

# **Axia Energy**

**Mesa County, CO**

**S14-T9S-R95W**

**Kimball Creek 14-403D-995**

**DD**

**Plan #1**

## **Anticollision Report**

**30 July, 2014**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Axia Energy	<b>Local Co-ordinate Reference:</b>	Well Kimball Creek 14-403D-995
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 6890.0ft (Original Well Elev)
<b>Reference Site:</b>	S14-T9S-R95W	<b>MD Reference:</b>	WELL @ 6890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kimball Creek 14-403D-995	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
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 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/30/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,405.5	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth	Offset Measured Depth	Distance		Separation Factor	Warning
	(ft)	(ft)	Between Centres (ft)	Between Ellipses (ft)		
S14-T9S-R95W						
KC 11-416D-995 (EXISTING) - EXISTING - EXISTING	0.0	9.0	27.1			
KC 11-416D-995 (EXISTING) - EXISTING - EXISTING	400.0	404.9	42.5	41.1	31.337	SF
KC 14-406D-995 (EXISTING) - EXISTING - EXISTING	388.7	397.8	18.5	17.2	14.081	CC
KC 14-406D-995 (EXISTING) - EXISTING - EXISTING	400.0	409.1	18.6	17.2	13.647	ES
KC 14-406D-995 (EXISTING) - EXISTING - EXISTING	600.0	608.9	23.3	21.1	10.952	SF

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<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S14-T9S-R95W - KC 11-416D-995 (EXISTING) - EXISTING - EXISTING													Offset Site Error:	0.0 ft
Survey Program: 175-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	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)	Total Uncertainty Axis			
0.0	0.0	9.0	9.0	0.0	0.0	4.80	27.0	2.3	27.1					
100.0	100.0	108.8	108.8	0.1	0.2	4.87	27.4	2.3	27.5	27.2	0.31	88.907		
200.0	200.0	208.2	208.2	0.3	0.3	4.98	28.8	2.5	29.0	28.3	0.64	45.112		
300.0	300.0	306.9	306.7	0.5	0.5	4.34	33.7	2.6	33.8	32.8	0.99	34.045		
400.0	400.0	404.9	404.4	0.7	0.8	1.84	42.2	1.4	42.5	41.1	1.36	31.337 SF		
500.0	500.0	501.5	500.1	0.8	1.1	-1.27	55.2	-1.2	55.9	54.2	1.73	32.371		
600.0	600.0	597.4	594.3	1.0	1.4	-4.24	72.3	-5.4	74.0	71.9	2.11	35.105		
700.0	700.0	692.1	686.7	1.2	1.8	-6.88	92.3	-11.1	95.6	93.1	2.50	38.263		
800.0	800.0	785.6	777.2	1.4	2.2	-8.87	114.8	-17.9	120.5	117.6	2.89	41.635		
900.0	900.0	878.2	866.1	1.5	2.7	-10.20	139.6	-25.1	148.2	144.9	3.29	45.015		
1,000.0	1,000.0	969.4	953.1	1.7	3.2	-10.83	166.4	-31.8	178.4	174.7	3.69	48.355		
1,100.0	1,100.0	1,059.9	1,038.7	1.9	3.8	-10.97	195.0	-37.8	210.8	206.7	4.10	51.459		
1,200.0	1,200.0	1,149.0	1,122.4	2.1	4.3	-10.94	225.1	-43.5	245.1	240.6	4.50	54.433		
1,300.0	1,300.0	1,237.1	1,204.5	2.2	4.9	-10.76	256.6	-48.8	281.4	276.4	4.92	57.215		
1,400.0	1,400.0	1,322.7	1,283.6	2.4	5.5	-10.60	288.9	-54.0	319.5	314.2	5.34	59.884		
1,500.0	1,500.0	1,404.3	1,358.2	2.6	6.1	-10.47	321.4	-59.4	360.0	354.3	5.75	62.593		
1,600.0	1,600.0	1,482.0	1,428.2	2.8	6.7	10.06	354.7	-64.8	402.8	397.5	5.29	76.095		
1,700.0	1,699.8	1,558.4	1,495.9	2.9	7.4	10.00	389.7	-70.6	444.6	439.0	5.61	79.259		
1,800.0	1,799.3	1,643.0	1,569.5	3.1	8.1	10.02	430.8	-77.7	484.6	478.7	5.93	81.657		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Axia Energy	<b>Local Co-ordinate Reference:</b>	Well Kimball Creek 14-403D-995
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 6890.0ft (Original Well Elev)
<b>Reference Site:</b>	S14-T9S-R95W	<b>MD Reference:</b>	WELL @ 6890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kimball Creek 14-403D-995	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S14-T9S-R95W - KC 14-406D-995 (EXISTING) - EXISTING - EXISTING													Offset Site Error:	0.0 ft
Survey Program: 247-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis	Factor		
0.0	0.0	9.0	9.0	0.0	0.0	4.19	19.3	1.4	19.3					
100.0	100.0	109.0	109.0	0.1	0.2	3.99	19.2	1.3	19.3	18.9	0.32	60.642		
200.0	200.0	209.1	209.1	0.3	0.3	3.44	19.0	1.1	19.0	18.4	0.65	29.329		
300.0	300.0	309.1	309.1	0.5	0.5	0.42	18.7	0.1	18.7	17.7	0.99	18.820		
388.7	388.7	397.8	397.7	0.7	0.7	-11.42	18.2	-3.7	18.5	17.2	1.32	14.081 CC		
400.0	400.0	409.1	409.0	0.7	0.7	-13.67	18.0	-4.4	18.6	17.2	1.36	13.647 ES		
500.0	500.0	509.0	508.5	0.8	0.9	-37.56	15.7	-12.1	19.8	18.0	1.75	11.310		
600.0	600.0	608.9	608.1	1.0	1.1	-57.80	12.4	-19.7	23.3	21.1	2.12	10.952 SF		
700.0	700.0	708.7	707.7	1.2	1.3	-70.59	9.2	-26.0	27.6	25.1	2.49	11.095		
800.0	800.0	808.4	807.1	1.4	1.5	-80.40	5.5	-32.4	32.9	30.0	2.85	11.544		
900.0	900.0	907.7	906.1	1.5	1.8	-88.24	1.2	-39.4	39.5	36.3	3.21	12.330		
1,000.0	1,000.0	1,007.2	1,005.1	1.7	2.0	-94.52	-3.7	-47.2	47.5	44.0	3.56	13.355		
1,100.0	1,100.0	1,107.1	1,104.6	1.9	2.2	-98.17	-7.9	-54.7	55.4	51.5	3.91	14.170		
1,200.0	1,200.0	1,206.2	1,203.4	2.1	2.4	-100.41	-11.5	-62.5	63.8	59.5	4.27	14.948		
1,300.0	1,300.0	1,305.7	1,302.4	2.2	2.7	-102.11	-15.3	-71.1	73.0	68.4	4.62	15.799		
1,400.0	1,400.0	1,406.5	1,402.9	2.4	2.9	-102.76	-17.9	-79.1	81.3	76.4	4.97	16.353		
1,500.0	1,500.0	1,507.1	1,503.2	2.6	3.1	-102.67	-19.3	-85.8	88.1	82.8	5.33	16.549		
1,600.0	1,600.0	1,606.1	1,602.0	2.8	3.3	-82.37	-20.6	-92.4	94.9	89.3	5.54	17.121		
1,700.0	1,699.8	1,704.6	1,700.2	2.9	3.5	-85.29	-22.9	-100.0	102.3	96.4	5.88	17.395		
1,800.0	1,799.3	1,802.3	1,797.5	3.1	3.8	-91.04	-26.7	-108.1	111.1	104.9	6.24	17.816		
1,900.0	1,898.0	1,900.8	1,895.5	3.4	4.0	-98.40	-31.0	-116.7	122.4	115.7	6.63	18.445		
2,000.0	1,995.8	1,998.1	1,992.4	3.6	4.2	-106.67	-35.8	-124.3	136.4	129.4	7.09	19.251		
2,100.0	2,092.4	2,095.7	2,089.6	4.0	4.5	-115.17	-40.5	-131.3	154.8	147.2	7.59	20.383		
2,200.0	2,188.4	2,191.0	2,184.6	4.4	4.7	-122.41	-44.1	-138.1	176.2	168.1	8.11	21.711		
2,300.0	2,284.4	2,286.7	2,280.0	4.8	4.9	-128.05	-47.7	-145.1	199.9	191.3	8.63	23.171		
2,400.0	2,380.5	2,384.7	2,377.7	5.2	5.1	-132.59	-50.8	-152.1	224.5	215.4	9.14	24.575		
2,500.0	2,476.5	2,480.5	2,473.2	5.6	5.3	-136.03	-53.0	-159.0	249.4	239.8	9.63	25.914		
2,600.0	2,572.5	2,575.8	2,568.2	6.1	5.5	-138.91	-55.5	-165.7	275.3	265.2	10.10	27.253		
2,700.0	2,668.5	2,672.3	2,664.5	6.5	5.7	-141.39	-58.0	-172.1	301.6	291.1	10.56	28.556		
2,800.0	2,764.5	2,768.2	2,760.2	7.0	5.9	-143.49	-60.5	-178.2	328.2	317.2	11.01	29.799		
2,900.0	2,860.5	2,864.7	2,856.4	7.5	6.1	-145.29	-62.8	-184.4	355.1	343.6	11.46	30.984		
3,000.0	2,956.5	2,960.0	2,951.5	8.0	6.3	-146.83	-64.9	-190.4	382.0	370.1	11.90	32.108		
3,100.0	3,052.5	3,055.0	3,046.3	8.4	6.5	-148.15	-67.4	-196.5	409.5	397.2	12.33	33.210		
3,200.0	3,148.5	3,148.0	3,139.0	8.9	6.7	-149.31	-70.4	-202.4	437.8	425.1	12.75	34.336		
3,300.0	3,244.5	3,243.2	3,234.0	9.4	6.9	-150.44	-73.7	-207.8	466.3	453.2	13.16	35.427		
3,400.0	3,340.5	3,339.3	3,329.9	9.9	7.1	-151.48	-76.9	-213.0	495.0	481.4	13.57	36.471		

# Cathedral Energy Services

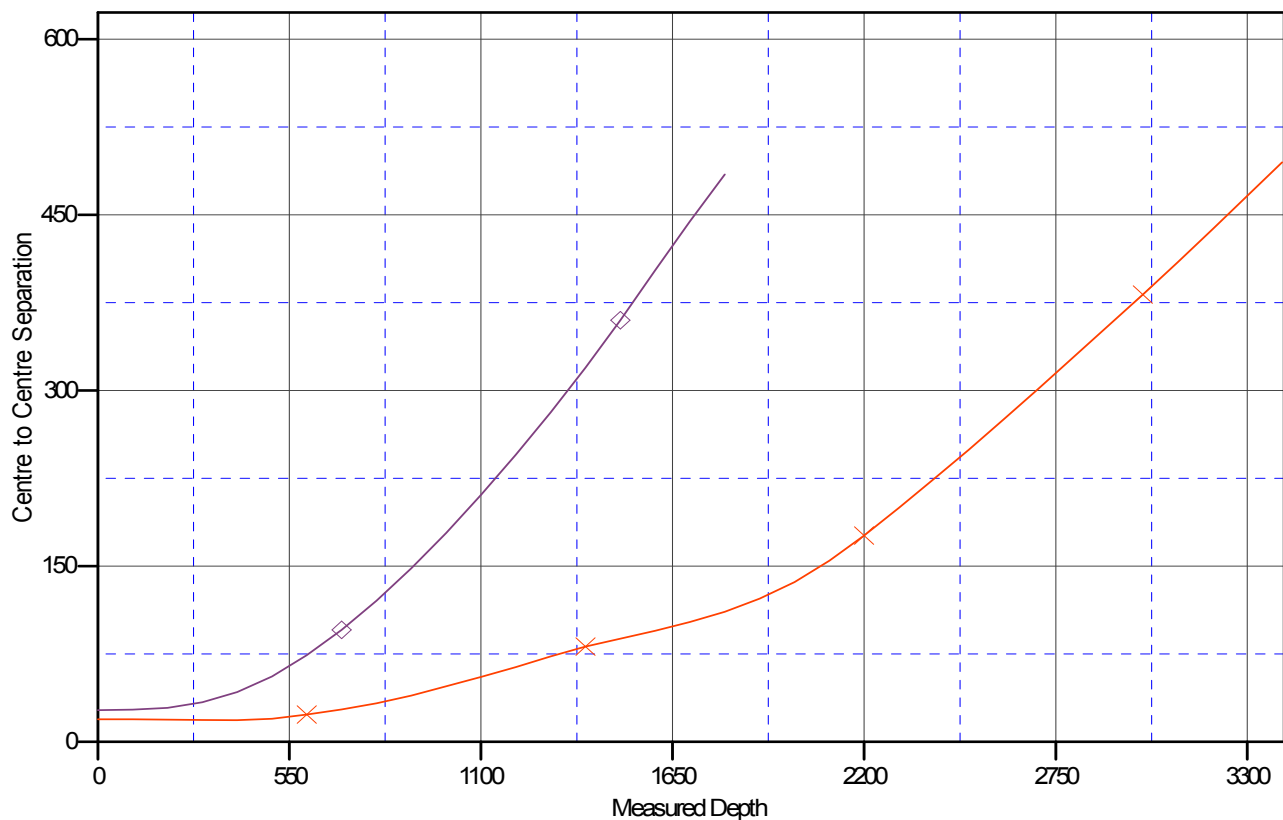
## Anticollision Report

<b>Company:</b>	Axia Energy	<b>Local Co-ordinate Reference:</b>	Well Kimball Creek 14-403D-995
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 6890.0ft (Original Well Elev)
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<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 6890.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: Kimball Creek 14-403D-995  
 Coordinate System is US State Plane 1983, Colorado Southern Zone  
 Grid Convergence at Surface is: -1.50°

### Ladder Plot



### LEGEND

4-406D-995 (EXISTING), EXISTING, EXISTING V0 — KC 11-416D-995 (EXISTING), EXISTING, EXISTING V0