	2,145.4	4.8	5.6	-13.59	-50.1	197.3	150.5	141.3	9.25	16.281		
2,300.0	2,293.1	2,259.0	2,235.1	5.2	6.1	-13.71	-60.4	228.5	163.3	153.6	9.68	16.863		
2,400.0	2,389.6	2,358.5	2,328.2	5.5	6.7	-14.07	-71.4	261.8	173.5	163.3	10.14	17.105		
2,500.0	2,485.3	2,458.2	2,421.6	6.0	7.4	-14.67	-82.5	295.1	180.3	169.7	10.64	16.956		
2,600.0	2,580.5	2,558.1	2,515.0	6.5	8.1	-15.36	-93.5	328.5	186.0	174.8	11.22	16.582		
2,700.0	2,675.8	2,657.9	2,608.4	7.0	8.8	-16.01	-104.5	361.9	191.7	179.8	11.82	16.215		
2,800.0	2,771.0	2,757.7	2,701.8	7.5	9.5	-16.62	-115.6	395.3	197.4	184.9	12.44	15.858		
2,900.0	2,866.3	2,857.5	2,795.2	8.0	10.2	-17.19	-126.6	428.6	203.1	190.0	13.09	15.514		
3,000.0	2,961.5	2,957.3	2,888.7	8.6	10.9	-17.74	-137.7	462.0	208.8	195.0	13.75	15.182		
3,100.0	3,056.8	3,057.1	2,982.1	9.2	11.6	-18.26	-148.7	495.4	214.6	200.1	14.43	14.865		
3,200.0	3,152.0	3,157.0	3,075.5	9.8	12.3	-18.75	-159.8	528.8	220.3	205.2	15.13	14.561		
3,300.0	3,247.3	3,256.8	3,168.9	10.4	13.0	-19.21	-170.8	562.1	226.1	210.3	15.84	14.273		
3,400.0	3,342.5	3,356.6	3,262.3	11.0	13.8	-19.65	-181.9	595.5	231.9	215.3	16.57	13.998		
3,500.0	3,437.8	3,456.4	3,355.8	11.6	14.5	-20.07	-192.9	628.9	237.7	220.4	17.30	13.738		
3,600.0	3,533.0	3,556.2	3,449.2	12.2	15.2	-20.47	-204.0	662.3	243.5	225.5	18.05	13.490		
3,700.0	3,628.3	3,656.0	3,542.6	12.8	16.0	-20.85	-215.0	695.7	249.4	230.6	18.81	13.255		
3,800.0	3,723.6	3,755.9	3,636.0	13.4	16.7	-21.22	-226.1	729.0	255.2	235.6	19.58	13.032		
3,900.0	3,818.8	3,855.7	3,729.4	14.1	17.4	-21.56	-237.1	762.4	261.1	240.7	20.36	12.821		
4,000.0	3,914.1	3,955.5	3,822.9	14.7	18.2	-21.90	-248.2	795.8	266.9	245.8	21.15	12.621		
4,100.0	4,009.3	4,055.3	3,916.3	15.3	18.9	-22.21	-259.2	829.2	272.8	250.9	21.95	12.430		
4,200.0	4,104.6	4,155.1	4,009.7	15.9	19.7	-22.52	-270.2	862.5	278.7	255.9	22.75	12.250		
4,300.0	4,199.8	4,254.9	4,103.1	16.6	20.4	-22.81	-281.3	895.9	284.6	261.0	23.56	12.078		
4,400.0	4,295.1	4,354.8	4,196.5	17.2	21.2	-23.09	-292.3	929.3	290.5	266.1	24.38	11.915		
4,500.0	4,390.3	4,454.6	4,290.0	17.8	21.9	-23.36	-303.4	962.7	296.4	271.2	25.20	11.759		
4,600.0	4,485.6	4,554.4	4,383.4	18.5	22.7	-23.62	-314.4	996.1	302.3	276.2	26.03	11.612		
4,700.0	4,580.8	4,654.2	4,476.8	19.1	23.4	-23.87	-325.5	1,029.4	308.2	281.3	26.87	11.471		
4,800.0	4,676.1	4,754.0	4,570.2	19.8	24.2	-24.11	-336.5	1,062.8	314.1	286.4	27.71	11.337		
4,900.0	4,771.3	4,853.8	4,663.6	20.4	24.9	-24.34	-347.6	1,096.2	320.0	291.5	28.55	11.209		
5,000.0	4,866.6	4,953.6	4,757.0	21.0	25.7	-24.56	-358.6	1,129.6	326.0	296.6	29.40	11.086		
5,100.0	4,961.8	5,053.5	4,850.5	21.7	26.4	-24.77	-369.7	1,163.0	331.9	301.6	30.26	10.970		

COMPASS 2003.21 Build 46

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	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	5,057.1	5,153.3	4,943.9	22.3	27.2	-24.98	-380.7	1,196.3	337.8	306.7	31.11	10.858	
5,300.0	5,152.3	5,253.1	5,037.3	23.0	27.9	-25.18	-391.8	1,229.7	343.8	311.8	31.98	10.751	
5,400.0	5,247.6	5,352.9	5,130.7	23.6	28.7	-25.37	-402.8	1,263.1	349.7	316.9	32.84	10.649	
5,500.0	5,342.8	5,452.7	5,224.1	24.2	29.4	-25.56	-413.9	1,296.5	355.7	322.0	33.71	10.551	
5,600.0	5,438.1	5,552.5	5,317.6	24.9	30.2	-25.74	-424.9	1,329.8	361.6	327.0	34.58	10.457	
5,700.0	5,533.4	5,652.4	5,411.0	25.5	30.9	-21.74	-435.9	1,363.2	367.6	332.1	35.47	10.363	
5,800.0	5,629.2	5,751.8	5,504.0	26.0	31.7	5.72	-447.0	1,396.5	373.2	337.4	35.78	10.429	
5,900.0	5,724.6	5,849.8	5,596.0	26.4	32.3	31.92	-455.4	1,429.3	378.9	343.6	35.31	10.733	
6,000.0	5,817.6	5,950.0	5,690.2	26.7	32.9	50.12	-451.2	1,463.0	385.7	350.9	34.75	11.100	
6,100.0	5,906.4	6,053.4	5,785.8	27.0	33.4	62.11	-432.4	1,497.1	393.2	358.9	34.27	11.471	
6,200.0	5,989.3	6,160.0	5,880.7	27.1	33.8	70.39	-397.8	1,530.9	401.1	367.2	33.96	11.811	
6,300.0	6,064.6	6,270.2	5,972.6	27.2	34.2	76.41	-346.9	1,563.6	409.3	375.5	33.85	12.093	
6,400.0	6,131.0	6,383.8	6,058.6	27.3	34.4	80.94	-279.2	1,594.2	417.2	383.3	33.93	12.296	
6,500.0	6,187.0	6,501.0	6,135.4	27.3	34.6	84.36	-195.4	1,621.6	424.5	390.3	34.23	12.403	
6,600.0	6,231.7	6,621.2	6,200.0	27.3	34.8	86.90	-96.7	1,644.4	430.8	396.0	34.76	12.393	
6,700.0	6,264.1	6,744.2	6,248.9	27.4	34.9	88.67	14.6	1,661.7	435.6	400.0	35.54	12.257	
6,800.0	6,283.7	6,869.1	6,279.5	27.4	35.0	89.74	135.1	1,672.5	438.6	402.0	36.63	11.976	
6,900.0	6,290.0	6,995.1	6,290.0	27.5	35.1	90.13	260.4	1,676.0	439.8	401.8	38.00	11.574	
7,000.0	6,290.0	7,095.2	6,290.0	27.7	35.2	90.13	360.5	1,675.9	439.8	400.6	39.23	11.209	
7,100.0	6,290.0	7,195.2	6,290.0	28.0	35.4	90.13	460.5	1,675.7	439.8	398.8	41.00	10.726	
7,200.0	6,290.0	7,295.2	6,290.0	28.4	35.6	90.13	560.5	1,675.6	439.8	396.8	43.05	10.216	
7,300.0	6,290.0	7,395.2	6,290.0	29.0	36.0	90.13	660.5	1,675.4	439.8	394.5	45.33	9.702	
7,400.0	6,290.0	7,495.2	6,290.0	29.8	36.5	90.13	760.5	1,675.3	439.8	392.0	47.81	9.199	
7,500.0	6,290.0	7,595.2	6,290.0	30.7	37.0	90.13	860.5	1,675.1	439.8	389.4	50.46	8.715	
7,600.0	6,290.0	7,695.2	6,290.0	31.7	37.7	90.13	960.5	1,675.0	439.8	386.6	53.26	8.258	
7,700.0	6,290.0	7,795.2	6,290.0	32.8	38.5	90.13	1,060.5	1,674.8	439.8	383.6	56.18	7.829	
7,800.0	6,290.0	7,895.2	6,290.0	34.1	39.3	90.13	1,160.5	1,674.7	439.8	380.6	59.21	7.429	
7,900.0	6,290.0	7,995.2	6,290.0	35.4	40.3	90.13	1,260.5	1,674.5	439.8	377.5	62.32	7.058	
8,000.0	6,290.0	8,095.2	6,290.0	36.8	41.4	90.13	1,360.5	1,674.3	439.8	374.3	65.51	6.714	
8,100.0	6,290.0	8,195.2	6,290.0	38.2	42.5	90.13	1,460.5	1,674.2	439.8	371.1	68.77	6.396	
8,200.0	6,290.0	8,295.2	6,290.0	39.7	43.7	90.13	1,560.5	1,674.0	439.8	367.8	72.09	6.102	
8,300.0	6,290.0	8,395.2	6,290.0	41.3	45.0	90.13	1,660.5	1,673.9	439.8	364.4	75.45	5.829	
8,400.0	6,290.0	8,495.2	6,290.0	42.8	46.4	90.13	1,760.5	1,673.7	439.9	361.0	78.86	5.578	
8,500.0	6,290.0	8,595.2	6,290.0	44.4	47.8	90.13	1,860.5	1,673.6	439.9	357.5	82.31	5.344	
8,600.0	6,290.0	8,695.2	6,290.0	46.0	49.2	90.13	1,960.5	1,673.4	439.9	354.1	85.79	5.127	
8,700.0	6,290.0	8,795.2	6,290.0	47.7	50.7	90.13	2,060.5	1,673.3	439.9	350.6	89.30	4.926	
8,800.0	6,290.0	8,895.2	6,290.0	49.4	52.2	90.13	2,160.5	1,673.1	439.9	347.0	92.84	4.738	
8,900.0	6,290.0	8,995.2	6,290.0	51.0	53.8	90.13	2,260.5	1,673.0	439.9	343.5	96.40	4.563	
9,000.0	6,290.0	9,095.2	6,290.0	52.8	55.3	90.13	2,360.5	1,672.8	439.9	339.9	99.98	4.400	
9,100.0	6,290.0	9,195.2	6,290.0	54.5	56.9	90.13	2,460.5	1,672.7	439.9	336.3	103.58	4.247	
9,200.0	6,290.0	9,295.2	6,290.0	56.2	58.6	90.13	2,560.5	1,672.5	439.9	332.7	107.19	4.104	
9,300.0	6,290.0	9,395.2	6,290.0	58.0	60.2	90.13	2,660.5	1,672.4	439.9	329.1	110.82	3.969	
9,400.0	6,290.0	9,495.2	6,290.0	59.7	61.9	90.13	2,760.5	1,672.2	439.9	325.4	114.47	3.843	
9,500.0	6,290.0	9,595.2	6,290.0	61.5	63.6	90.13	2,860.5	1,672.1	439.9	321.8	118.13	3.724	
9,600.0	6,290.0	9,695.2	6,290.0	63.2	65.3	90.13	2,960.5	1,671.9	439.9	318.1	121.80	3.612	
9,700.0	6,290.0	9,795.2	6,290.0	65.0	67.0	90.13	3,060.5	1,671.8	439.9	314.4	125.47	3.506	
9,800.0	6,290.0	9,895.2	6,290.0	66.8	68.7	90.13	3,160.5	1,671.6	439.9	310.8	129.16	3.406	
9,900.0	6,290.0	9,995.2	6,290.0	68.6	70.4	90.13	3,260.5	1,671.4	439.9	307.1	132.86	3.311	
10,000.0	6,290.0	10,095.2	6,290.0	70.4	72.2	90.13	3,360.5	1,671.3	439.9	303.4	136.56	3.221	
10,100.0	6,290.0	10,195.2	6,290.0	72.2	73.9	90.13	3,460.5	1,671.1	439.9	299.6	140.28	3.136	
10,200.0	6,290.0	10,295.2	6,290.0	74.0	75.7	90.13	3,560.5	1,671.0	439.9	295.9	144.00	3.055	
10,300.0	6,290.0	10,395.2	6,290.0	75.9	77.4	90.13	3,660.5	1,670.8	439.9	292.2	147.72	2.978	

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

Offset Design												Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,400.0	6,290.0	10,495.2	6,290.0	77.7	79.2	90.13	3,760.5	1,670.7	439.9	288.5	151.45	2.905		
10,500.0	6,290.0	10,595.2	6,290.0	79.5	81.0	90.13	3,860.5	1,670.5	439.9	284.8	155.19	2.835		
10,600.0	6,290.0	10,695.2	6,290.0	81.4	82.8	90.13	3,960.5	1,670.4	439.9	281.0	158.93	2.768		
10,700.0	6,290.0	10,795.2	6,290.0	83.2	84.6	90.13	4,060.5	1,670.2	440.0	277.3	162.68	2.704		
10,800.0	6,290.0	10,895.2	6,290.0	85.0	86.4	90.13	4,160.5	1,670.1	440.0	273.5	166.43	2.644		
10,900.0	6,290.0	10,995.2	6,290.0	86.9	88.2	90.13	4,260.5	1,669.9	440.0	269.8	170.18	2.585		
11,000.0	6,290.0	11,095.2	6,290.0	88.7	90.0	90.13	4,360.5	1,669.8	440.0	266.0	173.94	2.529		
11,100.0	6,290.0	11,195.2	6,290.0	90.6	91.8	90.13	4,460.5	1,669.6	440.0	262.3	177.70	2.476		
11,200.0	6,290.0	11,295.2	6,290.0	92.4	93.6	90.13	4,560.5	1,669.5	440.0	258.5	181.47	2.425		
11,300.0	6,290.0	11,395.2	6,290.0	94.3	95.5	90.13	4,660.5	1,669.3	440.0	254.7	185.24	2.375		
11,400.0	6,290.0	11,495.2	6,290.0	96.1	97.3	90.13	4,760.5	1,669.2	440.0	251.0	189.01	2.328		
11,500.0	6,290.0	11,595.2	6,290.0	98.0	99.1	90.13	4,860.5	1,669.0	440.0	247.2	192.78	2.282		
11,600.0	6,290.0	11,695.2	6,290.0	99.9	101.0	90.13	4,960.5	1,668.8	440.0	243.4	196.56	2.238		
11,700.0	6,290.0	11,795.2	6,290.0	101.7	102.8	90.13	5,060.5	1,668.7	440.0	239.7	200.34	2.196		
11,800.0	6,290.0	11,895.2	6,290.0	103.6	104.6	90.13	5,160.5	1,668.5	440.0	235.9	204.12	2.156		
11,900.0	6,290.0	11,995.2	6,290.0	105.5	106.5	90.13	5,260.5	1,668.4	440.0	232.1	207.90	2.116		
12,000.0	6,290.0	12,095.2	6,290.0	107.3	108.3	90.13	5,360.5	1,668.2	440.0	228.3	211.69	2.079		
12,100.0	6,290.0	12,195.2	6,290.0	109.2	110.2	90.13	5,460.5	1,668.1	440.0	224.5	215.48	2.042		
12,200.0	6,290.0	12,295.2	6,290.0	111.1	112.0	90.13	5,560.5	1,667.9	440.0	220.8	219.27	2.007		
12,300.0	6,290.0	12,395.2	6,290.0	113.0	113.9	90.13	5,660.5	1,667.8	440.0	217.0	223.06	1.973		
12,400.0	6,290.0	12,495.2	6,290.0	114.8	115.7	90.13	5,760.5	1,667.6	440.0	213.2	226.85	1.940		
12,500.0	6,290.0	12,595.2	6,290.0	116.7	117.6	90.13	5,860.5	1,667.5	440.0	209.4	230.64	1.908		
12,600.0	6,290.0	12,695.2	6,290.0	118.6	119.5	90.13	5,960.5	1,667.3	440.0	205.6	234.44	1.877		
12,700.0	6,290.0	12,795.2	6,290.0	120.5	121.3	90.13	6,060.5	1,667.2	440.0	201.8	238.24	1.847		
12,800.0	6,290.0	12,895.2	6,290.0	122.4	123.2	90.13	6,160.5	1,667.0	440.0	198.0	242.04	1.818		
12,900.0	6,290.0	12,995.2	6,290.0	124.2	125.1	90.13	6,260.5	1,666.9	440.0	194.2	245.84	1.790		
13,000.0	6,290.0	13,095.2	6,290.0	126.1	126.9	90.13	6,360.5	1,666.7	440.1	190.4	249.64	1.763		
13,100.0	6,290.0	13,195.2	6,290.0	128.0	128.8	90.13	6,460.5	1,666.6	440.1	186.6	253.44	1.736		
13,200.0	6,290.0	13,295.2	6,290.0	129.9	130.7	90.13	6,560.5	1,666.4	440.1	182.8	257.24	1.711		
13,300.0	6,290.0	13,395.2	6,290.0	131.8	132.5	90.13	6,660.5	1,666.2	440.1	179.0	261.05	1.686		
13,400.0	6,290.0	13,495.2	6,290.0	133.7	134.4	90.13	6,760.5	1,666.1	440.1	175.2	264.86	1.662		
13,500.0	6,290.0	13,595.2	6,290.0	135.6	136.3	90.13	6,860.5	1,665.9	440.1	171.4	268.66	1.638		
13,600.0	6,290.0	13,695.2	6,290.0	137.5	138.2	90.13	6,960.5	1,665.8	440.1	167.6	272.47	1.615		
13,700.0	6,290.0	13,795.2	6,290.0	139.3	140.0	90.13	7,060.5	1,665.6	440.1	163.8	276.28	1.593		
13,800.0	6,290.0	13,895.2	6,290.0	141.2	141.9	90.13	7,160.5	1,665.5	440.1	160.0	280.09	1.571		
13,900.0	6,290.0	13,995.2	6,290.0	143.1	143.8	90.13	7,260.5	1,665.3	440.1	156.2	283.90	1.550		
13,947.7	6,290.0	14,042.9	6,290.0	144.0	144.7	90.13	7,308.2	1,665.3	440.1	154.4	285.72	1.540		
13,947.9	6,290.0	14,043.0	6,290.0	144.0	144.7	90.13	7,308.4	1,665.3	440.0	154.2	285.72	1.540 SF		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	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	89.38	0.7	67.5	67.5					
100.0	100.0	99.0	99.0	0.1	0.1	89.38	0.7	67.5	67.5	67.3	0.22	301.783		
200.0	200.0	199.0	199.0	0.3	0.3	89.38	0.7	67.5	67.5	66.8	0.67	100.427		
300.0	300.0	299.0	299.0	0.6	0.6	89.38	0.7	67.5	67.5	66.4	1.12	60.176		
400.0	400.0	399.0	399.0	0.8	0.8	89.38	0.7	67.5	67.5	65.9	1.57	42.958		
500.0	500.0	499.0	499.0	1.0	1.0	89.38	0.7	67.5	67.5	65.5	2.02	33.401		
600.0	600.0	599.0	599.0	1.2	1.2	89.38	0.7	67.5	67.5	65.0	2.47	27.323		
700.0	700.0	699.0	699.0	1.5	1.5	89.38	0.7	67.5	67.5	64.6	2.92	23.116		
800.0	800.0	799.0	799.0	1.7	1.7	89.38	0.7	67.5	67.5	64.1	3.37	20.032		
900.0	900.0	899.0	899.0	1.9	1.9	89.38	0.7	67.5	67.5	63.7	3.82	17.674		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.38	0.7	67.5	67.5	63.2	4.27	15.812 CC, ES		
1,100.0	1,100.0	1,096.8	1,096.8	2.4	2.3	89.78	0.3	69.1	69.1	64.4	4.70	14.712		
1,200.0	1,200.0	1,194.3	1,194.2	2.6	2.5	90.87	-1.1	73.8	74.0	68.9	5.11	14.463		
1,300.0	1,300.0	1,291.4	1,290.9	2.8	2.7	92.41	-3.4	81.7	82.2	76.6	5.54	14.823		
1,400.0	1,400.0	1,387.8	1,386.6	3.0	3.0	94.10	-6.6	92.6	93.7	87.7	5.99	15.651		
1,500.0	1,500.0	1,483.4	1,481.1	3.3	3.2	95.74	-10.7	106.5	108.6	102.1	6.45	16.830		
1,600.0	1,600.0	1,577.8	1,573.9	3.5	3.5	97.22	-15.6	123.2	126.7	119.8	6.94	18.256		
1,700.0	1,700.0	1,671.4	1,665.3	3.7	3.8	-15.74	-21.3	142.6	146.5	139.2	7.25	20.214		
1,800.0	1,799.8	1,764.4	1,755.4	3.9	4.2	-14.97	-27.8	164.8	166.1	158.5	7.64	21.735		
1,900.0	1,899.5	1,856.8	1,844.1	4.1	4.6	-14.50	-35.1	189.5	185.7	177.6	8.05	23.068		
2,000.0	1,998.7	1,948.7	1,931.5	4.3	5.1	-14.24	-43.1	216.9	205.0	196.6	8.46	24.230		
2,100.0	2,097.5	2,040.1	2,017.4	4.6	5.7	-14.13	-51.8	246.7	224.2	215.3	8.88	25.236		
2,200.0	2,195.6	2,130.9	2,101.8	4.8	6.3	-14.13	-61.3	278.9	243.1	233.8	9.32	26.084		
2,300.0	2,293.1	2,229.4	2,192.7	5.2	7.0	-14.29	-71.9	315.3	260.2	250.4	9.79	26.583		
2,400.0	2,389.6	2,328.4	2,284.1	5.5	7.7	-14.62	-82.6	351.8	274.0	263.8	10.28	26.657		
2,500.0	2,485.3	2,427.9	2,375.9	6.0	8.5	-15.11	-93.4	388.5	284.5	273.7	10.80	26.335		
2,600.0	2,580.5	2,527.4	2,467.7	6.5	9.2	-15.68	-104.2	425.2	293.8	282.4	11.41	25.756		
2,700.0	2,675.8	2,626.9	2,559.6	7.0	10.0	-16.21	-114.9	462.0	303.1	291.1	12.03	25.193		
2,800.0	2,771.0	2,726.4	2,651.5	7.5	10.8	-16.72	-125.7	498.7	312.5	299.8	12.68	24.650		
2,900.0	2,866.3	2,826.0	2,743.4	8.0	11.6	-17.19	-136.5	535.4	321.8	308.5	13.34	24.128		
3,000.0	2,961.5	2,925.5	2,835.2	8.6	12.4	-17.64	-147.2	572.2	331.2	317.2	14.02	23.630		
3,100.0	3,056.8	3,025.0	2,927.1	9.2	13.2	-18.06	-158.0	608.9	340.6	325.9	14.71	23.155		
3,200.0	3,152.0	3,124.5	3,019.0	9.8	14.0	-18.46	-168.8	645.6	350.0	334.6	15.42	22.704		
3,300.0	3,247.3	3,224.1	3,110.9	10.4	14.8	-18.84	-179.5	682.3	359.5	343.3	16.14	22.275		
3,400.0	3,342.5	3,323.6	3,202.7	11.0	15.6	-19.20	-190.3	719.1	368.9	352.0	16.87	21.870		
3,500.0	3,437.8	3,423.1	3,294.6	11.6	16.4	-19.54	-201.1	755.8	378.4	360.7	17.61	21.485		
3,600.0	3,533.0	3,522.7	3,386.5	12.2	17.2	-19.86	-211.8	792.5	387.8	369.5	18.36	21.121		
3,700.0	3,628.3	3,622.2	3,478.4	12.8	18.1	-20.17	-222.6	829.3	397.3	378.2	19.12	20.776		
3,800.0	3,723.6	3,721.7	3,570.2	13.4	18.9	-20.47	-233.4	866.0	406.8	386.9	19.89	20.449		
3,900.0	3,818.8	3,821.2	3,662.1	14.1	19.7	-20.75	-244.1	902.7	416.3	395.6	20.67	20.140		
4,000.0	3,914.1	3,920.8	3,754.0	14.7	20.5	-21.02	-254.9	939.4	425.8	404.4	21.46	19.847		
4,100.0	4,009.3	4,020.3	3,845.8	15.3	21.3	-21.27	-265.7	976.2	435.3	413.1	22.25	19.568		
4,200.0	4,104.6	4,119.8	3,937.7	15.9	22.2	-21.52	-276.4	1,012.9	444.9	421.8	23.05	19.304		
4,300.0	4,199.8	4,219.3	4,029.6	16.6	23.0	-21.76	-287.2	1,049.6	454.4	430.6	23.85	19.054		
4,400.0	4,295.1	4,318.9	4,121.5	17.2	23.8	-21.98	-298.0	1,086.4	464.0	439.3	24.66	18.815		
4,500.0	4,390.3	4,418.4	4,213.3	17.8	24.6	-22.20	-308.7	1,123.1	473.5	448.0	25.47	18.588		
4,600.0	4,485.6	4,517.9	4,305.2	18.5	25.4	-22.41	-319.5	1,159.8	483.1	456.8	26.29	18.373		
4,700.0	4,580.8	4,617.4	4,397.1	19.1	26.3	-22.61	-330.3	1,196.5	492.6	465.5	27.12	18.167		
4,800.0	4,676.1	4,717.0	4,489.0	19.8	27.1	-22.80	-341.0	1,233.3	502.2	474.3	27.95	17.971		
4,900.0	4,771.3	4,816.5	4,580.8	20.4	27.9	-22.99	-351.8	1,270.0	511.8	483.0	28.78	17.784		
5,000.0	4,866.6	4,916.0	4,672.7	21.0	28.7	-23.16	-362.6	1,306.7	521.4	491.8	29.61	17.606		
5,100.0	4,961.8	5,015.6	4,764.6	21.7	29.6	-23.34	-373.4	1,343.5	531.0	500.5	30.45	17.435		

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 Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	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	5,057.1	5,115.1	4,856.4	22.3	30.4	-23.50	-384.1	1,380.2	540.5	509.2	31.30	17.272	
5,300.0	5,152.3	5,214.6	4,948.3	23.0	31.2	-23.66	-394.9	1,416.9	550.1	518.0	32.14	17.116	
5,400.0	5,247.6	5,314.1	5,040.2	23.6	32.0	-23.82	-405.7	1,453.6	559.7	526.8	32.99	16.966	
5,500.0	5,342.8	5,413.7	5,132.1	24.2	32.8	-23.97	-416.4	1,490.4	569.3	535.5	33.84	16.823	
5,600.0	5,438.1	5,513.2	5,223.9	24.9	33.7	-24.11	-427.2	1,527.1	579.0	544.3	34.70	16.686	
5,700.0	5,533.4	5,612.7	5,315.8	25.5	34.5	-20.15	-438.0	1,563.8	588.6	553.0	35.60	16.533	
5,800.0	5,629.2	5,711.9	5,407.3	26.0	35.3	6.50	-448.7	1,600.4	598.0	561.8	36.26	16.493	
5,900.0	5,724.6	5,810.0	5,498.3	26.4	36.0	30.96	-453.4	1,636.8	607.5	571.1	36.42	16.684	
6,000.0	5,817.6	5,910.3	5,590.9	26.7	36.6	47.32	-444.3	1,673.8	617.2	580.8	36.39	16.960	
6,100.0	5,906.4	6,012.9	5,683.6	27.0	37.2	57.57	-420.7	1,710.8	626.9	590.6	36.27	17.285	
6,200.0	5,989.3	6,118.0	5,774.3	27.1	37.6	64.22	-382.0	1,747.0	636.3	600.2	36.11	17.620	
6,300.0	6,064.6	6,225.7	5,860.8	27.2	38.0	68.78	-327.9	1,781.4	645.2	609.2	36.01	17.917	
6,400.0	6,131.0	6,336.0	5,940.5	27.3	38.3	72.01	-258.8	1,813.2	653.3	617.2	36.04	18.127	
6,500.0	6,187.0	6,448.8	6,010.8	27.3	38.6	74.34	-175.4	1,841.1	660.4	624.1	36.28	18.201	
6,600.0	6,231.7	6,563.8	6,069.1	27.3	38.8	76.01	-79.2	1,864.3	666.2	629.4	36.81	18.100	
6,700.0	6,264.1	6,680.6	6,113.0	27.4	38.9	77.15	27.6	1,881.6	670.6	632.9	37.65	17.811	
6,800.0	6,283.7	6,798.9	6,140.4	27.4	39.0	77.84	141.9	1,892.4	673.3	634.5	38.82	17.343	
6,900.0	6,290.0	6,918.0	6,150.0	27.5	39.1	78.10	260.4	1,896.1	674.3	634.0	40.33	16.722	
7,000.0	6,290.0	7,018.4	6,150.0	27.7	39.2	78.10	360.9	1,895.9	674.3	632.6	41.74	16.156	
7,100.0	6,290.0	7,118.4	6,150.0	28.0	39.3	78.10	460.9	1,895.8	674.3	630.8	43.51	15.497	
7,200.0	6,290.0	7,218.4	6,150.0	28.4	39.5	78.10	560.9	1,895.6	674.3	628.8	45.53	14.810	
7,300.0	6,290.0	7,318.4	6,150.0	29.0	39.8	78.10	660.9	1,895.4	674.3	626.6	47.76	14.118	
7,400.0	6,290.0	7,418.4	6,150.0	29.8	40.2	78.10	760.9	1,895.3	674.3	624.1	50.18	13.438	
7,500.0	6,290.0	7,518.4	6,150.0	30.7	40.6	78.10	860.9	1,895.1	674.3	621.6	52.75	12.782	
7,600.0	6,290.0	7,618.4	6,150.0	31.7	41.2	78.10	960.9	1,895.0	674.3	618.9	55.47	12.158	
7,700.0	6,290.0	7,718.4	6,150.0	32.8	41.8	78.10	1,060.9	1,894.8	674.3	616.0	58.30	11.567	
7,800.0	6,290.0	7,818.4	6,150.0	34.1	42.5	78.10	1,160.9	1,894.7	674.3	613.1	61.23	11.014	
7,900.0	6,290.0	7,918.4	6,150.0	35.4	43.4	78.10	1,260.9	1,894.5	674.3	610.1	64.25	10.496	
8,000.0	6,290.0	8,018.4	6,150.0	36.8	44.3	78.10	1,360.9	1,894.4	674.3	607.0	67.34	10.014	
8,100.0	6,290.0	8,118.4	6,150.0	38.2	45.3	78.10	1,460.9	1,894.2	674.3	603.8	70.50	9.565	
8,200.0	6,290.0	8,218.4	6,150.0	39.7	46.3	78.10	1,560.9	1,894.1	674.3	600.6	73.72	9.148	
8,300.0	6,290.0	8,318.4	6,150.0	41.3	47.5	78.10	1,660.9	1,893.9	674.4	597.4	76.99	8.759	
8,400.0	6,290.0	8,418.4	6,150.0	42.8	48.7	78.10	1,760.9	1,893.8	674.4	594.1	80.30	8.398	
8,500.0	6,290.0	8,518.4	6,150.0	44.4	50.0	78.10	1,860.9	1,893.6	674.4	590.7	83.65	8.062	
8,600.0	6,290.0	8,618.4	6,150.0	46.0	51.3	78.10	1,960.9	1,893.5	674.4	587.3	87.03	7.748	
8,700.0	6,290.0	8,718.4	6,150.0	47.7	52.7	78.10	2,060.9	1,893.3	674.4	583.9	90.45	7.456	
8,800.0	6,290.0	8,818.4	6,150.0	49.4	54.1	78.11	2,160.9	1,893.1	674.4	580.5	93.89	7.182	
8,900.0	6,290.0	8,918.4	6,150.0	51.0	55.6	78.11	2,260.8	1,893.0	674.4	577.0	97.36	6.927	
9,000.0	6,290.0	9,018.4	6,150.0	52.8	57.1	78.11	2,360.8	1,892.8	674.4	573.5	100.85	6.687	
9,100.0	6,290.0	9,118.4	6,150.0	54.5	58.6	78.11	2,460.8	1,892.7	674.4	570.0	104.36	6.462	
9,200.0	6,290.0	9,218.4	6,150.0	56.2	60.2	78.11	2,560.8	1,892.5	674.4	566.5	107.89	6.251	
9,300.0	6,290.0	9,318.4	6,150.0	58.0	61.7	78.11	2,660.8	1,892.4	674.4	563.0	111.43	6.052	
9,400.0	6,290.0	9,418.4	6,150.0	59.7	63.3	78.11	2,760.8	1,892.2	674.4	559.4	114.98	5.865	
9,500.0	6,290.0	9,518.4	6,150.0	61.5	65.0	78.11	2,860.8	1,892.1	674.4	555.8	118.56	5.688	
9,600.0	6,290.0	9,618.4	6,150.0	63.2	66.6	78.11	2,960.8	1,891.9	674.4	552.3	122.14	5.522	
9,700.0	6,290.0	9,718.4	6,150.0	65.0	68.3	78.11	3,060.8	1,891.8	674.4	548.7	125.73	5.364	
9,800.0	6,290.0	9,818.4	6,150.0	66.8	70.0	78.11	3,160.8	1,891.6	674.4	545.1	129.33	5.214	
9,900.0	6,290.0	9,918.4	6,150.0	68.6	71.7	78.11	3,260.8	1,891.5	674.4	541.5	132.95	5.073	
10,000.0	6,290.0	10,018.4	6,150.0	70.4	73.4	78.11	3,360.8	1,891.3	674.4	537.8	136.57	4.938	
10,100.0	6,290.0	10,118.4	6,150.0	72.2	75.1	78.11	3,460.8	1,891.1	674.4	534.2	140.20	4.810	
10,200.0	6,290.0	10,218.4	6,150.0	74.0	76.8	78.11	3,560.8	1,891.0	674.4	530.6	143.83	4.689	
10,300.0	6,290.0	10,318.4	6,150.0	75.9	78.5	78.11	3,660.8	1,890.8	674.4	526.9	147.48	4.573	

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

Survey 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
10,400.0	6,290.0	10,418.4	6,150.0	77.7	80.3	78.11	3,760.8	1,890.7	674.4	523.3	151.13	4.463	
10,500.0	6,290.0	10,518.4	6,150.0	79.5	82.1	78.11	3,860.8	1,890.5	674.4	519.6	154.78	4.357	
10,600.0	6,290.0	10,618.4	6,150.0	81.4	83.8	78.11	3,960.8	1,890.4	674.4	516.0	158.44	4.257	
10,700.0	6,290.0	10,718.4	6,150.0	83.2	85.6	78.11	4,060.8	1,890.2	674.4	512.3	162.11	4.160	
10,800.0	6,290.0	10,818.4	6,150.0	85.0	87.4	78.11	4,160.8	1,890.1	674.4	508.7	165.78	4.068	
10,900.0	6,290.0	10,918.4	6,150.0	86.9	89.1	78.11	4,260.8	1,889.9	674.4	505.0	169.46	3.980	
11,000.0	6,290.0	11,018.4	6,150.0	88.7	90.9	78.11	4,360.8	1,889.8	674.4	501.3	173.14	3.895	
11,100.0	6,290.0	11,118.4	6,150.0	90.6	92.7	78.11	4,460.8	1,889.6	674.4	497.6	176.82	3.814	
11,200.0	6,290.0	11,218.4	6,150.0	92.4	94.5	78.11	4,560.8	1,889.5	674.5	493.9	180.51	3.736	
11,300.0	6,290.0	11,318.4	6,150.0	94.3	96.3	78.11	4,660.8	1,889.3	674.5	490.3	184.20	3.662	
11,400.0	6,290.0	11,418.4	6,150.0	96.1	98.2	78.11	4,760.8	1,889.2	674.5	486.6	187.89	3.590	
11,500.0	6,290.0	11,518.4	6,150.0	98.0	100.0	78.11	4,860.8	1,889.0	674.5	482.9	191.59	3.520	
11,600.0	6,290.0	11,618.4	6,150.0	99.9	101.8	78.11	4,960.8	1,888.8	674.5	479.2	195.29	3.454	
11,700.0	6,290.0	11,718.4	6,150.0	101.7	103.6	78.11	5,060.8	1,888.7	674.5	475.5	198.99	3.390	
11,800.0	6,290.0	11,818.4	6,150.0	103.6	105.4	78.11	5,160.8	1,888.5	674.5	471.8	202.69	3.328	
11,900.0	6,290.0	11,918.4	6,150.0	105.5	107.3	78.11	5,260.8	1,888.4	674.5	468.1	206.40	3.268	
12,000.0	6,290.0	12,018.4	6,150.0	107.3	109.1	78.11	5,360.8	1,888.2	674.5	464.4	210.11	3.210	
12,100.0	6,290.0	12,118.4	6,150.0	109.2	110.9	78.11	5,460.8	1,888.1	674.5	460.7	213.82	3.154	
12,200.0	6,290.0	12,218.4	6,150.0	111.1	112.8	78.11	5,560.8	1,887.9	674.5	457.0	217.53	3.101	
12,300.0	6,290.0	12,318.4	6,150.0	113.0	114.6	78.11	5,660.8	1,887.8	674.5	453.2	221.25	3.049	
12,400.0	6,290.0	12,418.4	6,150.0	114.8	116.5	78.11	5,760.8	1,887.6	674.5	449.5	224.97	2.998	
12,500.0	6,290.0	12,518.4	6,150.0	116.7	118.3	78.11	5,860.8	1,887.5	674.5	445.8	228.69	2.949	
12,600.0	6,290.0	12,618.4	6,150.0	118.6	120.2	78.11	5,960.8	1,887.3	674.5	442.1	232.41	2.902	
12,700.0	6,290.0	12,718.4	6,150.0	120.5	122.0	78.11	6,060.8	1,887.2	674.5	438.4	236.13	2.857	
12,800.0	6,290.0	12,818.4	6,150.0	122.4	123.9	78.11	6,160.8	1,887.0	674.5	434.7	239.85	2.812	
12,900.0	6,290.0	12,918.4	6,150.0	124.2	125.7	78.11	6,260.8	1,886.8	674.5	430.9	243.58	2.769	
13,000.0	6,290.0	13,018.4	6,150.0	126.1	127.6	78.11	6,360.8	1,886.7	674.5	427.2	247.31	2.727	
13,100.0	6,290.0	13,118.4	6,150.0	128.0	129.4	78.11	6,460.8	1,886.5	674.5	423.5	251.03	2.687	
13,200.0	6,290.0	13,218.4	6,150.0	129.9	131.3	78.11	6,560.8	1,886.4	674.5	419.8	254.76	2.648	
13,300.0	6,290.0	13,318.4	6,150.0	131.8	133.2	78.11	6,660.8	1,886.2	674.5	416.0	258.49	2.609	
13,400.0	6,290.0	13,418.4	6,150.0	133.7	135.0	78.11	6,760.8	1,886.1	674.5	412.3	262.23	2.572	
13,500.0	6,290.0	13,518.4	6,150.0	135.6	136.9	78.11	6,860.8	1,885.9	674.5	408.6	265.96	2.536	
13,600.0	6,290.0	13,618.4	6,150.0	137.5	138.8	78.11	6,960.8	1,885.8	674.5	404.8	269.69	2.501	
13,700.0	6,290.0	13,718.4	6,150.0	139.3	140.6	78.11	7,060.8	1,885.6	674.5	401.1	273.43	2.467	
13,800.0	6,290.0	13,818.4	6,150.0	141.2	142.5	78.11	7,160.8	1,885.5	674.5	397.4	277.16	2.434	
13,900.0	6,290.0	13,918.4	6,150.0	143.1	144.4	78.11	7,260.8	1,885.3	674.5	393.6	280.90	2.401	
13,947.7	6,290.0	13,966.1	6,150.0	144.0	145.3	78.11	7,308.6	1,885.2	674.5	391.9	282.69	2.386	
13,947.9	6,290.0	13,966.2	6,150.0	144.0	145.3	78.11	7,308.7	1,885.2	674.4	391.7	282.69	2.386 SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Markham Pad Sec.16-T4N-R68W - SRC Markham R-16-9-CHZ - Wellbore #1 - Plan#1 (3-31-14)													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	89.54	0.7	90.1	90.1					
100.0	100.0	99.0	99.0	0.1	0.1	89.54	0.7	90.1	90.1	89.9	0.22	402.782		
200.0	200.0	199.0	199.0	0.3	0.3	89.54	0.7	90.1	90.1	89.4	0.67	134.037		
300.0	300.0	299.0	299.0	0.6	0.6	89.54	0.7	90.1	90.1	89.0	1.12	80.315		
400.0	400.0	399.0	399.0	0.8	0.8	89.54	0.7	90.1	90.1	88.5	1.57	57.335		
500.0	500.0	499.0	499.0	1.0	1.0	89.54	0.7	90.1	90.1	88.1	2.02	44.580		
600.0	600.0	599.0	599.0	1.2	1.2	89.54	0.7	90.1	90.1	87.6	2.47	36.467		
700.0	700.0	699.0	699.0	1.5	1.5	89.54	0.7	90.1	90.1	87.2	2.92	30.852		
800.0	800.0	799.0	799.0	1.7	1.7	89.54	0.7	90.1	90.1	86.7	3.37	26.736 CC, ES		
900.0	900.0	896.0	896.0	1.9	1.9	89.81	0.3	91.6	91.7	87.9	3.80	24.149		
1,000.0	1,000.0	992.8	992.7	2.1	2.1	90.54	-0.9	96.4	96.6	92.4	4.22	22.905		
1,100.0	1,100.0	1,089.2	1,088.7	2.4	2.3	91.62	-3.0	104.2	104.7	100.1	4.65	22.540		
1,200.0	1,200.0	1,184.9	1,183.7	2.6	2.5	92.87	-5.8	115.1	116.2	111.1	5.09	22.815		
1,300.0	1,300.0	1,279.8	1,277.5	2.8	2.8	94.15	-9.4	128.9	131.0	125.4	5.56	23.545		
1,400.0	1,400.0	1,373.6	1,369.7	3.0	3.1	95.37	-13.7	145.5	149.0	142.9	6.06	24.588		
1,500.0	1,500.0	1,466.1	1,460.1	3.3	3.4	96.47	-18.7	164.7	170.2	163.7	6.59	25.829		
1,600.0	1,600.0	1,557.3	1,548.5	3.5	3.8	97.43	-24.3	186.4	194.6	187.5	7.16	27.183		
1,700.0	1,700.0	1,647.4	1,635.1	3.7	4.2	-15.88	-30.6	210.5	220.5	213.2	7.27	30.347		
1,800.0	1,799.8	1,736.8	1,720.2	3.9	4.7	-15.31	-37.5	237.0	246.1	238.4	7.68	32.052		
1,900.0	1,899.5	1,825.5	1,803.8	4.1	5.3	-14.96	-44.9	265.8	271.5	263.4	8.10	33.534		
2,000.0	1,998.7	1,913.6	1,885.8	4.3	5.9	-14.76	-53.0	296.9	296.6	288.1	8.53	34.785		
2,100.0	2,097.5	2,006.1	1,971.0	4.6	6.5	-14.69	-62.1	331.8	321.0	312.0	8.98	35.737		
2,200.0	2,195.6	2,103.8	2,060.8	4.8	7.3	-14.77	-71.7	368.9	342.5	333.0	9.46	36.201		
2,300.0	2,293.1	2,202.1	2,151.2	5.2	8.1	-15.00	-81.4	406.3	360.6	350.7	9.96	36.216		
2,400.0	2,389.6	2,300.9	2,242.1	5.5	8.9	-15.35	-91.2	443.9	375.5	365.0	10.48	35.840		
2,500.0	2,485.3	2,400.2	2,333.4	6.0	9.7	-15.83	-101.0	481.6	387.1	376.0	11.03	35.101		
2,600.0	2,580.5	2,499.6	2,424.8	6.5	10.5	-16.39	-110.8	519.4	397.4	385.8	11.65	34.117		
2,700.0	2,675.8	2,598.9	2,516.2	7.0	11.3	-16.92	-120.6	557.2	407.8	395.5	12.29	33.181		
2,800.0	2,771.0	2,698.3	2,607.6	7.5	12.1	-17.42	-130.5	595.0	418.3	405.3	12.95	32.295		
2,900.0	2,866.3	2,797.7	2,699.0	8.0	12.9	-17.90	-140.3	632.8	428.7	415.1	13.63	31.456		
3,000.0	2,961.5	2,897.1	2,790.4	8.6	13.8	-18.36	-150.1	670.6	439.2	424.9	14.32	30.666		
3,100.0	3,056.8	2,996.5	2,881.8	9.2	14.6	-18.79	-159.9	708.3	449.7	434.7	15.03	29.920		
3,200.0	3,152.0	3,095.9	2,973.2	9.8	15.4	-19.21	-169.7	746.1	460.3	444.5	15.75	29.218		
3,300.0	3,247.3	3,195.3	3,064.6	10.4	16.2	-19.61	-179.5	783.9	470.9	454.4	16.49	28.557		
3,400.0	3,342.5	3,294.7	3,156.0	11.0	17.1	-19.99	-189.4	821.7	481.4	464.2	17.23	27.934		
3,500.0	3,437.8	3,394.1	3,247.4	11.6	17.9	-20.35	-199.2	859.5	492.0	474.1	17.99	27.347		
3,600.0	3,533.0	3,493.4	3,338.8	12.2	18.8	-20.70	-209.0	897.3	502.7	483.9	18.76	26.794		
3,700.0	3,628.3	3,592.8	3,430.2	12.8	19.6	-21.03	-218.8	935.1	513.3	493.8	19.54	26.273		
3,800.0	3,723.6	3,692.2	3,521.6	13.4	20.4	-21.35	-228.6	972.8	524.0	503.7	20.32	25.781		
3,900.0	3,818.8	3,791.6	3,613.0	14.1	21.3	-21.66	-238.4	1,010.6	534.7	513.5	21.12	25.317		
4,000.0	3,914.1	3,891.0	3,704.4	14.7	22.1	-21.95	-248.3	1,048.4	545.4	523.4	21.92	24.878		
4,100.0	4,009.3	3,990.4	3,795.8	15.3	22.9	-22.24	-258.1	1,086.2	556.1	533.3	22.73	24.462		
4,200.0	4,104.6	4,089.8	3,887.2	15.9	23.8	-22.51	-267.9	1,124.0	566.8	543.2	23.55	24.069		
4,300.0	4,199.8	4,189.2	3,978.6	16.6	24.6	-22.77	-277.7	1,161.8	577.5	553.1	24.37	23.696		
4,400.0	4,295.1	4,288.6	4,070.0	17.2	25.5	-23.02	-287.5	1,199.6	588.2	563.0	25.20	23.343		
4,500.0	4,390.3	4,387.9	4,161.4	17.8	26.3	-23.27	-297.3	1,237.3	599.0	573.0	26.04	23.007		
4,600.0	4,485.6	4,487.3	4,252.8	18.5	27.2	-23.50	-307.2	1,275.1	609.8	582.9	26.88	22.688		
4,700.0	4,580.8	4,586.7	4,344.2	19.1	28.0	-23.73	-317.0	1,312.9	620.5	592.8	27.72	22.385		
4,800.0	4,676.1	4,686.1	4,435.6	19.8	28.8	-23.95	-326.8	1,350.7	631.3	602.8	28.57	22.096		
4,900.0	4,771.3	4,785.5	4,527.0	20.4	29.7	-24.16	-336.6	1,388.5	642.1	612.7	29.43	21.821		
5,000.0	4,866.6	4,884.9	4,618.4	21.0	30.5	-24.37	-346.4	1,426.3	652.9	622.6	30.29	21.558		
5,100.0	4,961.8	4,984.3	4,709.8	21.7	31.4	-24.57	-356.2	1,464.1	663.7	632.6	31.15	21.308		

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 Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	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	5,057.1	5,083.7	4,801.2	22.3	32.2	-24.76	-366.1	1,501.8	674.5	642.5	32.02	21.068	
5,300.0	5,152.3	5,183.0	4,892.6	23.0	33.1	-24.95	-375.9	1,539.6	685.4	652.5	32.89	20.840	
5,400.0	5,247.6	5,282.4	4,984.0	23.6	33.9	-25.13	-385.7	1,577.4	696.2	662.4	33.76	20.621	
5,500.0	5,342.8	5,381.8	5,075.4	24.2	34.7	-25.30	-395.5	1,615.2	707.0	672.4	34.64	20.411	
5,600.0	5,438.1	5,481.2	5,166.8	24.9	35.6	-25.47	-405.3	1,653.0	717.9	682.4	35.52	20.210	
5,700.0	5,533.4	5,580.6	5,258.2	25.5	36.4	-21.55	-415.1	1,690.8	728.7	692.3	36.46	19.986	
5,800.0	5,629.2	5,679.7	5,349.3	26.0	37.3	4.82	-424.9	1,728.4	739.2	701.9	37.25	19.842	
5,900.0	5,724.6	5,776.9	5,438.7	26.4	38.1	29.34	-434.5	1,765.4	749.2	711.8	37.42	20.021	
6,000.0	5,817.6	5,870.2	5,524.5	26.7	38.9	46.57	-443.8	1,800.9	759.9	722.7	37.16	20.450	
6,100.0	5,906.4	5,962.8	5,609.8	27.0	39.6	58.26	-451.1	1,836.1	772.5	735.8	36.70	21.046	
6,200.0	5,989.3	6,063.4	5,702.5	27.1	40.3	66.51	-446.7	1,874.5	787.1	750.8	36.29	21.690	
6,300.0	6,064.6	6,172.5	5,801.5	27.2	40.9	72.70	-426.2	1,915.3	803.4	767.4	36.02	22.304	
6,400.0	6,131.0	6,292.2	5,905.3	27.3	41.5	77.61	-385.3	1,958.2	820.6	784.7	35.92	22.844	
6,500.0	6,187.0	6,424.7	6,011.2	27.3	42.1	81.66	-318.9	2,001.8	837.9	801.9	36.01	23.266	
6,600.0	6,231.7	6,572.2	6,113.5	27.3	42.5	85.00	-221.7	2,043.9	853.9	817.6	36.31	23.516	
6,700.0	6,264.1	6,735.5	6,202.6	27.4	42.9	87.62	-90.3	2,080.6	867.2	830.3	36.89	23.505	
6,800.0	6,283.7	6,913.1	6,265.7	27.4	43.1	89.37	73.2	2,106.4	876.3	838.4	37.90	23.120	
6,900.0	6,290.0	7,099.9	6,290.0	27.5	43.2	90.06	257.6	2,116.1	879.9	840.4	39.49	22.283	
7,000.0	6,290.0	7,203.5	6,290.0	27.7	43.3	90.07	361.2	2,115.9	879.9	838.9	40.96	21.483	
7,100.0	6,290.0	7,303.5	6,290.0	28.0	43.4	90.07	461.2	2,115.8	879.9	837.2	42.68	20.617	
7,200.0	6,290.0	7,403.5	6,290.0	28.4	43.6	90.07	561.2	2,115.6	879.9	835.2	44.66	19.701	
7,300.0	6,290.0	7,503.5	6,290.0	29.0	43.8	90.07	661.2	2,115.5	879.9	833.0	46.88	18.770	
7,400.0	6,290.0	7,603.5	6,290.0	29.8	44.1	90.07	761.2	2,115.3	879.9	830.6	49.29	17.850	
7,500.0	6,290.0	7,703.5	6,290.0	30.7	44.5	90.07	861.2	2,115.2	879.9	828.0	51.88	16.960	
7,600.0	6,290.0	7,803.5	6,290.0	31.7	45.0	90.07	961.2	2,115.0	879.9	825.2	54.61	16.110	
7,700.0	6,290.0	7,903.5	6,290.0	32.8	45.5	90.07	1,061.2	2,114.8	879.9	822.4	57.48	15.308	
7,800.0	6,290.0	8,003.5	6,290.0	34.1	46.1	90.07	1,161.2	2,114.7	879.9	819.4	60.44	14.556	
7,900.0	6,290.0	8,103.5	6,290.0	35.4	46.8	90.07	1,261.2	2,114.5	879.9	816.4	63.51	13.855	
8,000.0	6,290.0	8,203.5	6,290.0	36.8	47.6	90.07	1,361.2	2,114.4	879.9	813.2	66.65	13.201	
8,100.0	6,290.0	8,303.5	6,290.0	38.2	48.5	90.07	1,461.2	2,114.2	879.9	810.0	69.86	12.594	
8,200.0	6,290.0	8,403.5	6,290.0	39.7	49.4	90.07	1,561.2	2,114.1	879.9	806.7	73.14	12.031	
8,300.0	6,290.0	8,503.5	6,290.0	41.3	50.4	90.07	1,661.2	2,113.9	879.9	803.4	76.46	11.507	
8,400.0	6,290.0	8,603.5	6,290.0	42.8	51.5	90.07	1,761.2	2,113.7	879.9	800.0	79.83	11.021	
8,500.0	6,290.0	8,703.5	6,290.0	44.4	52.7	90.07	1,861.2	2,113.6	879.9	796.6	83.25	10.569	
8,600.0	6,290.0	8,803.5	6,290.0	46.0	53.9	90.07	1,961.2	2,113.4	879.9	793.2	86.69	10.149	
8,700.0	6,290.0	8,903.5	6,290.0	47.7	55.1	90.07	2,061.2	2,113.3	879.9	789.7	90.17	9.757	
8,800.0	6,290.0	9,003.5	6,290.0	49.4	56.5	90.07	2,161.2	2,113.1	879.9	786.2	93.68	9.392	
8,900.0	6,290.0	9,103.5	6,290.0	51.0	57.8	90.07	2,261.2	2,113.0	879.9	782.6	97.21	9.051	
9,000.0	6,290.0	9,203.5	6,290.0	52.8	59.2	90.07	2,361.2	2,112.8	879.9	779.1	100.77	8.731	
9,100.0	6,290.0	9,303.5	6,290.0	54.5	60.7	90.07	2,461.2	2,112.6	879.9	775.5	104.35	8.432	
9,200.0	6,290.0	9,403.5	6,290.0	56.2	62.2	90.07	2,561.2	2,112.5	879.9	771.9	107.94	8.151	
9,300.0	6,290.0	9,503.5	6,290.0	58.0	63.7	90.07	2,661.2	2,112.3	879.9	768.3	111.55	7.888	
9,400.0	6,290.0	9,603.5	6,290.0	59.7	65.2	90.07	2,761.2	2,112.2	879.9	764.7	115.18	7.639	
9,500.0	6,290.0	9,703.5	6,290.0	61.5	66.8	90.07	2,861.2	2,112.0	879.9	761.0	118.82	7.405	
9,600.0	6,290.0	9,803.5	6,290.0	63.2	68.4	90.07	2,961.2	2,111.9	879.9	757.4	122.47	7.184	
9,700.0	6,290.0	9,903.5	6,290.0	65.0	70.0	90.07	3,061.2	2,111.7	879.9	753.7	126.13	6.976	
9,800.0	6,290.0	10,003.5	6,290.0	66.8	71.6	90.07	3,161.2	2,111.5	879.9	750.1	129.80	6.778	
9,900.0	6,290.0	10,103.5	6,290.0	68.6	73.3	90.07	3,261.2	2,111.4	879.9	746.4	133.48	6.591	
10,000.0	6,290.0	10,203.5	6,290.0	70.4	74.9	90.07	3,361.2	2,111.2	879.9	742.7	137.18	6.414	
10,100.0	6,290.0	10,303.5	6,290.0	72.2	76.6	90.07	3,461.2	2,111.1	879.9	739.0	140.87	6.246	
10,200.0	6,290.0	10,403.5	6,290.0	74.0	78.3	90.07	3,561.2	2,110.9	879.9	735.3	144.58	6.086	
10,300.0	6,290.0	10,503.5	6,290.0	75.9	80.0	90.07	3,661.2	2,110.8	879.9	731.6	148.29	5.933	

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 Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	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	
10,400.0	6,290.0	10,603.5	6,290.0	77.7	81.7	90.07	3,761.2	2,110.6	879.9	727.8	152.01	5.788	
10,500.0	6,290.0	10,703.5	6,290.0	79.5	83.4	90.07	3,861.2	2,110.4	879.9	724.1	155.74	5.650	
10,600.0	6,290.0	10,803.5	6,290.0	81.4	85.1	90.07	3,961.2	2,110.3	879.9	720.4	159.47	5.517	
10,700.0	6,290.0	10,903.5	6,290.0	83.2	86.9	90.07	4,061.2	2,110.1	879.9	716.7	163.21	5.391	
10,800.0	6,290.0	11,003.5	6,290.0	85.0	88.6	90.07	4,161.2	2,110.0	879.9	712.9	166.95	5.270	
10,900.0	6,290.0	11,103.5	6,290.0	86.9	90.4	90.07	4,261.2	2,109.8	879.9	709.2	170.69	5.155	
11,000.0	6,290.0	11,203.5	6,290.0	88.7	92.2	90.07	4,361.2	2,109.7	879.9	705.4	174.44	5.044	
11,100.0	6,290.0	11,303.5	6,290.0	90.6	93.9	90.07	4,461.2	2,109.5	879.9	701.7	178.20	4.938	
11,200.0	6,290.0	11,403.5	6,290.0	92.4	95.7	90.07	4,561.2	2,109.3	879.9	697.9	181.95	4.836	
11,300.0	6,290.0	11,503.5	6,290.0	94.3	97.5	90.07	4,661.2	2,109.2	879.9	694.1	185.71	4.738	
11,400.0	6,290.0	11,603.5	6,290.0	96.1	99.3	90.07	4,761.2	2,109.0	879.9	690.4	189.48	4.644	
11,500.0	6,290.0	11,703.5	6,290.0	98.0	101.1	90.07	4,861.2	2,108.9	879.9	686.6	193.25	4.553	
11,600.0	6,290.0	11,803.5	6,290.0	99.9	102.9	90.07	4,961.2	2,108.7	879.9	682.8	197.01	4.466	
11,700.0	6,290.0	11,903.5	6,290.0	101.7	104.7	90.07	5,061.2	2,108.6	879.9	679.1	200.79	4.382	
11,800.0	6,290.0	12,003.5	6,290.0	103.6	106.5	90.07	5,161.2	2,108.4	879.9	675.3	204.56	4.301	
11,900.0	6,290.0	12,103.5	6,290.0	105.5	108.3	90.07	5,261.2	2,108.2	879.9	671.5	208.34	4.223	
12,000.0	6,290.0	12,203.5	6,290.0	107.3	110.1	90.07	5,361.2	2,108.1	879.9	667.7	212.12	4.148	
12,100.0	6,290.0	12,303.5	6,290.0	109.2	111.9	90.07	5,461.2	2,107.9	879.9	664.0	215.90	4.075	
12,200.0	6,290.0	12,403.5	6,290.0	111.1	113.7	90.07	5,561.2	2,107.8	879.9	660.2	219.69	4.005	
12,300.0	6,290.0	12,503.5	6,290.0	113.0	115.6	90.07	5,661.2	2,107.6	879.9	656.4	223.47	3.937	
12,400.0	6,290.0	12,603.5	6,290.0	114.8	117.4	90.07	5,761.2	2,107.5	879.9	652.6	227.26	3.872	
12,500.0	6,290.0	12,703.5	6,290.0	116.7	119.2	90.07	5,861.2	2,107.3	879.9	648.8	231.05	3.808	
12,600.0	6,290.0	12,803.5	6,290.0	118.6	121.1	90.07	5,961.2	2,107.1	879.9	645.0	234.84	3.747	
12,700.0	6,290.0	12,903.5	6,290.0	120.5	122.9	90.07	6,061.2	2,107.0	879.9	641.2	238.63	3.687	
12,800.0	6,290.0	13,003.5	6,290.0	122.4	124.7	90.07	6,161.2	2,106.8	879.9	637.4	242.43	3.629	
12,900.0	6,290.0	13,103.5	6,290.0	124.2	126.6	90.07	6,261.2	2,106.7	879.9	633.6	246.22	3.573	
13,000.0	6,290.0	13,203.5	6,290.0	126.1	128.4	90.07	6,361.2	2,106.5	879.9	629.8	250.02	3.519	
13,100.0	6,290.0	13,303.5	6,290.0	128.0	130.3	90.07	6,461.2	2,106.4	879.9	626.0	253.82	3.466	
13,200.0	6,290.0	13,403.5	6,290.0	129.9	132.1	90.07	6,561.2	2,106.2	879.9	622.2	257.62	3.415	
13,300.0	6,290.0	13,503.5	6,290.0	131.8	134.0	90.07	6,661.2	2,106.0	879.9	618.4	261.42	3.366	
13,400.0	6,290.0	13,603.5	6,290.0	133.7	135.8	90.07	6,761.2	2,105.9	879.9	614.6	265.22	3.317	
13,500.0	6,290.0	13,703.5	6,290.0	135.6	137.7	90.07	6,861.2	2,105.7	879.9	610.8	269.02	3.271	
13,600.0	6,290.0	13,803.5	6,290.0	137.5	139.6	90.07	6,961.2	2,105.6	879.9	607.0	272.83	3.225	
13,700.0	6,290.0	13,903.5	6,290.0	139.3	141.4	90.07	7,061.2	2,105.4	879.9	603.2	276.63	3.181	
13,800.0	6,290.0	14,003.5	6,290.0	141.2	143.3	90.07	7,161.2	2,105.3	879.9	599.4	280.44	3.137	
13,861.1	6,290.0	14,064.6	6,290.0	142.4	144.4	90.07	7,222.3	2,105.2	879.9	597.1	282.77	3.112	
13,900.0	6,290.0	14,101.0	6,290.0	143.1	145.1	90.07	7,258.6	2,105.1	879.9	595.7	284.20	3.096	
13,936.3	6,290.0	14,137.3	6,290.0	143.8	145.8	90.07	7,294.9	2,105.2	880.0	594.4	285.58	3.081	
13,947.9	6,290.0	14,148.8	6,290.0	144.0	146.0	90.07	7,306.5	2,105.2	879.9	593.9	286.02	3.076 SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.44	1.1	112.4	112.4					
100.0	100.0	99.0	99.0	0.1	0.1	89.44	1.1	112.4	112.4	112.2	0.22	502.550		
200.0	200.0	199.0	199.0	0.3	0.3	89.44	1.1	112.4	112.4	111.7	0.67	167.238		
300.0	300.0	299.0	299.0	0.6	0.6	89.44	1.1	112.4	112.4	111.3	1.12	100.209		
400.0	400.0	399.0	399.0	0.8	0.8	89.44	1.1	112.4	112.4	110.8	1.57	71.537		
500.0	500.0	499.0	499.0	1.0	1.0	89.44	1.1	112.4	112.4	110.4	2.02	55.622		
600.0	600.0	599.0	599.0	1.2	1.2	89.44	1.1	112.4	112.4	109.9	2.47	45.500 CC, ES		
700.0	700.0	695.3	695.3	1.5	1.4	89.63	0.7	113.9	114.0	111.1	2.90	39.353		
800.0	800.0	791.4	791.3	1.7	1.6	90.18	-0.4	118.6	118.9	115.5	3.32	35.824		
900.0	900.0	887.1	886.6	1.9	1.8	91.00	-2.2	126.4	127.0	123.3	3.75	33.847		
1,000.0	1,000.0	982.1	980.9	2.1	2.1	91.98	-4.7	137.2	138.4	134.2	4.20	32.918		
1,100.0	1,100.0	1,076.2	1,074.1	2.4	2.4	93.02	-7.9	150.8	153.1	148.4	4.68	32.703		
1,200.0	1,200.0	1,169.4	1,165.7	2.6	2.7	94.04	-11.8	167.3	171.0	165.8	5.19	32.962		
1,300.0	1,300.0	1,261.3	1,255.5	2.8	3.0	95.00	-16.3	186.4	192.1	186.3	5.73	33.529		
1,400.0	1,400.0	1,351.9	1,343.3	3.0	3.4	95.87	-21.4	207.9	216.3	210.0	6.31	34.286		
1,500.0	1,500.0	1,441.0	1,429.0	3.3	3.9	96.64	-27.0	231.7	243.5	236.6	6.93	35.152		
1,600.0	1,600.0	1,528.4	1,512.2	3.5	4.3	97.31	-33.0	257.6	273.8	266.2	7.59	36.076		
1,700.0	1,700.0	1,614.6	1,593.5	3.7	4.9	-16.17	-39.6	285.5	305.3	298.0	7.32	41.684		
1,800.0	1,799.8	1,700.0	1,673.2	3.9	5.5	-15.70	-46.7	315.5	336.5	328.8	7.75	43.422		
1,900.0	1,899.5	1,784.8	1,751.3	4.1	6.1	-15.39	-54.2	347.5	367.3	359.2	8.19	44.871		
2,000.0	1,998.7	1,872.0	1,830.6	4.3	6.8	-15.21	-62.5	382.7	397.7	389.0	8.64	46.006		
2,100.0	2,097.5	1,968.0	1,917.7	4.6	7.6	-15.16	-71.7	422.1	425.5	416.4	9.13	46.592		
2,200.0	2,195.6	2,064.9	2,005.6	4.8	8.5	-15.23	-81.1	461.8	450.1	440.5	9.64	46.698		
2,300.0	2,293.1	2,162.6	2,094.2	5.2	9.4	-15.42	-90.5	501.9	471.5	461.3	10.16	46.382		
2,400.0	2,389.6	2,260.9	2,183.3	5.5	10.2	-15.71	-100.0	542.3	489.5	478.8	10.71	45.700		
2,500.0	2,485.3	2,359.7	2,272.9	6.0	11.1	-16.11	-109.5	582.8	504.3	493.0	11.29	44.674		
2,600.0	2,580.5	2,458.7	2,362.7	6.5	12.0	-16.60	-119.1	623.4	517.9	506.0	11.93	43.416		
2,700.0	2,675.8	2,557.6	2,452.4	7.0	12.9	-17.06	-128.6	664.0	531.5	519.0	12.59	42.226		
2,800.0	2,771.0	2,656.6	2,542.2	7.5	13.8	-17.50	-138.2	704.6	545.2	531.9	13.26	41.104		
2,900.0	2,866.3	2,755.6	2,631.9	8.0	14.7	-17.92	-147.7	745.2	558.9	544.9	13.96	40.047		
3,000.0	2,961.5	2,854.6	2,721.7	8.6	15.6	-18.32	-157.3	785.9	572.6	558.0	14.66	39.054		
3,100.0	3,056.8	2,953.5	2,811.4	9.2	16.5	-18.70	-166.8	826.5	586.4	571.0	15.38	38.120		
3,200.0	3,152.0	3,052.5	2,901.2	9.8	17.4	-19.06	-176.3	867.1	600.1	584.0	16.11	37.243		
3,300.0	3,247.3	3,151.5	2,990.9	10.4	18.3	-19.40	-185.9	907.7	613.9	597.1	16.86	36.419		
3,400.0	3,342.5	3,250.5	3,080.7	11.0	19.2	-19.73	-195.4	948.3	627.7	610.1	17.61	35.644		
3,500.0	3,437.8	3,349.5	3,170.5	11.6	20.1	-20.05	-205.0	988.9	641.6	623.2	18.38	34.915		
3,600.0	3,533.0	3,448.4	3,260.2	12.2	21.0	-20.35	-214.5	1,029.5	655.4	636.3	19.15	34.229		
3,700.0	3,628.3	3,547.4	3,350.0	12.8	21.9	-20.64	-224.1	1,070.1	669.3	649.4	19.93	33.583		
3,800.0	3,723.6	3,646.4	3,439.7	13.4	22.8	-20.92	-233.6	1,110.8	683.2	662.5	20.72	32.973		
3,900.0	3,818.8	3,745.4	3,529.5	14.1	23.7	-21.19	-243.2	1,151.4	697.1	675.6	21.52	32.398		
4,000.0	3,914.1	3,844.3	3,619.2	14.7	24.6	-21.44	-252.7	1,192.0	711.0	688.7	22.32	31.855		
4,100.0	4,009.3	3,943.3	3,709.0	15.3	25.5	-21.69	-262.3	1,232.6	724.9	701.8	23.13	31.341		
4,200.0	4,104.6	4,042.3	3,798.8	15.9	26.4	-21.93	-271.8	1,273.2	738.9	714.9	23.95	30.854		
4,300.0	4,199.8	4,141.3	3,888.5	16.6	27.3	-22.16	-281.4	1,313.8	752.8	728.0	24.77	30.393		
4,400.0	4,295.1	4,240.3	3,978.3	17.2	28.2	-22.38	-290.9	1,354.4	766.8	741.2	25.60	29.956		
4,500.0	4,390.3	4,339.2	4,068.0	17.8	29.2	-22.59	-300.5	1,395.0	780.8	754.3	26.43	29.541		
4,600.0	4,485.6	4,438.2	4,157.8	18.5	30.1	-22.79	-310.0	1,435.7	794.7	767.5	27.27	29.147		
4,700.0	4,580.8	4,537.2	4,247.5	19.1	31.0	-22.99	-319.6	1,476.3	808.7	780.6	28.11	28.771		
4,800.0	4,676.1	4,636.2	4,337.3	19.8	31.9	-23.18	-329.1	1,516.9	822.7	793.8	28.96	28.414		
4,900.0	4,771.3	4,735.1	4,427.0	20.4	32.8	-23.37	-338.7	1,557.5	836.7	806.9	29.81	28.074		
5,000.0	4,866.6	4,834.1	4,516.8	21.0	33.7	-23.55	-348.2	1,598.1	850.8	820.1	30.66	27.749		
5,100.0	4,961.8	4,933.1	4,606.6	21.7	34.6	-23.72	-357.8	1,638.7	864.8	833.3	31.52	27.439		

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

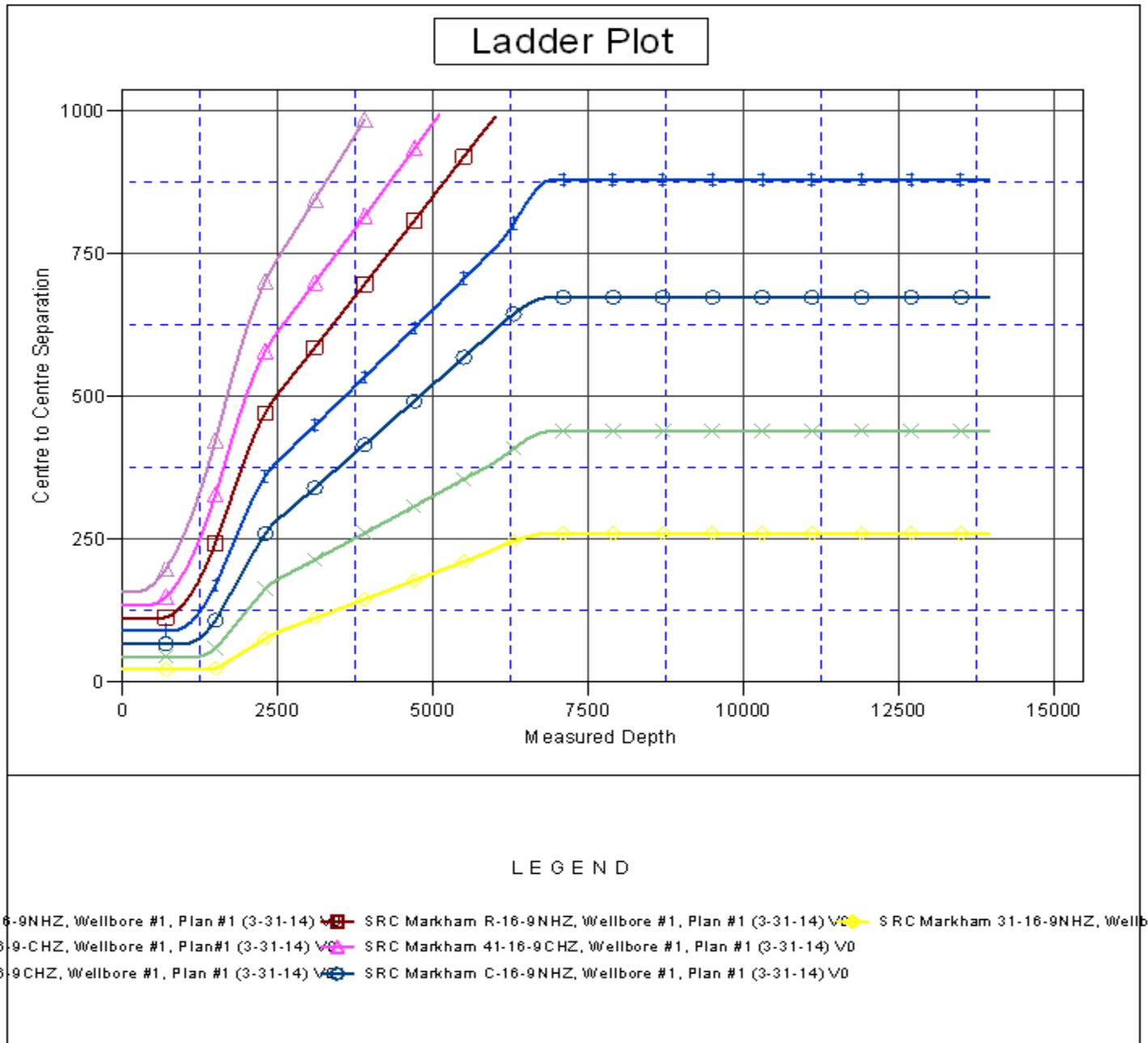
Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
SRC Markham Pad Sec.16-T4N-R68W - SRC Markham R-16-9NHZ - Wellbore #1 - Plan #1 (3-31-14)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
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	5,057.1	5,032.1	4,696.3	22.3	35.5	-23.89	-367.3	1,679.3	878.8	846.5	32.38	27.142	
5,300.0	5,152.3	5,131.1	4,786.1	23.0	36.4	-24.05	-376.9	1,719.9	892.9	859.6	33.24	26.859	
5,400.0	5,247.6	5,230.0	4,875.8	23.6	37.3	-24.21	-386.4	1,760.6	906.9	872.8	34.11	26.587	
5,500.0	5,342.8	5,329.0	4,965.6	24.2	38.2	-24.36	-396.0	1,801.2	921.0	886.0	34.98	26.327	
5,600.0	5,438.1	5,428.0	5,055.3	24.9	39.2	-24.51	-405.5	1,841.8	935.0	899.2	35.86	26.078	
5,700.0	5,533.4	5,527.0	5,145.1	25.5	40.1	-20.62	-415.1	1,882.4	949.1	912.3	36.81	25.781	
5,800.0	5,629.2	5,625.7	5,234.6	26.0	41.0	5.33	-424.6	1,922.9	962.9	925.1	37.82	25.459 SF	
5,900.0	5,724.6	5,722.5	5,322.4	26.4	41.9	29.19	-433.9	1,962.6	976.4	938.1	38.30	25.492	
6,000.0	5,817.6	5,815.5	5,406.8	26.7	42.7	45.61	-442.9	2,000.8	990.2	951.8	38.36	25.812	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Markham 31-16-9CHZ
Project:	Sec.16-T4N-R68W	TVD Reference:	WELL @ 4977.0ft (RKB - 13')
Reference Site:	SRC Markham Pad Sec.16-T4N-R68W	MD Reference:	WELL @ 4977.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Markham 31-16-9CHZ	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 #1 (3-31-14)	Offset TVD Reference:	Offset Datum

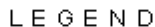
Reference Depths are relative to WELL @ 4977.0ft (RKB - 13')
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °






Coordinates are relative to: SRC Markham 31-16-9CHZ
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.32°



Reference Depths are relative to WELL @ 4977.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: SRC Markham 31-16-9CHZ
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.32°



16-9NHZ, Wellbore #1, Plan #1 (3-31-14)  SRC Markham R-16-9NHZ, Wellbore #1, Plan #1 (3-31-14)  SRC Markham 31-16-9NHZ, Wellbore #1, Plan #1 (3-31-14) 
16-9-CHZ, Wellbore #1, Plan #1 (3-31-14)  SRC Markham 41-16-9CHZ, Wellbore #1, Plan #1 (3-31-14) 
16-9CHZ, Wellbore #1, Plan #1 (3-31-14) SRC Markham C-16-9NHZ, Wellbore #1, Plan #1 (3-31-14)