



Synergy Resources

SEC.5-T2N-R68W

SRC Union Pad Sec.5-T2N-R68W

SRC Union A-5CHZ

Wellbore #1

Plan #3 (1-2-14)

Anticollision Report

31 January, 2014

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
SRC Union Pad Sec.5-T2N-R68W - Pietrzak #1 (Existing) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													
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
10,900.0	7,100.0	7,056.5	7,042.6	109.5	17.6	-75.87	896.8	3,472.6	325.4	201.7	123.76	2.630	
11,000.0	7,100.0	7,049.4	7,035.6	112.3	17.5	-73.47	895.9	3,473.1	414.3	289.1	125.21	3.309	
11,100.0	7,100.0	7,042.3	7,028.5	115.0	17.5	-71.09	895.0	3,473.6	507.3	380.8	126.42	4.013	
11,200.0	7,100.0	7,035.1	7,021.4	117.8	17.5	-68.75	894.1	3,474.1	602.4	475.0	127.39	4.729	
11,300.0	7,100.0	7,027.9	7,014.2	120.6	17.5	-66.44	893.2	3,474.6	698.8	570.7	128.11	5.455	
11,400.0	7,100.0	7,020.6	7,007.0	123.3	17.5	-64.17	892.3	3,475.1	796.0	667.4	128.61	6.190	
11,500.0	7,100.0	7,013.3	6,999.8	126.1	17.5	-61.95	891.4	3,475.6	893.8	764.9	128.89	6.935	
11,600.0	7,100.0	7,006.0	6,992.6	128.9	17.4	-59.79	890.5	3,476.1	992.0	863.0	128.97	7.692	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	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	2.0	2.0	0.0	0.0	69.07	35.7	93.3	99.9	99.9	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	69.07	35.7	93.3	99.9	99.7	0.23	435.899		
200.0	200.0	202.0	202.0	0.3	0.3	69.07	35.7	93.3	99.9	99.3	0.68	147.224		
300.0	300.0	302.0	302.0	0.6	0.6	69.07	35.7	93.3	99.9	98.8	1.13	88.569		
400.0	400.0	402.0	402.0	0.8	0.8	69.07	35.7	93.3	99.9	98.4	1.58	63.336		
500.0	500.0	502.0	502.0	1.0	1.0	69.07	35.7	93.3	99.9	97.9	2.03	49.292		
600.0	600.0	602.0	602.0	1.2	1.2	69.07	35.7	93.3	99.9	97.5	2.48	40.346		
700.0	700.0	702.0	702.0	1.5	1.5	89.43	35.7	93.3	99.9	97.0	2.93	34.158		
746.5	746.5	748.5	748.5	1.6	1.6	90.00	35.7	93.3	99.9	96.8	3.13	31.887 CC		
800.0	800.0	802.0	802.0	1.7	1.7	90.93	35.7	93.3	99.9	96.6	3.37	29.624		
900.0	899.9	901.9	901.9	1.9	1.9	93.42	35.7	93.3	100.1	96.3	3.82	26.180 ES		
1,000.0	999.7	1,001.7	1,001.7	2.1	2.1	96.88	35.7	93.3	100.6	96.4	4.28	23.526		
1,100.0	1,099.4	1,101.4	1,101.4	2.4	2.4	101.24	35.7	93.3	101.9	97.1	4.74	21.498		
1,200.0	1,198.9	1,200.9	1,200.9	2.6	2.6	106.37	35.7	93.3	104.2	99.0	5.21	20.003		
1,300.0	1,298.3	1,300.3	1,300.3	2.9	2.8	112.08	35.7	93.3	107.9	102.3	5.68	18.988		
1,400.0	1,397.4	1,399.4	1,399.4	3.2	3.0	118.11	35.7	93.3	113.5	107.4	6.17	18.412		
1,500.0	1,496.3	1,498.3	1,498.3	3.5	3.3	124.17	35.7	93.3	121.2	114.6	6.65	18.238		
1,600.0	1,594.9	1,598.6	1,598.6	3.8	3.5	130.36	35.4	92.5	130.7	123.6	7.11	18.380		
1,700.0	1,693.3	1,698.7	1,698.6	4.1	3.7	136.58	34.5	90.1	141.2	133.6	7.55	18.707		
1,800.0	1,791.7	1,798.6	1,798.5	4.5	3.9	142.45	33.0	86.0	152.2	144.2	7.98	19.067		
1,900.0	1,890.1	1,898.3	1,898.0	4.9	4.1	148.00	30.9	80.4	163.6	155.2	8.41	19.454		
2,000.0	1,988.5	1,997.8	1,997.2	5.2	4.3	153.29	28.2	73.1	175.5	166.7	8.84	19.866		
2,100.0	2,086.9	2,097.0	2,095.9	5.6	4.5	158.34	24.9	64.2	188.1	178.9	9.27	20.298		
2,200.0	2,185.2	2,195.8	2,194.1	6.0	4.7	163.19	21.0	53.8	201.5	191.8	9.71	20.746		
2,300.0	2,283.6	2,294.2	2,291.6	6.3	5.0	167.84	16.6	41.8	215.8	205.6	10.18	21.203		
2,400.0	2,382.0	2,391.6	2,388.1	6.7	5.2	172.10	11.8	29.1	231.2	220.5	10.66	21.681		
2,500.0	2,480.4	2,489.0	2,484.6	7.1	5.5	175.82	7.1	16.3	247.7	236.5	11.17	22.177		
2,600.0	2,578.8	2,586.4	2,581.0	7.5	5.8	179.08	2.4	3.6	265.1	253.4	11.69	22.673		
2,700.0	2,677.1	2,683.8	2,677.5	7.9	6.1	-178.07	-2.3	-9.1	283.3	271.1	12.23	23.161		
2,800.0	2,775.5	2,781.2	2,773.9	8.3	6.4	-175.55	-7.1	-21.9	302.1	289.3	12.78	23.633		
2,900.0	2,873.9	2,878.6	2,870.4	8.7	6.6	-173.34	-11.8	-34.6	321.4	308.0	13.34	24.085		
3,000.0	2,972.3	2,976.0	2,966.8	9.1	6.9	-171.37	-16.5	-47.4	341.0	327.1	13.91	24.516		
3,100.0	3,070.7	3,073.4	3,063.2	9.4	7.3	-169.61	-21.3	-60.1	361.1	346.6	14.49	24.926		
3,200.0	3,169.1	3,170.8	3,159.7	9.8	7.6	-168.04	-26.0	-72.9	381.4	366.4	15.07	25.314		
3,300.0	3,267.4	3,268.2	3,256.1	10.2	7.9	-166.63	-30.7	-85.6	402.0	386.4	15.65	25.682		
3,400.0	3,365.8	3,365.6	3,352.6	10.6	8.2	-165.36	-35.5	-98.3	422.8	406.6	16.24	26.030		
3,500.0	3,464.2	3,463.0	3,449.0	11.0	8.5	-164.20	-40.2	-111.1	443.8	427.0	16.84	26.359		
3,600.0	3,562.6	3,560.4	3,545.5	11.4	8.8	-163.15	-44.9	-123.8	464.9	447.5	17.43	26.670		
3,700.0	3,661.0	3,657.8	3,641.9	11.8	9.1	-162.19	-49.6	-136.6	486.2	468.2	18.03	26.965		
3,800.0	3,759.3	3,755.2	3,738.4	12.2	9.4	-161.31	-54.4	-149.3	507.6	489.0	18.63	27.245		
3,900.0	3,857.7	3,852.6	3,834.8	12.6	9.8	-160.50	-59.1	-162.0	529.1	509.9	19.23	27.510		
4,000.0	3,956.1	3,950.0	3,931.2	13.0	10.1	-159.75	-63.8	-174.8	550.7	530.9	19.84	27.761		
4,100.0	4,054.5	4,047.4	4,027.7	13.4	10.4	-159.06	-68.6	-187.5	572.4	552.0	20.44	27.999		
4,200.0	4,152.9	4,144.8	4,124.1	13.8	10.7	-158.42	-73.3	-200.3	594.2	573.1	21.05	28.226		
4,300.0	4,251.3	4,242.2	4,220.6	14.2	11.1	-157.83	-78.0	-213.0	616.0	594.3	21.66	28.442		
4,400.0	4,349.6	4,339.6	4,317.0	14.6	11.4	-157.27	-82.8	-225.8	637.9	615.6	22.27	28.647		
4,500.0	4,448.0	4,437.0	4,413.5	15.0	11.7	-156.76	-87.5	-238.5	659.8	636.9	22.88	28.843		
4,600.0	4,546.4	4,534.4	4,509.9	15.4	12.1	-156.27	-92.2	-251.2	681.8	658.3	23.49	29.029		
4,700.0	4,644.8	4,631.8	4,606.3	15.8	12.4	-155.82	-96.9	-264.0	703.8	679.7	24.10	29.207		
4,800.0	4,743.2	4,729.5	4,703.1	16.2	12.7	-155.39	-101.7	-276.8	725.8	701.1	24.71	29.378		
4,900.0	4,841.5	4,839.0	4,811.8	16.6	13.0	-155.10	-106.2	-289.0	747.1	721.8	25.28	29.548		
5,000.0	4,939.9	4,949.3	4,921.8	17.0	13.2	-155.11	-109.4	-297.5	766.8	741.0	25.80	29.718		

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

SRC Union Pad Sec.5-T2N-R68W - SRC Union 12-5CHZ - Wellbore #1 - Plan #3 (1-2-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,038.3	5,060.2	5,032.6	17.4	13.4	-155.41	-111.0	-301.9	784.9	758.6	26.28	29.866		
5,200.0	5,136.7	5,166.3	5,138.7	17.8	13.6	-155.93	-111.3	-302.7	801.6	774.8	26.72	29.997		
5,300.0	5,235.1	5,264.7	5,237.1	18.2	13.8	-156.44	-111.3	-302.7	818.0	790.9	27.15	30.126		
5,400.0	5,333.5	5,363.1	5,335.5	18.6	14.0	-156.93	-111.3	-302.7	834.5	806.9	27.59	30.250		
5,500.0	5,431.8	5,461.5	5,433.8	19.0	14.1	-157.40	-111.3	-302.7	851.1	823.0	28.02	30.372		
5,600.0	5,530.3	5,559.9	5,532.3	19.3	14.3	-157.90	-111.3	-302.7	867.4	838.9	28.47	30.463		
5,700.0	5,629.2	5,658.8	5,631.2	19.6	14.5	-158.36	-111.3	-302.7	881.0	852.1	28.89	30.491		
5,800.0	5,728.6	5,758.2	5,730.6	19.8	14.6	-158.71	-111.3	-302.7	891.4	862.1	29.28	30.441		
5,900.0	5,828.3	5,857.9	5,830.3	20.1	14.8	-158.94	-111.3	-302.7	898.6	869.0	29.64	30.316		
6,000.0	5,928.2	5,957.8	5,930.2	20.2	15.0	-159.06	-111.3	-302.7	902.6	872.6	29.97	30.117		
6,100.0	6,028.2	6,057.8	6,030.2	20.3	15.2	-178.94	-111.3	-302.7	903.5	870.4	33.07	27.323		
6,200.0	6,128.2	6,157.8	6,130.2	20.5	15.4	-178.94	-111.3	-302.7	903.5	870.0	33.41	27.040		
6,300.0	6,228.2	6,257.8	6,230.2	20.6	15.5	-178.94	-111.3	-302.7	903.5	869.7	33.76	26.761		
6,400.0	6,328.2	6,357.8	6,330.2	20.8	15.7	-178.94	-111.3	-302.7	903.5	869.3	34.11	26.485		
6,466.9	6,395.0	6,424.7	6,397.1	20.9	15.9	90.26	-111.3	-302.5	903.5	871.8	31.67	28.530		
6,500.0	6,428.1	6,458.0	6,430.3	20.9	15.9	90.17	-111.3	-301.1	903.5	871.7	31.77	28.437		
6,600.0	6,527.2	6,558.3	6,529.6	21.0	16.0	90.15	-111.5	-287.7	903.5	871.5	31.96	28.268		
6,700.0	6,623.4	6,658.5	6,626.0	21.0	16.0	90.12	-112.0	-260.5	903.5	871.4	32.03	28.203		
6,800.0	6,715.0	6,758.8	6,717.7	21.0	16.0	90.10	-112.6	-220.1	903.5	871.4	32.06	28.180		
6,900.0	6,800.2	6,858.9	6,802.7	21.0	16.0	90.07	-113.4	-167.4	903.5	871.3	32.15	28.106		
7,000.0	6,877.2	6,959.0	6,879.6	20.9	16.1	90.04	-114.4	-103.4	903.5	871.1	32.43	27.857		
7,100.0	6,944.7	7,059.1	6,946.7	20.9	16.3	90.01	-115.6	-29.3	903.5	870.4	33.10	27.300		
7,200.0	7,001.2	7,159.0	7,002.8	20.9	16.8	89.98	-116.9	53.3	903.5	869.3	34.29	26.348		
7,300.0	7,045.7	7,258.9	7,046.9	21.0	17.7	89.95	-118.3	142.9	903.6	867.4	36.13	25.008		
7,400.0	7,077.3	7,358.8	7,078.1	21.3	18.9	89.92	-119.7	237.6	903.6	865.0	38.62	23.394		
7,500.0	7,095.5	7,458.6	7,095.8	22.3	20.4	89.89	-121.3	335.7	903.6	861.9	41.70	21.670		
7,600.0	7,100.0	7,558.4	7,100.0	23.9	22.2	89.87	-122.8	435.4	903.6	858.4	45.22	19.984		
7,700.0	7,100.0	7,658.4	7,100.0	25.7	24.1	89.87	-124.4	535.3	903.7	854.6	49.11	18.399		
7,800.0	7,100.0	7,758.4	7,100.0	27.8	26.2	89.87	-125.9	635.3	903.7	850.4	53.31	16.953		
7,900.0	7,100.0	7,858.4	7,100.0	30.0	28.5	89.87	-127.5	735.3	903.7	846.0	57.74	15.652		
8,000.0	7,100.0	7,958.4	7,100.0	32.2	30.8	89.87	-129.1	835.3	903.8	841.4	62.36	14.492		
8,100.0	7,100.0	8,058.4	7,100.0	34.6	33.2	89.87	-130.6	935.3	903.8	836.6	67.14	13.461		
8,200.0	7,100.0	8,158.4	7,100.0	37.0	35.6	89.87	-132.2	1,035.3	903.8	831.8	72.04	12.546		
8,300.0	7,100.0	8,258.4	7,100.0	39.5	38.1	89.87	-133.7	1,135.3	903.8	826.8	77.03	11.733		
8,400.0	7,100.0	8,358.4	7,100.0	42.0	40.7	89.87	-135.3	1,235.3	903.9	821.7	82.11	11.008		
8,500.0	7,100.0	8,458.4	7,100.0	44.5	43.2	89.87	-136.9	1,335.3	903.9	816.6	87.25	10.359		
8,600.0	7,100.0	8,558.4	7,100.0	47.1	45.9	89.87	-138.4	1,435.2	903.9	811.5	92.45	9.777		
8,700.0	7,100.0	8,658.4	7,100.0	49.7	48.5	89.87	-140.0	1,535.2	903.9	806.2	97.70	9.253		
8,800.0	7,100.0	8,758.4	7,100.0	52.3	51.1	89.87	-141.5	1,635.2	904.0	801.0	102.98	8.778		
8,900.0	7,100.0	8,858.4	7,100.0	55.0	53.8	89.87	-143.1	1,735.2	904.0	795.7	108.30	8.347		
9,000.0	7,100.0	8,958.4	7,100.0	57.6	56.5	89.87	-144.7	1,835.2	904.0	790.4	113.64	7.955		
9,100.0	7,100.0	9,058.4	7,100.0	60.3	59.1	89.87	-146.2	1,935.2	904.0	785.0	119.01	7.596		
9,200.0	7,100.0	9,158.4	7,100.0	63.0	61.8	89.87	-147.8	2,035.2	904.1	779.7	124.41	7.267		
9,300.0	7,100.0	9,258.4	7,100.0	65.6	64.6	89.87	-149.3	2,135.2	904.1	774.3	129.82	6.964		
9,400.0	7,100.0	9,358.4	7,100.0	68.3	67.3	89.87	-150.9	2,235.1	904.1	768.9	135.25	6.685		
9,500.0	7,100.0	9,458.4	7,100.0	71.1	70.0	89.87	-152.5	2,335.1	904.2	763.5	140.69	6.427		
9,600.0	7,100.0	9,558.4	7,100.0	73.8	72.7	89.87	-154.0	2,435.1	904.2	758.0	146.14	6.187		
9,700.0	7,100.0	9,658.4	7,100.0	76.5	75.5	89.87	-155.6	2,535.1	904.2	752.6	151.61	5.964		
9,800.0	7,100.0	9,758.4	7,100.0	79.2	78.2	89.87	-157.1	2,635.1	904.2	747.1	157.09	5.756		
9,900.0	7,100.0	9,858.4	7,100.0	81.9	80.9	89.87	-158.7	2,735.1	904.3	741.7	162.58	5.562		
10,000.0	7,100.0	9,958.4	7,100.0	84.7	83.7	89.87	-160.3	2,835.1	904.3	736.2	168.07	5.380		
10,100.0	7,100.0	10,058.4	7,100.0	87.4	86.5	89.87	-161.8	2,935.1	904.3	730.7	173.58	5.210		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Union Pad Sec.5-T2N-R68W - SRC Union 12-5CHZ - Wellbore #1 - Plan #3 (1-2-14)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,100.0	10,158.4	7,100.0	90.2	89.2	89.87	-163.4	3,035.0	904.3	725.2	179.09	5.050	
10,300.0	7,100.0	10,258.4	7,100.0	92.9	92.0	89.87	-164.9	3,135.0	904.4	719.8	184.61	4.899	
10,400.0	7,100.0	10,358.4	7,100.0	95.7	94.7	89.87	-166.5	3,235.0	904.4	714.3	190.13	4.757	
10,500.0	7,100.0	10,458.4	7,100.0	98.4	97.5	89.87	-168.1	3,335.0	904.4	708.8	195.66	4.622	
10,600.0	7,100.0	10,558.4	7,100.0	101.2	100.3	89.87	-169.6	3,435.0	904.4	703.3	201.19	4.495	
10,700.0	7,100.0	10,658.4	7,100.0	104.0	103.0	89.87	-171.2	3,535.0	904.5	697.7	206.73	4.375	
10,800.0	7,100.0	10,758.4	7,100.0	106.7	105.8	89.87	-172.7	3,635.0	904.5	692.2	212.27	4.261	
10,900.0	7,100.0	10,858.4	7,100.0	109.5	108.6	89.87	-174.3	3,735.0	904.5	686.7	217.81	4.153	
11,000.0	7,100.0	10,958.4	7,100.0	112.3	111.4	89.87	-175.9	3,834.9	904.5	681.2	223.36	4.050	
11,100.0	7,100.0	11,058.4	7,100.0	115.0	114.1	89.87	-177.4	3,934.9	904.6	675.7	228.92	3.952	
11,200.0	7,100.0	11,158.4	7,100.0	117.8	116.9	89.87	-179.0	4,034.9	904.6	670.1	234.47	3.858	
11,300.0	7,100.0	11,258.4	7,100.0	120.6	119.7	89.87	-180.5	4,134.9	904.6	664.6	240.03	3.769	
11,400.0	7,100.0	11,358.4	7,100.0	123.3	122.5	89.87	-182.1	4,234.9	904.7	659.1	245.59	3.684	
11,500.0	7,100.0	11,458.4	7,100.0	126.1	125.3	89.87	-183.7	4,334.9	904.7	653.5	251.15	3.602	
11,600.0	7,100.0	11,558.4	7,100.0	128.9	128.0	89.87	-185.2	4,434.9	904.7	648.0	256.72	3.524	
11,645.1	7,100.0	11,603.5	7,100.0	130.2	129.3	89.87	-185.9	4,480.0	904.7	645.5	259.23	3.490	
11,683.6	7,100.0	11,639.2	7,100.0	131.2	130.3	89.87	-186.5	4,515.7	904.7	643.4	261.29	3.462 SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	69.08	14.2	37.2	39.8	39.8	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	69.08	14.2	37.2	39.8	39.6	0.23	175.284	
200.0	200.0	201.0	201.0	0.3	0.3	69.08	14.2	37.2	39.8	39.1	0.68	58.816	
300.0	300.0	301.0	301.0	0.6	0.6	69.08	14.2	37.2	39.8	38.7	1.13	35.337	
400.0	400.0	401.0	401.0	0.8	0.8	69.08	14.2	37.2	39.8	38.2	1.58	25.255	
500.0	500.0	501.0	501.0	1.0	1.0	69.08	14.2	37.2	39.8	37.8	2.03	19.649	
600.0	600.0	601.0	601.0	1.2	1.2	69.08	14.2	37.2	39.8	37.3	2.47	16.080	
692.0	692.0	693.0	693.0	1.4	1.4	90.00	14.2	37.2	39.8	36.9	2.89	13.780 CC	
700.0	700.0	701.0	701.0	1.5	1.5	90.19	14.2	37.2	39.8	36.9	2.92	13.611	
800.0	800.0	801.0	801.0	1.7	1.7	93.95	14.2	37.2	39.9	36.5	3.37	11.831 ES	
900.0	899.9	900.9	900.9	1.9	1.9	100.12	14.2	37.2	40.4	36.6	3.82	10.578	
1,000.0	999.7	1,000.7	1,000.7	2.1	2.1	108.34	14.2	37.2	41.9	37.6	4.27	9.809	
1,100.0	1,099.4	1,100.4	1,100.4	2.4	2.4	117.81	14.2	37.2	45.0	40.3	4.73	9.516 SF	
1,200.0	1,198.9	1,199.9	1,199.9	2.6	2.6	127.46	14.2	37.2	50.2	45.0	5.19	9.679	
1,300.0	1,298.3	1,299.3	1,299.3	2.9	2.8	136.32	14.2	37.2	57.8	52.2	5.64	10.245	
1,400.0	1,397.4	1,398.6	1,398.6	3.2	3.0	144.58	13.6	36.6	67.7	61.7	6.07	11.157	
1,500.0	1,496.3	1,497.4	1,497.4	3.5	3.2	152.46	11.8	34.8	80.2	73.7	6.47	12.381	
1,600.0	1,594.9	1,595.6	1,595.5	3.8	3.4	159.53	8.8	31.8	95.4	88.5	6.88	13.873	
1,700.0	1,693.3	1,693.1	1,692.8	4.1	3.6	165.65	4.7	27.6	113.3	106.0	7.29	15.533	
1,800.0	1,791.7	1,790.1	1,789.5	4.5	3.8	170.78	-0.6	22.4	132.7	124.9	7.73	17.171	
1,900.0	1,890.1	1,886.6	1,885.6	4.9	4.0	175.16	-7.0	16.0	153.4	145.2	8.17	18.769	
2,000.0	1,988.5	1,982.5	1,980.9	5.2	4.2	178.97	-14.5	8.5	175.4	166.8	8.63	20.320	
2,100.0	2,086.9	2,077.7	2,075.3	5.6	4.4	-177.66	-23.1	0.0	198.8	189.7	9.11	21.823	
2,200.0	2,185.2	2,173.3	2,170.0	6.0	4.7	-174.67	-32.7	-9.6	223.4	213.8	9.60	23.263	
2,300.0	2,283.6	2,269.6	2,265.3	6.3	5.0	-172.23	-42.4	-19.2	248.6	238.5	10.11	24.590	
2,400.0	2,382.0	2,365.9	2,360.6	6.7	5.2	-170.24	-52.1	-28.9	274.1	263.5	10.62	25.800	
2,500.0	2,480.4	2,462.2	2,455.9	7.1	5.5	-168.59	-61.8	-38.6	299.8	288.7	11.14	26.913	
2,600.0	2,578.8	2,558.5	2,551.2	7.5	5.8	-167.19	-71.5	-48.3	325.8	314.1	11.67	27.929	
2,700.0	2,677.1	2,654.8	2,646.5	7.9	6.1	-166.01	-81.2	-58.0	351.9	339.7	12.19	28.859	
2,800.0	2,775.5	2,751.1	2,741.9	8.3	6.4	-164.98	-90.9	-67.7	378.2	365.4	12.73	29.713	
2,900.0	2,873.9	2,847.4	2,837.2	8.7	6.7	-164.09	-100.7	-77.4	404.5	391.2	13.26	30.499	
3,000.0	2,972.3	2,943.7	2,932.5	9.1	7.0	-163.31	-110.4	-87.1	430.9	417.1	13.80	31.223	
3,100.0	3,070.7	3,040.0	3,027.8	9.4	7.3	-162.61	-120.1	-96.7	457.4	443.1	14.34	31.892	
3,200.0	3,169.1	3,136.3	3,123.1	9.8	7.6	-162.00	-129.8	-106.4	483.9	469.1	14.89	32.511	
3,300.0	3,267.4	3,232.5	3,218.4	10.2	8.0	-161.45	-139.5	-116.1	510.5	495.1	15.43	33.085	
3,400.0	3,365.8	3,328.8	3,313.7	10.6	8.3	-160.95	-149.2	-125.8	537.1	521.2	15.98	33.619	
3,500.0	3,464.2	3,425.1	3,409.0	11.0	8.6	-160.50	-158.9	-135.5	563.8	547.3	16.53	34.117	
3,600.0	3,562.6	3,521.4	3,504.3	11.4	8.9	-160.09	-168.7	-145.2	590.5	573.4	17.08	34.582	
3,700.0	3,661.0	3,617.7	3,599.6	11.8	9.2	-159.71	-178.4	-154.9	617.2	599.6	17.63	35.017	
3,800.0	3,759.3	3,714.0	3,694.9	12.2	9.6	-159.37	-188.1	-164.5	643.9	625.8	18.18	35.424	
3,900.0	3,857.7	3,810.3	3,790.2	12.6	9.9	-159.05	-197.8	-174.2	670.7	652.0	18.73	35.806	
4,000.0	3,956.1	3,906.6	3,885.5	13.0	10.2	-158.76	-207.5	-183.9	697.5	678.2	19.29	36.166	
4,100.0	4,054.5	4,002.9	3,980.9	13.4	10.6	-158.49	-217.2	-193.6	724.3	704.4	19.84	36.505	
4,200.0	4,152.9	4,099.2	4,076.2	13.8	10.9	-158.24	-227.0	-203.3	751.1	730.7	20.40	36.824	
4,300.0	4,251.3	4,195.4	4,171.5	14.2	11.2	-158.00	-236.7	-213.0	777.9	756.9	20.95	37.126	
4,400.0	4,349.6	4,291.7	4,266.8	14.6	11.6	-157.78	-246.4	-222.7	804.7	783.2	21.51	37.411	
4,500.0	4,448.0	4,388.0	4,362.1	15.0	11.9	-157.58	-256.1	-232.4	831.6	809.5	22.07	37.682	
4,600.0	4,546.4	4,484.3	4,457.4	15.4	12.2	-157.39	-265.8	-242.0	858.4	835.8	22.63	37.938	
4,700.0	4,644.8	4,580.6	4,552.7	15.8	12.5	-157.21	-275.5	-251.7	885.3	862.1	23.19	38.182	
4,800.0	4,743.2	4,676.9	4,648.0	16.2	12.9	-157.04	-285.2	-261.4	912.1	888.4	23.75	38.413	
4,900.0	4,841.5	4,773.2	4,743.3	16.6	13.2	-156.88	-295.0	-271.1	939.0	914.7	24.31	38.633	
5,000.0	4,939.9	4,869.5	4,838.6	17.0	13.6	-156.73	-304.7	-280.8	965.9	941.0	24.87	38.843	

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Union Pad Sec.5-T2N-R68W - SRC Union 12-5NHZ - Wellbore #1 - Plan #3 (1-2-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,038.3	4,980.6	4,948.7	17.4	13.9	-156.59	-315.5	-291.6	992.4	967.0	25.45	38.997		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	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	69.71	6.9	18.7	20.0	20.0	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	69.71	6.9	18.7	20.0	19.7	0.22	88.815		
200.0	200.0	200.0	200.0	0.3	0.3	69.71	6.9	18.7	20.0	19.3	0.67	29.605		
300.0	300.0	300.0	300.0	0.6	0.6	69.71	6.9	18.7	20.0	18.8	1.12	17.763		
400.0	400.0	400.0	400.0	0.8	0.8	69.71	6.9	18.7	20.0	18.4	1.57	12.688		
500.0	500.0	500.0	500.0	1.0	1.0	69.71	6.9	18.7	20.0	17.9	2.02	9.868		
600.0	600.0	600.0	600.0	1.2	1.2	69.71	6.9	18.7	20.0	17.5	2.47	8.074		
641.5	641.5	641.5	641.5	1.3	1.3	90.00	6.9	18.7	20.0	17.3	2.66	7.508 CC		
700.0	700.0	700.0	700.0	1.5	1.5	92.07	6.9	18.7	20.0	17.1	2.92	6.839		
800.0	800.0	800.0	800.0	1.7	1.7	99.49	6.9	18.7	20.2	16.9	3.37	6.008		
900.0	899.9	899.9	899.9	1.9	1.9	111.07	6.9	18.7	21.4	17.6	3.82	5.604		
1,000.0	999.7	999.7	999.7	2.1	2.1	124.60	6.9	18.7	24.3	20.0	4.27	5.685		
1,100.0	1,099.4	1,099.8	1,099.8	2.4	2.4	136.33	7.7	18.3	28.7	24.0	4.72	6.088		
1,200.0	1,198.9	1,200.0	1,200.0	2.6	2.6	145.10	10.0	17.0	33.9	28.7	5.17	6.562		
1,300.0	1,298.3	1,300.4	1,300.2	2.9	2.8	151.86	13.8	14.8	39.5	33.9	5.61	7.041		
1,400.0	1,397.4	1,400.8	1,400.5	3.2	3.0	157.24	19.1	11.8	45.4	39.4	6.06	7.500		
1,500.0	1,496.3	1,501.4	1,500.8	3.5	3.3	161.68	26.0	7.8	51.6	45.1	6.51	7.930		
1,600.0	1,594.9	1,602.1	1,601.0	3.8	3.5	165.45	34.4	3.0	57.9	51.0	6.96	8.328		
1,700.0	1,693.3	1,702.9	1,701.2	4.1	3.8	168.68	44.3	-2.7	64.0	56.6	7.42	8.630		
1,800.0	1,791.7	1,803.9	1,801.3	4.5	4.0	171.39	55.8	-9.2	68.6	60.7	7.89	8.695		
1,900.0	1,890.1	1,904.5	1,900.7	4.9	4.3	173.81	68.6	-16.5	71.8	63.4	8.37	8.579		
2,000.0	1,988.5	2,004.4	1,999.5	5.2	4.6	176.03	81.4	-23.9	74.9	66.0	8.85	8.461		
2,100.0	2,086.9	2,104.3	2,098.3	5.6	4.9	178.07	94.3	-31.3	78.1	68.8	9.34	8.360		
2,200.0	2,185.2	2,204.2	2,197.1	6.0	5.2	179.95	107.2	-38.6	81.4	71.5	9.84	8.272		
2,300.0	2,283.6	2,304.1	2,296.0	6.3	5.6	-178.32	120.1	-46.0	84.7	74.4	10.34	8.196		
2,400.0	2,382.0	2,404.0	2,394.8	6.7	5.9	-176.73	133.0	-53.4	88.2	77.3	10.85	8.128		
2,500.0	2,480.4	2,503.9	2,493.6	7.1	6.2	-175.25	145.8	-60.7	91.7	80.3	11.37	8.067		
2,600.0	2,578.8	2,603.8	2,592.4	7.5	6.5	-173.88	158.7	-68.1	95.2	83.3	11.89	8.011		
2,700.0	2,677.1	2,703.7	2,691.2	7.9	6.9	-172.62	171.6	-75.5	98.8	86.4	12.42	7.960		
2,800.0	2,775.5	2,803.7	2,790.0	8.3	7.2	-171.44	184.5	-82.8	102.5	89.5	12.95	7.913		
2,900.0	2,873.9	2,903.6	2,888.8	8.7	7.5	-170.34	197.4	-90.2	106.2	92.7	13.49	7.870		
3,000.0	2,972.3	3,003.5	2,987.6	9.1	7.9	-169.32	210.2	-97.6	109.9	95.9	14.04	7.829		
3,100.0	3,070.7	3,103.4	3,086.4	9.4	8.2	-168.36	223.1	-104.9	113.7	99.1	14.59	7.790		
3,200.0	3,169.1	3,203.3	3,185.2	9.8	8.5	-167.47	236.0	-112.3	117.5	102.3	15.15	7.754		
3,300.0	3,267.4	3,303.2	3,284.0	10.2	8.9	-166.63	248.9	-119.7	121.3	105.6	15.71	7.720		
3,400.0	3,365.8	3,403.1	3,382.8	10.6	9.2	-165.85	261.7	-127.0	125.1	108.8	16.28	7.688		
3,500.0	3,464.2	3,503.0	3,481.6	11.0	9.6	-165.11	274.6	-134.4	129.0	112.1	16.84	7.657		
3,600.0	3,562.6	3,603.0	3,580.4	11.4	9.9	-164.41	287.5	-141.8	132.9	115.4	17.42	7.628		
3,700.0	3,661.0	3,702.9	3,679.2	11.8	10.3	-163.75	300.4	-149.1	136.8	118.8	17.99	7.601		
3,800.0	3,759.3	3,802.8	3,778.0	12.2	10.6	-163.13	313.3	-156.5	140.7	122.1	18.57	7.574		
3,900.0	3,857.7	3,902.7	3,876.8	12.6	10.9	-162.55	326.1	-163.8	144.6	125.5	19.16	7.549		
4,000.0	3,956.1	4,002.6	3,975.6	13.0	11.3	-161.99	339.0	-171.2	148.6	128.8	19.74	7.525		
4,100.0	4,054.5	4,102.5	4,074.4	13.4	11.6	-161.46	351.9	-178.6	152.5	132.2	20.33	7.503		
4,200.0	4,152.9	4,202.4	4,173.2	13.8	12.0	-160.96	364.8	-185.9	156.5	135.6	20.92	7.481		
4,300.0	4,251.3	4,302.3	4,272.0	14.2	12.3	-160.49	377.6	-193.3	160.5	139.0	21.51	7.460		
4,400.0	4,349.6	4,402.3	4,370.8	14.6	12.7	-160.04	390.5	-200.7	164.5	142.4	22.11	7.440		
4,500.0	4,448.0	4,502.2	4,469.6	15.0	13.0	-159.61	403.4	-208.0	168.5	145.8	22.70	7.421		
4,600.0	4,546.4	4,602.1	4,568.5	15.4	13.4	-159.20	416.3	-215.4	172.5	149.2	23.30	7.402		
4,700.0	4,644.8	4,702.0	4,667.3	15.8	13.7	-158.80	429.2	-222.8	176.5	152.6	23.90	7.385		
4,800.0	4,743.2	4,801.9	4,766.1	16.2	14.1	-158.43	442.0	-230.1	180.6	156.1	24.51	7.368		
4,900.0	4,841.5	4,901.8	4,864.9	16.6	14.4	-158.07	454.9	-237.5	184.6	159.5	25.11	7.352		
5,000.0	4,939.9	5,001.7	4,963.7	17.0	14.8	-157.73	467.8	-244.9	188.6	162.9	25.71	7.336		

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,038.3	5,101.6	5,062.5	17.4	15.1	-157.40	480.7	-252.2	192.7	166.4	26.32	7.321	
5,200.0	5,136.7	5,201.5	5,161.3	17.8	15.5	-157.09	493.5	-259.6	196.7	169.8	26.93	7.307	
5,300.0	5,235.1	5,301.5	5,260.1	18.2	15.8	-156.78	506.4	-267.0	200.8	173.3	27.53	7.293	
5,400.0	5,333.5	5,401.4	5,358.9	18.6	16.2	-156.49	519.3	-274.3	204.9	176.7	28.14	7.280	
5,500.0	5,431.8	5,496.4	5,453.1	19.0	16.5	-156.39	530.6	-280.8	209.9	181.2	28.68	7.319	
5,600.0	5,530.3	5,590.3	5,546.4	19.3	16.7	-156.74	539.2	-285.7	217.4	188.3	29.10	7.469	
5,700.0	5,629.2	5,683.9	5,639.8	19.6	16.9	-157.24	545.0	-289.0	224.8	195.4	29.42	7.642	
5,800.0	5,728.6	5,777.4	5,733.1	19.8	17.0	-157.80	548.2	-290.9	231.9	202.2	29.68	7.812	
5,900.0	5,828.3	5,872.5	5,828.3	20.1	17.2	-158.42	548.9	-291.3	238.3	208.4	29.89	7.973	
6,000.0	5,928.2	5,972.4	5,928.2	20.2	17.3	-158.82	548.9	-291.3	242.3	212.2	30.13	8.041	
6,100.0	6,028.2	6,072.4	6,028.2	20.3	17.5	-178.76	548.9	-291.3	243.1	206.9	36.26	6.705	
6,200.0	6,128.2	6,172.4	6,128.2	20.5	17.7	-178.76	548.9	-291.3	243.1	206.6	36.58	6.647	
6,300.0	6,228.2	6,272.4	6,228.2	20.6	17.8	-178.76	548.9	-291.3	243.1	206.2	36.90	6.589	
6,400.0	6,328.2	6,372.4	6,328.2	20.8	18.0	-178.76	548.9	-291.3	243.1	205.9	37.22	6.532	
6,499.0	6,427.1	6,471.6	6,427.3	20.9	18.2	90.48	548.9	-288.7	243.1	211.2	31.95	7.610	
6,500.0	6,428.1	6,472.5	6,428.1	20.9	18.2	90.07	548.9	-288.6	243.1	211.2	31.90	7.623	
6,600.0	6,527.2	6,572.3	6,526.7	21.0	18.2	89.51	548.6	-273.2	243.1	211.1	32.02	7.593	
6,700.0	6,623.4	6,671.8	6,621.8	21.0	18.3	88.96	548.2	-244.3	243.2	211.1	32.06	7.585	
6,800.0	6,715.0	6,771.0	6,711.8	21.0	18.2	88.43	547.5	-202.7	243.3	211.2	32.08	7.582	
6,900.0	6,800.2	6,869.9	6,794.9	21.0	18.2	87.93	546.7	-149.3	243.3	211.1	32.20	7.558	
7,000.0	6,877.2	6,968.5	6,869.7	20.9	18.1	87.48	545.7	-85.1	243.4	210.9	32.54	7.481	
7,100.0	6,944.7	7,066.9	6,934.8	20.9	18.1	87.07	544.5	-11.4	243.5	210.3	33.27	7.321	
7,200.0	7,001.2	7,165.1	6,989.1	20.9	18.0	86.72	543.2	70.3	243.7	209.1	34.52	7.059	
7,300.0	7,045.7	7,263.1	7,031.6	21.0	18.2	86.43	541.9	158.5	243.8	207.4	36.38	6.700	
7,400.0	7,077.3	7,360.9	7,061.7	21.3	19.5	86.22	540.4	251.5	243.9	205.0	38.86	6.275	
7,500.0	7,095.5	7,458.7	7,078.8	22.3	21.1	86.07	538.9	347.6	243.9	202.0	41.89	5.823	
7,600.0	7,100.0	7,556.9	7,083.0	23.9	22.9	86.00	537.4	445.6	244.0	198.6	45.35	5.380	
7,700.0	7,100.0	7,656.9	7,083.0	25.7	24.9	86.01	535.8	545.6	244.0	194.8	49.25	4.954	
7,800.0	7,100.0	7,756.9	7,083.0	27.8	27.0	86.01	534.2	645.6	244.1	190.6	53.44	4.567	
7,900.0	7,100.0	7,856.9	7,083.0	30.0	29.2	86.01	532.6	745.6	244.1	186.2	57.87	4.218	
8,000.0	7,100.0	7,956.9	7,083.0	32.2	31.5	86.01	531.1	845.6	244.1	181.6	62.49	3.906	
8,100.0	7,100.0	8,056.9	7,083.0	34.6	33.9	86.01	529.5	945.6	244.2	176.9	67.26	3.630	
8,200.0	7,100.0	8,156.9	7,083.0	37.0	36.4	86.01	527.9	1,045.6	244.2	172.0	72.15	3.384	
8,300.0	7,100.0	8,256.9	7,083.0	39.5	38.9	86.01	526.4	1,145.6	244.2	167.1	77.14	3.166	
8,400.0	7,100.0	8,356.9	7,083.0	42.0	41.4	86.01	524.8	1,245.5	244.3	162.1	82.21	2.971	
8,500.0	7,100.0	8,456.9	7,083.0	44.5	44.0	86.01	523.2	1,345.5	244.3	157.0	87.34	2.797	
8,600.0	7,100.0	8,556.9	7,083.0	47.1	46.6	86.01	521.7	1,445.5	244.3	151.8	92.52	2.641	
8,700.0	7,100.0	8,656.9	7,083.0	49.7	49.2	86.01	520.1	1,545.5	244.4	146.6	97.76	2.500	
8,800.0	7,100.0	8,756.9	7,083.0	52.3	51.8	86.01	518.5	1,645.5	244.4	141.4	103.03	2.372	
8,900.0	7,100.0	8,856.9	7,083.0	55.0	54.5	86.01	517.0	1,745.5	244.5	136.1	108.33	2.256	
9,000.0	7,100.0	8,956.9	7,083.0	57.6	57.1	86.01	515.4	1,845.5	244.5	130.8	113.67	2.151	
9,100.0	7,100.0	9,056.9	7,083.0	60.3	59.8	86.01	513.8	1,945.5	244.5	125.5	119.03	2.054	
9,200.0	7,100.0	9,156.9	7,083.0	63.0	62.5	86.01	512.2	2,045.4	244.6	120.2	124.41	1.966	
9,300.0	7,100.0	9,256.9	7,083.0	65.6	65.2	86.01	510.7	2,145.4	244.6	114.8	129.80	1.884	
9,400.0	7,100.0	9,356.9	7,083.0	68.3	67.9	86.02	509.1	2,245.4	244.6	109.4	135.22	1.809	
9,500.0	7,100.0	9,456.9	7,083.0	71.1	70.6	86.02	507.5	2,345.4	244.7	104.0	140.65	1.740	
9,600.0	7,100.0	9,556.9	7,083.0	73.8	73.4	86.02	506.0	2,445.4	244.7	98.6	146.09	1.675	
9,700.0	7,100.0	9,656.9	7,083.0	76.5	76.1	86.02	504.4	2,545.4	244.7	93.2	151.55	1.615	
9,800.0	7,100.0	9,756.9	7,083.0	79.2	78.8	86.02	502.8	2,645.4	244.8	87.8	157.01	1.559	
9,900.0	7,100.0	9,856.9	7,083.0	81.9	81.6	86.02	501.3	2,745.4	244.8	82.3	162.49	1.507	
10,000.0	7,100.0	9,956.9	7,083.0	84.7	84.3	86.02	499.7	2,845.3	244.8	76.9	167.97	1.458 Level 3	
10,100.0	7,100.0	10,056.9	7,083.0	87.4	87.1	86.02	498.1	2,945.3	244.9	71.4	173.46	1.412 Level 3	

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

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design SRC Union Pad Sec.5-T2N-R68W - SRC Union A-5NHZ - Wellbore #1 - Plan #3 (1-2-14)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,100.0	10,156.9	7,083.0	90.2	89.8	86.02	496.5	3,045.3	244.9	66.0	178.96	1.369	Level 3
10,300.0	7,100.0	10,256.9	7,083.0	92.9	92.6	86.02	495.0	3,145.3	245.0	60.5	184.46	1.328	Level 3
10,400.0	7,100.0	10,356.8	7,083.0	95.7	95.3	86.02	493.4	3,245.3	245.0	55.0	189.97	1.290	Level 3
10,500.0	7,100.0	10,456.8	7,083.0	98.4	98.1	86.02	491.8	3,345.3	245.0	49.5	195.49	1.253	Level 3
10,600.0	7,100.0	10,556.8	7,083.0	101.2	100.9	86.02	490.3	3,445.3	245.1	44.1	201.01	1.219	Level 2
10,700.0	7,100.0	10,656.8	7,083.0	104.0	103.6	86.02	488.7	3,545.3	245.1	38.6	206.53	1.187	Level 2
10,800.0	7,100.0	10,756.8	7,083.0	106.7	106.4	86.02	487.1	3,645.2	245.1	33.1	212.06	1.156	Level 2
10,900.0	7,100.0	10,856.8	7,083.0	109.5	109.2	86.02	485.6	3,745.2	245.2	27.6	217.59	1.127	Level 2
11,000.0	7,100.0	10,956.8	7,083.0	112.3	111.9	86.02	484.0	3,845.2	245.2	22.1	223.13	1.099	Level 2
11,100.0	7,100.0	11,056.8	7,083.0	115.0	114.7	86.03	482.4	3,945.2	245.2	16.6	228.67	1.072	Level 2
11,200.0	7,100.0	11,156.8	7,083.0	117.8	117.5	86.03	480.9	4,045.2	245.3	11.1	234.21	1.047	Level 2
11,300.0	7,100.0	11,256.8	7,083.0	120.6	120.3	86.03	479.3	4,145.2	245.3	5.6	239.76	1.023	Level 2
11,400.0	7,100.0	11,356.8	7,083.0	123.3	123.1	86.03	477.7	4,245.2	245.3	0.0	245.30	1.000	Level 2
11,500.0	7,100.0	11,456.8	7,083.0	126.1	125.8	86.03	476.1	4,345.2	245.4	-5.5	250.85	0.978	Level 1
11,600.0	7,100.0	11,556.8	7,083.0	128.9	128.6	86.03	474.6	4,445.1	245.4	-11.0	256.41	0.957	Level 1
11,642.7	7,100.0	11,599.5	7,083.0	130.1	129.8	86.03	473.9	4,487.8	245.4	-13.3	258.78	0.948	Level 1
11,683.6	7,100.0	11,639.8	7,083.0	131.2	130.9	86.03	473.3	4,528.1	245.4	-15.6	261.03	0.940	Level 1, ES, SF

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 169-MWD, 6568-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	2.0	2.0	0.0	0.0	69.01	43.0	112.1	120.0	120.0	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	68.91	43.2	112.0	120.0	119.8	0.23	528.788		
200.0	200.0	202.1	202.1	0.3	0.3	68.61	43.8	111.8	120.1	119.5	0.60	199.951		
300.0	300.0	302.9	302.9	0.6	0.5	68.07	44.7	111.0	119.7	118.7	1.05	114.191		
400.0	400.0	403.6	403.6	0.8	0.7	67.41	45.6	109.5	118.6	117.1	1.49	79.814		
500.0	500.0	504.2	504.1	1.0	0.9	67.60	44.6	108.2	117.1	115.2	1.91	61.267		
600.0	600.0	604.1	604.0	1.2	1.1	68.09	43.0	106.8	115.2	112.8	2.34	49.209		
700.0	700.0	704.0	703.9	1.5	1.3	88.40	42.4	105.3	113.5	110.7	2.78	40.873		
800.0	800.0	804.2	804.1	1.7	1.5	89.24	42.6	103.2	111.6	108.4	3.22	34.677		
900.0	899.9	902.3	902.1	1.9	1.8	90.49	44.0	101.4	110.3	106.6	3.65	30.186		
1,000.0	999.7	1,003.0	1,002.8	2.1	2.0	92.24	46.5	100.2	110.1	106.0	4.10	26.880		
1,042.7	1,042.2	1,044.9	1,044.7	2.2	2.1	92.97	48.0	99.3	109.9	105.6	4.29	25.623 CC, ES		
1,100.0	1,099.4	1,100.1	1,099.8	2.4	2.2	94.29	50.0	99.0	110.5	105.9	4.54	24.319		
1,200.0	1,198.9	1,199.9	1,199.7	2.6	2.4	98.42	51.7	100.1	112.9	107.9	4.99	22.628		
1,300.0	1,298.3	1,301.9	1,301.6	2.9	2.6	103.88	52.1	100.0	115.2	109.7	5.46	21.093		
1,400.0	1,397.4	1,401.6	1,401.2	3.2	2.8	108.45	55.2	98.4	117.3	111.4	5.95	19.731		
1,500.0	1,496.3	1,498.3	1,497.9	3.5	3.0	113.41	58.2	98.0	122.3	115.8	6.43	19.017		
1,600.0	1,594.9	1,598.4	1,597.9	3.8	3.2	118.69	61.4	98.0	129.2	122.3	6.92	18.668		
1,700.0	1,693.3	1,697.2	1,696.8	4.1	3.4	123.95	64.3	97.9	137.9	130.4	7.41	18.600		
1,800.0	1,791.7	1,796.9	1,796.4	4.5	3.6	128.50	67.8	97.2	146.9	139.0	7.90	18.596		
1,900.0	1,890.1	1,898.6	1,898.0	4.9	3.9	132.35	72.1	96.5	156.5	148.1	8.39	18.660		
2,000.0	1,988.5	2,002.4	2,001.5	5.2	4.1	136.21	76.9	92.2	163.4	154.5	8.87	18.423		
2,100.0	2,086.9	2,101.8	2,100.7	5.6	4.3	140.31	80.2	86.1	169.8	160.5	9.32	18.226		
2,200.0	2,185.2	2,203.5	2,202.1	6.0	4.6	144.54	82.9	78.8	176.6	166.9	9.75	18.108		
2,300.0	2,283.6	2,302.7	2,300.9	6.3	4.8	148.37	86.2	70.7	183.1	172.9	10.19	17.974		
2,400.0	2,382.0	2,401.3	2,399.2	6.7	5.0	151.51	90.4	63.7	190.5	179.9	10.62	17.941		
2,500.0	2,480.4	2,502.0	2,499.5	7.1	5.3	154.74	94.1	55.7	198.3	187.3	11.05	17.942		
2,600.0	2,578.8	2,604.8	2,601.7	7.5	5.5	158.14	98.0	45.7	205.3	193.8	11.49	17.867		
2,700.0	2,677.1	2,705.5	2,701.8	7.9	5.8	161.12	103.2	35.4	211.6	199.7	11.93	17.732		
2,800.0	2,775.5	2,804.1	2,799.8	8.3	6.0	163.76	108.5	25.6	218.5	206.1	12.37	17.660		
2,900.0	2,873.9	2,903.8	2,898.7	8.7	6.3	166.55	113.4	14.7	225.5	212.7	12.82	17.588		
3,000.0	2,972.3	3,002.5	2,996.8	9.1	6.6	169.02	118.3	4.4	233.4	220.1	13.28	17.575		
3,100.0	3,070.7	3,100.9	3,094.5	9.4	6.8	171.33	123.2	-5.9	241.6	227.9	13.75	17.573		
3,200.0	3,169.1	3,203.8	3,196.7	9.8	7.1	173.32	128.8	-15.6	250.2	236.0	14.23	17.579		
3,300.0	3,267.4	3,308.4	3,300.4	10.2	7.4	175.38	136.2	-27.2	256.9	242.1	14.74	17.422		
3,400.0	3,365.8	3,406.3	3,397.4	10.6	7.7	177.34	143.6	-38.9	263.2	247.9	15.25	17.260		
3,500.0	3,464.2	3,506.0	3,496.1	11.0	8.0	179.24	150.9	-50.7	270.0	254.2	15.77	17.122		
3,600.0	3,562.6	3,604.9	3,594.0	11.4	8.3	-178.88	158.0	-62.8	277.0	260.7	16.30	16.991		
3,700.0	3,661.0	3,705.7	3,693.8	11.8	8.6	-177.14	165.0	-74.6	284.7	267.8	16.85	16.894		
3,800.0	3,759.3	3,809.4	3,796.4	12.2	8.9	-175.50	174.1	-87.1	290.9	273.4	17.41	16.704		
3,900.0	3,857.7	3,909.3	3,895.2	12.6	9.2	-174.15	183.5	-98.4	296.7	278.8	17.96	16.518		
4,000.0	3,956.1	4,007.6	3,992.5	13.0	9.5	-172.99	192.8	-108.8	302.9	284.4	18.51	16.366		
4,100.0	4,054.5	4,105.0	4,089.1	13.4	9.8	-172.01	201.6	-118.4	309.8	290.7	19.05	16.264		
4,200.0	4,152.9	4,209.6	4,192.5	13.8	10.1	-170.76	211.1	-130.1	316.4	296.7	19.64	16.110		
4,300.0	4,251.3	4,307.7	4,289.3	14.2	10.4	-169.37	220.4	-142.7	322.5	302.3	20.24	15.934		
4,400.0	4,349.6	4,405.2	4,385.8	14.6	10.7	-168.10	229.1	-154.8	329.4	308.6	20.84	15.803		
4,500.0	4,448.0	4,503.1	4,482.6	15.0	11.0	-166.92	237.4	-166.6	337.0	315.5	21.45	15.709		
4,600.0	4,546.4	4,602.0	4,580.4	15.4	11.3	-165.83	245.5	-178.2	345.0	323.0	22.07	15.637		
4,700.0	4,644.8	4,702.0	4,679.5	15.8	11.6	-164.86	253.7	-189.4	353.2	330.5	22.68	15.575		
4,800.0	4,743.2	4,802.5	4,779.0	16.2	11.9	-163.95	262.2	-200.5	361.2	337.9	23.30	15.503		
4,900.0	4,841.5	4,900.7	4,876.0	16.6	12.3	-162.84	270.4	-213.1	369.3	345.4	23.95	15.420		
5,000.0	4,939.9	4,998.2	4,972.6	17.0	12.6	-161.91	278.2	-224.7	378.0	353.4	24.59	15.375		

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 169-MWD, 6568-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,038.3	5,097.3	5,070.6	17.4	12.9	-161.05	285.7	-236.3	387.1	361.9	25.23	15.346		
5,200.0	5,136.7	5,202.1	5,174.4	17.8	13.2	-160.20	294.4	-248.4	395.6	369.8	25.89	15.283		
5,300.0	5,235.1	5,301.5	5,272.8	18.2	13.5	-159.63	303.6	-258.4	403.3	376.8	26.50	15.219		
5,400.0	5,333.5	5,392.1	5,363.0	18.6	13.8	-159.50	310.7	-264.9	412.4	385.4	27.02	15.260		
5,500.0	5,431.8	5,486.5	5,456.9	19.0	14.0	-159.29	316.2	-272.3	423.5	395.9	27.56	15.362		
5,600.0	5,530.3	5,581.7	5,551.7	19.3	14.3	-159.21	321.4	-279.1	434.6	406.5	28.10	15.470		
5,700.0	5,629.2	5,674.7	5,644.5	19.6	14.5	-159.25	324.6	-284.2	444.9	416.4	28.54	15.588		
5,800.0	5,728.6	5,767.2	5,737.0	19.8	14.7	-159.48	327.0	-286.4	453.0	424.0	28.91	15.667		
5,900.0	5,828.3	5,870.9	5,840.6	20.1	14.9	-159.40	328.2	-290.2	459.1	429.8	29.30	15.668		
6,000.0	5,928.2	5,978.7	5,948.2	20.2	15.1	-159.16	331.8	-293.7	459.8	430.1	29.68	15.491		
6,100.0	6,028.2	6,075.0	6,044.5	20.3	15.3	-178.90	335.7	-294.7	456.7	423.2	33.50	13.631		
6,200.0	6,128.2	6,163.3	6,132.7	20.5	15.5	-178.87	337.7	-295.0	454.4	420.6	33.82	13.435		
6,300.0	6,228.2	6,272.1	6,241.5	20.6	15.7	-179.14	338.6	-292.8	453.6	419.4	34.21	13.261		
6,400.0	6,328.2	6,442.8	6,409.0	20.8	15.9	177.72	355.7	-268.7	443.7	408.7	35.05	12.660		
6,500.0	6,428.1	6,518.0	6,479.9	20.9	16.0	84.55	369.6	-247.7	426.9	396.3	30.63	13.940		
6,600.0	6,527.2	6,590.4	6,547.6	21.0	16.0	83.13	377.3	-223.2	417.7	387.2	30.57	13.665		
6,700.0	6,623.4	6,679.0	6,627.0	21.0	15.9	81.35	384.4	-184.8	411.4	380.9	30.45	13.510		
6,800.0	6,715.0	6,766.1	6,700.0	21.0	15.9	79.67	390.5	-137.8	406.2	375.9	30.38	13.374		
6,900.0	6,800.2	6,850.0	6,764.5	21.0	15.8	78.19	395.4	-84.4	402.2	371.7	30.43	13.217		
7,000.0	6,877.2	6,936.8	6,824.2	20.9	15.8	76.81	399.5	-21.6	399.0	368.3	30.73	12.987		
7,100.0	6,944.7	7,020.9	6,874.4	20.9	15.7	75.68	402.5	45.7	396.8	365.4	31.36	12.652		
7,200.0	7,001.2	7,104.4	6,916.3	20.9	16.2	74.80	404.3	117.8	395.3	362.9	32.42	12.192		
7,300.0	7,045.7	7,187.4	6,949.3	21.0	17.2	74.19	405.1	194.0	394.4	360.4	34.00	11.601		
7,400.0	7,077.3	7,270.2	6,973.3	21.3	18.3	73.86	404.8	273.1	394.1	358.0	36.09	10.919		
7,441.3	7,086.5	7,304.3	6,980.6	21.6	18.8	73.81	404.4	306.5	394.1	357.0	37.13	10.616		
7,500.0	7,095.5	7,350.0	6,987.8	22.3	19.6	73.82	403.5	351.6	394.3	355.7	38.61	10.211		
7,600.0	7,100.0	7,435.6	6,993.5	23.9	21.1	74.05	401.1	436.9	395.1	353.4	41.69	9.477		
7,700.0	7,100.0	7,534.4	6,993.5	25.7	23.1	74.14	397.5	535.7	397.1	351.6	45.45	8.735		
7,800.0	7,100.0	7,634.4	6,993.5	27.8	25.2	74.22	393.9	635.6	399.0	349.5	49.53	8.056		
7,900.0	7,100.0	7,734.4	6,993.5	30.0	27.4	74.30	390.3	735.5	401.0	347.2	53.86	7.447		
8,000.0	7,100.0	7,834.4	6,993.5	32.2	29.8	74.38	386.7	835.4	403.0	344.7	58.37	6.905		
8,100.0	7,100.0	7,934.3	6,993.5	34.6	32.2	74.46	383.1	935.3	405.0	342.0	63.03	6.426		
8,200.0	7,100.0	8,034.3	6,993.5	37.0	34.6	74.54	379.5	1,035.2	407.0	339.2	67.81	6.002		
8,300.0	7,100.0	8,134.3	6,993.5	39.5	37.2	74.61	375.9	1,135.2	409.0	336.3	72.69	5.627		
8,400.0	7,100.0	8,234.3	6,993.5	42.0	39.7	74.69	372.3	1,235.1	411.0	333.4	77.65	5.293		
8,500.0	7,100.0	8,334.3	6,993.5	44.5	42.3	74.77	368.7	1,335.0	413.0	330.4	82.68	4.996		
8,600.0	7,100.0	8,434.2	6,993.5	47.1	44.9	74.84	365.0	1,434.9	415.0	327.3	87.76	4.729		
8,700.0	7,100.0	8,534.2	6,993.5	49.7	47.5	74.92	361.4	1,534.8	417.0	324.1	92.88	4.490		
8,800.0	7,100.0	8,634.2	6,993.5	52.3	50.2	74.99	357.8	1,634.7	419.0	321.0	98.05	4.274		
8,900.0	7,100.0	8,734.2	6,993.5	55.0	52.9	75.06	354.2	1,734.6	421.0	317.8	103.25	4.078		
9,000.0	7,100.0	8,834.2	6,993.5	57.6	55.6	75.14	350.6	1,834.6	423.0	314.6	108.48	3.900		
9,100.0	7,100.0	8,934.1	6,993.5	60.3	58.2	75.21	347.0	1,934.5	425.0	311.3	113.73	3.737		
9,200.0	7,100.0	9,034.1	6,993.5	63.0	61.0	75.28	343.4	2,034.4	427.0	308.0	119.01	3.588		
9,300.0	7,100.0	9,134.1	6,993.5	65.6	63.7	75.35	339.8	2,134.3	429.1	304.7	124.31	3.452		
9,400.0	7,100.0	9,234.1	6,993.5	68.3	66.4	75.42	336.2	2,234.2	431.1	301.4	129.62	3.325		
9,500.0	7,100.0	9,334.0	6,993.5	71.1	69.1	75.49	332.6	2,334.1	433.1	298.1	134.96	3.209		
9,600.0	7,100.0	9,434.0	6,993.5	73.8	71.9	75.56	329.0	2,434.0	435.1	294.8	140.30	3.101		
9,700.0	7,100.0	9,534.0	6,993.5	76.5	74.6	75.62	325.4	2,533.9	437.1	291.4	145.66	3.001		
9,800.0	7,100.0	9,634.0	6,993.5	79.2	77.3	75.69	321.8	2,633.9	439.1	288.1	151.03	2.907		
9,900.0	7,100.0	9,734.0	6,993.5	81.9	80.1	75.76	318.2	2,733.8	441.1	284.7	156.42	2.820		
10,000.0	7,100.0	9,833.9	6,993.5	84.7	82.9	75.82	314.6	2,833.7	443.1	281.3	161.81	2.738		
10,100.0	7,100.0	9,933.9	6,993.5	87.4	85.6	75.89	311.0	2,933.6	445.1	277.9	167.21	2.662		

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
SRC Union Pad Sec.5-T2N-R68W - SRC Union C-5CHZ - Wellbore #1 - Plan #5 (1-30-14)												Offset Well Error:	0.0 ft
Survey Program: 169-MWD, 6568-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
10,200.0	7,100.0	10,033.9	6,993.5	90.2	88.4	75.95	307.4	3,033.5	447.1	274.5	172.62	2.590	
10,300.0	7,100.0	10,133.9	6,993.5	92.9	91.1	76.02	303.8	3,133.4	449.1	271.1	178.04	2.523	
10,400.0	7,100.0	10,233.9	6,993.5	95.7	93.9	76.08	300.2	3,233.3	451.1	267.7	183.47	2.459	
10,500.0	7,100.0	10,333.8	6,993.5	98.4	96.7	76.14	296.6	3,333.3	453.2	264.3	188.90	2.399	
10,600.0	7,100.0	10,433.8	6,993.5	101.2	99.4	76.21	292.9	3,433.2	455.2	260.8	194.34	2.342	
10,700.0	7,100.0	10,533.8	6,993.5	104.0	102.2	76.27	289.3	3,533.1	457.2	257.4	199.79	2.288	
10,800.0	7,100.0	10,633.8	6,993.5	106.7	105.0	76.33	285.7	3,633.0	459.2	254.0	205.24	2.237	
10,900.0	7,100.0	10,733.7	6,993.5	109.5	107.8	76.39	282.1	3,732.9	461.2	250.5	210.70	2.189	
11,000.0	7,100.0	10,833.7	6,993.5	112.3	110.6	76.45	278.5	3,832.8	463.2	247.1	216.16	2.143	
11,100.0	7,100.0	10,933.7	6,993.5	115.0	113.3	76.51	274.9	3,932.7	465.2	243.6	221.63	2.099	
11,200.0	7,100.0	11,033.7	6,993.5	117.8	116.1	76.57	271.3	4,032.6	467.3	240.2	227.10	2.058	
11,300.0	7,100.0	11,133.7	6,993.5	120.6	118.9	76.63	267.7	4,132.6	469.3	236.7	232.57	2.018	
11,400.0	7,100.0	11,233.6	6,993.5	123.3	121.7	76.69	264.1	4,232.5	471.3	233.2	238.05	1.980	
11,500.0	7,100.0	11,333.6	6,993.5	126.1	124.5	76.75	260.5	4,332.4	473.3	229.8	243.54	1.943	
11,600.0	7,100.0	11,433.6	6,993.5	128.9	127.3	76.80	256.9	4,432.3	475.3	226.3	249.03	1.909	
11,683.6	7,100.0	11,517.1	6,993.5	131.2	129.6	76.85	253.9	4,515.8	477.0	223.4	253.61	1.881 SF	

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 169-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	2.0	2.0	0.0	0.0	69.01	43.0	112.1	120.0	120.0	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	68.91	43.2	112.0	120.0	119.8	0.23	528.788		
200.0	200.0	202.1	202.1	0.3	0.3	68.61	43.8	111.8	120.1	119.5	0.60	199.951		
300.0	300.0	302.9	302.9	0.6	0.5	68.07	44.7	111.0	119.7	118.7	1.05	114.191		
400.0	400.0	403.6	403.6	0.8	0.7	67.41	45.6	109.5	118.6	117.1	1.49	79.814		
500.0	500.0	504.2	504.1	1.0	0.9	67.60	44.6	108.2	117.1	115.2	1.91	61.267		
600.0	600.0	604.1	604.0	1.2	1.1	68.09	43.0	106.8	115.2	112.8	2.34	49.209		
700.0	700.0	704.0	703.9	1.5	1.3	88.40	42.4	105.3	113.5	110.7	2.78	40.873		
800.0	800.0	804.2	804.1	1.7	1.5	89.24	42.6	103.2	111.6	108.4	3.22	34.677		
900.0	899.9	902.3	902.1	1.9	1.8	90.49	44.0	101.4	110.3	106.6	3.65	30.186		
1,000.0	999.7	1,003.0	1,002.8	2.1	2.0	92.24	46.5	100.2	110.1	106.0	4.10	26.880		
1,042.7	1,042.2	1,044.9	1,044.7	2.2	2.1	92.97	48.0	99.3	109.9	105.6	4.29	25.623 CC, ES		
1,100.0	1,099.4	1,100.1	1,099.8	2.4	2.2	94.29	50.0	99.0	110.5	105.9	4.54	24.319		
1,200.0	1,198.9	1,199.9	1,199.7	2.6	2.4	98.42	51.7	100.1	112.9	107.9	4.99	22.628		
1,300.0	1,298.3	1,301.9	1,301.6	2.9	2.6	103.88	52.1	100.0	115.2	109.7	5.46	21.093		
1,400.0	1,397.4	1,401.6	1,401.2	3.2	2.8	108.45	55.2	98.4	117.3	111.4	5.95	19.731		
1,500.0	1,496.3	1,498.3	1,497.9	3.5	3.0	113.41	58.2	98.0	122.3	115.8	6.43	19.017		
1,600.0	1,594.9	1,598.4	1,597.9	3.8	3.2	118.69	61.4	98.0	129.2	122.3	6.92	18.668		
1,700.0	1,693.3	1,697.2	1,696.8	4.1	3.4	123.95	64.3	97.9	137.9	130.4	7.41	18.600		
1,800.0	1,791.7	1,796.9	1,796.4	4.5	3.6	128.50	67.8	97.2	146.9	139.0	7.90	18.596		
1,900.0	1,890.1	1,898.6	1,898.0	4.9	3.9	132.35	72.1	96.5	156.5	148.1	8.39	18.660		
2,000.0	1,988.5	2,002.4	2,001.5	5.2	4.1	136.21	76.9	92.2	163.4	154.5	8.87	18.423		
2,100.0	2,086.9	2,101.8	2,100.7	5.6	4.3	140.31	80.2	86.1	169.8	160.5	9.32	18.226		
2,200.0	2,185.2	2,203.5	2,202.1	6.0	4.6	144.54	82.9	78.8	176.6	166.9	9.75	18.108		
2,300.0	2,283.6	2,302.7	2,300.9	6.3	4.8	148.37	86.2	70.7	183.1	172.9	10.19	17.974		
2,400.0	2,382.0	2,401.3	2,399.2	6.7	5.0	151.51	90.4	63.7	190.5	179.9	10.62	17.941		
2,500.0	2,480.4	2,502.0	2,499.5	7.1	5.3	154.74	94.1	55.7	198.3	187.3	11.05	17.942		
2,600.0	2,578.8	2,604.8	2,601.7	7.5	5.5	158.14	98.0	45.7	205.3	193.8	11.49	17.867		
2,700.0	2,677.1	2,705.5	2,701.8	7.9	5.8	161.12	103.2	35.4	211.6	199.7	11.93	17.732		
2,800.0	2,775.5	2,804.1	2,799.8	8.3	6.0	163.76	108.5	25.6	218.5	206.1	12.37	17.660		
2,900.0	2,873.9	2,903.8	2,898.7	8.7	6.3	166.55	113.4	14.7	225.5	212.7	12.82	17.588		
3,000.0	2,972.3	3,002.5	2,996.8	9.1	6.6	169.02	118.3	4.4	233.4	220.1	13.28	17.575		
3,100.0	3,070.7	3,100.9	3,094.5	9.4	6.8	171.33	123.2	-5.9	241.6	227.9	13.75	17.573		
3,200.0	3,169.1	3,203.8	3,196.7	9.8	7.1	173.32	128.8	-15.6	250.2	236.0	14.23	17.579		
3,300.0	3,267.4	3,308.4	3,300.4	10.2	7.4	175.38	136.2	-27.2	256.9	242.1	14.74	17.422		
3,400.0	3,365.8	3,406.3	3,397.4	10.6	7.7	177.34	143.6	-38.9	263.2	247.9	15.25	17.260		
3,500.0	3,464.2	3,506.0	3,496.1	11.0	8.0	179.24	150.9	-50.7	270.0	254.2	15.77	17.122		
3,600.0	3,562.6	3,604.9	3,594.0	11.4	8.3	-178.88	158.0	-62.8	277.0	260.7	16.30	16.991		
3,700.0	3,661.0	3,705.7	3,693.8	11.8	8.6	-177.14	165.0	-74.6	284.7	267.8	16.85	16.894		
3,800.0	3,759.3	3,809.4	3,796.4	12.2	8.9	-175.50	174.1	-87.1	290.9	273.4	17.41	16.704		
3,900.0	3,857.7	3,909.3	3,895.2	12.6	9.2	-174.15	183.5	-98.4	296.7	278.8	17.96	16.518		
4,000.0	3,956.1	4,007.6	3,992.5	13.0	9.5	-172.99	192.8	-108.8	302.9	284.4	18.51	16.366		
4,100.0	4,054.5	4,105.0	4,089.1	13.4	9.8	-172.01	201.6	-118.4	309.8	290.7	19.05	16.264		
4,200.0	4,152.9	4,209.6	4,192.5	13.8	10.1	-170.76	211.1	-130.1	316.4	296.7	19.64	16.110		
4,300.0	4,251.3	4,307.7	4,289.3	14.2	10.4	-169.37	220.4	-142.7	322.5	302.3	20.24	15.934		
4,400.0	4,349.6	4,405.2	4,385.8	14.6	10.7	-168.10	229.1	-154.8	329.4	308.6	20.84	15.803		
4,500.0	4,448.0	4,503.1	4,482.6	15.0	11.0	-166.92	237.4	-166.6	337.0	315.5	21.45	15.709		
4,600.0	4,546.4	4,602.0	4,580.4	15.4	11.3	-165.83	245.5	-178.2	345.0	323.0	22.07	15.637		
4,700.0	4,644.8	4,702.0	4,679.5	15.8	11.6	-164.86	253.7	-189.4	353.2	330.5	22.68	15.575		
4,800.0	4,743.2	4,802.5	4,779.0	16.2	11.9	-163.95	262.2	-200.5	361.2	337.9	23.30	15.503		
4,900.0	4,841.5	4,900.7	4,876.0	16.6	12.3	-162.84	270.4	-213.1	369.3	345.4	23.95	15.420		
5,000.0	4,939.9	4,998.2	4,972.6	17.0	12.6	-161.91	278.2	-224.7	378.0	353.4	24.59	15.375		

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

SRC Union Pad Sec.5-T2N-R68W - SRC Union C-5CHZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 169-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,038.3	5,097.3	5,070.6	17.4	12.9	-161.05	285.7	-236.3	387.1	361.9	25.23	15.346		
5,200.0	5,136.7	5,202.1	5,174.4	17.8	13.2	-160.20	294.4	-248.4	395.6	369.8	25.89	15.283		
5,300.0	5,235.1	5,301.5	5,272.8	18.2	13.5	-159.63	303.6	-258.4	403.3	376.8	26.50	15.219		
5,400.0	5,333.5	5,392.1	5,363.0	18.6	13.8	-159.50	310.7	-264.9	412.4	385.4	27.02	15.260		
5,500.0	5,431.8	5,486.5	5,456.9	19.0	14.0	-159.29	316.2	-272.3	423.5	395.9	27.56	15.362		
5,600.0	5,530.3	5,581.7	5,551.7	19.3	14.3	-159.21	321.4	-279.1	434.6	406.5	28.10	15.470		
5,700.0	5,629.2	5,674.7	5,644.5	19.6	14.5	-159.25	324.6	-284.2	444.9	416.4	28.54	15.588		
5,800.0	5,728.6	5,767.2	5,737.0	19.8	14.7	-159.48	327.0	-286.4	453.0	424.0	28.91	15.667		
5,900.0	5,828.3	5,870.9	5,840.6	20.1	14.9	-159.40	328.2	-290.2	459.1	429.8	29.30	15.668		
6,000.0	5,928.2	5,978.7	5,948.2	20.2	15.1	-159.16	331.8	-293.7	459.8	430.1	29.68	15.491		
6,100.0	6,028.2	6,075.0	6,044.5	20.3	15.3	-178.90	335.7	-294.7	456.7	423.2	33.50	13.631		
6,200.0	6,128.2	6,163.3	6,132.7	20.5	15.5	-178.87	337.7	-295.0	454.4	420.6	33.82	13.435		
6,300.0	6,228.2	6,272.1	6,241.5	20.6	15.7	-179.14	338.6	-292.8	453.6	419.4	34.21	13.261		
6,400.0	6,328.2	6,442.8	6,409.0	20.8	15.9	-177.72	355.7	-268.7	443.7	408.7	35.05	12.660 SF		
6,500.0	6,428.1	6,518.0	6,479.9	20.9	16.0	84.55	369.6	-247.7	426.9	396.3	30.63	13.940		
6,600.0	6,527.2	6,568.0	6,526.7	21.0	16.0	83.68	375.3	-231.4	418.4	387.8	30.63	13.660		
6,607.4	6,534.4	6,568.0	6,526.7	21.0	16.0	83.68	375.3	-231.4	418.3	387.7	30.63	13.655		
6,700.0	6,623.4	6,568.0	6,526.7	21.0	16.0	82.92	375.3	-231.4	427.8	397.2	30.62	13.970		
6,800.0	6,715.0	6,568.0	6,526.7	21.0	16.0	80.43	375.3	-231.4	457.7	427.3	30.44	15.035		
6,900.0	6,800.2	6,568.0	6,526.7	21.0	16.0	76.32	375.3	-231.4	504.0	473.8	30.14	16.722		
7,000.0	6,877.2	6,568.0	6,526.7	20.9	16.0	70.87	375.3	-231.4	561.8	532.1	29.71	18.910		
7,100.0	6,944.7	6,568.0	6,526.7	20.9	16.0	64.49	375.3	-231.4	627.1	598.0	29.08	21.564		
7,200.0	7,001.2	6,568.0	6,526.7	20.9	16.0	57.72	375.3	-231.4	696.6	668.4	28.15	24.742		
7,300.0	7,045.7	6,568.0	6,526.7	21.0	16.0	51.08	375.3	-231.4	768.1	741.1	26.93	28.520		
7,400.0	7,077.3	6,568.0	6,526.7	21.3	16.0	44.97	375.3	-231.4	839.8	814.2	25.56	32.853		
7,500.0	7,095.5	6,568.0	6,526.7	22.3	16.0	39.60	375.3	-231.4	910.4	886.1	24.33	37.423		
7,600.0	7,100.0	6,568.0	6,526.7	23.9	16.0	35.86	375.3	-231.4	979.2	955.3	23.86	41.045		

Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 105-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	2.0	2.0	0.0	0.0	68.91	57.6	149.2	160.0	159.9	0.00	N/A		
100.0	100.0	103.0	103.0	0.1	0.1	69.10	57.0	149.1	159.6	159.4	0.23	696.778		
200.0	200.0	204.2	204.2	0.3	0.3	69.52	55.5	148.6	158.6	158.0	0.68	233.577		
300.0	300.0	305.9	305.8	0.6	0.6	70.01	53.6	147.3	156.8	155.6	1.13	138.267		
400.0	400.0	406.9	406.8	0.8	0.8	70.50	51.3	145.0	153.9	152.3	1.59	97.053		
500.0	500.0	506.9	506.7	1.0	1.0	70.95	49.1	142.3	150.6	148.6	2.03	74.338		
600.0	600.0	606.3	606.1	1.2	1.2	71.37	47.2	140.0	147.8	145.3	2.44	60.482		
700.0	700.0	704.0	703.8	1.5	1.4	91.82	45.9	138.1	145.6	142.7	2.85	51.062		
750.2	750.2	752.5	752.3	1.6	1.5	92.21	45.9	137.8	145.3	142.2	3.06	47.480 CC, ES		
800.0	800.0	800.7	800.5	1.7	1.6	92.65	46.3	137.9	145.6	142.3	3.27	44.555		
900.0	899.9	900.6	900.4	1.9	1.8	93.82	47.9	138.8	147.1	143.4	3.70	39.785		
1,000.0	999.7	1,001.8	1,001.5	2.1	2.0	95.52	49.8	138.9	148.2	144.1	4.14	35.805		
1,100.0	1,099.4	1,100.6	1,100.3	2.4	2.2	97.69	51.8	138.7	149.4	144.8	4.58	32.588		
1,200.0	1,198.9	1,198.9	1,198.6	2.6	2.4	100.24	54.5	139.2	152.0	147.0	5.04	30.172		
1,300.0	1,298.3	1,300.2	1,299.8	2.9	2.6	103.29	57.6	139.8	155.3	149.8	5.51	28.186		
1,400.0	1,397.4	1,401.3	1,400.9	3.2	2.8	106.86	60.5	139.2	158.4	152.4	5.99	26.420		
1,500.0	1,496.3	1,499.1	1,498.7	3.5	3.0	110.95	62.6	138.6	162.6	156.1	6.48	25.092		
1,600.0	1,594.9	1,597.1	1,596.7	3.8	3.3	115.60	63.9	138.8	169.3	162.3	6.97	24.279		
1,700.0	1,693.3	1,698.4	1,698.0	4.1	3.5	120.19	66.0	138.4	177.1	169.6	7.48	23.683		
1,800.0	1,791.7	1,798.8	1,798.2	4.5	3.7	123.98	69.8	137.0	184.5	176.5	7.98	23.120		
1,900.0	1,890.1	1,896.0	1,895.4	4.9	3.9	127.59	72.5	135.7	193.0	184.5	8.47	22.788		
2,000.0	1,988.5	1,994.3	1,993.7	5.2	4.1	131.22	74.1	134.7	203.0	194.1	8.95	22.686		
2,100.0	2,086.9	2,094.4	2,093.8	5.6	4.3	134.50	76.1	133.5	213.4	203.9	9.43	22.637		
2,200.0	2,185.2	2,197.3	2,196.6	6.0	4.5	137.50	78.8	131.3	223.3	213.4	9.90	22.543		
2,300.0	2,283.6	2,301.0	2,300.1	6.3	4.8	140.43	82.1	126.8	231.6	221.2	10.38	22.316		
2,400.0	2,382.0	2,399.6	2,398.5	6.7	5.0	143.33	84.5	121.0	239.5	228.6	10.83	22.117		
2,500.0	2,480.4	2,498.1	2,496.8	7.1	5.2	146.47	85.2	114.5	248.4	237.1	11.26	22.055		
2,600.0	2,578.8	2,600.5	2,598.9	7.5	5.4	149.79	85.5	106.3	257.2	245.5	11.70	21.992		
2,700.0	2,677.1	2,700.7	2,698.6	7.9	5.7	153.03	85.8	96.6	265.6	253.5	12.12	21.912		
2,800.0	2,775.5	2,798.0	2,795.5	8.3	5.9	156.05	85.7	87.1	275.0	262.4	12.55	21.918		
2,900.0	2,873.9	2,898.6	2,895.6	8.7	6.1	159.00	85.5	77.2	285.1	272.1	12.98	21.968		
3,000.0	2,972.3	3,001.5	2,997.8	9.1	6.4	161.92	86.0	65.8	294.6	281.2	13.42	21.952		
3,100.0	3,070.7	3,099.7	3,095.3	9.4	6.7	164.63	86.8	53.9	304.1	290.2	13.87	21.917		
3,200.0	3,169.1	3,197.5	3,192.3	9.8	6.9	167.25	87.0	41.9	314.5	300.1	14.33	21.938		
3,300.0	3,267.4	3,299.1	3,293.1	10.2	7.2	169.84	87.5	29.1	325.1	310.2	14.82	21.939		
3,400.0	3,365.8	3,398.7	3,391.9	10.6	7.5	172.23	88.7	15.9	335.4	320.1	15.31	21.912		
3,500.0	3,464.2	3,493.6	3,486.0	11.0	7.7	174.38	89.3	3.6	346.8	331.0	15.80	21.956		
3,600.0	3,562.6	3,590.5	3,582.1	11.4	8.0	176.42	89.2	-8.5	359.6	343.3	16.30	22.065		
3,700.0	3,661.0	3,690.2	3,681.0	11.8	8.2	178.32	89.3	-20.8	372.7	355.9	16.81	22.169		
3,800.0	3,759.3	3,795.3	3,785.4	12.2	8.5	-179.85	90.4	-33.7	385.4	368.0	17.36	22.204		
3,900.0	3,857.7	3,903.8	3,892.8	12.6	8.8	-177.99	93.7	-48.6	396.1	378.2	17.93	22.096		
4,000.0	3,956.1	3,993.4	3,981.4	13.0	9.1	-176.44	96.2	-61.5	407.0	388.5	18.47	22.041		
4,100.0	4,054.5	4,082.4	4,069.5	13.4	9.4	-174.89	96.7	-74.3	420.5	401.5	19.01	22.118		
4,200.0	4,152.9	4,180.2	4,166.3	13.8	9.7	-173.29	96.1	-88.2	435.5	415.9	19.59	22.229		
4,300.0	4,251.3	4,278.4	4,263.5	14.2	9.9	-171.83	95.5	-101.8	450.9	430.8	20.18	22.347		
4,400.0	4,349.6	4,378.1	4,362.3	14.6	10.2	-170.52	95.2	-115.0	466.4	445.6	20.76	22.463		
4,500.0	4,448.0	4,478.4	4,461.8	15.0	10.5	-169.38	95.3	-127.7	481.7	460.4	21.35	22.562		
4,600.0	4,546.4	4,579.3	4,561.9	15.4	10.8	-168.30	95.9	-140.5	496.8	474.8	21.95	22.634		
4,700.0	4,644.8	4,678.8	4,660.6	15.8	11.1	-167.29	96.9	-153.4	511.6	489.0	22.55	22.684		
4,800.0	4,743.2	4,777.4	4,758.3	16.2	11.4	-166.28	97.9	-166.6	526.5	503.3	23.16	22.727		
4,900.0	4,841.5	4,883.2	4,863.1	16.6	11.7	-165.28	99.6	-180.7	541.0	517.2	23.80	22.730		
5,000.0	4,939.9	4,989.2	4,968.3	17.0	12.0	-164.46	103.0	-193.7	554.0	529.6	24.43	22.681		

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 105-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,038.3	5,086.3	5,064.6	17.4	12.3	-163.79	106.6	-205.3	566.8	541.8	25.01	22.659		
5,200.0	5,136.7	5,184.3	5,161.8	17.8	12.6	-163.13	109.8	-217.0	579.9	554.3	25.61	22.644		
5,300.0	5,235.1	5,284.0	5,260.7	18.2	12.9	-162.41	113.2	-229.8	593.1	566.9	26.23	22.611		
5,400.0	5,333.5	5,378.8	5,354.5	18.6	13.2	-161.66	116.2	-242.9	606.5	579.6	26.85	22.587		
5,500.0	5,431.8	5,469.1	5,443.9	19.0	13.5	-160.96	118.1	-255.5	621.1	593.7	27.46	22.617		
5,600.0	5,530.3	5,568.2	5,542.0	19.3	13.8	-160.26	119.1	-269.3	636.5	608.4	28.11	22.645		
5,700.0	5,629.2	5,675.4	5,648.4	19.6	14.1	-159.65	121.4	-282.4	648.2	619.5	28.73	22.566		
5,800.0	5,728.6	5,770.7	5,743.1	19.8	14.3	-159.17	123.7	-292.2	656.4	627.1	29.24	22.451		
5,900.0	5,828.3	5,865.0	5,837.1	20.1	14.6	-158.72	125.2	-300.5	662.1	632.4	29.70	22.294		
6,000.0	5,928.2	5,952.3	5,924.2	20.2	14.8	-158.36	125.4	-306.3	666.1	636.0	30.07	22.153		
6,100.0	6,028.2	6,043.0	6,014.8	20.3	15.0	-177.95	123.9	-310.0	668.7	636.1	32.57	20.529		
6,200.0	6,128.2	6,153.9	6,125.6	20.5	15.2	-177.81	122.0	-311.6	670.5	637.5	32.93	20.360		
6,300.0	6,228.2	6,263.7	6,235.5	20.6	15.4	-177.90	122.3	-310.5	670.2	636.9	33.30	20.125		
6,400.0	6,328.2	6,364.8	6,336.5	20.8	15.5	-178.15	123.2	-307.6	669.2	635.5	33.67	19.877		
6,500.0	6,428.1	6,459.4	6,430.7	20.9	15.6	90.36	123.4	-299.1	668.8	637.0	31.73	21.076		
6,501.6	6,429.7	6,460.8	6,432.0	20.9	15.6	90.35	123.4	-298.9	668.8	637.0	31.73	21.075		
6,600.0	6,527.2	6,539.9	6,509.4	21.0	15.6	89.74	121.9	-282.8	670.2	638.4	31.80	21.080		
6,700.0	6,623.4	6,639.4	6,604.2	21.0	15.6	89.21	118.2	-252.7	673.5	641.7	31.76	21.204		
6,800.0	6,715.0	6,749.2	6,703.0	21.0	15.5	88.70	116.1	-205.2	674.8	643.1	31.68	21.304		
6,900.0	6,800.2	6,840.2	6,779.4	21.0	15.4	88.40	113.6	-156.0	676.8	645.1	31.68	21.364		
7,000.0	6,877.2	6,923.5	6,842.3	20.9	15.4	87.99	110.3	-101.5	679.8	647.9	31.86	21.336		
7,100.0	6,944.7	6,994.4	6,890.9	20.9	15.5	87.62	105.3	-50.2	685.7	653.4	32.33	21.211		
7,200.0	7,001.2	7,069.0	6,935.3	20.9	15.8	87.15	97.0	9.1	695.3	662.1	33.19	20.950		
7,300.0	7,045.7	7,145.5	6,971.1	21.0	16.3	86.41	86.3	75.7	707.8	673.2	34.56	20.477		
7,400.0	7,077.3	7,226.4	6,996.9	21.3	17.0	85.37	73.6	151.3	721.9	685.4	36.49	19.786		
7,500.0	7,095.5	7,385.6	7,014.5	22.3	19.2	83.80	56.0	308.1	732.1	692.2	39.99	18.309		
7,600.0	7,100.0	7,494.9	7,013.4	23.9	21.1	83.08	51.0	417.3	735.8	692.3	43.50	16.916		
7,700.0	7,100.0	7,601.7	7,008.8	25.7	23.1	82.75	47.6	523.9	737.9	690.5	47.45	15.552		
7,800.0	7,100.0	7,716.0	7,007.5	27.8	25.6	82.66	44.3	638.1	739.5	687.6	51.93	14.240		
7,900.0	7,100.0	7,846.5	7,011.4	30.0	28.5	82.92	45.8	768.6	736.2	679.1	57.11	12.890		
8,000.0	7,100.0	7,942.2	7,014.2	32.2	30.8	83.11	47.5	864.2	732.5	670.8	61.68	11.875		
8,100.0	7,100.0	8,043.6	7,014.1	34.6	33.2	83.07	49.7	965.6	728.9	662.4	66.49	10.963		
8,200.0	7,100.0	8,132.0	7,013.0	37.0	35.4	82.95	51.4	1,054.0	725.7	654.6	71.07	10.210		
8,300.0	7,100.0	8,227.3	7,011.0	39.5	37.8	82.78	51.6	1,149.2	724.1	648.2	75.91	9.539		
8,400.0	7,100.0	8,319.7	7,009.5	42.0	40.2	82.65	51.4	1,241.6	723.0	642.2	80.75	8.954		
8,500.0	7,100.0	8,423.6	7,006.3	44.5	42.9	82.39	50.8	1,345.5	722.5	636.6	85.91	8.410		
8,544.8	7,100.0	8,461.3	7,005.0	45.7	43.9	82.28	50.6	1,383.2	722.2	634.2	88.01	8.206		
8,600.0	7,100.0	8,506.4	7,003.4	47.1	45.1	82.15	49.8	1,428.3	722.6	632.0	90.57	7.978		
8,700.0	7,100.0	8,600.1	7,001.9	49.7	47.5	82.05	46.8	1,521.9	724.6	629.0	95.60	7.579		
8,800.0	7,100.0	8,696.5	7,003.5	52.3	50.1	82.21	42.6	1,618.1	727.1	626.3	100.79	7.214		
8,900.0	7,100.0	8,816.7	7,008.6	55.0	53.3	82.63	38.8	1,738.1	728.1	621.4	106.72	6.822		
9,000.0	7,100.0	8,930.6	7,012.9	57.6	56.4	82.96	37.1	1,851.9	727.7	615.2	112.49	6.469		
9,100.0	7,100.0	9,043.1	7,018.2	60.3	59.4	83.35	38.1	1,964.3	724.6	606.3	118.26	6.127		
9,200.0	7,100.0	9,147.3	7,023.5	63.0	62.2	83.74	40.0	2,068.4	720.7	596.9	123.83	5.820		
9,300.0	7,100.0	9,246.6	7,028.1	65.6	64.9	84.08	42.3	2,167.5	716.4	587.1	129.28	5.542		
9,400.0	7,100.0	9,335.4	7,030.1	68.3	67.3	84.22	43.5	2,256.3	713.2	578.8	134.41	5.306		
9,500.0	7,100.0	9,432.5	7,028.7	71.1	69.9	84.08	44.6	2,353.4	710.8	571.1	139.72	5.087		
9,600.0	7,100.0	9,525.6	7,025.4	73.8	72.5	83.80	44.9	2,446.5	709.3	564.4	144.88	4.896		
9,700.0	7,100.0	9,621.4	7,022.8	76.5	75.1	83.58	44.7	2,542.2	708.2	558.1	150.13	4.718		
9,729.0	7,100.0	9,646.7	7,022.6	77.3	75.8	83.56	44.5	2,567.5	708.2	556.6	151.60	4.671		
9,800.0	7,100.0	9,714.3	7,022.7	79.2	77.6	83.57	43.1	2,635.1	708.5	553.1	155.38	4.560		
9,900.0	7,100.0	9,812.4	7,021.7	81.9	80.3	83.49	41.3	2,733.2	708.9	548.1	160.76	4.409		

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 Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
SRC Union Pad Sec.5-T2N-R68W - SRC Union C-5NHZ - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 105-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
10,000.0	7,100.0	9,908.8	7,021.5	84.7	83.0	83.49	38.7	2,829.5	710.0	543.9	166.13	4.274	
10,100.0	7,100.0	10,000.0	7,021.5	87.4	85.5	83.50	36.2	2,920.7	711.3	540.0	171.37	4.151	
10,200.0	7,100.0	10,000.0	7,021.5	90.2	85.5	83.50	36.2	2,920.7	720.8	546.7	174.11	4.140 SF	
10,300.0	7,100.0	10,000.0	7,021.5	92.9	85.5	83.50	36.2	2,920.7	743.7	566.8	176.85	4.205	
10,400.0	7,100.0	10,000.0	7,021.5	95.7	85.5	83.50	36.2	2,920.7	778.8	599.2	179.59	4.337	
10,500.0	7,100.0	10,000.0	7,021.5	98.4	85.5	83.50	36.2	2,920.7	824.7	642.3	182.34	4.523	
10,600.0	7,100.0	10,000.0	7,021.5	101.2	85.5	83.50	36.2	2,920.7	879.6	694.5	185.09	4.752	
10,700.0	7,100.0	10,000.0	7,021.5	104.0	85.5	83.50	36.2	2,920.7	941.9	754.0	187.84	5.014	

Reference Depths are relative to WELL @ 4976.5ft (Ensign 131 RKB - Coordinates are relative to: SRC Union A-5CHZ
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.30°



Company:	Synergy Resources	Local Co-ordinate Reference:	Well SRC Union A-5CHZ
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Reference Site:	SRC Union Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4976.5ft (Ensign 131 RKB - 13.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	SRC Union A-5CHZ	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 #3 (1-2-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4976.5ft (Ensign 131 RKB - Coordinates are relative to: SRC Union A-5CHZ
Offset Depths are relative to Offset Datum
Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °
Grid Convergence at Surface is: 0.30°

