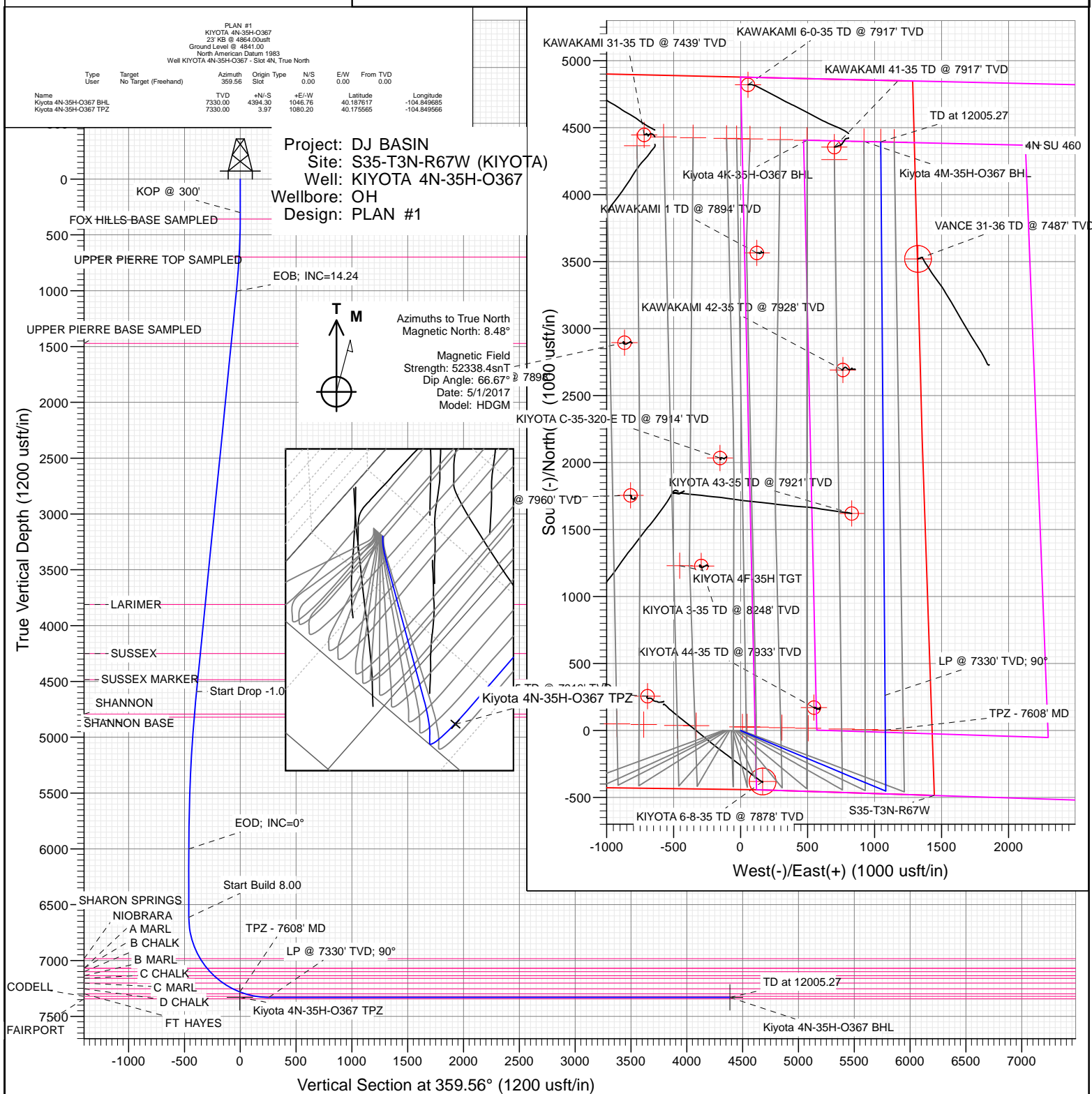




Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1012.19	14.24	112.67	1004.88	-33.94	81.27	2.00	112.67	-34.56	
4	4711.27	14.24	112.67	4590.24	-384.68	921.13	0.00	0.00	-391.74	
5	6135.66	0.00	0.00	6000.00	-452.56	1083.67	1.00	180.00	-460.87	
6	6749.46	0.00	0.00	6613.80	-452.56	1083.67	0.00	0.00	-460.87	
7	7874.46	90.00	359.56	7330.00	263.62	1078.22	8.00	359.56	255.33	
8	12005.27	90.00	359.56	7330.00	4394.30	1046.76	0.00	0.00	4386.13	Kiyota 4N-35H-O367 BHL



WELL DETAILS: KIYOTA 4N-35H-O367

+N/-S	+E/-W	Northing	Ground Level:	4841.00			
0.00	0.00	1307455.95	Easting		Latitude	Longitude	Slot
			3180670.54		40.175554	-104.853432	4N



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site:</b>	S35-T3N-R67W (KIYOTA)	<b>North Reference:</b>	True
<b>Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	DJ BASIN		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		S35-T3N-R67W (KIYOTA)			
Site Position:		Northing:	1,307,456.03 usft	Latitude:	40.175557
From:	Lat/Long	Easting:	3,180,540.51 usft	Longitude:	-104.853897
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.42 °

Well	KIYOTA 4N-35H-O367 - Slot 4N					
Well Position	+N/-S	0.00 usft	Northing:	1,307,455.95 usft	Latitude:	40.175554
	+E/-W	0.00 usft	Easting:	3,180,670.54 usft	Longitude:	-104.853432
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,841.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	HDGM	5/1/2017	8.48	66.67	52,338

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	13.40

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,012.19	14.24	112.67	1,004.88	-33.94	81.27	2.00	2.00	0.00	112.67	
4,711.27	14.24	112.67	4,590.24	-384.68	921.13	0.00	0.00	0.00	0.00	
6,135.66	0.00	0.00	6,000.00	-452.56	1,083.67	1.00	-1.00	0.00	180.00	
6,749.46	0.00	0.00	6,613.80	-452.56	1,083.67	0.00	0.00	0.00	0.00	
7,874.46	90.00	359.56	7,330.00	263.62	1,078.22	8.00	8.00	0.00	359.56	
12,005.27	90.00	359.56	7,330.00	4,394.30	1,046.76	0.00	0.00	0.00	0.00	Kiyota 4N-35H-O367

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site:</b>	S35-T3N-R67W (KIYOTA)	<b>North Reference:</b>	True
<b>Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	KOP @ 300'
400.00	2.00	112.67	399.98	-0.67	1.61	-0.28	2.00	2.00	
500.00	4.00	112.67	499.84	-2.69	6.44	-1.12	2.00	2.00	
600.00	6.00	112.67	599.45	-6.05	14.48	-2.53	2.00	2.00	
700.00	8.00	112.67	698.70	-10.74	25.73	-4.49	2.00	2.00	
800.00	10.00	112.67	797.46	-16.77	40.16	-7.01	2.00	2.00	
900.00	12.00	112.67	895.62	-24.12	57.77	-10.08	2.00	2.00	
1,000.00	14.00	112.67	993.05	-32.79	78.52	-13.70	2.00	2.00	
1,012.19	14.24	112.67	1,004.88	-33.94	81.27	-14.18	2.00	2.00	EOB; INC=14.24
1,100.00	14.24	112.67	1,089.99	-42.26	101.20	-17.66	0.00	0.00	
1,200.00	14.24	112.67	1,186.91	-51.75	123.91	-21.63	0.00	0.00	
1,300.00	14.24	112.67	1,283.84	-61.23	146.61	-25.59	0.00	0.00	
1,400.00	14.24	112.67	1,380.76	-70.71	169.32	-29.55	0.00	0.00	
1,500.00	14.24	112.67	1,477.69	-80.19	192.02	-33.51	0.00	0.00	
1,600.00	14.24	112.67	1,574.61	-89.67	214.73	-37.48	0.00	0.00	
1,700.00	14.24	112.67	1,671.54	-99.16	237.43	-41.44	0.00	0.00	
1,800.00	14.24	112.67	1,768.46	-108.64	260.14	-45.40	0.00	0.00	
1,900.00	14.24	112.67	1,865.39	-118.12	282.84	-49.36	0.00	0.00	
2,000.00	14.24	112.67	1,962.31	-127.60	305.55	-53.33	0.00	0.00	
2,100.00	14.24	112.67	2,059.24	-137.08	328.25	-57.29	0.00	0.00	
2,200.00	14.24	112.67	2,156.17	-146.57	350.96	-61.25	0.00	0.00	
2,300.00	14.24	112.67	2,253.09	-156.05	373.66	-65.21	0.00	0.00	
2,400.00	14.24	112.67	2,350.02	-165.53	396.36	-69.18	0.00	0.00	
2,500.00	14.24	112.67	2,446.94	-175.01	419.07	-73.14	0.00	0.00	
2,599.99	14.24	112.67	2,543.87	-184.49	441.77	-77.10	0.00	0.00	
2,699.99	14.24	112.67	2,640.79	-193.97	464.48	-81.06	0.00	0.00	
2,799.99	14.24	112.67	2,737.72	-203.46	487.18	-85.03	0.00	0.00	
2,899.99	14.24	112.67	2,834.64	-212.94	509.89	-88.99	0.00	0.00	
2,999.99	14.24	112.67	2,931.57	-222.42	532.59	-92.95	0.00	0.00	
3,099.99	14.24	112.67	3,028.50	-231.90	555.30	-96.91	0.00	0.00	
3,199.99	14.24	112.67	3,125.42	-241.38	578.00	-100.88	0.00	0.00	
3,299.99	14.24	112.67	3,222.35	-250.87	600.71	-104.84	0.00	0.00	
3,399.99	14.24	112.67	3,319.27	-260.35	623.41	-108.80	0.00	0.00	
3,499.99	14.24	112.67	3,416.20	-269.83	646.11	-112.76	0.00	0.00	
3,599.99	14.24	112.67	3,513.12	-279.31	668.82	-116.73	0.00	0.00	
3,699.99	14.24	112.67	3,610.05	-288.79	691.52	-120.69	0.00	0.00	
3,799.99	14.24	112.67	3,706.97	-298.27	714.23	-124.65	0.00	0.00	
3,899.99	14.24	112.67	3,803.90	-307.76	736.93	-128.61	0.00	0.00	
3,999.99	14.24	112.67	3,900.83	-317.24	759.64	-132.58	0.00	0.00	
4,099.99	14.24	112.67	3,997.75	-326.72	782.34	-136.54	0.00	0.00	
4,199.99	14.24	112.67	4,094.68	-336.20	805.05	-140.50	0.00	0.00	
4,299.99	14.24	112.67	4,191.60	-345.68	827.75	-144.46	0.00	0.00	
4,399.99	14.24	112.67	4,288.53	-355.17	850.46	-148.43	0.00	0.00	
4,499.99	14.24	112.67	4,385.45	-364.65	873.16	-152.39	0.00	0.00	
4,599.99	14.24	112.67	4,482.38	-374.13	895.87	-156.35	0.00	0.00	
4,699.99	14.24	112.67	4,579.30	-383.61	918.57	-160.31	0.00	0.00	
4,711.27	14.24	112.67	4,590.24	-384.68	921.13	-160.76	0.00	0.00	Start Drop -1.00
4,799.99	13.36	112.67	4,676.39	-392.84	940.66	-164.17	1.00	-1.00	
4,899.99	12.36	112.67	4,773.89	-401.41	961.19	-167.75	1.00	-1.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site:</b>	S35-T3N-R67W (KIYOTA)	<b>North Reference:</b>	True
<b>Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,999.99	11.36	112.67	4,871.75	-409.33	980.15	-171.06	1.00	-1.00	
5,099.99	10.36	112.67	4,969.96	-416.59	997.53	-174.10	1.00	-1.00	
5,199.99	9.36	112.67	5,068.48	-423.18	1,013.33	-176.85	1.00	-1.00	
5,299.99	8.36	112.67	5,167.29	-429.12	1,027.53	-179.33	1.00	-1.00	
5,399.99	7.36	112.67	5,266.35	-434.38	1,040.15	-181.53	1.00	-1.00	
5,499.99	6.36	112.67	5,365.63	-438.99	1,051.16	-183.46	1.00	-1.00	
5,599.99	5.36	112.67	5,465.11	-442.92	1,060.58	-185.10	1.00	-1.00	
5,699.99	4.36	112.67	5,564.75	-446.18	1,068.39	-186.46	1.00	-1.00	
5,799.99	3.36	112.67	5,664.52	-448.77	1,074.60	-187.55	1.00	-1.00	
5,899.99	2.36	112.67	5,764.39	-450.69	1,079.20	-188.35	1.00	-1.00	
5,999.99	1.36	112.67	5,864.34	-451.94	1,082.19	-188.87	1.00	-1.00	
6,099.99	0.36	112.67	5,964.33	-452.52	1,083.57	-189.11	1.00	-1.00	
6,135.66	0.00	0.00	6,000.00	-452.56	1,083.67	-189.13	1.00	-1.00	EOD; INC=0°
6,199.99	0.00	0.00	6,064.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,299.99	0.00	0.00	6,164.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,399.99	0.00	0.00	6,264.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,499.99	0.00	0.00	6,364.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,599.99	0.00	0.00	6,464.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,699.99	0.00	0.00	6,564.33	-452.56	1,083.67	-189.13	0.00	0.00	
6,749.46	0.00	0.00	6,613.80	-452.56	1,083.67	-189.13	0.00	0.00	Start Build 8.00
6,799.99	4.04	359.56	6,664.28	-450.78	1,083.66	-187.40	8.00	8.00	
6,899.99	12.04	359.56	6,763.22	-436.80	1,083.55	-173.83	8.00	8.00	
6,999.99	20.04	359.56	6,859.25	-409.19	1,083.34	-147.02	8.00	8.00	
7,099.99	28.04	359.56	6,950.50	-368.48	1,083.03	-107.49	8.00	8.00	
7,199.99	36.04	359.56	7,035.20	-315.48	1,082.63	-56.02	8.00	8.00	
7,299.99	44.04	359.56	7,111.69	-251.19	1,082.14	6.40	8.00	8.00	
7,399.99	52.04	359.56	7,178.50	-176.89	1,081.57	78.55	8.00	8.00	
7,499.99	60.04	359.56	7,234.31	-94.02	1,080.94	159.02	8.00	8.00	
7,599.98	68.04	359.56	7,278.04	-4.18	1,080.26	246.25	8.00	8.00	
7,608.76	68.74	359.56	7,281.28	3.97	1,080.19	254.17	8.00	8.00	TPZ - 7608' MD
7,699.98	76.04	359.56	7,308.85	90.86	1,079.53	338.54	8.00	8.00	
7,799.98	84.04	359.56	7,326.13	189.27	1,078.78	434.10	8.00	8.00	
7,874.46	90.00	359.56	7,330.00	263.62	1,078.22	506.29	8.00	8.00	LP @ 7330' TVD; 90°
7,899.98	90.00	359.56	7,330.00	289.14	1,078.02	531.07	0.00	0.00	
7,999.98	90.00	359.56	7,330.00	389.13	1,077.26	628.17	0.00	0.00	
8,099.98	90.00	359.56	7,330.00	489.13	1,076.50	725.27	0.00	0.00	
8,199.98	90.00	359.56	7,330.00	589.13	1,075.74	822.37	0.00	0.00	
8,299.98	90.00	359.56	7,330.00	689.12	1,074.98	919.47	0.00	0.00	
8,399.98	90.00	359.56	7,330.00	789.12	1,074.21	1,016.56	0.00	0.00	
8,499.98	90.00	359.56	7,330.00	889.12	1,073.45	1,113.66	0.00	0.00	
8,599.98	90.00	359.56	7,330.00	989.12	1,072.69	1,210.76	0.00	0.00	
8,699.98	90.00	359.56	7,330.00	1,089.11	1,071.93	1,307.86	0.00	0.00	
8,799.98	90.00	359.56	7,330.00	1,189.11	1,071.17	1,404.96	0.00	0.00	
8,899.98	90.00	359.56	7,330.00	1,289.11	1,070.41	1,502.06	0.00	0.00	
8,999.98	90.00	359.56	7,330.00	1,389.10	1,069.65	1,599.16	0.00	0.00	
9,099.98	90.00	359.56	7,330.00	1,489.10	1,068.88	1,696.26	0.00	0.00	
9,199.98	90.00	359.56	7,330.00	1,589.10	1,068.12	1,793.35	0.00	0.00	
9,299.98	90.00	359.56	7,330.00	1,689.09	1,067.36	1,890.45	0.00	0.00	
9,399.98	90.00	359.56	7,330.00	1,789.09	1,066.60	1,987.55	0.00	0.00	
9,499.98	90.00	359.56	7,330.00	1,889.09	1,065.84	2,084.65	0.00	0.00	
9,599.98	90.00	359.56	7,330.00	1,989.08	1,065.08	2,181.75	0.00	0.00	
9,699.98	90.00	359.56	7,330.00	2,089.08	1,064.31	2,278.85	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well KİYOTA 4N-35H-O367 - Slot 4N
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site:</b>	S35-T3N-R67W (KIYOTA)	<b>North Reference:</b>	True
<b>Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,799.98	90.00	359.56	7,330.00	2,189.08	1,063.55	2,375.95	0.00	0.00	
9,899.98	90.00	359.56	7,330.00	2,289.07	1,062.79	2,473.04	0.00	0.00	
9,999.98	90.00	359.56	7,330.00	2,389.07	1,062.03	2,570.14	0.00	0.00	
10,099.98	90.00	359.56	7,330.00	2,489.07	1,061.27	2,667.24	0.00	0.00	
10,199.98	90.00	359.56	7,330.00	2,589.07	1,060.51	2,764.34	0.00	0.00	
10,299.98	90.00	359.56	7,330.00	2,689.06	1,059.75	2,861.44	0.00	0.00	
10,399.98	90.00	359.56	7,330.00	2,789.06	1,058.98	2,958.54	0.00	0.00	
10,499.98	90.00	359.56	7,330.00	2,889.06	1,058.22	3,055.64	0.00	0.00	
10,599.98	90.00	359.56	7,330.00	2,989.05	1,057.46	3,152.74	0.00	0.00	
10,699.98	90.00	359.56	7,330.00	3,089.05	1,056.70	3,249.83	0.00	0.00	
10,799.98	90.00	359.56	7,330.00	3,189.05	1,055.94	3,346.93	0.00	0.00	
10,899.98	90.00	359.56	7,330.00	3,289.04	1,055.18	3,444.03	0.00	0.00	
10,999.98	90.00	359.56	7,330.00	3,389.04	1,054.42	3,541.13	0.00	0.00	
11,099.98	90.00	359.56	7,330.00	3,489.04	1,053.65	3,638.23	0.00	0.00	
11,199.98	90.00	359.56	7,330.00	3,589.03	1,052.89	3,735.33	0.00	0.00	
11,299.98	90.00	359.56	7,330.00	3,689.03	1,052.13	3,832.43	0.00	0.00	
11,399.98	90.00	359.56	7,330.00	3,789.03	1,051.37	3,929.52	0.00	0.00	
11,499.98	90.00	359.56	7,330.00	3,889.03	1,050.61	4,026.62	0.00	0.00	
11,599.98	90.00	359.56	7,330.00	3,989.02	1,049.85	4,123.72	0.00	0.00	
11,699.98	90.00	359.56	7,330.00	4,089.02	1,049.08	4,220.82	0.00	0.00	
11,799.98	90.00	359.56	7,330.00	4,189.02	1,048.32	4,317.92	0.00	0.00	
11,899.98	90.00	359.56	7,330.00	4,289.01	1,047.56	4,415.02	0.00	0.00	
11,999.98	90.00	359.56	7,330.00	4,389.01	1,046.80	4,512.12	0.00	0.00	
12,005.27	90.00	359.56	7,330.00	4,394.30	1,046.76	4,517.25	0.00	0.00	TD at 12005.27

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Kiyota 4N-35H-O367 TP	0.00	0.00	7,330.00	3.97	1,080.20	1,307,467.80	3,181,750.68	40.175565	-104.849566
- plan misses target center by 45.66usft at 7623.51usft MD (7286.48 TVD, 17.77 N, 1080.09 E)									
- Point									
Kiyota 4N-35H-O367 BH-	0.00	0.00	7,330.00	4,394.30	1,046.76	1,311,857.76	3,181,685.23	40.187617	-104.849685
- plan hits target center									
- Point									

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
300.00	300.00	0.00	0.00	KOP @ 300'
1,012.19	1,004.88	-33.94	81.27	EOB; INC=14.24
4,711.27	4,590.24	-384.68	921.13	Start Drop -1.00
6,135.66	6,000.00	-452.56	1,083.67	EOD; INC=0°
6,749.46	6,613.80	-452.56	1,083.67	Start Build 8.00
7,608.76	7,281.28	3.97	1,080.19	TPZ - 7608' MD
7,874.46	7,330.00	263.62	1,078.22	LP @ 7330' TVD; 90°
12,005.27	7,330.00	4,394.30	1,046.76	TD at 12005.27

# **Crestone Peak Resources**

**DJ BASIN**

**S35-T3N-R67W (KIYOTA)**

**KIYOTA 4N-35H-O367**

**OH**

**PLAN #1**

## **Anticollision Report**

**05 May, 2017**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 820.40usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	5/5/2017		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	12,005.27	PLAN #1 (OH)	MWD+HDGM	OWSG MWD + HDGM



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
S35-T3N-R67W (KIYOTA)						
KIYOTA 4A-35H-O367 - OH - PLAN #1	200.00	200.00	130.03	129.04	130.949	CC, ES
KIYOTA 4A-35H-O367 - OH - PLAN #1	700.00	670.84	194.32	189.62	41.308	SF
KIYOTA 4B-35H-O367 - OH - PLAN #1	300.00	300.00	119.97	118.26	70.161	CC, ES
KIYOTA 4B-35H-O367 - OH - PLAN #1	700.00	679.44	169.77	165.16	36.788	SF
KIYOTA 4C-35H-O367 - OH - PLAN #1	300.00	300.00	110.00	108.29	64.331	CC, ES
KIYOTA 4C-35H-O367 - OH - PLAN #1	700.00	686.15	149.11	144.55	32.693	SF
KIYOTA 4D-35H-O367 - OH - PLAN #1	300.00	300.00	100.00	98.29	58.483	CC, ES
KIYOTA 4D-35H-O367 - OH - PLAN #1	700.00	691.68	131.60	127.06	29.008	SF
KIYOTA 4E-35H-O367 - OH - PLAN #1	300.00	300.00	90.00	88.29	52.634	CC, ES
KIYOTA 4E-35H-O367 - OH - PLAN #1	800.00	792.22	135.16	129.92	25.797	SF
KIYOTA 4F-35H-O367 - OH - PLAN #1	200.00	200.00	80.00	79.01	80.567	CC, ES
KIYOTA 4F-35H-O367 - OH - PLAN #1	800.00	791.39	142.32	137.02	26.845	SF
KIYOTA 4G-35H-O367 - OH - PLAN #1	301.90	301.97	69.95	68.24	40.942	CC, ES
KIYOTA 4G-35H-O367 - OH - PLAN #1	800.00	797.55	110.67	105.36	20.868	SF
KIYOTA 4H-35H-O367 - OH - PLAN #1	300.00	300.00	60.00	58.29	35.090	CC, ES
KIYOTA 4H-35H-O367 - OH - PLAN #1	800.00	799.57	92.96	87.68	17.603	SF
KIYOTA 4I-35H-O367 - OH - PLAN #1	300.00	300.00	50.00	48.29	29.241	CC, ES
KIYOTA 4I-35H-O367 - OH - PLAN #1	700.00	698.70	76.54	71.98	16.794	SF
KIYOTA 4J-35H-O367 - OH - PLAN #1	300.00	300.00	40.00	38.29	23.393	CC, ES
KIYOTA 4J-35H-O367 - OH - PLAN #1	12,005.27	11,676.74	779.67	630.24	5.217	SF
KIYOTA 4K-35H-O367 - OH - PLAN #1	300.00	300.00	30.00	28.29	17.545	CC, ES
KIYOTA 4K-35H-O367 - OH - PLAN #1	12,005.27	11,747.21	570.46	421.10	3.819	SF
KIYOTA 4L-35H-O367 - OH - PLAN #1	300.00	300.00	20.00	18.29	11.697	CC, ES
KIYOTA 4L-35H-O367 - OH - PLAN #1	11,900.00	11,597.90	406.69	275.87	3.109	SF
KIYOTA 4M-35H-O367 - OH - PLAN #1	300.00	300.00	10.00	8.29	5.848	CC, ES
KIYOTA 4M-35H-O367 - OH - PLAN #1	12,005.27	11,822.07	195.18	85.64	1.782	SF
KIYOTA 4O-35H-O367 - OH - PLAN #1	200.00	200.00	10.00	9.01	10.071	CC, ES
KIYOTA 4O-35H-O367 - OH - PLAN #1	12,005.27	11,826.18	232.73	127.54	2.212	SF
S35-T3N-R67W (OFFSETS)						
KAWAKAMI 1 (EXISTING) - CPR WELL - GYRO						Out of range
KAWAKAMI 31-35 (EXISTING) - CPR WELL - SURVEYS						Out of range
KAWAKAMI 32-35 (EXISTING) - CPR WELL - GYRO						Out of range
KAWAKAMI 4-0-35 (EXISTING) - CPR WELL - SURVEY						Out of range
KAWAKAMI 41-35 (EXISTING) - CPR WELL - GYRO	11,971.47	7,265.75	336.10	250.42	3.923	CC, ES, SF
KAWAKAMI 42-35 (EXISTING) - CPR WELL - GYRO	10,303.68	7,276.73	303.50	240.85	4.844	CC, ES, SF
KAWAKAMI 4-2-35 (EXISTING) - CPR WELL - SURVEY						Out of range
KAWAKAMI 6-0-35 (EXISTING) - CPR WELL - GYRO						Out of range
KIYOTA 33-35 (EXISTING) - CPR WELL - GYRO						Out of range
KIYOTA 3-35 (EXISTING) - CPR WELL - GYRO						Out of range
KIYOTA 34-35 (EXISTING) - CPR WELL - GYRO	100.00	67.80	612.25	612.07	3,449.979	CC, ES
KIYOTA 34-35 (EXISTING) - CPR WELL - GYRO	1,400.00	1,342.08	804.12	797.67	124.747	SF
KIYOTA 43-35 (EXISTING) - CPR WELL - GYRO	9,265.92	7,826.41	510.52	465.89	11.441	CC, ES
KIYOTA 43-35 (EXISTING) - CPR WELL - GYRO	9,300.00	7,823.68	511.65	466.78	11.404	SF
KIYOTA 44-35 (EXISTING) - CPR WELL - GYRO	2,541.29	2,442.22	384.17	370.18	27.447	CC
KIYOTA 44-35 (EXISTING) - CPR WELL - GYRO	2,600.00	2,499.90	384.38	370.01	26.748	ES
KIYOTA 44-35 (EXISTING) - CPR WELL - GYRO	7,800.00	7,282.15	528.51	494.86	15.703	SF
KIYOTA 4-6-35 (EXISTING) - CPR WELL - SURVEYS						Out of range
KIYOTA 6-8-35 (EXISTING) - CPR WELL - SURVEYS	303.88	289.80	607.95	606.58	443.199	CC, ES
KIYOTA 6-8-35 (EXISTING) - CPR WELL - SURVEYS	3,000.00	3,131.17	817.83	800.11	46.141	SF
KIYOTA C-35-320-E (EXISTING) - CPR WELL - GYRO						Out of range
VANCE #31-36(EXISTING) - CPR WELL - SURVEYS	11,131.19	7,400.87	272.88	188.60	3.238	CC, ES, SF

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



## Cathedral Energy Services

### Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4A-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.55	1.02	-130.02	130.03					
100.00	100.00	100.00	100.00	0.14	0.14	-89.55	1.02	-130.02	130.03	129.75	0.28	471.076		
200.00	200.00	200.00	200.00	0.50	0.50	-89.55	1.02	-130.02	130.03	129.04	0.99	130.949 CC, ES		
300.00	300.00	295.89	295.87	0.85	0.83	-89.80	0.47	-131.53	131.60	129.88	1.72	76.499		
400.00	399.98	391.46	391.32	1.20	1.17	157.06	-1.18	-136.03	137.91	135.45	2.46	55.995		
500.00	499.84	486.17	485.70	1.55	1.51	156.67	-3.90	-143.43	150.54	147.33	3.21	46.848		
600.00	599.45	579.47	578.36	1.91	1.87	156.38	-7.63	-153.58	169.39	165.43	3.96	42.740		
700.00	698.70	670.84	668.72	2.29	2.23	156.16	-12.28	-166.26	194.32	189.62	4.70	41.308 SF		
800.00	797.47	759.82	756.26	2.69	2.61	156.00	-17.77	-181.21	225.17	219.74	5.43	41.450		
900.00	895.62	846.00	840.53	3.11	2.99	155.85	-23.97	-198.11	261.74	255.60	6.14	42.629		
1,000.00	993.06	932.71	924.82	3.56	3.40	155.72	-31.00	-217.24	303.54	296.72	6.82	44.481		
1,100.00	1,089.99	1,022.52	1,012.02	4.04	3.84	156.00	-38.40	-237.40	347.49	339.99	7.50	46.337		
1,200.00	1,186.91	1,112.31	1,099.21	4.54	4.29	156.26	-45.80	-257.57	391.47	383.29	8.18	47.864		
1,300.00	1,283.84	1,202.11	1,186.40	5.04	4.74	156.47	-53.20	-277.73	435.46	426.59	8.87	49.083		
1,400.00	1,380.76	1,291.90	1,273.59	5.55	5.19	156.64	-60.60	-297.89	479.45	469.87	9.58	50.071		
1,500.00	1,477.69	1,381.70	1,360.78	6.07	5.65	156.78	-68.01	-318.05	523.44	513.16	10.29	50.883		
1,600.00	1,574.62	1,471.50	1,447.97	6.59	6.11	156.90	-75.41	-338.21	567.44	556.43	11.01	51.558		
1,700.00	1,671.54	1,561.29	1,535.16	7.11	6.57	157.00	-82.81	-358.37	611.43	599.70	11.73	52.127		
1,800.00	1,768.47	1,651.09	1,622.35	7.63	7.03	157.09	-90.21	-378.53	655.43	642.97	12.46	52.611		
1,900.00	1,865.39	1,740.89	1,709.54	8.16	7.50	157.17	-97.61	-398.70	699.43	686.24	13.19	53.026		
2,000.00	1,962.32	1,830.68	1,796.73	8.69	7.96	157.24	-105.01	-418.86	743.43	729.51	13.93	53.386		
2,100.00	2,059.24	1,920.48	1,883.92	9.22	8.43	157.30	-112.42	-439.02	787.43	772.77	14.66	53.700		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4B-35H-O367 - OH - PLAN #1												Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+HDGM												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis		Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-89.52	1.01	-119.96	119.97				
100.00	100.00	100.00	100.00	0.14	0.14	-89.52	1.01	-119.96	119.97	119.69	0.28	434.632	
200.00	200.00	200.00	200.00	0.50	0.50	-89.52	1.01	-119.96	119.97	118.98	0.99	120.818	
300.00	300.00	300.00	300.00	0.85	0.85	-89.52	1.01	-119.96	119.97	118.26	1.71	70.161	CC, ES
400.00	399.98	396.25	396.23	1.20	1.19	157.77	0.34	-121.44	123.11	120.69	2.42	50.955	
500.00	499.84	491.93	491.78	1.55	1.52	157.64	-1.65	-125.82	132.51	129.36	3.14	42.183	
600.00	599.45	586.50	586.02	1.91	1.86	157.46	-4.91	-133.00	148.10	144.22	3.88	38.184	
700.00	698.70	679.44	678.33	2.29	2.21	157.23	-9.36	-142.81	169.77	165.16	4.61	36.788	SF
800.00	797.47	770.26	768.15	2.69	2.57	156.98	-14.90	-155.04	197.39	192.05	5.34	36.938	
900.00	895.62	858.52	854.99	3.11	2.93	156.72	-21.41	-169.39	230.78	224.72	6.06	38.078	
1,000.00	993.06	949.50	944.14	3.56	3.32	156.52	-28.92	-185.93	268.97	262.22	6.75	39.870	
1,100.00	1,089.99	1,041.11	1,033.89	4.04	3.73	156.75	-36.50	-202.64	309.04	301.60	7.44	41.522	
1,200.00	1,186.91	1,132.72	1,123.64	4.54	4.14	156.95	-44.08	-219.36	349.13	340.99	8.14	42.897	
1,300.00	1,283.84	1,224.32	1,213.39	5.04	4.56	157.12	-51.66	-236.07	389.23	380.39	8.85	44.000	
1,400.00	1,380.76	1,315.92	1,303.13	5.55	4.98	157.25	-59.24	-252.78	429.33	419.77	9.56	44.899	
1,500.00	1,477.69	1,407.53	1,392.88	6.07	5.40	157.36	-66.82	-269.49	469.44	459.15	10.29	45.641	
1,600.00	1,574.62	1,499.13	1,482.62	6.59	5.82	157.46	-74.40	-286.21	509.54	498.53	11.01	46.262	
1,700.00	1,671.54	1,590.73	1,572.37	7.11	6.25	157.54	-81.98	-302.92	549.64	537.90	11.75	46.788	
1,800.00	1,768.47	1,682.34	1,662.12	7.63	6.68	157.61	-89.56	-319.63	589.75	577.26	12.48	47.238	
1,900.00	1,865.39	1,773.94	1,751.86	8.16	7.11	157.67	-97.14	-336.34	629.86	616.63	13.22	47.627	
2,000.00	1,962.32	1,865.54	1,841.61	8.69	7.54	157.72	-104.72	-353.05	669.96	655.99	13.97	47.966	
2,100.00	2,059.24	1,957.15	1,931.36	9.22	7.97	157.77	-112.30	-369.77	710.07	695.36	14.71	48.263	
2,200.00	2,156.17	2,048.75	2,021.10	9.75	8.40	157.81	-119.88	-386.48	750.18	734.72	15.46	48.525	
2,300.00	2,253.10	2,140.35	2,110.85	10.28	8.83	157.85	-127.46	-403.19	790.28	774.08	16.21	48.759	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4C-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.80	-110.00	110.00				
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.80	-110.00	110.00	109.72	0.28	398.517	
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.80	-110.00	110.00	109.01	0.99	110.779	
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.80	-110.00	110.00	108.29	1.71	64.331 CC, ES	
400.00	399.98	399.98	399.98	1.20	1.21	158.08	0.80	-110.00	111.62	109.20	2.42	46.184	
500.00	499.84	496.36	496.34	1.55	1.55	158.58	0.07	-111.44	117.96	114.85	3.12	37.829	
600.00	599.45	591.93	591.78	1.91	1.88	158.83	-2.11	-115.73	130.49	126.66	3.84	34.021	
700.00	698.70	686.15	685.67	2.29	2.21	158.85	-5.67	-122.72	149.11	144.55	4.56	32.693 SF	
800.00	797.47	778.52	777.42	2.69	2.55	158.70	-10.52	-132.25	173.69	168.40	5.28	32.867	
900.00	895.62	868.58	866.50	3.11	2.90	158.43	-16.53	-144.08	204.08	198.08	6.00	34.002	
1,000.00	993.06	957.67	954.18	3.56	3.26	158.10	-23.68	-158.13	240.00	233.29	6.71	35.786	
1,100.00	1,089.99	1,049.99	1,044.91	4.04	3.65	158.12	-31.41	-173.33	278.43	271.03	7.40	37.636	
1,200.00	1,186.91	1,142.30	1,135.63	4.54	4.04	158.17	-39.14	-188.53	316.88	308.78	8.10	39.134	
1,300.00	1,283.84	1,234.62	1,226.35	5.04	4.44	158.21	-46.87	-203.74	355.33	346.52	8.81	40.346	
1,400.00	1,380.76	1,326.93	1,317.08	5.55	4.84	158.24	-54.60	-218.94	393.78	384.25	9.53	41.339	
1,500.00	1,477.69	1,419.24	1,407.80	6.07	5.25	158.27	-62.34	-234.14	432.23	421.98	10.25	42.164	
1,600.00	1,574.62	1,511.55	1,498.52	6.59	5.66	158.29	-70.07	-249.35	470.68	459.70	10.98	42.859	
1,700.00	1,671.54	1,603.86	1,589.24	7.11	6.07	158.31	-77.80	-264.55	509.13	497.41	11.72	43.450	
1,800.00	1,768.47	1,696.18	1,679.97	7.63	6.48	158.32	-85.53	-279.75	547.58	535.12	12.46	43.958	
1,900.00	1,865.39	1,788.49	1,770.69	8.16	6.90	158.33	-93.26	-294.95	586.03	572.83	13.20	44.399	
2,000.00	1,962.32	1,880.80	1,861.41	8.69	7.31	158.35	-100.99	-310.16	624.48	610.54	13.94	44.785	
2,100.00	2,059.24	1,973.11	1,952.13	9.22	7.73	158.36	-108.72	-325.36	662.93	648.24	14.69	45.125	
2,200.00	2,156.17	2,065.42	2,042.86	9.75	8.14	158.37	-116.46	-340.56	701.39	685.95	15.44	45.426	
2,300.00	2,253.10	2,157.74	2,133.58	10.28	8.56	158.37	-124.19	-355.76	739.84	723.65	16.19	45.696	
2,400.00	2,350.02	2,250.05	2,224.30	10.81	8.98	158.38	-131.92	-370.97	778.29	761.35	16.94	45.937	
2,500.00	2,446.95	2,342.36	2,315.03	11.34	9.40	158.39	-139.65	-386.17	816.74	799.04	17.70	46.155	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4D-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis			
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.73	-100.00	100.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.73	-100.00	100.00	99.72	0.28	362.288		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.73	-100.00	100.00	99.01	0.99	100.708		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.73	-100.00	100.00	98.29	1.71	58.483 CC, ES		
400.00	399.98	399.98	399.98	1.20	1.21	158.11	0.73	-100.00	101.62	99.20	2.42	42.046		
500.00	499.84	499.84	499.84	1.55	1.57	159.13	0.73	-100.00	106.49	103.37	3.12	34.085		
600.00	599.45	596.27	596.26	1.91	1.91	160.10	-0.13	-101.37	116.05	112.22	3.83	30.315		
700.00	698.70	691.68	691.54	2.29	2.23	160.54	-2.67	-105.43	131.60	127.06	4.54	29.008 SF		
800.00	797.47	785.56	785.09	2.69	2.56	160.53	-6.81	-112.05	153.04	147.79	5.25	29.148		
900.00	895.62	877.45	876.36	3.11	2.90	160.24	-12.44	-121.05	180.23	174.26	5.96	30.221		
1,000.00	993.06	967.34	965.28	3.56	3.23	159.77	-19.44	-132.23	213.00	206.33	6.67	31.933		
1,100.00	1,089.99	1,060.76	1,057.49	4.04	3.60	159.57	-27.36	-144.89	248.68	241.31	7.37	33.740		
1,200.00	1,186.91	1,154.17	1,149.70	4.54	3.98	159.44	-35.28	-157.54	284.38	276.30	8.08	35.211		
1,300.00	1,283.84	1,247.58	1,241.90	5.04	4.36	159.35	-43.20	-170.20	320.09	311.29	8.79	36.405		
1,400.00	1,380.76	1,340.98	1,334.11	5.55	4.74	159.27	-51.12	-182.85	355.79	346.27	9.52	37.387		
1,500.00	1,477.69	1,434.39	1,426.32	6.07	5.13	159.21	-59.04	-195.51	391.50	381.25	10.25	38.206		
1,600.00	1,574.62	1,527.80	1,518.52	6.59	5.52	159.15	-66.96	-208.17	427.20	416.22	10.98	38.898		
1,700.00	1,671.54	1,621.21	1,610.73	7.11	5.91	159.11	-74.88	-220.82	462.91	451.19	11.72	39.488		
1,800.00	1,768.47	1,714.61	1,702.94	7.63	6.30	159.07	-82.80	-233.48	498.61	486.15	12.47	39.997		
1,900.00	1,865.39	1,808.02	1,795.15	8.16	6.70	159.04	-90.71	-246.13	534.32	521.11	13.21	40.440		
2,000.00	1,962.32	1,901.43	1,887.35	8.69	7.10	159.01	-98.63	-258.79	570.03	556.07	13.96	40.829		
2,100.00	2,059.24	1,994.84	1,979.56	9.22	7.49	158.98	-106.55	-271.44	605.73	591.02	14.71	41.172		
2,200.00	2,156.17	2,088.24	2,071.77	9.75	7.89	158.96	-114.47	-284.10	641.44	625.98	15.47	41.477		
2,300.00	2,253.10	2,181.65	2,163.97	10.28	8.29	158.94	-122.39	-296.75	677.15	660.93	16.22	41.750		
2,400.00	2,350.02	2,275.06	2,256.18	10.81	8.69	158.92	-130.31	-309.41	712.86	695.88	16.97	41.995		
2,500.00	2,446.95	2,368.47	2,348.39	11.34	9.09	158.90	-138.23	-322.06	748.56	730.83	17.73	42.217		
2,600.00	2,543.87	2,461.87	2,440.59	11.87	9.49	158.89	-146.15	-334.72	784.27	765.78	18.49	42.418		
2,700.00	2,640.80	2,555.28	2,532.80	12.40	9.89	158.88	-154.07	-347.37	819.98	800.73	19.25	42.601		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4E-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.66	-90.00	90.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.66	-90.00	90.00	89.72	0.28	326.059		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.66	-90.00	90.00	89.01	0.99	90.638		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.66	-90.00	90.00	88.29	1.71	52.634	CC, ES	
400.00	399.98	399.98	399.98	1.20	1.21	158.15	0.66	-90.00	91.62	89.20	2.42	37.908		
500.00	499.84	499.84	499.84	1.55	1.57	159.27	0.66	-90.00	96.50	93.37	3.12	30.886		
600.00	599.45	599.45	599.45	1.91	1.93	160.91	0.66	-90.00	104.69	100.86	3.84	27.272		
700.00	698.70	696.36	696.34	2.29	2.26	162.11	-0.55	-91.08	117.27	112.73	4.54	25.825		
800.00	797.47	792.22	792.07	2.69	2.59	162.32	-4.15	-94.30	135.16	129.92	5.24	25.797	SF	
900.00	895.62	886.63	886.15	3.11	2.91	161.86	-10.02	-99.55	158.23	152.29	5.94	26.620		
1,000.00	993.06	981.39	980.34	3.56	3.25	161.13	-17.80	-106.51	186.08	179.42	6.65	27.963		
1,100.00	1,089.99	1,076.80	1,075.14	4.04	3.60	160.84	-25.81	-113.68	216.02	208.65	7.37	29.308		
1,200.00	1,186.91	1,172.20	1,169.93	4.54	3.95	160.65	-33.82	-120.84	245.99	237.90	8.09	30.408		
1,300.00	1,283.84	1,267.60	1,264.72	5.04	4.31	160.49	-41.83	-128.00	275.97	267.15	8.82	31.295		
1,400.00	1,380.76	1,363.00	1,359.51	5.55	4.67	160.36	-49.84	-135.17	305.94	296.39	9.55	32.024		
1,500.00	1,477.69	1,458.40	1,454.31	6.07	5.03	160.26	-57.85	-142.33	335.92	325.62	10.29	32.631		
1,600.00	1,574.62	1,553.80	1,549.10	6.59	5.40	160.17	-65.86	-149.50	365.90	354.86	11.04	33.143		
1,700.00	1,671.54	1,649.20	1,643.89	7.11	5.77	160.10	-73.87	-156.66	395.87	384.08	11.79	33.580		
1,800.00	1,768.47	1,744.60	1,738.68	7.63	6.14	160.04	-81.88	-163.83	425.85	413.31	12.54	33.957		
1,900.00	1,865.39	1,840.00	1,833.48	8.16	6.51	159.98	-89.89	-170.99	455.83	442.53	13.30	34.284		
2,000.00	1,962.32	1,935.40	1,928.27	8.69	6.88	159.94	-97.90	-178.16	485.81	471.76	14.05	34.572		
2,100.00	2,059.24	2,030.80	2,023.06	9.22	7.26	159.89	-105.91	-185.32	515.79	500.98	14.81	34.826		
2,200.00	2,156.17	2,126.20	2,117.85	9.75	7.63	159.86	-113.92	-192.49	545.77	530.20	15.57	35.052		
2,300.00	2,253.10	2,221.60	2,212.65	10.28	8.00	159.82	-121.93	-199.65	575.75	559.42	16.33	35.254		
2,400.00	2,350.02	2,317.00	2,307.44	10.81	8.38	159.79	-129.94	-206.82	605.73	588.64	17.09	35.436		
2,500.00	2,446.95	2,412.40	2,402.23	11.34	8.75	159.77	-137.95	-213.98	635.71	617.85	17.86	35.600		
2,600.00	2,543.87	2,507.79	2,497.02	11.87	9.13	159.74	-145.96	-221.14	665.69	647.07	18.62	35.750		
2,700.00	2,640.80	2,603.19	2,591.82	12.40	9.50	159.72	-153.97	-228.31	695.67	676.28	19.39	35.886		
2,800.00	2,737.72	2,698.59	2,686.61	12.94	9.88	159.70	-161.98	-235.47	725.65	705.50	20.15	36.010		
2,900.00	2,834.65	2,793.99	2,781.40	13.47	10.26	159.68	-169.99	-242.64	755.63	734.71	20.92	36.125		
3,000.00	2,931.58	2,889.39	2,876.19	14.01	10.63	159.66	-178.00	-249.80	785.61	763.93	21.68	36.230		
3,100.00	3,028.50	2,984.79	2,970.99	14.54	11.01	159.64	-186.01	-256.97	815.59	793.14	22.45	36.328		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4F-35H-O367 - OH - PLAN #1													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.58	-80.00	80.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.58	-80.00	80.00	79.72	0.28	289.830		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.58	-80.00	80.00	79.01	0.99	80.567	CC, ES	
300.00	300.00	298.59	298.57	0.85	0.84	-90.62	-0.88	-80.85	80.87	79.17	1.70	47.512		
400.00	399.98	396.91	396.76	1.20	1.18	154.20	-5.26	-83.41	85.20	82.79	2.42	35.276		
500.00	499.84	495.37	494.87	1.55	1.54	151.33	-12.31	-87.52	94.59	91.45	3.13	30.173		
600.00	599.45	594.49	593.60	1.91	1.90	149.61	-19.90	-91.96	107.50	103.65	3.85	27.934		
700.00	698.70	693.20	691.93	2.29	2.27	149.06	-27.47	-96.38	123.44	118.87	4.57	27.005		
800.00	797.47	791.39	789.73	2.69	2.64	149.30	-35.00	-100.78	142.32	137.02	5.30	26.845	SF	
900.00	895.62	888.94	886.89	3.11	3.01	150.04	-42.48	-105.15	164.18	158.14	6.04	27.175		
1,000.00	993.06	985.72	983.29	3.56	3.38	151.06	-49.90	-109.48	189.03	182.24	6.79	27.845		
1,100.00	1,089.99	1,081.98	1,079.17	4.04	3.75	152.28	-57.28	-113.79	215.79	208.25	7.54	28.626		
1,200.00	1,186.91	1,178.23	1,175.04	4.54	4.12	153.26	-64.66	-118.10	242.64	234.36	8.29	29.283		
1,300.00	1,283.84	1,274.49	1,270.91	5.04	4.49	154.04	-72.04	-122.41	269.55	260.51	9.04	29.823		
1,400.00	1,380.76	1,370.74	1,366.79	5.55	4.85	154.68	-79.42	-126.72	296.50	286.70	9.79	30.273		
1,500.00	1,477.69	1,466.99	1,462.66	6.07	5.22	155.21	-86.80	-131.03	323.47	312.92	10.55	30.655		
1,600.00	1,574.62	1,563.25	1,558.53	6.59	5.59	155.66	-94.17	-135.34	350.46	339.15	11.31	30.983		
1,700.00	1,671.54	1,659.50	1,654.41	7.11	5.96	156.05	-101.55	-139.65	377.48	365.40	12.07	31.266		
1,800.00	1,768.47	1,755.75	1,750.28	7.63	6.33	156.39	-108.93	-143.96	404.50	391.67	12.84	31.515		
1,900.00	1,865.39	1,852.01	1,846.15	8.16	6.70	156.68	-116.31	-148.27	431.54	417.94	13.60	31.733		
2,000.00	1,962.32	1,948.26	1,942.03	8.69	7.07	156.94	-123.69	-152.58	458.59	444.23	14.36	31.928		
2,100.00	2,059.24	2,044.51	2,037.90	9.22	7.44	157.17	-131.07	-156.89	485.64	470.52	15.13	32.102		
2,200.00	2,156.17	2,140.77	2,133.77	9.75	7.81	157.38	-138.45	-161.19	512.70	496.81	15.89	32.258		
2,300.00	2,253.10	2,237.02	2,229.65	10.28	8.17	157.56	-145.83	-165.50	539.77	523.11	16.66	32.399		
2,400.00	2,350.02	2,333.27	2,325.52	10.81	8.54	157.73	-153.21	-169.81	566.84	549.42	17.43	32.527		
2,500.00	2,446.95	2,429.53	2,421.39	11.34	8.91	157.88	-160.59	-174.12	593.92	575.73	18.19	32.644		
2,600.00	2,543.87	2,525.78	2,517.27	11.87	9.28	158.02	-167.97	-178.43	621.00	602.04	18.96	32.752		
2,700.00	2,640.80	2,622.03	2,613.14	12.40	9.65	158.15	-175.35	-182.74	648.08	628.35	19.73	32.850		
2,800.00	2,737.72	2,718.29	2,709.01	12.94	10.02	158.26	-182.73	-187.05	675.17	654.67	20.50	32.941		
2,900.00	2,834.65	2,814.54	2,804.89	13.47	10.39	158.37	-190.11	-191.36	702.25	680.99	21.26	33.025		
3,000.00	2,931.58	2,910.79	2,900.76	14.01	10.76	158.47	-197.48	-195.67	729.34	707.31	22.03	33.103		
3,100.00	3,028.50	3,007.05	2,996.63	14.54	11.13	158.56	-204.86	-199.98	756.43	733.63	22.80	33.176		
3,200.00	3,125.43	3,103.30	3,092.51	15.07	11.50	158.65	-212.24	-204.29	783.53	759.96	23.57	33.244		
3,300.00	3,222.35	3,199.55	3,188.38	15.61	11.87	158.73	-219.62	-208.60	810.62	786.28	24.34	33.307		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4G-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.51	-70.00	70.00				
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.51	-70.00	70.00	69.72	0.28	253.602	
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.51	-70.00	70.00	69.01	0.99	70.496	
300.00	300.00	300.06	300.04	0.85	0.84	-91.01	-1.24	-69.94	69.95	68.25	1.70	41.261	
301.90	301.90	301.97	301.94	0.86	0.85	156.27	-1.30	-69.93	69.95	68.24	1.71	40.942 CC, ES	
400.00	399.98	399.92	399.75	1.20	1.19	152.68	-6.46	-69.75	71.59	69.20	2.39	29.966	
500.00	499.84	499.63	499.18	1.55	1.54	148.76	-14.02	-69.48	76.76	73.66	3.10	24.767	
600.00	599.45	599.23	598.48	1.91	1.91	146.59	-21.65	-69.21	85.14	81.31	3.82	22.262	
700.00	698.70	698.57	697.54	2.29	2.28	145.96	-29.25	-68.94	96.46	91.90	4.56	21.158	
800.00	797.47	797.55	796.22	2.69	2.65	146.43	-36.83	-68.66	110.67	105.36	5.30	20.868 SF	
900.00	895.62	896.03	894.41	3.11	3.02	147.59	-44.37	-68.40	127.78	121.73	6.06	21.100	
1,000.00	993.06	993.90	991.99	3.56	3.38	149.12	-51.86	-68.13	147.89	141.07	6.82	21.698	
1,100.00	1,089.99	1,091.33	1,089.14	4.04	3.75	150.78	-59.32	-67.86	169.93	162.35	7.58	22.424	
1,200.00	1,186.91	1,188.76	1,186.28	4.54	4.12	152.09	-66.78	-67.60	192.10	183.76	8.34	23.039	
1,300.00	1,283.84	1,286.19	1,283.43	5.04	4.48	153.13	-74.24	-67.33	214.34	205.24	9.10	23.552	
1,400.00	1,380.76	1,383.62	1,380.57	5.55	4.85	153.97	-81.69	-67.06	236.64	226.77	9.87	23.986	
1,500.00	1,477.69	1,481.05	1,477.71	6.07	5.22	154.67	-89.15	-66.80	258.98	248.34	10.63	24.357	
1,600.00	1,574.62	1,578.47	1,574.85	6.59	5.59	155.25	-96.61	-66.53	281.34	269.94	11.40	24.679	
1,700.00	1,671.54	1,675.90	1,672.00	7.11	5.95	155.75	-104.07	-66.26	303.74	291.57	12.17	24.960	
1,800.00	1,768.47	1,773.33	1,769.14	7.63	6.32	156.18	-111.53	-66.00	326.15	313.21	12.94	25.207	
1,900.00	1,865.39	1,870.76	1,866.28	8.16	6.69	156.56	-118.99	-65.73	348.58	334.87	13.71	25.426	
2,000.00	1,962.32	1,968.19	1,963.42	8.69	7.06	156.89	-126.44	-65.46	371.01	356.53	14.48	25.622	
2,100.00	2,059.24	2,065.62	2,060.57	9.22	7.43	157.18	-133.90	-65.20	393.46	378.21	15.25	25.798	
2,200.00	2,156.17	2,163.05	2,157.71	9.75	7.79	157.44	-141.36	-64.93	415.92	399.90	16.02	25.957	
2,300.00	2,253.10	2,260.48	2,254.85	10.28	8.16	157.68	-148.82	-64.67	438.39	421.59	16.80	26.102	
2,400.00	2,350.02	2,357.91	2,352.00	10.81	8.53	157.89	-156.28	-64.40	460.86	443.29	17.57	26.233	
2,500.00	2,446.95	2,455.33	2,449.14	11.34	8.90	158.08	-163.74	-64.13	483.34	465.00	18.34	26.353	
2,600.00	2,543.87	2,552.76	2,546.28	11.87	9.27	158.26	-171.19	-63.87	505.82	486.71	19.11	26.464	
2,700.00	2,640.80	2,650.19	2,643.42	12.40	9.64	158.42	-178.65	-63.60	528.31	508.42	19.89	26.566	
2,800.00	2,737.72	2,747.62	2,740.57	12.94	10.00	158.56	-186.11	-63.33	550.80	530.14	20.66	26.660	
2,900.00	2,834.65	2,845.05	2,837.71	13.47	10.37	158.70	-193.57	-63.07	573.29	551.86	21.43	26.747	
3,000.00	2,931.58	2,942.48	2,934.85	14.01	10.74	158.82	-201.03	-62.80	595.79	573.58	22.21	26.829	
3,100.00	3,028.50	3,039.91	3,031.99	14.54	11.11	158.94	-208.49	-62.53	618.29	595.30	22.98	26.904	
3,200.00	3,125.43	3,137.34	3,129.14	15.07	11.48	159.05	-215.94	-62.27	640.79	617.03	23.75	26.975	
3,300.00	3,222.35	3,234.76	3,226.28	15.61	11.85	159.15	-223.40	-62.00	663.29	638.76	24.53	27.041	
3,400.00	3,319.28	3,332.19	3,323.42	16.14	12.21	159.24	-230.86	-61.74	685.79	660.49	25.30	27.103	
3,500.00	3,416.20	3,429.62	3,420.56	16.68	12.58	159.33	-238.32	-61.47	708.30	682.22	26.08	27.162	
3,600.00	3,513.13	3,527.05	3,517.71	17.21	12.95	159.41	-245.78	-61.20	730.81	703.96	26.85	27.217	
3,700.00	3,610.06	3,624.48	3,614.85	17.75	13.32	159.49	-253.24	-60.94	753.32	725.69	27.63	27.269	
3,800.00	3,706.98	3,721.91	3,711.99	18.29	13.69	159.56	-260.70	-60.67	775.83	747.43	28.40	27.318	
3,900.00	3,803.91	3,819.34	3,809.13	18.82	14.06	159.63	-268.15	-60.40	798.34	769.16	29.17	27.364	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4H-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.44	-60.00	60.00				
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.44	-60.00	60.00	59.72	0.28	217.373	
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.44	-60.00	60.00	59.01	0.99	60.425	
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.44	-60.00	60.00	58.29	1.71	35.090 CC, ES	
400.00	399.98	400.52	400.50	1.20	1.20	156.77	-1.27	-59.55	61.17	58.76	2.40	25.445	
500.00	499.84	500.90	500.74	1.55	1.55	154.04	-6.38	-58.22	64.77	61.67	3.10	20.927	
600.00	599.45	600.85	600.32	1.91	1.90	150.38	-14.53	-56.09	71.08	67.28	3.81	18.671	
700.00	698.70	700.36	699.43	2.29	2.26	148.22	-23.20	-53.82	80.52	75.99	4.54	17.749	
800.00	797.47	799.57	798.24	2.69	2.63	147.65	-31.84	-51.56	92.96	87.68	5.28	17.603 SF	
900.00	895.62	898.37	896.64	3.11	3.00	148.16	-40.45	-49.31	108.32	102.29	6.04	17.946	
1,000.00	993.06	996.64	994.51	3.56	3.37	149.30	-49.01	-47.08	126.65	119.85	6.80	18.623	
1,100.00	1,089.99	1,094.52	1,091.99	4.04	3.74	150.70	-57.54	-44.85	146.87	139.30	7.57	19.403	
1,200.00	1,186.91	1,192.39	1,189.47	4.54	4.11	151.78	-66.07	-42.62	167.17	158.83	8.34	20.050	
1,300.00	1,283.84	1,290.27	1,286.94	5.04	4.48	152.63	-74.60	-40.39	187.51	178.40	9.11	20.585	
1,400.00	1,380.76	1,388.14	1,384.42	5.55	4.86	153.31	-83.13	-38.17	207.89	198.00	9.88	21.034	
1,500.00	1,477.69	1,486.02	1,481.90	6.07	5.23	153.87	-91.65	-35.94	228.29	217.63	10.66	21.415	
1,600.00	1,574.62	1,583.89	1,579.38	6.59	5.60	154.34	-100.18	-33.71	248.70	237.27	11.44	21.743	
1,700.00	1,671.54	1,681.77	1,676.85	7.11	5.98	154.73	-108.71	-31.48	269.14	256.92	12.22	22.028	
1,800.00	1,768.47	1,779.64	1,774.33	7.63	6.35	155.08	-117.24	-29.25	289.58	276.58	13.00	22.278	
1,900.00	1,865.39	1,877.52	1,871.81	8.16	6.73	155.37	-125.76	-27.02	310.03	296.25	13.78	22.498	
2,000.00	1,962.32	1,975.39	1,969.28	8.69	7.10	155.63	-134.29	-24.80	330.48	315.92	14.56	22.694	
2,100.00	2,059.24	2,073.27	2,066.76	9.22	7.48	155.86	-142.82	-22.57	350.95	335.60	15.35	22.869	
2,200.00	2,156.17	2,171.14	2,164.24	9.75	7.85	156.06	-151.35	-20.34	371.41	355.29	16.13	23.027	
2,300.00	2,253.10	2,269.02	2,261.72	10.28	8.23	156.25	-159.88	-18.11	391.89	374.97	16.91	23.170	
2,400.00	2,350.02	2,366.89	2,359.19	10.81	8.60	156.41	-168.40	-15.88	412.36	394.66	17.70	23.300	
2,500.00	2,446.95	2,464.77	2,456.67	11.34	8.98	156.56	-176.93	-13.66	432.84	414.36	18.48	23.419	
2,600.00	2,543.87	2,562.64	2,554.15	11.87	9.36	156.70	-185.46	-11.43	453.32	434.05	19.27	23.528	
2,700.00	2,640.80	2,660.52	2,651.63	12.40	9.73	156.82	-193.99	-9.20	473.80	453.75	20.05	23.627	
2,800.00	2,737.72	2,758.39	2,749.10	12.94	10.11	156.93	-202.52	-6.97	494.29	473.45	20.84	23.720	
2,900.00	2,834.65	2,856.27	2,846.58	13.47	10.48	157.04	-211.04	-4.74	514.77	493.15	21.62	23.805	
3,000.00	2,931.58	2,954.14	2,944.06	14.01	10.86	157.13	-219.57	-2.51	535.26	512.85	22.41	23.884	
3,100.00	3,028.50	3,052.02	3,041.53	14.54	11.24	157.22	-228.10	-0.29	555.75	532.55	23.20	23.958	
3,200.00	3,125.43	3,149.89	3,139.01	15.07	11.61	157.31	-236.63	1.94	576.24	552.26	23.98	24.027	
3,300.00	3,222.35	3,247.77	3,236.49	15.61	11.99	157.38	-245.15	4.17	596.73	571.96	24.77	24.091	
3,400.00	3,319.28	3,345.64	3,333.97	16.14	12.36	157.46	-253.68	6.40	617.22	591.67	25.56	24.152	
3,500.00	3,416.20	3,443.52	3,431.44	16.68	12.74	157.52	-262.21	8.63	637.72	611.37	26.34	24.208	
3,600.00	3,513.13	3,541.39	3,528.92	17.21	13.12	157.59	-270.74	10.85	658.21	631.08	27.13	24.262	
3,700.00	3,610.06	3,639.27	3,626.40	17.75	13.49	157.65	-279.27	13.08	678.71	650.79	27.92	24.312	
3,800.00	3,706.98	3,737.14	3,723.87	18.29	13.87	157.70	-287.79	15.31	699.20	670.50	28.70	24.359	
3,900.00	3,803.91	3,835.02	3,821.35	18.82	14.25	157.75	-296.32	17.54	719.70	690.21	29.49	24.404	
4,000.00	3,900.83	3,932.89	3,918.83	19.36	14.62	157.80	-304.85	19.77	740.20	709.92	30.28	24.446	
4,100.00	3,997.76	4,030.77	4,016.31	19.89	15.00	157.85	-313.38	22.00	760.69	729.63	31.07	24.487	
4,200.00	4,094.68	4,128.64	4,113.78	20.43	15.38	157.90	-321.91	24.22	781.19	749.34	31.85	24.525	
4,300.00	4,191.61	4,226.52	4,211.26	20.97	15.75	157.94	-330.43	26.45	801.69	769.05	32.64	24.561	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4I-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.36	-50.00	50.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.36	-50.00	50.00	49.72	0.28	181.144		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.36	-50.00	50.00	49.01	0.99	50.354		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.36	-50.00	50.00	48.29	1.71	29.241	CC, ES	
400.00	399.98	399.98	399.98	1.20	1.21	158.47	0.36	-50.00	51.62	49.20	2.42	21.358		
500.00	499.84	499.84	499.84	1.55	1.57	160.39	0.36	-50.00	56.52	53.40	3.12	18.091		
600.00	599.45	599.45	599.45	1.91	1.93	162.92	0.36	-50.00	64.80	60.96	3.84	16.880		
700.00	698.70	698.70	698.70	2.29	2.28	165.54	0.36	-50.00	76.54	71.98	4.56	16.794	SF	
800.00	797.47	797.47	797.47	2.69	2.64	167.92	0.36	-50.00	91.77	86.50	5.28	17.387		
900.00	895.62	897.82	897.82	3.11	2.98	169.25	-1.16	-49.32	109.55	103.55	5.99	18.276		
1,000.00	993.06	998.44	998.28	3.56	3.32	169.19	-5.92	-47.22	128.69	121.98	6.71	19.179		
1,100.00	1,089.99	1,096.45	1,096.05	4.04	3.65	168.77	-12.20	-44.45	148.85	141.43	7.42	20.058		
1,200.00	1,186.91	1,194.38	1,193.74	4.54	3.98	168.46	-18.47	-41.68	169.04	160.91	8.14	20.776		
1,300.00	1,283.84	1,292.32	1,291.44	5.04	4.33	168.22	-24.74	-38.91	189.23	180.37	8.86	21.359		
1,400.00	1,380.76	1,390.26	1,389.14	5.55	4.67	168.03	-31.02	-36.14	209.43	199.84	9.59	21.838		
1,500.00	1,477.69	1,488.20	1,486.83	6.07	5.02	167.87	-37.29	-33.37	229.63	219.30	10.33	22.239		
1,600.00	1,574.62	1,586.13	1,584.53	6.59	5.37	167.73	-43.56	-30.61	249.83	238.76	11.07	22.577		
1,700.00	1,671.54	1,684.07	1,682.23	7.11	5.73	167.62	-49.84	-27.84	270.03	258.22	11.81	22.867		
1,800.00	1,768.47	1,782.01	1,779.93	7.63	6.08	167.52	-56.11	-25.07	290.23	277.67	12.55	23.118		
1,900.00	1,865.39	1,879.94	1,877.62	8.16	6.44	167.43	-62.38	-22.30	310.43	297.13	13.30	23.336		
2,000.00	1,962.32	1,977.88	1,975.32	8.69	6.80	167.36	-68.66	-19.53	330.63	316.58	14.05	23.528		
2,100.00	2,059.24	2,075.82	2,073.02	9.22	7.16	167.29	-74.93	-16.76	350.83	336.03	14.80	23.697		
2,200.00	2,156.17	2,173.76	2,170.71	9.75	7.52	167.23	-81.20	-13.99	371.04	355.48	15.56	23.848		
2,300.00	2,253.10	2,271.69	2,268.41	10.28	7.88	167.18	-87.47	-11.22	391.24	374.93	16.31	23.984		
2,400.00	2,350.02	2,369.63	2,366.11	10.81	8.24	167.13	-93.75	-8.45	411.44	394.38	17.07	24.106		
2,500.00	2,446.95	2,467.57	2,463.80	11.34	8.60	167.09	-100.02	-5.68	431.65	413.82	17.82	24.216		
2,600.00	2,543.87	2,565.50	2,561.50	11.87	8.96	167.05	-106.29	-2.91	451.85	433.27	18.58	24.316		
2,700.00	2,640.80	2,663.44	2,659.20	12.40	9.32	167.01	-112.57	-0.14	472.06	452.72	19.34	24.408		
2,800.00	2,737.72	2,761.38	2,756.89	12.94	9.69	166.98	-118.84	2.63	492.26	472.16	20.10	24.491		
2,900.00	2,834.65	2,859.32	2,854.59	13.47	10.05	166.95	-125.11	5.40	512.47	491.61	20.86	24.568		
3,000.00	2,931.58	2,957.25	2,952.29	14.01	10.41	166.92	-131.39	8.17	532.67	511.05	21.62	24.639		
3,100.00	3,028.50	3,055.19	3,049.98	14.54	10.78	166.89	-137.66	10.94	552.87	530.50	22.38	24.705		
3,200.00	3,125.43	3,153.13	3,147.68	15.07	11.14	166.87	-143.93	13.71	573.08	549.94	23.14	24.766		
3,300.00	3,222.35	3,251.07	3,245.38	15.61	11.50	166.84	-150.21	16.48	593.28	569.38	23.90	24.823		
3,400.00	3,319.28	3,349.00	3,343.08	16.14	11.87	166.82	-156.48	19.25	613.49	588.83	24.66	24.876		
3,500.00	3,416.20	3,446.94	3,440.77	16.68	12.23	166.80	-162.75	22.02	633.70	608.27	25.42	24.925		
3,600.00	3,513.13	3,544.88	3,538.47	17.21	12.60	166.78	-169.03	24.79	653.90	627.71	26.19	24.971		
3,700.00	3,610.06	3,642.81	3,636.17	17.75	12.96	166.77	-175.30	27.56	674.11	647.16	26.95	25.014		
3,800.00	3,706.98	3,740.75	3,733.86	18.29	13.33	166.75	-181.57	30.33	694.31	666.60	27.71	25.055		
3,900.00	3,803.91	3,838.69	3,831.56	18.82	13.69	166.73	-187.85	33.09	714.52	686.04	28.47	25.094		
4,000.00	3,900.83	3,936.63	3,929.26	19.36	14.06	166.72	-194.12	35.86	734.72	705.49	29.24	25.130		
4,100.00	3,997.76	4,034.56	4,026.95	19.89	14.42	166.70	-200.39	38.63	754.93	724.93	30.00	25.164		
4,200.00	4,094.68	4,132.50	4,124.65	20.43	14.79	166.69	-206.66	41.40	775.13	744.37	30.76	25.196		
4,300.00	4,191.61	4,230.44	4,222.35	20.97	15.15	166.68	-212.94	44.17	795.34	763.81	31.53	25.227		
4,400.00	4,288.54	4,328.38	4,320.04	21.50	15.52	166.67	-219.21	46.94	815.54	783.25	32.29	25.256		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4J-35H-O367 - OH - PLAN #1													Offset Site Error: 0.00 usft			
Survey Program: 0-MWD+HDGM															Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning			
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.29	-40.00	40.00							
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.29	-40.00	40.00	39.72	0.28	144.915				
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.29	-40.00	40.00	39.01	0.99	40.283				
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.29	-40.00	40.00	38.29	1.71	23.393	CC, ES			
400.00	399.98	399.98	399.98	1.20	1.21	158.65	0.29	-40.00	41.62	39.20	2.42	17.221				
500.00	499.84	499.84	499.84	1.55	1.57	160.96	0.29	-40.00	46.53	43.41	3.12	14.894				
600.00	599.45	599.45	599.45	1.91	1.93	163.89	0.29	-40.00	54.85	51.01	3.84	14.288				
700.00	698.70	698.70	698.70	2.29	2.28	166.74	0.29	-40.00	66.65	62.09	4.56	14.624				
800.00	797.47	799.65	799.63	2.69	2.63	168.46	-1.05	-38.90	80.64	75.37	5.27	15.292				
900.00	895.62	900.97	900.81	3.11	2.97	168.71	-5.16	-35.54	95.35	89.36	5.99	15.907				
1,000.00	993.06	1,002.60	1,002.03	3.56	3.32	168.05	-12.07	-29.89	110.74	104.01	6.74	16.442				
1,100.00	1,089.99	1,102.14	1,100.93	4.04	3.67	167.05	-20.79	-22.76	126.28	118.82	7.47	16.908				
1,200.00	1,186.91	1,200.91	1,199.06	4.54	4.03	166.26	-29.53	-15.61	141.80	133.59	8.20	17.285				
1,300.00	1,283.84	1,299.68	1,297.18	5.04	4.40	165.63	-38.27	-8.46	157.33	148.38	8.95	17.582				
1,400.00	1,380.76	1,398.45	1,395.31	5.55	4.77	165.11	-47.01	-1.31	172.88	163.18	9.70	17.820				
1,500.00	1,477.69	1,497.23	1,493.43	6.07	5.14	164.67	-55.75	5.84	188.44	177.98	10.46	18.013				
1,600.00	1,574.62	1,596.00	1,591.56	6.59	5.52	164.31	-64.50	12.99	204.00	192.78	11.23	18.173				
1,700.00	1,671.54	1,694.77	1,689.68	7.11	5.90	163.99	-73.24	20.14	219.58	207.59	11.99	18.307				
1,800.00	1,768.47	1,793.55	1,787.81	7.63	6.28	163.72	-81.98	27.29	235.16	222.39	12.77	18.419				
1,900.00	1,865.39	1,892.32	1,885.93	8.16	6.66	163.48	-90.72	34.44	250.75	237.21	13.54	18.516				
2,000.00	1,962.32	1,991.09	1,984.06	8.69	7.04	163.27	-99.46	41.59	266.34	252.02	14.32	18.599				
2,100.00	2,059.24	2,089.86	2,082.18	9.22	7.43	163.08	-108.20	48.74	281.93	266.83	15.10	18.671				
2,200.00	2,156.17	2,188.64	2,180.31	9.75	7.81	162.91	-116.94	55.89	297.53	281.64	15.88	18.734				
2,300.00	2,253.10	2,287.41	2,278.43	10.28	8.20	162.76	-125.69	63.04	313.12	296.46	16.66	18.790				
2,400.00	2,350.02	2,386.18	2,376.56	10.81	8.59	162.62	-134.43	70.19	328.72	311.27	17.45	18.839				
2,500.00	2,446.95	2,484.96	2,474.68	11.34	8.97	162.49	-143.17	77.35	344.32	326.09	18.23	18.883				
2,600.00	2,543.87	2,583.73	2,572.81	11.87	9.36	162.38	-151.91	84.50	359.93	340.91	19.02	18.922				
2,700.00	2,640.80	2,682.50	2,670.93	12.40	9.75	162.28	-160.65	91.65	375.53	355.72	19.81	18.957				
2,800.00	2,737.72	2,781.27	2,769.06	12.94	10.14	162.18	-169.39	98.80	391.14	370.54	20.60	18.989				
2,900.00	2,834.65	2,880.05	2,867.18	13.47	10.53	162.09	-178.14	105.95	406.74	385.36	21.39	19.018				
3,000.00	2,931.58	2,978.82	2,965.31	14.01	10.92	162.01	-186.88	113.10	422.35	400.17	22.18	19.045				
3,100.00	3,028.50	3,077.59	3,063.44	14.54	11.31	161.93	-195.62	120.25	437.96	414.99	22.97	19.069				
3,200.00	3,125.43	3,176.37	3,161.56	15.07	11.70	161.86	-204.36	127.40	453.57	429.81	23.76	19.091				
3,300.00	3,222.35	3,275.14	3,259.69	15.61	12.09	161.79	-213.10	134.55	469.18	444.63	24.55	19.112				
3,400.00	3,319.28	3,373.91	3,357.81	16.14	12.48	161.73	-221.84	141.70	484.79	459.44	25.34	19.131				
3,500.00	3,416.20	3,472.68	3,455.94	16.68	12.87	161.67	-230.58	148.85	500.40	474.26	26.13	19.148				
3,600.00	3,513.13	3,571.46	3,554.06	17.21	13.26	161.62	-239.33	156.00	516.01	489.08	26.93	19.164				
3,700.00	3,610.06	3,670.23	3,652.19	17.75	13.66	161.57	-248.07	163.15	531.62	503.90	27.72	19.179				
3,800.00	3,706.98	3,769.00	3,750.31	18.29	14.05	161.52	-256.81	170.30	547.23	518.72	28.51	19.193				
3,900.00	3,803.91	3,867.77	3,848.44	18.82	14.44	161.47	-265.55	177.45	562.84	533.54	29.31	19.206				
4,000.00	3,900.83	3,966.55	3,946.56	19.36	14.83	161.43	-274.29	184.60	578.45	548.36	30.10	19.219				
4,100.00	3,997.76	4,065.32	4,044.69	19.89	15.22	161.39	-283.03	191.75	594.07	563.17	30.89	19.230				
4,200.00	4,094.68	4,164.09	4,142.81	20.43	15.62	161.35	-291.78	198.90	609.68	577.99	31.69	19.241				
4,300.00	4,191.61	4,262.87	4,240.94	20.97	16.01	161.31	-300.52	206.05	625.29	592.81	32.48	19.251				
4,400.00	4,288.54	4,361.64	4,339.06	21.50	16.40	161.28	-309.26	213.20	640.91	607.63	33.28	19.261				
4,500.00	4,385.46	4,460.41	4,437.19	22.04	16.79	161.24	-318.00	220.35	656.52	622.45	34.07	19.270				
4,600.00	4,482.39	4,559.18	4,535.31	22.58	17.19	161.21	-326.74	227.50	672.13	637.27	34.87	19.278				
4,700.00	4,579.31	4,657.96	4,633.44	23.11	17.58	161.18	-335.48	234.65	687.75	652.09	35.66	19.286				
4,800.00	4,676.40	4,756.83	4,731.66	23.64	17.97	161.18	-344.23	241.81	702.72	666.26	36.45	19.277				
4,900.00	4,773.90	4,855.93	4,830.11	24.15	18.36	161.13	-353.00	248.98	716.07	678.82	37.25	19.225				
5,000.00	4,871.76	4,955.22	4,928.75	24.63	18.76	161.03	-361.79	256.17	727.78	689.74	38.04	19.133				
5,100.00	4,969.97	5,054.69	5,027.56	25.09	19.16	160.89	-370.59	263.37	737.86	699.03	38.83	19.003				

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
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<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4J-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.00	5,068.49	5,154.29	5,126.52	25.53	19.55	160.71	-379.41	270.58	746.30	706.68	39.62	18.838	
5,300.00	5,167.30	5,254.00	5,225.57	25.95	19.95	160.48	-388.23	277.80	753.11	712.71	40.40	18.641	
5,400.00	5,266.36	5,353.79	5,324.71	26.35	20.34	160.20	-397.07	285.02	758.30	717.11	41.19	18.412	
5,500.00	5,365.64	5,447.13	5,417.49	26.73	20.71	159.93	-404.97	291.48	762.21	720.29	41.91	18.185	
5,600.00	5,465.12	5,538.86	5,508.81	27.09	21.07	159.71	-411.62	296.93	765.54	722.93	42.61	17.966	
5,700.00	5,564.76	5,630.62	5,600.29	27.44	21.41	159.52	-417.14	301.44	768.32	725.04	43.29	17.750	
5,800.00	5,664.53	5,722.41	5,691.91	27.76	21.75	159.37	-421.53	305.03	770.54	726.60	43.94	17.536	
5,900.00	5,764.41	5,814.23	5,783.62	28.07	22.08	159.26	-424.79	307.69	772.18	727.61	44.57	17.324	
6,000.00	5,864.35	5,906.06	5,875.42	28.36	22.40	159.19	-426.90	309.42	773.25	728.06	45.19	17.112	
6,100.00	5,964.34	6,000.00	5,969.35	28.64	22.72	159.16	-427.89	310.23	773.75	727.95	45.80	16.894	
6,100.89	5,965.23	6,000.00	5,969.35	28.65	22.72	159.16	-427.89	310.23	773.75	727.95	45.80	16.895	
6,200.00	6,064.34	6,094.99	6,064.34	28.90	23.02	-88.18	-427.95	310.28	773.78	727.41	46.37	16.688	
6,300.00	6,164.34	6,194.99	6,164.34	29.15	23.33	-88.18	-427.95	310.28	773.78	726.81	46.98	16.472	
6,400.00	6,264.34	6,294.99	6,264.34	29.41	23.64	-88.18	-427.95	310.28	773.78	726.19	47.59	16.260	
6,500.00	6,364.34	6,394.99	6,364.34	29.67	23.95	-88.18	-427.95	310.28	773.78	725.58	48.20	16.053	
6,508.62	6,372.96	6,403.61	6,372.96	29.69	23.97	-88.18	-427.95	310.28	773.78	725.53	48.26	16.035	
6,600.00	6,464.34	6,491.42	6,460.71	29.93	24.24	-88.01	-425.69	310.23	773.92	725.16	48.76	15.872	
6,700.00	6,564.34	6,583.64	6,551.91	30.19	24.50	-87.03	-412.47	309.91	774.90	725.74	49.16	15.762	
6,800.00	6,664.30	6,671.61	6,636.65	30.45	24.72	-84.88	-389.05	309.34	777.27	727.85	49.41	15.730	
6,900.00	6,763.23	6,756.87	6,715.44	30.69	24.91	-83.07	-356.62	308.55	780.60	731.03	49.57	15.748	
7,000.00	6,859.26	6,840.16	6,788.15	30.89	25.08	-81.39	-316.11	307.57	784.56	734.91	49.65	15.802	
7,100.00	6,950.51	6,921.80	6,854.40	31.05	25.23	-79.87	-268.49	306.42	788.89	739.22	49.67	15.883	
7,200.00	7,035.21	7,000.00	6,912.38	31.18	25.37	-78.54	-216.08	305.15	793.36	743.73	49.64	15.983	
7,300.00	7,111.70	7,081.28	6,966.21	31.27	25.50	-77.36	-155.27	303.68	797.72	748.07	49.65	16.066	
7,400.00	7,178.50	7,159.61	7,011.25	31.31	25.65	-76.41	-91.25	302.13	801.76	752.07	49.69	16.135	
7,500.00	7,234.32	7,237.30	7,048.76	31.33	25.81	-75.68	-23.27	300.49	805.32	755.50	49.82	16.164	
7,600.00	7,278.05	7,314.56	7,078.54	31.31	26.01	-75.17	47.96	298.77	808.24	758.15	50.09	16.136	
7,700.00	7,308.86	7,391.57	7,100.41	31.26	26.25	-74.89	121.74	296.98	810.42	759.90	50.53	16.040	
7,800.00	7,326.13	7,468.53	7,114.24	31.19	26.54	-74.85	197.39	295.15	811.81	760.66	51.15	15.870	
7,900.00	7,330.00	7,550.00	7,119.94	31.10	26.88	-75.02	278.59	293.19	812.53	760.56	51.97	15.635	
8,000.00	7,330.00	7,641.57	7,120.00	31.03	27.34	-75.05	370.13	290.97	814.07	761.19	52.87	15.396	
8,100.00	7,330.00	7,741.56	7,120.00	30.96	27.91	-75.08	470.09	288.56	815.67	761.72	53.95	15.120	
8,200.00	7,330.00	7,841.54	7,120.00	30.90	28.57	-75.11	570.04	286.14	817.27	762.10	55.18	14.812	
8,300.00	7,330.00	7,941.53	7,120.00	31.05	29.30	-75.14	670.00	283.72	818.87	762.32	56.55	14.481	
10,100.00	7,330.00	9,771.91	7,120.00	51.24	50.30	-75.14	2,500.02	269.67	819.05	722.38	96.67	8.473	
10,200.00	7,330.00	9,871.89	7,120.00	52.58	51.66	-75.10	2,599.99	271.05	816.98	717.68	99.31	8.227	
10,300.00	7,330.00	9,971.87	7,120.00	53.94	53.03	-75.06	2,699.95	272.43	814.91	712.95	101.97	7.992	
10,400.00	7,330.00	10,071.85	7,120.00	55.32	54.41	-75.02	2,799.92	273.81	812.84	708.19	104.65	7.767	
10,500.00	7,330.00	10,171.82	7,120.00	56.70	55.81	-74.99	2,899.89	275.19	810.77	703.42	107.35	7.553	
10,600.00	7,330.00	10,271.80	7,120.00	58.09	57.21	-74.95	2,999.86	276.57	808.71	698.63	110.07	7.347	
10,700.00	7,330.00	10,371.78	7,120.00	59.50	58.62	-74.91	3,099.82	277.95	806.64	693.83	112.81	7.150	
10,800.00	7,330.00	10,471.75	7,120.00	60.91	60.04	-74.87	3,199.79	279.33	804.57	689.00	115.57	6.962	
10,900.00	7,330.00	10,571.73	7,120.00	62.33	61.47	-74.83	3,299.76	280.71	802.50	684.17	118.33	6.782	
11,000.00	7,330.00	10,671.71	7,120.00	63.76	62.91	-74.79	3,399.73	282.09	800.43	679.32	121.12	6.609	
11,100.00	7,330.00	10,771.68	7,120.00	65.20	64.35	-74.75	3,499.70	283.47	798.37	674.45	123.91	6.443	
11,200.00	7,330.00	10,871.66	7,120.00	66.64	65.80	-74.71	3,599.66	284.85	796.30	669.58	126.72	6.284	
11,300.00	7,330.00	10,971.64	7,120.00	68.09	67.25	-74.67	3,699.63	286.23	794.23	664.70	129.54	6.131	
11,400.00	7,330.00	11,071.62	7,120.00	69.55	68.71	-74.62	3,799.60	287.61	792.17	659.80	132.37	5.985	
11,500.00	7,330.00	11,171.59	7,120.00	71.01	70.18	-74.58	3,899.57	289.00	790.10	654.90	135.20	5.844	
11,600.00	7,330.00	11,271.57	7,120.00	72.48	71.65	-74.54	3,999.53	290.38	788.04	649.99	138.05	5.708	
11,700.00	7,330.00	11,371.55	7,120.00	73.95	73.12	-74.50	4,099.50	291.76	785.97	645.07	140.90	5.578	
11,800.00	7,330.00	11,471.52	7,120.00	75.43	74.60	-74.46	4,199.47	293.14	783.91	640.14	143.77	5.453	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												S35-T3N-R67W (KIYOTA) - KIYOTA 4J-35H-O367 - OH - PLAN #1		Offset Site Error:		0.00 usft	
Survey Program:												0-MWD+HDGM		Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor					
11,900.00	7,330.00	11,571.50	7,120.00	76.91	76.08	-74.42	4,299.44	294.52	781.85	635.21	146.63	5.332					
12,000.00	7,330.00	11,671.48	7,120.00	78.40	77.36	-74.37	4,399.40	295.90	779.78	630.48	149.30	5.223					
12,005.27	7,330.00	11,676.74	7,120.00	78.47	77.42	-74.37	4,404.67	295.97	779.67	630.24	149.44	5.217 SF					

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4K-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.22	-30.00	30.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.22	-30.00	30.00	29.72	0.28	108.686		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.22	-30.00	30.00	29.01	0.99	30.213		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.22	-30.00	30.00	28.29	1.71	17.545 CC, ES		
400.00	399.98	399.98	399.98	1.20	1.21	158.94	0.22	-30.00	31.62	29.21	2.42	13.084		
500.00	499.84	499.84	499.84	1.55	1.57	161.86	0.22	-30.00	36.55	33.43	3.12	11.700		
600.00	599.45	599.45	599.45	1.91	1.93	165.28	0.22	-30.00	44.92	41.08	3.84	11.702		
700.00	698.70	700.41	700.39	2.29	2.28	167.53	-0.90	-28.64	55.28	50.73	4.55	12.139		
800.00	797.47	801.71	801.54	2.69	2.62	168.19	-4.31	-24.53	66.01	60.73	5.28	12.504		
900.00	895.62	903.32	902.75	3.11	2.97	167.90	-10.02	-17.65	77.05	71.03	6.02	12.792		
1,000.00	993.06	1,005.20	1,003.85	3.56	3.34	167.03	-18.03	-7.97	88.41	81.62	6.78	13.032		
1,100.00	1,089.99	1,104.47	1,102.14	4.04	3.72	166.19	-26.94	2.77	100.36	92.84	7.52	13.347		
1,200.00	1,186.91	1,203.74	1,200.42	4.54	4.10	165.53	-35.84	13.52	112.35	104.08	8.26	13.595		
1,300.00	1,283.84	1,303.02	1,298.71	5.04	4.48	165.01	-44.75	24.27	124.35	115.33	9.02	13.788		
1,400.00	1,380.76	1,402.29	1,396.99	5.55	4.88	164.57	-53.65	35.01	136.36	126.58	9.78	13.941		
1,500.00	1,477.69	1,501.56	1,495.28	6.07	5.27	164.21	-62.55	45.76	148.37	137.82	10.55	14.064		
1,600.00	1,574.62	1,600.83	1,593.56	6.59	5.67	163.90	-71.46	56.50	160.40	149.07	11.32	14.164		
1,700.00	1,671.54	1,700.10	1,691.85	7.11	6.07	163.63	-80.36	67.25	172.42	160.32	12.10	14.247		
1,800.00	1,768.47	1,799.37	1,790.14	7.63	6.47	163.40	-89.27	77.99	184.45	171.57	12.88	14.316		
1,900.00	1,865.39	1,898.64	1,888.42	8.16	6.88	163.20	-98.17	88.74	196.48	182.81	13.67	14.375		
2,000.00	1,962.32	1,997.91	1,986.71	8.69	7.28	163.02	-107.07	99.48	208.52	194.06	14.45	14.425		
2,100.00	2,059.24	2,097.19	2,084.99	9.22	7.69	162.86	-115.98	110.23	220.55	205.31	15.24	14.469		
2,200.00	2,156.17	2,196.46	2,183.28	9.75	8.09	162.71	-124.88	120.97	232.59	216.55	16.03	14.506		
2,300.00	2,253.10	2,295.73	2,281.56	10.28	8.50	162.58	-133.79	131.72	244.63	227.80	16.83	14.539		
2,400.00	2,350.02	2,395.00	2,379.85	10.81	8.91	162.46	-142.69	142.46	256.67	239.05	17.62	14.568		
2,500.00	2,446.95	2,494.27	2,478.13	11.34	9.32	162.36	-151.59	153.21	268.71	250.29	18.41	14.593		
2,600.00	2,543.87	2,593.54	2,576.42	11.87	9.73	162.26	-160.50	163.95	280.75	261.54	19.21	14.616		
2,700.00	2,640.80	2,692.81	2,674.71	12.40	10.14	162.17	-169.40	174.70	292.79	272.78	20.00	14.636		
2,800.00	2,737.72	2,792.08	2,772.99	12.94	10.55	162.09	-178.30	185.45	304.83	284.03	20.80	14.654		
2,900.00	2,834.65	2,891.36	2,871.28	13.47	10.96	162.01	-187.21	196.19	316.87	295.28	21.60	14.671		
3,000.00	2,931.58	2,990.63	2,969.56	14.01	11.37	161.94	-196.11	206.94	328.92	306.52	22.40	14.686		
3,100.00	3,028.50	3,089.90	3,067.85	14.54	11.78	161.88	-205.02	217.68	340.96	317.77	23.20	14.699		
3,200.00	3,125.43	3,189.17	3,166.13	15.07	12.20	161.81	-213.92	228.43	353.01	329.01	24.00	14.712		
3,300.00	3,222.35	3,288.44	3,264.42	15.61	12.61	161.76	-222.82	239.17	365.05	340.26	24.80	14.723		
3,400.00	3,319.28	3,387.71	3,362.70	16.14	13.02	161.70	-231.73	249.92	377.10	351.50	25.60	14.733		
3,500.00	3,416.20	3,486.98	3,460.99	16.68	13.43	161.65	-240.63	260.66	389.14	362.75	26.40	14.743		
3,600.00	3,513.13	3,586.26	3,559.28	17.21	13.85	161.61	-249.54	271.41	401.19	373.99	27.20	14.751		
3,700.00	3,610.06	3,685.53	3,657.56	17.75	14.26	161.56	-258.44	282.15	413.24	385.24	28.00	14.760		
3,800.00	3,706.98	3,784.80	3,755.85	18.29	14.67	161.52	-267.34	292.90	425.28	396.48	28.80	14.767		
3,900.00	3,803.91	3,884.07	3,854.13	18.82	15.08	161.48	-276.25	303.64	437.33	407.73	29.60	14.774		
4,000.00	3,900.83	3,983.34	3,952.42	19.36	15.50	161.44	-285.15	314.39	449.37	418.97	30.40	14.781		
4,100.00	3,997.76	4,082.61	4,050.70	19.89	15.91	161.41	-294.06	325.14	461.42	430.22	31.21	14.787		
4,200.00	4,094.68	4,181.88	4,148.99	20.43	16.32	161.37	-302.96	335.88	473.47	441.46	32.01	14.792		
4,300.00	4,191.61	4,281.15	4,247.27	20.97	16.74	161.34	-311.86	346.63	485.52	452.71	32.81	14.798		
4,400.00	4,288.54	4,380.43	4,345.56	21.50	17.15	161.31	-320.77	357.37	497.56	463.95	33.61	14.803		
4,500.00	4,385.46	4,479.70	4,443.85	22.04	17.56	161.28	-329.67	368.12	509.61	475.20	34.42	14.807		
4,600.00	4,482.39	4,578.97	4,542.13	22.58	17.98	161.25	-338.58	378.86	521.66	486.44	35.22	14.812		
4,700.00	4,579.31	4,678.24	4,640.42	23.11	18.39	161.23	-347.48	389.61	533.71	497.68	36.02	14.816		
4,800.00	4,676.40	4,777.59	4,738.78	23.64	18.81	161.21	-356.39	400.36	545.11	508.28	36.83	14.803		
4,900.00	4,773.90	4,877.10	4,837.30	24.15	19.22	161.14	-365.32	411.13	554.88	517.25	37.63	14.746		
5,000.00	4,871.76	4,976.76	4,935.97	24.63	19.64	161.01	-374.25	421.92	563.01	524.58	38.43	14.650		
5,100.00	4,969.97	5,076.52	5,034.74	25.09	20.05	160.81	-383.20	432.72	569.50	530.26	39.23	14.516		

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



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4K-35H-O367 - OH - PLAN #1												Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+HDGM												Offset Well Error: 0.00 usft	
Reference				Offset		Semi Major Axis			Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
5,200.00	5,068.49	5,176.37	5,133.60	25.53	20.47	160.57	-392.16	443.53	574.35	534.31	40.04	14.346	
5,300.00	5,167.30	5,273.39	5,229.68	25.95	20.87	160.27	-400.79	453.94	577.67	536.85	40.82	14.153	
5,400.00	5,266.36	5,365.82	5,321.36	26.35	21.25	160.01	-408.25	462.94	580.41	538.86	41.55	13.970	
5,500.00	5,365.64	5,458.27	5,413.24	26.73	21.61	159.79	-414.76	470.80	582.81	540.56	42.26	13.793	
5,600.00	5,465.12	5,550.72	5,505.28	27.09	21.97	159.60	-420.33	477.52	584.88	541.93	42.94	13.620	
5,700.00	5,564.76	5,643.18	5,597.46	27.44	22.31	159.44	-424.95	483.10	586.59	542.99	43.60	13.453	
5,800.00	5,664.53	5,735.65	5,689.74	27.76	22.65	159.32	-428.62	487.53	587.96	543.71	44.24	13.289	
5,900.00	5,764.41	5,828.12	5,782.12	28.07	22.97	159.23	-431.34	490.81	588.97	544.11	44.86	13.128	
6,000.00	5,864.35	5,920.60	5,874.55	28.36	23.29	159.17	-433.11	492.94	589.63	544.18	45.46	12.971	
6,100.00	5,964.34	6,013.08	5,967.02	28.64	23.59	159.14	-433.92	493.93	589.94	543.91	46.03	12.817	
6,200.00	6,064.34	6,110.40	6,064.34	28.90	23.89	-88.20	-433.98	494.00	589.96	543.36	46.61	12.658	
6,300.00	6,164.34	6,210.40	6,164.34	29.15	24.19	-88.20	-433.98	494.00	589.96	542.75	47.21	12.496	
6,400.00	6,264.34	6,310.40	6,264.34	29.41	24.49	-88.20	-433.98	494.00	589.96	542.14	47.82	12.336	
6,500.00	6,364.34	6,410.40	6,364.34	29.67	24.79	-88.20	-433.98	494.00	589.96	541.53	48.44	12.180	
6,516.49	6,380.83	6,426.88	6,380.83	29.71	24.84	-88.20	-433.98	494.00	589.96	541.42	48.54	12.155	
6,600.00	6,464.34	6,510.38	6,464.33	29.93	25.10	-88.20	-433.98	494.00	589.96	540.91	49.05	12.027	
6,700.00	6,564.34	6,607.29	6,560.93	30.19	25.38	-87.55	-427.37	494.00	590.21	540.67	49.54	11.914	
6,800.00	6,664.30	6,700.00	6,651.72	30.45	25.62	-85.43	-408.89	494.01	591.26	541.45	49.82	11.869	
6,900.00	6,763.23	6,792.58	6,739.23	30.69	25.83	-83.61	-378.90	494.03	592.84	542.83	50.02	11.853	
7,000.00	6,859.26	6,882.09	6,819.50	30.89	26.00	-81.94	-339.41	494.05	594.74	544.62	50.12	11.865	
7,100.00	6,950.51	6,969.96	6,892.90	31.05	26.15	-80.43	-291.21	494.07	596.79	546.63	50.17	11.896	
7,200.00	7,035.21	7,056.44	6,958.85	31.18	26.27	-79.09	-235.35	494.10	598.85	548.68	50.17	11.937	
7,300.00	7,111.70	7,141.75	7,016.85	31.27	26.36	-77.94	-172.85	494.13	600.74	550.58	50.16	11.977	
7,400.00	7,178.50	7,226.12	7,066.50	31.31	26.45	-77.00	-104.69	494.16	602.33	552.15	50.18	12.003	
7,500.00	7,234.32	7,309.76	7,107.47	31.33	26.53	-76.28	-31.83	494.20	603.51	553.23	50.28	12.003	
7,600.00	7,278.05	7,392.86	7,139.50	31.31	26.62	-75.77	44.80	494.24	604.16	553.65	50.51	11.962	
7,700.00	7,308.86	7,475.62	7,162.37	31.26	26.76	-75.50	124.28	494.27	604.24	553.33	50.90	11.870	
7,800.00	7,326.13	7,558.21	7,175.90	31.19	26.96	-75.46	205.72	494.31	603.69	552.20	51.49	11.725	
7,900.00	7,330.00	7,642.08	7,180.00	31.10	27.25	-75.59	289.44	494.36	602.63	550.37	52.26	11.532	
8,000.00	7,330.00	7,742.08	7,180.00	31.03	27.70	-75.57	389.44	494.40	601.85	548.69	53.15	11.323	
8,100.00	7,330.00	7,842.08	7,180.00	30.96	28.26	-75.55	489.43	494.45	601.06	546.86	54.20	11.089	
8,200.00	7,330.00	7,942.07	7,180.00	30.90	28.90	-75.53	589.43	494.50	600.28	544.87	55.41	10.834	
8,300.00	7,330.00	8,042.07	7,180.00	31.05	29.63	-75.51	689.43	494.55	599.49	542.74	56.75	10.563	
8,400.00	7,330.00	8,142.07	7,180.00	31.84	30.42	-75.49	789.42	494.60	598.71	540.47	58.24	10.281	
8,500.00	7,330.00	8,242.06	7,180.00	32.69	31.27	-75.47	889.42	494.65	597.92	538.08	59.84	9.992	
8,600.00	7,330.00	8,342.06	7,180.00	33.60	32.18	-75.45	989.42	494.70	597.14	535.58	61.56	9.700	
8,700.00	7,330.00	8,442.06	7,180.00	34.56	33.14	-75.43	1,089.41	494.75	596.35	532.97	63.39	9.408	
8,800.00	7,330.00	8,542.05	7,180.00	35.55	34.14	-75.41	1,189.41	494.80	595.57	530.26	65.31	9.120	
8,900.00	7,330.00	8,642.05	7,180.00	36.59	35.19	-75.39	1,289.41	494.85	594.79	527.47	67.32	8.836	
9,000.00	7,330.00	8,742.05	7,180.00	37.67	36.28	-75.37	1,389.40	494.89	594.00	524.60	69.40	8.559	
9,100.00	7,330.00	8,842.04	7,180.00	38.78	37.40	-75.35	1,489.40	494.94	593.22	521.65	71.57	8.289	
9,200.00	7,330.00	8,942.04	7,180.00	39.92	38.55	-75.33	1,589.40	494.99	592.43	518.64	73.80	8.028	
9,300.00	7,330.00	9,042.04	7,180.00	41.08	39.74	-75.31	1,689.39	495.04	591.65	515.56	76.08	7.776	
9,400.00	7,330.00	9,142.03	7,180.00	42.28	40.95	-75.29	1,789.39	495.09	590.86	512.44	78.43	7.534	
9,500.00	7,330.00	9,242.03	7,180.00	43.50	42.19	-75.27	1,889.39	495.14	590.08	509.26	80.82	7.301	
9,600.00	7,330.00	9,342.03	7,180.00	44.74	43.44	-75.25	1,989.38	495.19	589.30	506.03	83.27	7.077	
9,700.00	7,330.00	9,442.02	7,180.00	46.01	44.72	-75.23	2,089.38	495.24	588.51	502.76	85.75	6.863	
9,800.00	7,330.00	9,542.02	7,180.00	47.29	46.02	-75.21	2,189.38	495.29	587.73	499.46	88.27	6.658	
9,900.00	7,330.00	9,642.02	7,180.00	48.59	47.34	-75.19	2,289.37	495.34	586.95	496.12	90.83	6.462	
10,000.00	7,330.00	9,742.01	7,180.00	49.91	48.67	-75.17	2,389.37	495.39	586.16	492.75	93.42	6.275	
10,100.00	7,330.00	9,842.01	7,180.00	51.24	50.02	-75.15	2,489.37	495.43	585.38	489.34	96.03	6.095	
10,200.00	7,330.00	9,942.01	7,180.00	52.58	51.38	-75.13	2,589.36	495.48	584.60	485.91	98.68	5.924	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4K-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,300.00	7,330.00	10,042.00	7,180.00	53.94	52.75	-75.11	2,689.36	495.53	583.81	482.46	101.35	5.760	
10,400.00	7,330.00	10,142.00	7,180.00	55.32	54.14	-75.09	2,789.36	495.58	583.03	478.98	104.05	5.604	
10,500.00	7,330.00	10,242.00	7,180.00	56.70	55.53	-75.07	2,889.35	495.63	582.25	475.48	106.76	5.454	
10,600.00	7,330.00	10,341.99	7,180.00	58.09	56.94	-75.05	2,989.35	495.68	581.46	471.97	109.50	5.310	
10,700.00	7,330.00	10,441.99	7,180.00	59.50	58.35	-75.03	3,089.35	495.73	580.68	468.43	112.25	5.173	
10,800.00	7,330.00	10,541.99	7,180.00	60.91	59.78	-75.01	3,189.34	495.78	579.90	464.88	115.02	5.042	
10,900.00	7,330.00	10,641.99	7,180.00	62.33	61.21	-74.99	3,289.34	495.83	579.11	461.31	117.80	4.916	
11,000.00	7,330.00	10,741.98	7,180.00	63.76	62.65	-74.97	3,389.34	495.88	578.33	457.73	120.60	4.795	
11,100.00	7,330.00	10,841.98	7,180.00	65.20	64.10	-74.95	3,489.33	495.93	577.55	454.13	123.42	4.680	
11,200.00	7,330.00	10,941.98	7,180.00	66.64	65.55	-74.93	3,589.33	495.97	576.76	450.52	126.24	4.569	
11,300.00	7,330.00	11,041.97	7,180.00	68.09	67.01	-74.90	3,689.33	496.02	575.98	446.90	129.08	4.462	
11,400.00	7,330.00	11,141.97	7,180.00	69.55	68.47	-74.88	3,789.32	496.07	575.20	443.27	131.93	4.360	
11,500.00	7,330.00	11,241.97	7,180.00	71.01	69.94	-74.86	3,889.32	496.12	574.42	439.63	134.79	4.262	
11,600.00	7,330.00	11,341.96	7,180.00	72.48	71.42	-74.84	3,989.32	496.17	573.63	435.98	137.66	4.167	
11,700.00	7,330.00	11,441.96	7,180.00	73.95	72.90	-74.82	4,089.31	496.22	572.85	432.32	140.53	4.076	
11,800.00	7,330.00	11,541.96	7,180.00	75.43	74.38	-74.80	4,189.31	496.27	572.07	428.65	143.42	3.989	
11,900.00	7,330.00	11,641.95	7,180.00	76.91	75.87	-74.78	4,289.31	496.32	571.29	424.98	146.31	3.905	
12,000.00	7,330.00	11,741.95	7,180.00	78.40	77.36	-74.76	4,389.30	496.37	570.51	421.30	149.21	3.824	
12,005.27	7,330.00	11,747.21	7,180.00	78.47	77.44	-74.75	4,394.57	496.37	570.46	421.10	149.36	3.819 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4L-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.15	-20.00	20.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.15	-20.00	20.00	19.72	0.28	72.458		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.15	-20.00	20.00	19.01	0.99	20.142		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.15	-20.00	20.00	18.29	1.71	11.697 CC, ES		
400.00	399.98	399.98	399.98	1.20	1.21	159.49	0.15	-20.00	21.63	19.21	2.42	8.948		
500.00	499.84	499.84	499.84	1.55	1.57	163.42	0.15	-20.00	26.59	23.47	3.12	8.511		
600.00	599.45	600.57	600.55	1.91	1.92	166.49	-0.73	-18.46	33.39	29.55	3.84	8.698		
700.00	698.70	701.55	701.38	2.29	2.27	167.92	-3.35	-13.84	40.34	35.77	4.57	8.828		
800.00	797.47	802.77	802.21	2.69	2.62	168.41	-7.74	-6.10	47.37	42.05	5.32	8.908		
900.00	895.62	904.23	902.89	3.11	3.00	168.33	-13.90	4.77	54.47	48.39	6.08	8.959		
1,000.00	993.06	1,005.92	1,003.30	3.56	3.39	167.86	-21.84	18.76	61.62	54.77	6.85	8.991		
1,100.00	1,089.99	1,106.45	1,102.08	4.04	3.80	167.13	-31.06	35.01	68.22	60.61	7.61	8.968		
1,200.00	1,186.91	1,206.24	1,200.08	4.54	4.22	166.47	-40.32	51.34	74.63	66.28	8.35	8.933		
1,300.00	1,283.84	1,306.03	1,298.09	5.04	4.64	165.92	-49.58	67.67	81.06	71.95	9.12	8.893		
1,400.00	1,380.76	1,405.83	1,396.10	5.55	5.08	165.45	-58.85	84.00	87.50	77.61	9.88	8.852		
1,500.00	1,477.69	1,505.62	1,494.11	6.07	5.52	165.05	-68.11	100.33	93.93	83.27	10.66	8.811		
1,600.00	1,574.62	1,605.41	1,592.12	6.59	5.96	164.69	-77.37	116.66	100.38	88.93	11.44	8.771		
1,700.00	1,671.54	1,705.20	1,690.13	7.11	6.40	164.38	-86.64	132.99	106.82	94.59	12.23	8.733		
1,800.00	1,768.47	1,804.99	1,788.14	7.63	6.85	164.11	-95.90	149.32	113.27	100.25	13.02	8.697		
1,900.00	1,865.39	1,904.78	1,886.14	8.16	7.30	163.86	-105.16	165.65	119.72	105.90	13.82	8.663		
2,000.00	1,962.32	2,004.57	1,984.15	8.69	7.75	163.64	-114.42	181.98	126.18	111.56	14.62	8.632		
2,100.00	2,059.24	2,104.36	2,082.16	9.22	8.20	163.44	-123.69	198.31	132.63	117.21	15.42	8.602		
2,200.00	2,156.17	2,204.15	2,180.17	9.75	8.65	163.26	-132.95	214.63	139.09	122.86	16.22	8.574		
2,300.00	2,253.10	2,303.94	2,278.18	10.28	9.11	163.10	-142.21	230.96	145.54	128.52	17.03	8.548		
2,400.00	2,350.02	2,403.73	2,376.19	10.81	9.56	162.95	-151.47	247.29	152.00	134.17	17.83	8.524		
2,500.00	2,446.95	2,503.52	2,474.20	11.34	10.02	162.81	-160.74	263.62	158.46	139.82	18.64	8.501		
2,600.00	2,543.87	2,603.31	2,572.20	11.87	10.48	162.68	-170.00	279.95	164.92	145.47	19.45	8.479		
2,700.00	2,640.80	2,703.10	2,670.21	12.40	10.93	162.57	-179.26	296.28	171.38	151.12	20.26	8.459		
2,800.00	2,737.72	2,802.89	2,768.22	12.94	11.39	162.46	-188.53	312.61	177.84	156.77	21.07	8.440		
2,900.00	2,834.65	2,902.68	2,866.23	13.47	11.85	162.35	-197.79	328.94	184.31	162.42	21.88	8.422		
3,000.00	2,931.58	3,002.47	2,964.24	14.01	12.31	162.26	-207.05	345.27	190.77	168.07	22.70	8.405		
3,100.00	3,028.50	3,102.26	3,062.25	14.54	12.77	162.17	-216.31	361.60	197.23	173.72	23.51	8.389		
3,200.00	3,125.43	3,202.05	3,160.26	15.07	13.22	162.09	-225.58	377.93	203.70	179.37	24.32	8.374		
3,300.00	3,222.35	3,301.84	3,258.26	15.61	13.68	162.01	-234.84	394.26	210.16	185.02	25.14	8.360		
3,400.00	3,319.28	3,401.63	3,356.27	16.14	14.14	161.94	-244.10	410.59	216.63	190.67	25.96	8.346		
3,500.00	3,416.20	3,501.42	3,454.28	16.68	14.60	161.87	-253.36	426.92	223.09	196.32	26.77	8.333		
3,600.00	3,513.13	3,601.22	3,552.29	17.21	15.06	161.80	-262.63	443.25	229.56	201.97	27.59	8.321		
3,700.00	3,610.06	3,701.01	3,650.30	17.75	15.52	161.74	-271.89	459.58	236.02	207.62	28.40	8.309		
3,800.00	3,706.98	3,800.80	3,748.31	18.29	15.98	161.68	-281.15	475.91	242.49	213.26	29.22	8.298		
3,900.00	3,803.91	3,900.59	3,846.32	18.82	16.44	161.63	-290.42	492.24	248.95	218.91	30.04	8.288		
4,000.00	3,900.83	4,000.38	3,944.32	19.36	16.90	161.58	-299.68	508.56	255.42	224.56	30.86	8.278		
4,100.00	3,997.76	4,100.17	4,042.33	19.89	17.36	161.53	-308.94	524.89	261.88	230.21	31.67	8.268		
4,200.00	4,094.68	4,199.96	4,140.34	20.43	17.82	161.48	-318.20	541.22	268.35	235.86	32.49	8.259		
4,300.00	4,191.61	4,299.75	4,238.35	20.97	18.28	161.43	-327.47	557.55	274.82	241.51	33.31	8.250		
4,400.00	4,288.54	4,399.54	4,336.36	21.50	18.75	161.39	-336.73	573.88	281.28	247.15	34.13	8.241		
4,500.00	4,385.46	4,499.33	4,434.37	22.04	19.21	161.35	-345.99	590.21	287.75	252.80	34.95	8.233		
4,600.00	4,482.39	4,599.12	4,532.38	22.58	19.67	161.31	-355.26	606.54	294.22	258.45	35.77	8.226		
4,700.00	4,579.31	4,698.91	4,630.39	23.11	20.13	161.27	-364.52	622.87	300.69	264.10	36.59	8.218		
4,800.00	4,676.40	4,798.74	4,728.43	23.64	20.59	161.21	-373.78	639.21	306.50	269.09	37.41	8.193		
4,900.00	4,773.90	4,898.65	4,826.55	24.15	21.05	161.05	-383.06	655.55	310.68	272.45	38.24	8.125		
5,000.00	4,871.76	4,998.48	4,924.60	24.63	21.51	160.78	-392.32	671.89	313.22	274.15	39.07	8.017		
5,100.00	4,969.97	5,093.76	5,018.34	25.09	21.95	160.49	-400.76	686.77	314.90	275.04	39.87	7.899		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4L-35H-O367 - OH - PLAN #1													Offset Site Error: 0.00 usft			
Survey Program: 0-MWD+HDGM															Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor				
5,200.00	5,068.49	5,189.04	5,112.33	25.53	22.36	160.23	-408.43	700.29	316.44	275.80	40.64	7.786				
5,300.00	5,167.30	5,284.31	5,206.57	25.95	22.76	160.00	-415.33	712.44	317.83	276.44	41.39	7.678				
5,400.00	5,266.36	5,379.57	5,301.02	26.35	23.15	159.80	-421.45	723.24	319.07	276.95	42.12	7.576				
5,500.00	5,365.64	5,474.83	5,395.67	26.73	23.52	159.62	-426.80	732.66	320.15	277.33	42.82	7.477				
5,600.00	5,465.12	5,570.09	5,490.47	27.09	23.88	159.47	-431.36	740.71	321.08	277.58	43.49	7.382				
5,700.00	5,564.76	5,665.34	5,585.41	27.44	24.23	159.35	-435.15	747.40	321.85	277.71	44.14	7.291				
5,800.00	5,664.53	5,760.59	5,680.46	27.76	24.56	159.25	-438.17	752.70	322.46	277.70	44.77	7.203				
5,900.00	5,764.41	5,855.84	5,775.60	28.07	24.88	159.18	-440.40	756.64	322.92	277.55	45.37	7.118				
6,000.00	5,864.35	5,951.08	5,870.80	28.36	25.18	159.13	-441.85	759.19	323.22	277.27	45.94	7.035				
6,100.00	5,964.34	6,046.33	5,966.04	28.64	25.47	159.11	-442.52	760.37	323.35	276.87	46.49	6.956				
6,200.00	6,064.34	6,144.63	6,064.34	28.90	25.75	-88.23	-442.56	760.46	323.36	276.31	47.06	6.872				
6,300.00	6,164.34	6,244.63	6,164.34	29.15	26.04	-88.23	-442.56	760.46	323.36	275.71	47.66	6.785				
6,400.00	6,264.34	6,344.63	6,264.34	29.41	26.32	-88.23	-442.56	760.46	323.36	275.10	48.26	6.700				
6,500.00	6,364.34	6,444.63	6,364.34	29.67	26.61	-88.23	-442.56	760.46	323.36	274.49	48.87	6.617				
6,504.10	6,368.44	6,448.73	6,368.44	29.68	26.62	-88.23	-442.56	760.46	323.36	274.47	48.89	6.614				
6,600.00	6,464.34	6,543.32	6,462.97	29.93	26.89	-87.80	-440.12	760.43	323.48	274.10	49.38	6.550				
6,700.00	6,564.34	6,639.06	6,557.56	30.19	27.13	-85.28	-425.87	760.25	324.59	275.08	49.51	6.556				
6,800.00	6,664.30	6,730.03	6,644.93	30.45	27.33	-80.57	-400.76	759.93	328.14	278.90	49.25	6.663				
6,900.00	6,763.23	6,817.88	6,725.64	30.69	27.49	-76.23	-366.19	759.48	333.79	285.00	48.79	6.841				
7,000.00	6,859.26	6,903.41	6,799.57	30.89	27.62	-72.28	-323.29	758.94	340.85	292.71	48.14	7.080				
7,100.00	6,950.51	6,986.98	6,866.37	31.05	27.72	-68.77	-273.16	758.29	348.74	301.45	47.28	7.376				
7,200.00	7,035.21	7,068.91	6,925.76	31.18	27.79	-65.74	-216.79	757.57	356.89	310.65	46.24	7.718				
7,300.00	7,111.70	7,150.00	6,977.83	31.27	27.84	-63.17	-154.68	756.78	364.82	319.69	45.12	8.085				
7,400.00	7,178.50	7,229.01	7,021.49	31.31	27.87	-61.09	-88.89	755.94	372.06	328.10	43.97	8.462				
7,500.00	7,234.32	7,307.66	7,057.50	31.33	27.88	-59.47	-19.02	755.05	378.28	335.30	42.98	8.801				
7,600.00	7,278.05	7,385.68	7,085.43	31.31	27.87	-58.29	53.78	754.12	383.18	340.90	42.28	9.064				
7,700.00	7,308.86	7,463.26	7,105.20	31.26	27.86	-57.54	128.76	753.16	386.56	344.57	41.99	9.206				
7,800.00	7,326.13	7,540.61	7,116.73	31.19	27.86	-57.23	205.20	752.18	388.29	346.08	42.21	9.199				
7,900.00	7,330.00	7,620.50	7,120.00	31.10	27.87	-57.28	284.98	751.16	388.53	345.59	42.94	9.049				
8,000.00	7,330.00	7,720.49	7,120.00	31.03	28.03	-57.32	384.97	749.88	388.96	345.22	43.74	8.892				
8,100.00	7,330.00	7,820.49	7,120.00	30.96	28.47	-57.36	484.96	748.61	389.40	344.69	44.71	8.710				
8,200.00	7,330.00	7,920.49	7,120.00	30.90	29.10	-57.41	584.95	747.33	389.83	344.00	45.83	8.506				
8,300.00	7,330.00	8,020.49	7,120.00	31.05	29.82	-57.45	684.94	746.05	390.27	343.17	47.10	8.286				
8,400.00	7,330.00	8,120.49	7,120.00	31.84	30.63	-57.49	784.93	744.77	390.70	342.21	48.50	8.056				
8,500.00	7,330.00	8,220.49	7,120.00	32.69	31.49	-57.53	884.92	743.49	391.14	341.12	50.02	7.820				
8,600.00	7,330.00	8,320.49	7,120.00	33.60	32.41	-57.57	984.91	742.22	391.58	339.92	51.65	7.581				
8,700.00	7,330.00	8,420.48	7,120.00	34.56	33.38	-57.61	1,084.90	740.94	392.01	338.63	53.39	7.343				
8,800.00	7,330.00	8,520.48	7,120.00	35.55	34.40	-57.65	1,184.89	739.66	392.45	337.23	55.21	7.108				
8,900.00	7,330.00	8,620.48	7,120.00	36.59	35.46	-57.69	1,284.88	738.38	392.89	335.76	57.12	6.878				
9,000.00	7,330.00	8,720.48	7,120.00	37.67	36.55	-57.73	1,384.87	737.10	393.32	334.21	59.11	6.654				
9,100.00	7,330.00	8,820.48	7,120.00	38.78	37.68	-57.77	1,484.86	735.83	393.76	332.59	61.17	6.438				
9,200.00	7,330.00	8,920.48	7,120.00	39.92	38.85	-57.81	1,584.85	734.55	394.20	330.91	63.28	6.229				
9,300.00	7,330.00	9,020.48	7,120.00	41.08	40.04	-57.85	1,684.84	733.27	394.63	329.18	65.46	6.029				
9,400.00	7,330.00	9,120.48	7,120.00	42.28	41.26	-57.89	1,784.83	731.99	395.07	327.39	67.68	5.837				
9,500.00	7,330.00	9,220.47	7,120.00	43.50	42.50	-57.93	1,884.82	730.71	395.51	325.56	69.95	5.654				
9,600.00	7,330.00	9,320.47	7,120.00	44.74	43.77	-57.97	1,984.81	729.43	395.95	323.68	72.27	5.479				
9,700.00	7,330.00	9,420.47	7,120.00	46.01	45.05	-58.01	2,084.80	728.16	396.38	321.77	74.62	5.312				
9,800.00	7,330.00	9,520.47	7,120.00	47.29	46.36	-58.05	2,184.79	726.88	396.82	319.82	77.01	5.153				
9,900.00	7,330.00	9,620.47	7,120.00	48.59	47.68	-58.09	2,284.78	725.60	397.26	317.84	79.42	5.002				
10,000.00	7,330.00	9,720.47	7,120.00	49.91	49.02	-58.13	2,384.78	724.32	397.70	315.83	81.87	4.858				
10,100.00	7,330.00	9,820.47	7,120.00	51.24	50.38	-58.17	2,484.77	723.04	398.14	313.79	84.35	4.720				
10,200.00	7,330.00	9,920.46	7,120.00	52.58	51.74	-58.21	2,584.76	721.77	398.58	311.73	86.85	4.589				

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4L-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.00	7,330.00	10,020.46	7,120.00	53.94	53.12	-58.24	2,684.75	720.49	399.02	309.64	89.37	4.465	
10,400.00	7,330.00	10,120.46	7,120.00	55.32	54.52	-58.28	2,784.74	719.21	399.46	307.54	91.92	4.346	
10,500.00	7,330.00	10,220.46	7,120.00	56.70	55.92	-58.32	2,884.73	717.93	399.89	305.41	94.48	4.232	
10,600.00	7,330.00	10,320.46	7,120.00	58.09	57.33	-58.36	2,984.72	716.65	400.33	303.27	97.07	4.124	
10,700.00	7,330.00	10,420.46	7,120.00	59.50	58.76	-58.40	3,084.71	715.38	400.77	301.11	99.67	4.021	
10,800.00	7,330.00	10,520.46	7,120.00	60.91	60.19	-58.44	3,184.70	714.10	401.21	298.93	102.28	3.923	
10,900.00	7,330.00	10,620.46	7,120.00	62.33	61.63	-58.48	3,284.69	712.82	401.65	296.74	104.91	3.829	
11,000.00	7,330.00	10,720.45	7,120.00	63.76	63.07	-58.52	3,384.68	711.54	402.10	294.54	107.56	3.739	
11,100.00	7,330.00	10,820.45	7,120.00	65.20	64.53	-58.55	3,484.67	710.26	402.54	292.32	110.21	3.652	
11,200.00	7,330.00	10,920.45	7,120.00	66.64	65.99	-58.59	3,584.66	708.99	402.98	290.10	112.88	3.570	
11,300.00	7,330.00	11,020.45	7,120.00	68.09	67.46	-58.63	3,684.65	707.71	403.42	287.86	115.56	3.491	
11,400.00	7,330.00	11,120.45	7,120.00	69.55	68.93	-58.67	3,784.64	706.43	403.86	285.61	118.25	3.415	
11,500.00	7,330.00	11,220.45	7,120.00	71.01	70.41	-58.71	3,884.63	705.15	404.30	283.35	120.95	3.343	
11,600.00	7,330.00	11,320.45	7,120.00	72.48	71.89	-58.74	3,984.62	703.87	404.74	281.08	123.66	3.273	
11,700.00	7,330.00	11,420.44	7,120.00	73.95	73.38	-58.78	4,084.61	702.60	405.18	278.80	126.38	3.206	
11,800.00	7,330.00	11,520.44	7,120.00	75.43	74.87	-58.82	4,184.60	701.32	405.62	276.51	129.11	3.142	
11,800.00	7,330.00	11,520.44	7,120.00	75.43	74.87	-58.82	4,184.61	701.32	405.62	276.51	129.11	3.142	
11,900.00	7,330.00	11,597.90	7,120.00	76.91	76.03	-58.85	4,262.05	700.33	406.69	275.87	130.82	3.109 SF	
12,000.00	7,330.00	11,597.90	7,120.00	78.40	76.03	-58.85	4,262.05	700.33	424.58	299.08	125.50	3.383	
12,005.27	7,330.00	11,597.90	7,120.00	78.47	76.03	-58.85	4,262.05	700.33	426.15	301.06	125.09	3.407	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4M-35H-O367 - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.58	0.07	-10.00	10.00					
100.00	100.00	100.00	100.00	0.14	0.14	-89.58	0.07	-10.00	10.00	9.72	0.28	36.229		
200.00	200.00	200.00	200.00	0.50	0.50	-89.58	0.07	-10.00	10.00	9.01	0.99	10.071		
300.00	300.00	300.00	300.00	0.85	0.85	-89.58	0.07	-10.00	10.00	8.29	1.71	5.848	CC, ES	
400.00	399.98	399.98	399.98	1.20	1.21	161.00	0.07	-10.00	11.63	9.22	2.42	4.814		
500.00	499.84	500.36	500.34	1.55	1.56	165.03	-0.68	-8.41	15.00	11.87	3.13	4.793		
600.00	599.45	600.86	600.69	1.91	1.91	167.05	-2.95	-3.64	18.43	14.57	3.86	4.772		
700.00	698.70	701.48	700.93	2.29	2.27	167.98	-6.74	4.31	21.90	17.29	4.61	4.746		
800.00	797.47	802.23	800.91	2.69	2.64	168.27	-12.05	15.45	25.39	20.01	5.38	4.721		
900.00	895.62	903.09	900.51	3.11	3.04	168.14	-18.87	29.78	28.89	22.74	6.15	4.697		
1,000.00	993.06	1,004.07	999.61	3.56	3.46	167.74	-27.20	47.29	32.40	25.47	6.93	4.674		
1,100.00	1,089.99	1,104.33	1,097.46	4.04	3.90	167.07	-36.57	66.97	35.50	27.82	7.68	4.621		
1,200.00	1,186.91	1,204.28	1,195.00	4.54	4.36	166.47	-45.97	86.71	38.51	30.07	8.43	4.565		
1,300.00	1,283.84	1,304.24	1,292.53	5.04	4.82	165.96	-55.36	106.44	41.52	32.32	9.20	4.513		
1,400.00	1,380.76	1,404.19	1,390.07	5.55	5.29	165.51	-64.76	126.18	44.53	34.56	9.97	4.465		
1,500.00	1,477.69	1,504.14	1,487.60	6.07	5.77	165.13	-74.16	145.92	47.55	36.79	10.76	4.420		
1,600.00	1,574.62	1,604.10	1,585.14	6.59	6.24	164.79	-83.55	165.65	50.56	39.02	11.55	4.379		
1,700.00	1,671.54	1,704.05	1,682.67	7.11	6.73	164.48	-92.95	185.39	53.58	41.24	12.34	4.342		
1,800.00	1,768.47	1,804.01	1,780.21	7.63	7.21	164.21	-102.35	205.13	56.60	43.46	13.14	4.308		
1,900.00	1,865.39	1,903.96	1,877.74	8.16	7.70	163.97	-111.74	224.86	59.62	45.68	13.94	4.276		
2,000.00	1,962.32	2,003.91	1,975.27	8.69	8.19	163.75	-121.14	244.60	62.64	47.90	14.75	4.248		
2,100.00	2,059.24	2,103.87	2,072.81	9.22	8.68	163.55	-130.53	264.34	65.67	50.11	15.56	4.221		
2,200.00	2,156.17	2,203.82	2,170.34	9.75	9.17	163.37	-139.93	284.07	68.69	52.32	16.37	4.197		
2,300.00	2,253.10	2,303.78	2,267.88	10.28	9.66	163.20	-149.33	303.81	71.71	54.53	17.18	4.174		
2,400.00	2,350.02	2,403.73	2,365.41	10.81	10.15	163.05	-158.72	323.55	74.74	56.74	18.00	4.153		
2,500.00	2,446.95	2,503.68	2,462.95	11.34	10.65	162.91	-168.12	343.28	77.76	58.95	18.81	4.134		
2,600.00	2,543.87	2,603.64	2,560.48	11.87	11.14	162.78	-177.52	363.02	80.79	61.16	19.63	4.115		
2,700.00	2,640.80	2,703.59	2,658.02	12.40	11.63	162.65	-186.91	382.75	83.82	63.37	20.45	4.099		
2,800.00	2,737.72	2,803.55	2,755.55	12.94	12.13	162.54	-196.31	402.49	86.84	65.57	21.27	4.083		
2,900.00	2,834.65	2,903.50	2,853.09	13.47	12.62	162.44	-205.71	422.23	89.87	67.78	22.09	4.068		
3,000.00	2,931.58	3,003.46	2,950.62	14.01	13.12	162.34	-215.10	441.96	92.90	69.98	22.91	4.054		
3,100.00	3,028.50	3,103.41	3,048.15	14.54	13.62	162.25	-224.50	461.70	95.92	72.19	23.74	4.041		
3,200.00	3,125.43	3,203.36	3,145.69	15.07	14.11	162.16	-233.89	481.44	98.95	74.39	24.56	4.029		
3,300.00	3,222.35	3,303.32	3,243.22	15.61	14.61	162.08	-243.29	501.17	101.98	76.59	25.39	4.017		
3,400.00	3,319.28	3,403.27	3,340.76	16.14	15.11	162.00	-252.69	520.91	105.01	78.80	26.21	4.006		
3,500.00	3,416.20	3,503.23	3,438.29	16.68	15.60	161.93	-262.08	540.65	108.04	81.00	27.04	3.996		
3,600.00	3,513.13	3,603.18	3,535.83	17.21	16.10	161.86	-271.48	560.38	111.06	83.20	27.86	3.986		
3,700.00	3,610.06	3,703.13	3,633.36	17.75	16.60	161.80	-280.88	580.12	114.09	85.40	28.69	3.977		
3,800.00	3,706.98	3,803.09	3,730.90	18.29	17.10	161.74	-290.27	599.86	117.12	87.61	29.52	3.968		
3,900.00	3,803.91	3,903.04	3,828.43	18.82	17.59	161.68	-299.67	619.59	120.15	89.81	30.34	3.960		
4,000.00	3,900.83	4,003.00	3,925.97	19.36	18.09	161.62	-309.06	639.33	123.18	92.01	31.17	3.952		
4,100.00	3,997.76	4,102.95	4,023.50	19.89	18.59	161.57	-318.46	659.07	126.21	94.21	32.00	3.944		
4,200.00	4,094.68	4,202.90	4,121.03	20.43	19.09	161.52	-327.86	678.80	129.24	96.41	32.83	3.937		
4,300.00	4,191.61	4,302.86	4,218.57	20.97	19.59	161.47	-337.25	698.54	132.27	98.61	33.66	3.930		
4,400.00	4,288.54	4,402.81	4,316.10	21.50	20.08	161.42	-346.65	718.28	135.29	100.81	34.48	3.923		
4,500.00	4,385.46	4,502.77	4,413.64	22.04	20.58	161.38	-356.05	738.01	138.32	103.01	35.31	3.917		
4,600.00	4,482.39	4,602.72	4,511.17	22.58	21.08	161.34	-365.44	757.75	141.35	105.21	36.14	3.911		
4,700.00	4,579.31	4,702.67	4,608.71	23.11	21.58	161.30	-374.84	777.49	144.38	107.41	36.97	3.905		
4,800.00	4,676.40	4,802.64	4,706.26	23.64	22.08	161.18	-384.24	797.23	146.76	108.95	37.81	3.882		
4,900.00	4,773.90	4,901.28	4,802.56	24.15	22.57	160.89	-393.39	816.45	147.77	109.11	38.66	3.823		
5,000.00	4,871.76	5,000.00	4,899.28	24.63	23.04	160.61	-401.90	834.33	148.58	109.09	39.49	3.762		
5,100.00	4,969.97	5,096.57	4,994.21	25.09	23.48	160.35	-409.53	850.36	149.32	109.04	40.28	3.707		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4M-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.00	5,068.49	5,194.21	5,090.47	25.53	23.91	160.12	-416.55	865.09	150.00	108.94	41.06	3.653	
5,300.00	5,167.30	5,291.85	5,186.99	25.95	24.32	159.92	-422.86	878.35	150.62	108.81	41.81	3.603	
5,400.00	5,266.36	5,389.48	5,283.75	26.35	24.72	159.74	-428.46	890.11	151.16	108.63	42.53	3.554	
5,500.00	5,365.64	5,487.10	5,380.71	26.73	25.09	159.58	-433.35	900.38	151.64	108.41	43.23	3.508	
5,600.00	5,465.12	5,584.72	5,477.84	27.09	25.45	159.45	-437.53	909.16	152.05	108.15	43.90	3.464	
5,700.00	5,564.76	5,682.34	5,575.13	27.44	25.80	159.34	-441.00	916.45	152.39	107.85	44.54	3.421	
5,800.00	5,664.53	5,779.96	5,672.53	27.76	26.13	159.25	-443.75	922.23	152.66	107.50	45.16	3.381	
5,900.00	5,764.41	5,877.57	5,770.03	28.07	26.44	159.19	-445.79	926.52	152.86	107.11	45.75	3.342	
6,000.00	5,864.35	5,975.19	5,867.59	28.36	26.74	159.14	-447.12	929.31	152.99	106.68	46.31	3.304	
6,100.00	5,964.34	6,072.80	5,965.19	28.64	27.02	159.13	-447.73	930.59	153.05	106.21	46.84	3.268	
6,200.00	6,064.34	6,171.95	6,064.34	28.90	27.29	-88.21	-447.78	930.69	153.05	105.66	47.40	3.229	
6,300.00	6,164.34	6,271.95	6,164.34	29.15	27.56	-88.21	-447.78	930.69	153.05	105.06	47.99	3.189	
6,400.00	6,264.34	6,371.95	6,264.34	29.41	27.83	-88.21	-447.78	930.69	153.05	104.46	48.59	3.150	
6,500.00	6,364.34	6,471.95	6,364.34	29.67	28.10	-88.21	-447.78	930.69	153.05	103.86	49.20	3.111	
6,516.49	6,380.83	6,488.43	6,380.83	29.71	28.15	-88.21	-447.78	930.69	153.05	103.76	49.30	3.105	
6,600.00	6,464.34	6,571.94	6,464.34	29.93	28.38	-88.21	-447.78	930.69	153.05	103.25	49.80	3.073	
6,700.00	6,564.34	6,670.60	6,562.68	30.19	28.63	-85.65	-440.92	930.68	153.44	103.49	49.95	3.072	
6,800.00	6,664.30	6,766.05	6,656.06	30.45	28.85	-78.55	-421.49	930.64	156.01	106.64	49.37	3.160	
6,900.00	6,763.23	6,858.88	6,743.62	30.69	29.03	-71.80	-390.85	930.59	160.91	112.34	48.57	3.313	
7,000.00	6,859.26	6,950.00	6,825.01	30.89	29.18	-65.82	-350.02	930.51	167.42	119.89	47.53	3.522	
7,100.00	6,950.51	7,038.59	6,898.55	31.05	29.28	-60.73	-300.73	930.42	174.87	128.84	46.03	3.799	
7,200.00	7,035.21	7,126.00	6,964.61	31.18	29.36	-56.46	-243.57	930.32	182.62	138.48	44.15	4.137	
7,300.00	7,111.70	7,212.11	7,022.40	31.27	29.41	-52.97	-179.81	930.20	190.14	148.20	41.94	4.533	
7,400.00	7,178.50	7,300.00	7,073.07	31.31	29.43	-50.11	-108.06	930.07	196.99	157.07	39.92	4.934	
7,500.00	7,234.32	7,381.31	7,111.80	31.33	29.43	-48.04	-36.61	929.94	202.75	165.45	37.30	5.436	
7,600.00	7,278.05	7,464.83	7,142.88	31.31	29.40	-46.46	40.85	929.80	207.20	171.84	35.37	5.859	
7,700.00	7,308.86	7,550.00	7,165.09	31.26	29.36	-45.40	123.03	929.65	210.16	175.97	34.19	6.147	
7,800.00	7,326.13	7,630.65	7,176.98	31.19	29.31	-44.87	202.75	929.51	211.45	177.77	33.68	6.278	
7,900.00	7,330.00	7,716.87	7,180.00	31.10	29.24	-44.74	288.88	929.35	211.20	176.99	34.21	6.174	
8,000.00	7,330.00	7,816.87	7,180.00	31.03	29.17	-44.63	388.88	929.17	210.79	175.93	34.86	6.047	
8,100.00	7,330.00	7,916.87	7,180.00	30.96	29.12	-44.52	488.88	928.99	210.38	174.72	35.66	5.899	
8,200.00	7,330.00	8,016.87	7,180.00	30.90	29.53	-44.41	588.88	928.80	209.97	173.35	36.62	5.734	
8,300.00	7,330.00	8,116.87	7,180.00	31.05	30.27	-44.29	688.87	928.62	209.57	171.86	37.71	5.557	
8,400.00	7,330.00	8,216.86	7,180.00	31.84	31.07	-44.18	788.87	928.44	209.17	170.24	38.92	5.374	
8,500.00	7,330.00	8,316.86	7,180.00	32.69	31.94	-44.07	888.87	928.26	208.76	168.51	40.25	5.187	
8,600.00	7,330.00	8,416.86	7,180.00	33.60	32.85	-43.95	988.87	928.08	208.36	166.69	41.67	5.000	
8,700.00	7,330.00	8,516.86	7,180.00	34.56	33.81	-43.84	1,088.87	927.89	207.96	164.77	43.18	4.816	
8,800.00	7,330.00	8,616.86	7,180.00	35.55	34.82	-43.72	1,188.87	927.71	207.56	162.78	44.77	4.636	
8,900.00	7,330.00	8,716.86	7,180.00	36.59	35.87	-43.61	1,288.86	927.53	207.16	160.73	46.43	4.462	
9,000.00	7,330.00	8,816.85	7,180.00	37.67	36.95	-43.49	1,388.86	927.35	206.76	158.61	48.15	4.294	
9,100.00	7,330.00	8,916.85	7,180.00	38.78	38.06	-43.37	1,488.86	927.17	206.36	156.44	49.92	4.134	
9,200.00	7,330.00	9,016.85	7,180.00	39.92	39.21	-43.26	1,588.86	926.98	205.96	154.22	51.74	3.981	
9,300.00	7,330.00	9,116.85	7,180.00	41.08	40.39	-43.14	1,688.86	926.80	205.56	151.96	53.60	3.835	
9,400.00	7,330.00	9,216.85	7,180.00	42.28	41.59	-43.02	1,788.85	926.62	205.17	149.67	55.50	3.697	
9,500.00	7,330.00	9,316.85	7,180.00	43.50	42.82	-42.90	1,888.85	926.44	204.77	147.34	57.43	3.566	
9,600.00	7,330.00	9,416.84	7,180.00	44.74	44.07	-42.78	1,988.85	926.26	204.38	144.99	59.39	3.441	
9,700.00	7,330.00	9,516.84	7,180.00	46.01	45.34	-42.66	2,088.85	926.08	203.99	142.62	61.37	3.324	
9,800.00	7,330.00	9,616.84	7,180.00	47.29	46.63	-42.54	2,188.85	925.89	203.59	140.22	63.37	3.213	
9,900.00	7,330.00	9,716.84	7,180.00	48.59	47.94	-42.42	2,288.85	925.71	203.20	137.81	65.40	3.107	
10,000.00	7,330.00	9,816.84	7,180.00	49.91	49.26	-42.30	2,388.84	925.53	202.81	135.38	67.43	3.008	
10,100.00	7,330.00	9,916.84	7,180.00	51.24	50.60	-42.18	2,488.84	925.35	202.42	132.94	69.49	2.913	
10,200.00	7,330.00	10,016.83	7,180.00	52.58	51.95	-42.06	2,588.84	925.17	202.03	130.48	71.55	2.824	

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



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4M-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,300.00	7,330.00	10,116.83	7,180.00	53.94	53.32	-41.94	2,688.84	924.98	201.65	128.02	73.63	2.739	
10,400.00	7,330.00	10,216.83	7,180.00	55.32	54.69	-41.81	2,788.84	924.80	201.26	125.55	75.71	2.658	
10,500.00	7,330.00	10,316.83	7,180.00	56.70	56.08	-41.69	2,888.83	924.62	200.87	123.07	77.80	2.582	
10,600.00	7,330.00	10,416.83	7,180.00	58.09	57.48	-41.57	2,988.83	924.44	200.49	120.59	79.90	2.509	
10,700.00	7,330.00	10,516.83	7,180.00	59.50	58.89	-41.44	3,088.83	924.26	200.10	118.10	82.00	2.440	
10,800.00	7,330.00	10,616.82	7,180.00	60.91	60.30	-41.32	3,188.83	924.07	199.72	115.61	84.11	2.375	
10,900.00	7,330.00	10,716.82	7,180.00	62.33	61.73	-41.19	3,288.83	923.89	199.34	113.12	86.22	2.312	
11,000.00	7,330.00	10,816.82	7,180.00	63.76	63.16	-41.07	3,388.83	923.71	198.96	110.63	88.33	2.252	
11,100.00	7,330.00	10,916.82	7,180.00	65.20	64.60	-40.94	3,488.82	923.53	198.58	108.13	90.44	2.196	
11,200.00	7,330.00	11,016.82	7,180.00	66.64	66.05	-40.81	3,588.82	923.35	198.20	105.64	92.56	2.141	
11,300.00	7,330.00	11,116.82	7,180.00	68.09	67.50	-40.69	3,688.82	923.16	197.82	103.15	94.67	2.090	
11,400.00	7,330.00	11,216.81	7,180.00	69.55	68.96	-40.56	3,788.82	922.98	197.44	100.66	96.78	2.040	
11,500.00	7,330.00	11,316.81	7,180.00	71.01	70.42	-40.43	3,888.82	922.80	197.07	98.17	98.90	1.993	
11,600.00	7,330.00	11,416.81	7,180.00	72.48	71.89	-40.30	3,988.81	922.62	196.69	95.68	101.01	1.947	
11,700.00	7,330.00	11,516.81	7,180.00	73.95	73.36	-40.17	4,088.81	922.44	196.32	93.20	103.12	1.904	
11,800.00	7,330.00	11,616.81	7,180.00	75.43	74.84	-40.05	4,188.81	922.25	195.94	90.72	105.23	1.862	
11,900.00	7,330.00	11,716.80	7,180.00	76.91	76.33	-39.92	4,288.81	922.07	195.57	88.24	107.33	1.822	
12,000.00	7,330.00	11,816.80	7,180.00	78.40	77.81	-39.78	4,388.81	921.89	195.20	85.77	109.43	1.784	
12,005.27	7,330.00	11,822.07	7,180.00	78.47	77.89	-39.78	4,394.07	921.88	195.18	85.64	109.54	1.782 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4O-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.42	-0.07	10.00	10.00				
100.00	100.00	100.00	100.00	0.14	0.14	90.42	-0.07	10.00	10.00	9.72	0.28	36.229	
200.00	200.00	200.00	200.00	0.50	0.50	90.42	-0.07	10.00	10.00	9.01	0.99	10.071 CC, ES	
300.00	300.00	299.63	299.61	0.85	0.85	93.37	-0.68	11.62	11.65	9.91	1.74	6.706	
400.00	399.98	399.13	398.97	1.20	1.20	-15.58	-2.51	16.47	15.01	12.52	2.49	6.017	
500.00	499.84	498.50	497.96	1.55	1.56	-13.60	-5.56	24.54	18.42	15.16	3.26	5.657	
600.00	599.45	597.76	596.48	1.91	1.94	-12.56	-9.80	35.79	21.84	17.82	4.03	5.427	
700.00	698.70	696.90	694.41	2.29	2.34	-12.09	-15.24	50.22	25.27	20.47	4.80	5.267	
800.00	797.47	795.92	791.63	2.69	2.76	-11.96	-21.87	67.78	28.69	23.11	5.57	5.147	
900.00	895.62	894.83	888.04	3.11	3.22	-12.08	-29.66	88.45	32.09	25.74	6.35	5.053	
1,000.00	993.06	993.74	983.63	3.56	3.71	-12.38	-38.62	112.21	35.47	28.33	7.13	4.974	
1,100.00	1,089.99	1,093.71	1,079.88	4.04	4.24	-12.96	-48.16	137.48	38.12	30.25	7.87	4.845	
1,200.00	1,186.91	1,193.67	1,176.12	4.54	4.78	-13.47	-57.69	162.76	40.75	32.13	8.62	4.725	
1,300.00	1,283.84	1,293.64	1,272.37	5.04	5.32	-13.92	-67.22	188.03	43.39	33.99	9.39	4.618	
1,400.00	1,380.76	1,393.60	1,368.62	5.55	5.87	-14.31	-76.75	213.30	46.02	35.85	10.18	4.523	
1,500.00	1,477.69	1,493.57	1,464.87	6.07	6.43	-14.67	-86.28	238.57	48.66	37.70	10.97	4.437	
1,600.00	1,574.62	1,593.53	1,561.11	6.59	6.99	-14.99	-95.81	263.84	51.30	39.54	11.77	4.360	
1,700.00	1,671.54	1,693.50	1,657.36	7.11	7.55	-15.27	-105.35	289.11	53.95	41.38	12.57	4.291	
1,800.00	1,768.47	1,793.46	1,753.61	7.63	8.11	-15.53	-114.88	314.39	56.59	43.21	13.38	4.229	
1,900.00	1,865.39	1,893.43	1,849.85	8.16	8.68	-15.77	-124.41	339.66	59.24	45.04	14.20	4.173	
2,000.00	1,962.32	1,993.39	1,946.10	8.69	9.24	-15.98	-133.94	364.93	61.88	46.87	15.01	4.121	
2,100.00	2,059.24	2,093.36	2,042.35	9.22	9.81	-16.18	-143.47	390.20	64.53	48.69	15.84	4.075	
2,200.00	2,156.17	2,193.32	2,138.59	9.75	10.38	-16.37	-153.00	415.47	67.18	50.51	16.66	4.032	
2,300.00	2,253.10	2,293.28	2,234.84	10.28	10.94	-16.53	-162.54	440.74	69.82	52.34	17.49	3.993	
2,400.00	2,350.02	2,393.25	2,331.09	10.81	11.51	-16.69	-172.07	466.01	72.47	54.16	18.32	3.957	
2,500.00	2,446.95	2,493.21	2,427.33	11.34	12.08	-16.84	-181.60	491.29	75.12	55.97	19.15	3.923	
2,600.00	2,543.87	2,593.18	2,523.58	11.87	12.65	-16.97	-191.13	516.56	77.77	57.79	19.98	3.893	
2,700.00	2,640.80	2,693.14	2,619.83	12.40	13.22	-17.10	-200.66	541.83	80.42	59.61	20.81	3.864	
2,800.00	2,737.72	2,793.11	2,716.07	12.94	13.79	-17.22	-210.19	567.10	83.07	61.42	21.65	3.837	
2,900.00	2,834.65	2,893.07	2,812.32	13.47	14.37	-17.33	-219.72	592.37	85.72	63.24	22.48	3.812	
3,000.00	2,931.58	2,993.04	2,908.57	14.01	14.94	-17.43	-229.26	617.64	88.37	65.05	23.32	3.789	
3,100.00	3,028.50	3,093.00	3,004.81	14.54	15.51	-17.53	-238.79	642.91	91.02	66.86	24.16	3.767	
3,200.00	3,125.43	3,192.97	3,101.06	15.07	16.08	-17.63	-248.32	668.19	93.67	68.67	25.00	3.747	
3,300.00	3,222.35	3,292.93	3,197.31	15.61	16.65	-17.71	-257.85	693.46	96.33	70.49	25.84	3.728	
3,400.00	3,319.28	3,392.90	3,293.55	16.14	17.22	-17.80	-267.38	718.73	98.98	72.30	26.68	3.710	
3,500.00	3,416.20	3,492.86	3,389.80	16.68	17.80	-17.88	-276.91	744.00	101.63	74.11	27.52	3.693	
3,600.00	3,513.13	3,592.83	3,486.05	17.21	18.37	-17.95	-286.45	769.27	104.28	75.92	28.36	3.676	
3,700.00	3,610.06	3,692.79	3,582.30	17.75	18.94	-18.02	-295.98	794.54	106.93	77.73	29.21	3.661	
3,800.00	3,706.98	3,792.76	3,678.54	18.29	19.52	-18.09	-305.51	819.81	109.59	79.54	30.05	3.647	
3,900.00	3,803.91	3,892.72	3,774.79	18.82	20.09	-18.15	-315.04	845.09	112.24	81.34	30.89	3.633	
4,000.00	3,900.83	3,992.69	3,871.04	19.36	20.66	-18.21	-324.57	870.36	114.89	83.15	31.74	3.620	
4,100.00	3,997.76	4,092.65	3,967.28	19.89	21.24	-18.27	-334.10	895.63	117.54	84.96	32.58	3.608	
4,200.00	4,094.68	4,192.61	4,063.53	20.43	21.81	-18.33	-343.64	920.90	120.20	86.77	33.43	3.596	
4,300.00	4,191.61	4,292.58	4,159.78	20.97	22.38	-18.38	-353.17	946.17	122.85	88.58	34.27	3.584	
4,400.00	4,288.54	4,392.54	4,256.02	21.50	22.96	-18.43	-362.70	971.44	125.50	90.39	35.12	3.574	
4,500.00	4,385.46	4,492.51	4,352.27	22.04	23.53	-18.48	-372.23	996.71	128.16	92.19	35.96	3.563	
4,600.00	4,482.39	4,592.47	4,448.52	22.58	24.10	-18.53	-381.76	1,021.99	130.81	94.00	36.81	3.554	
4,700.00	4,579.31	4,694.63	4,547.10	23.11	24.68	-18.68	-391.21	1,047.05	132.67	94.97	37.69	3.520	
4,800.00	4,676.40	4,796.90	4,646.25	23.64	25.23	-18.96	-400.05	1,070.48	133.47	94.89	38.58	3.460	
4,900.00	4,773.90	4,899.18	4,745.84	24.15	25.75	-19.22	-408.27	1,092.26	134.21	94.77	39.44	3.403	
5,000.00	4,871.76	5,001.46	4,845.84	24.63	26.25	-19.46	-415.85	1,112.38	134.90	94.63	40.27	3.350	
5,100.00	4,969.97	5,103.76	4,946.22	25.09	26.72	-19.67	-422.81	1,130.82	135.53	94.46	41.07	3.300	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4O-35H-O367 - OH - PLAN #1												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.00	5,068.49	5,206.07	5,046.95	25.53	27.17	-19.86	-429.13	1,147.58	136.10	94.25	41.85	3.252	
5,300.00	5,167.30	5,308.38	5,147.98	25.95	27.60	-20.04	-434.82	1,162.66	136.62	94.03	42.60	3.207	
5,400.00	5,266.36	5,410.70	5,249.30	26.35	28.00	-20.19	-439.87	1,176.06	137.08	93.77	43.31	3.165	
5,500.00	5,365.64	5,513.03	5,350.86	26.73	28.38	-20.32	-444.28	1,187.75	137.49	93.48	44.00	3.125	
5,600.00	5,465.12	5,615.36	5,452.63	27.09	28.75	-20.43	-448.05	1,197.75	137.83	93.17	44.66	3.086	
5,700.00	5,564.76	5,717.70	5,554.58	27.44	29.09	-20.53	-451.18	1,206.05	138.12	92.83	45.29	3.050	
5,800.00	5,664.53	5,820.04	5,656.67	27.76	29.41	-20.60	-453.67	1,212.64	138.35	92.45	45.89	3.015	
5,900.00	5,764.41	5,922.38	5,758.88	28.07	29.72	-20.65	-455.51	1,217.52	138.52	92.05	46.46	2.981	
6,000.00	5,864.35	6,024.73	5,861.17	28.36	30.01	-20.69	-456.71	1,220.70	138.63	91.62	47.01	2.949	
6,100.00	5,964.34	6,127.07	5,963.50	28.64	30.28	-20.71	-457.26	1,222.16	138.68	91.16	47.52	2.918	
6,200.00	6,064.34	6,227.91	6,064.34	28.90	30.52	91.96	-457.30	1,222.27	138.68	90.62	48.06	2.885	
6,300.00	6,164.34	6,327.91	6,164.34	29.15	30.76	91.96	-457.30	1,222.27	138.68	90.03	48.65	2.851	
6,400.00	6,264.34	6,427.91	6,264.34	29.41	31.01	91.96	-457.30	1,222.27	138.68	89.44	49.24	2.817	
6,500.00	6,364.34	6,527.91	6,364.34	29.67	31.26	91.96	-457.30	1,222.27	138.68	88.85	49.83	2.783	
6,600.00	6,464.34	6,628.35	6,464.71	29.93	31.50	90.89	-454.71	1,222.23	138.58	88.00	50.58	2.740	
6,638.58	6,502.92	6,666.81	6,502.92	30.03	31.58	89.11	-450.41	1,222.16	138.51	87.38	51.13	2.709	
6,700.00	6,564.34	6,726.78	6,561.90	30.19	31.71	84.66	-439.64	1,222.00	138.95	86.51	52.44	2.650	
6,800.00	6,664.30	6,820.03	6,651.25	30.45	31.88	74.88	-413.20	1,221.59	143.55	88.26	55.29	2.596	
6,900.00	6,763.23	6,909.82	6,733.35	30.69	32.02	65.21	-376.99	1,221.02	152.87	95.67	57.20	2.672	
7,000.00	6,859.26	6,997.00	6,808.12	30.89	32.12	57.16	-332.28	1,220.33	165.22	107.68	57.54	2.872	
7,100.00	6,950.51	7,081.96	6,875.24	31.05	32.19	50.69	-280.27	1,219.52	179.10	122.64	56.46	3.172	
7,200.00	7,035.21	7,165.07	6,934.49	31.18	32.24	45.59	-222.08	1,218.62	193.29	138.90	54.38	3.554	
7,300.00	7,111.70	7,250.00	6,987.67	31.27	32.26	41.49	-155.92	1,217.60	206.90	154.77	52.14	3.969	
7,400.00	7,178.50	7,326.91	7,028.76	31.31	32.26	38.54	-90.96	1,216.59	219.17	170.35	48.82	4.490	
7,500.00	7,234.32	7,406.17	7,063.57	31.33	32.24	36.22	-19.80	1,215.48	229.70	183.67	46.03	4.990	
7,600.00	7,278.05	7,484.65	7,090.09	31.31	32.20	34.50	54.01	1,214.34	238.10	194.44	43.66	5.453	
7,700.00	7,308.86	7,562.56	7,108.27	31.26	32.14	33.31	129.72	1,213.17	244.14	202.13	42.00	5.812	
7,800.00	7,326.13	7,640.09	7,118.09	31.19	32.08	32.58	206.57	1,211.97	247.63	206.36	41.27	6.000	
7,900.00	7,330.00	7,724.78	7,120.00	31.10	32.01	32.28	291.21	1,210.66	248.39	206.73	41.66	5.963	
8,000.00	7,330.00	7,824.78	7,120.00	31.03	31.93	32.13	391.19	1,209.11	247.97	205.37	42.60	5.820	
8,100.00	7,330.00	7,924.77	7,120.00	30.96	31.86	31.97	491.18	1,207.56	247.55	203.92	43.63	5.674	
8,200.00	7,330.00	8,024.77	7,120.00	30.90	31.80	31.82	591.16	1,206.01	247.13	202.40	44.73	5.524	
8,300.00	7,330.00	8,124.77	7,120.00	31.05	31.76	31.66	691.15	1,204.46	246.72	200.81	45.90	5.375	
8,400.00	7,330.00	8,224.76	7,120.00	31.84	31.84	31.50	791.13	1,202.91	246.30	199.17	47.14	5.225	
8,500.00	7,330.00	8,324.76	7,120.00	32.69	32.57	31.35	891.12	1,201.36	245.89	197.47	48.42	5.078	
8,600.00	7,330.00	8,424.76	7,120.00	33.60	33.48	31.19	991.10	1,199.81	245.48	195.73	49.76	4.934	
8,700.00	7,330.00	8,524.75	7,120.00	34.56	34.45	31.03	1,091.09	1,198.26	245.08	193.94	51.14	4.792	
8,800.00	7,330.00	8,624.75	7,120.00	35.55	35.47	30.87	1,191.07	1,196.70	244.67	192.11	52.56	4.655	
8,900.00	7,330.00	8,724.75	7,120.00	36.59	36.53	30.71	1,291.06	1,195.15	244.27	190.25	54.01	4.522	
9,000.00	7,330.00	8,824.74	7,120.00	37.67	37.62	30.55	1,391.04	1,193.60	243.86	188.36	55.50	4.394	
9,100.00	7,330.00	8,924.74	7,120.00	38.78	38.74	30.39	1,491.03	1,192.05	243.46	186.44	57.02	4.270	
9,200.00	7,330.00	9,024.74	7,120.00	39.92	39.90	30.23	1,591.01	1,190.50	243.06	184.50	58.56	4.151	
9,300.00	7,330.00	9,124.74	7,120.00	41.08	41.09	30.07	1,691.00	1,188.95	242.67	182.54	60.13	4.036	
9,400.00	7,330.00	9,224.73	7,120.00	42.28	42.30	29.91	1,790.98	1,187.40	242.27	180.56	61.71	3.926	
9,500.00	7,330.00	9,324.73	7,120.00	43.50	43.53	29.75	1,890.97	1,185.85	241.88	178.57	63.31	3.821	
9,600.00	7,330.00	9,424.73	7,120.00	44.74	44.79	29.59	1,990.95	1,184.30	241.49	176.56	64.93	3.719	
9,700.00	7,330.00	9,524.72	7,120.00	46.01	46.07	29.42	2,090.94	1,182.75	241.10	174.55	66.56	3.623	
9,800.00	7,330.00	9,624.72	7,120.00	47.29	47.37	29.26	2,190.92	1,181.20	240.71	172.52	68.20	3.530	
9,900.00	7,330.00	9,724.72	7,120.00	48.59	48.68	29.10	2,290.91	1,179.65	240.33	170.48	69.85	3.441	
10,000.00	7,330.00	9,824.71	7,120.00	49.91	50.01	28.93	2,390.89	1,178.10	239.95	168.44	71.50	3.356	
10,100.00	7,330.00	9,924.71	7,120.00	51.24	51.36	28.77	2,490.88	1,176.55	239.57	166.40	73.17	3.274	
10,200.00	7,330.00	10,024.71	7,120.00	52.58	52.72	28.60	2,590.86	1,174.99	239.19	164.35	74.84	3.196	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (KIYOTA) - KIYOTA 4O-35H-O367 - OH - PLAN #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
10,300.00	7,330.00	10,124.70	7,120.00	53.94	54.09	28.43	2,690.85	1,173.44	238.81	162.29	76.52	3.121	
10,400.00	7,330.00	10,224.70	7,120.00	55.32	55.47	28.27	2,790.83	1,171.89	238.44	160.24	78.20	3.049	
10,500.00	7,330.00	10,324.70	7,120.00	56.70	56.87	28.10	2,890.82	1,170.34	238.06	158.18	79.88	2.980	
10,600.00	7,330.00	10,424.69	7,120.00	58.09	58.27	27.93	2,990.80	1,168.79	237.69	156.13	81.56	2.914	
10,700.00	7,330.00	10,524.69	7,120.00	59.50	59.69	27.76	3,090.79	1,167.24	237.32	154.08	83.25	2.851	
10,800.00	7,330.00	10,624.69	7,120.00	60.91	61.11	27.60	3,190.77	1,165.69	236.96	152.03	84.93	2.790	
10,900.00	7,330.00	10,724.69	7,120.00	62.33	62.54	27.43	3,290.76	1,164.14	236.59	149.98	86.62	2.732	
11,000.00	7,330.00	10,824.68	7,120.00	63.76	63.98	27.26	3,390.74	1,162.59	236.23	147.93	88.30	2.675	
11,100.00	7,330.00	10,924.68	7,120.00	65.20	65.43	27.09	3,490.73	1,161.04	235.87	145.89	89.98	2.621	
11,200.00	7,330.00	11,024.68	7,120.00	66.64	66.88	26.91	3,590.71	1,159.49	235.51	143.85	91.66	2.569	
11,300.00	7,330.00	11,124.67	7,120.00	68.09	68.34	26.74	3,690.70	1,157.94	235.15	141.82	93.34	2.519	
11,400.00	7,330.00	11,224.67	7,120.00	69.55	69.81	26.57	3,790.68	1,156.39	234.80	139.79	95.01	2.471	
11,500.00	7,330.00	11,324.67	7,120.00	71.01	71.28	26.40	3,890.66	1,154.84	234.45	137.77	96.68	2.425	
11,600.00	7,330.00	11,424.66	7,120.00	72.48	72.76	26.23	3,990.65	1,153.28	234.10	135.75	98.35	2.380	
11,700.00	7,330.00	11,524.66	7,120.00	73.95	74.24	26.05	4,090.63	1,151.73	233.75	133.74	100.01	2.337	
11,800.00	7,330.00	11,624.66	7,120.00	75.43	75.73	25.88	4,190.62	1,150.18	233.41	131.73	101.67	2.296	
11,900.00	7,330.00	11,724.65	7,120.00	76.91	77.22	25.70	4,290.60	1,148.63	233.06	129.74	103.33	2.256	
12,000.00	7,330.00	11,824.65	7,120.00	78.40	78.71	25.53	4,390.59	1,147.08	232.72	127.75	104.97	2.217	
12,002.32	7,330.00	11,826.18	7,120.00	78.43	78.73	25.53	4,392.12	1,147.06	232.71	127.67	105.04	2.215	
12,005.27	7,330.00	11,826.18	7,120.00	78.47	78.73	25.53	4,392.12	1,147.06	232.73	127.54	105.19	2.212 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KAWAKAMI 41-35 (EXISTING) - CPR WELL - GYRO													Offset Site Error: 0.00 usft
Survey Program: 100- GyroFlex													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
11,300.00	7,330.00	7,270.10	7,268.43	68.09	9.62	-88.54	4,357.92	711.01	750.88	700.60	50.29	14.932	
11,400.00	7,330.00	7,269.45	7,267.78	69.55	9.62	-88.43	4,357.93	711.03	662.97	609.64	53.33	12.431	
11,500.00	7,330.00	7,268.80	7,267.13	71.01	9.62	-88.32	4,357.93	711.06	579.00	521.64	57.37	10.093	
11,600.00	7,330.00	7,268.15	7,266.48	72.48	9.62	-88.21	4,357.94	711.08	500.95	438.27	62.68	7.992	
11,700.00	7,330.00	7,267.51	7,265.83	73.95	9.62	-88.10	4,357.94	711.11	432.04	362.59	69.45	6.221	
11,800.00	7,330.00	7,266.86	7,265.19	75.43	9.62	-87.99	4,357.94	711.13	377.31	300.17	77.14	4.891	
11,900.00	7,330.00	7,266.21	7,264.54	76.91	9.62	-87.88	4,357.95	711.16	343.62	259.97	83.64	4.108	
11,971.47	7,330.00	7,265.75	7,264.08	77.97	9.61	-87.80	4,357.95	711.17	336.10	250.42	85.68	3.923 CC, ES, SF	
12,000.00	7,330.00	7,265.57	7,263.89	78.40	9.61	-87.77	4,357.95	711.18	337.31	251.66	85.65	3.938	
12,005.27	7,330.00	7,265.53	7,263.86	78.47	9.61	-87.76	4,357.95	711.18	337.80	252.21	85.59	3.947	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KAWAKAMI 42-35 (EXISTING) - CPR WELL - GYRO													Offset Site Error: 0.00 usft
Survey Program: 100- GyroFlex													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
9,600.00	7,330.00	7,275.06	7,273.65	44.74	9.07	-89.56	2,690.44	756.23	766.33	725.51	40.83	18.770	
9,700.00	7,330.00	7,275.29	7,273.89	46.01	9.07	-89.60	2,690.44	756.23	675.67	633.38	42.29	15.977	
9,800.00	7,330.00	7,275.52	7,274.12	47.29	9.07	-89.65	2,690.44	756.23	588.05	543.74	44.30	13.273	
9,900.00	7,330.00	7,275.76	7,274.35	48.59	9.07	-89.69	2,690.44	756.23	505.04	457.95	47.09	10.724	
10,000.00	7,330.00	7,275.99	7,274.59	49.91	9.07	-89.74	2,690.45	756.23	429.34	378.45	50.89	8.436	
10,100.00	7,330.00	7,276.23	7,274.83	51.24	9.07	-89.78	2,690.45	756.23	365.51	309.85	55.66	6.567	
10,200.00	7,330.00	7,276.48	7,275.07	52.58	9.07	-89.83	2,690.45	756.23	320.72	260.32	60.40	5.310	
10,300.00	7,330.00	7,276.72	7,275.32	53.94	9.07	-89.87	2,690.45	756.23	303.52	240.87	62.65	4.845	
10,303.68	7,330.00	7,276.73	7,275.33	53.99	9.07	-89.88	2,690.45	756.23	303.50	240.85	62.65	4.844	CC, ES, SF
10,400.00	7,330.00	7,276.97	7,275.57	55.32	9.07	-89.92	2,690.45	756.23	318.42	257.77	60.65	5.250	
10,500.00	7,330.00	7,277.22	7,275.82	56.70	9.07	-89.97	2,690.45	756.22	361.46	305.49	55.97	6.458	
10,600.00	7,330.00	7,277.47	7,276.07	58.09	9.07	-90.01	2,690.45	756.22	424.17	373.01	51.16	8.290	
10,700.00	7,330.00	7,277.72	7,276.32	59.50	9.07	-90.06	2,690.45	756.22	499.18	451.86	47.33	10.548	
10,800.00	7,330.00	7,277.98	7,276.58	60.91	9.07	-90.11	2,690.45	756.22	581.76	537.25	44.52	13.068	
10,900.00	7,330.00	7,278.24	7,276.84	62.33	9.07	-90.16	2,690.45	756.22	669.11	626.60	42.51	15.739	
11,000.00	7,330.00	7,278.50	7,277.10	63.76	9.07	-90.21	2,690.45	756.22	759.59	718.52	41.07	18.493	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KIYOTA 34-35 (EXISTING) - CPR WELL - GYRO													Offset Site Error: 0.00 usft
Survey Program: 100- GyroFlex													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-69.23	217.03	-572.36	612.86				
100.00	100.00	67.80	67.80	0.14	0.05	-69.25	216.92	-572.53	612.25	612.07	0.18	3,449.979 CC, ES	
200.00	200.00	165.79	165.78	0.50	0.18	-69.31	216.54	-573.26	612.80	612.17	0.63	967.227	
300.00	300.00	264.95	264.94	0.85	0.33	-69.37	216.21	-574.20	613.58	612.46	1.12	549.235	
400.00	399.98	365.93	365.91	1.20	0.49	177.92	215.98	-575.13	616.10	614.50	1.60	385.062	
500.00	499.84	467.59	467.57	1.55	0.65	177.90	215.78	-575.76	621.84	619.77	2.07	300.002	
600.00	599.45	567.70	567.69	1.91	0.80	177.87	215.41	-576.20	630.84	628.31	2.53	249.230	
700.00	698.70	665.68	665.66	2.29	0.95	177.86	215.08	-576.69	643.36	640.36	3.00	214.632	
800.00	797.47	764.88	764.86	2.69	1.10	177.86	214.79	-577.32	659.48	656.01	3.47	189.909	
900.00	895.62	861.96	861.94	3.11	1.24	177.86	214.44	-577.86	678.93	674.98	3.95	171.768	
1,000.00	993.06	958.24	958.21	3.56	1.39	177.88	214.35	-578.58	702.06	697.60	4.45	157.698	
1,100.00	1,089.99	1,053.48	1,053.45	4.04	1.53	177.92	214.25	-579.37	727.34	722.39	4.96	146.748	
1,200.00	1,186.91	1,149.00	1,148.96	4.54	1.68	177.94	214.03	-580.50	752.93	747.48	5.45	138.071	
1,300.00	1,283.84	1,245.86	1,245.81	5.04	1.83	177.94	213.65	-581.72	778.52	772.57	5.95	130.834	
1,400.00	1,380.76	1,342.08	1,342.02	5.55	1.98	177.94	213.24	-582.95	804.12	797.67	6.45	124.747 SF	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KIYOTA 43-35 (EXISTING) - CPR WELL - GYRO													Offset Site Error: 0.00 usft
Survey Program: 100- GyroFlex													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
8,700.00	7,330.00	7,870.47	7,568.10	34.56	8.61	-122.48	1,648.46	635.49	760.93	721.26	39.67	19.181	
8,800.00	7,330.00	7,862.85	7,561.38	35.55	8.59	-121.63	1,648.99	631.94	690.24	649.96	40.28	17.135	
8,900.00	7,330.00	7,855.17	7,554.60	36.59	8.56	-120.78	1,649.54	628.37	627.48	586.42	41.06	15.282	
9,000.00	7,330.00	7,847.41	7,547.75	37.67	8.54	-119.91	1,650.09	624.77	575.26	533.26	42.00	13.698	
9,100.00	7,330.00	7,839.58	7,540.83	38.78	8.52	-119.03	1,650.64	621.14	536.65	493.62	43.03	12.471	
9,200.00	7,330.00	7,831.67	7,533.84	39.92	8.50	-118.15	1,651.21	617.48	514.73	470.68	44.05	11.686	
9,265.92	7,330.00	7,826.41	7,529.20	40.69	8.48	-117.56	1,651.59	615.05	510.52	465.89	44.62	11.441	CC, ES
9,300.00	7,330.00	7,823.68	7,526.78	41.08	8.48	-117.25	1,651.79	613.79	511.65	466.78	44.87	11.404	SF
9,400.00	7,330.00	7,815.62	7,519.66	42.28	8.45	-116.35	1,652.37	610.07	527.73	482.41	45.31	11.646	
9,500.00	7,330.00	7,807.48	7,512.45	43.50	8.43	-115.44	1,652.96	606.32	561.32	516.00	45.33	12.384	
9,600.00	7,330.00	7,800.00	7,505.83	44.74	8.41	-114.61	1,653.51	602.88	609.55	564.56	44.99	13.550	
9,700.00	7,330.00	7,800.00	7,505.83	46.01	8.41	-114.61	1,653.51	602.88	669.30	624.93	44.37	15.086	
9,800.00	7,330.00	7,786.77	7,494.14	47.29	8.37	-113.13	1,654.48	596.76	737.67	693.81	43.87	16.817	
9,900.00	7,330.00	7,780.33	7,488.47	48.59	8.36	-112.42	1,654.96	593.76	812.60	769.30	43.30	18.768	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KIYOTA 44-35 (EXISTING) - CPR WELL - GYRO												Offset Site Error:	0.00 usft
Survey Program: 100- GyroFlex												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	74.63	156.56	569.39	591.94				
100.00	100.00	58.45	58.45	0.14	0.04	74.62	156.65	569.39	590.55	590.39	0.16	3,658.335	
200.00	200.00	157.84	157.84	0.50	0.17	74.57	157.16	569.41	590.70	590.12	0.59	1,008.423	
300.00	300.00	258.40	258.39	0.85	0.32	74.52	157.70	569.45	590.88	589.86	1.02	576.489	
400.00	399.98	356.72	356.71	1.20	0.47	-38.34	158.53	569.36	589.65	588.21	1.45	407.305	
500.00	499.84	452.94	452.92	1.55	0.62	-38.83	160.11	569.61	586.26	584.38	1.88	311.316	
600.00	599.45	548.90	548.86	1.91	0.75	-39.54	161.63	570.49	580.82	578.46	2.36	246.194	
700.00	698.70	644.95	644.90	2.29	0.85	-40.42	162.55	572.18	573.41	570.54	2.87	200.054	
800.00	797.47	743.14	743.05	2.69	0.93	-41.47	162.40	574.70	563.93	560.54	3.39	166.286	
900.00	895.62	843.38	843.25	3.11	1.00	-42.81	161.69	577.31	551.88	547.96	3.93	140.472	
1,000.00	993.06	942.25	942.10	3.56	1.08	-44.50	161.10	579.55	537.33	532.84	4.49	119.789	
1,100.00	1,089.99	1,039.76	1,039.58	4.04	1.18	-46.25	160.47	581.72	521.62	516.56	5.06	103.067	
1,200.00	1,186.91	1,138.27	1,138.07	4.54	1.29	-48.12	160.07	583.77	506.36	500.71	5.65	89.645	
1,300.00	1,283.84	1,237.44	1,237.22	5.04	1.41	-50.15	159.66	585.38	491.27	485.02	6.25	78.649	
1,400.00	1,380.76	1,334.84	1,334.62	5.55	1.53	-52.26	159.27	586.80	476.66	469.81	6.85	69.585	
1,500.00	1,477.69	1,433.77	1,433.53	6.07	1.64	-54.55	158.89	588.17	462.71	455.27	7.44	62.183	
1,600.00	1,574.62	1,534.67	1,534.43	6.59	1.69	-57.12	158.71	588.47	448.75	440.78	7.97	56.273	
1,700.00	1,671.54	1,632.08	1,631.84	7.11	1.67	-59.83	158.81	588.02	435.27	426.78	8.48	51.311	
1,800.00	1,768.47	1,727.42	1,727.18	7.63	1.67	-62.68	159.23	587.54	423.02	413.98	9.04	46.800	
1,900.00	1,865.39	1,822.55	1,822.30	8.16	1.71	-65.71	160.09	587.16	412.32	402.67	9.65	42.712	
2,000.00	1,962.32	1,917.63	1,917.38	8.69	1.80	-68.89	161.25	586.98	403.31	393.00	10.31	39.123	
2,100.00	2,059.24	2,012.29	2,012.03	9.22	1.91	-72.15	162.66	587.26	396.20	385.21	10.99	36.048	
2,200.00	2,156.17	2,108.42	2,108.14	9.75	2.04	-75.53	164.21	587.90	390.87	379.18	11.69	33.447	
2,300.00	2,253.10	2,203.75	2,203.45	10.28	2.17	-78.95	166.00	588.74	387.36	374.98	12.38	31.294	
2,400.00	2,350.02	2,302.72	2,302.40	10.81	2.32	-82.50	167.61	589.86	385.31	372.25	13.06	29.499	
2,500.00	2,446.95	2,401.68	2,401.35	11.34	2.47	-86.06	168.71	590.85	384.28	370.55	13.73	27.991	
2,541.29	2,486.97	2,442.22	2,441.89	11.56	2.53	-87.53	169.07	591.14	384.17	370.18	14.00	27.447 CC	
2,600.00	2,543.87	2,499.90	2,499.56	11.87	2.61	-89.61	169.48	591.58	384.38	370.01	14.37	26.748 ES	
2,700.00	2,640.80	2,597.26	2,596.92	12.40	2.76	-93.10	170.01	592.39	385.82	370.84	14.97	25.766	
2,800.00	2,737.72	2,695.36	2,695.01	12.94	2.90	-96.56	170.36	593.22	388.57	373.03	15.53	25.017	
2,900.00	2,834.65	2,792.45	2,792.10	13.47	3.04	-99.93	170.57	594.02	392.63	376.58	16.05	24.468	
3,000.00	2,931.58	2,893.88	2,893.52	14.01	3.11	-103.39	170.31	594.60	397.61	381.13	16.48	24.132	
3,100.00	3,028.50	2,997.98	2,997.61	14.54	3.11	-106.88	168.60	594.77	402.57	385.75	16.82	23.931	
3,200.00	3,125.43	3,093.46	3,093.07	15.07	3.09	-110.06	166.37	594.47	408.18	391.02	17.15	23.796	
3,300.00	3,222.35	3,188.38	3,187.97	15.61	3.06	-113.19	164.61	593.73	415.59	398.10	17.48	23.770	
3,400.00	3,319.28	3,284.92	3,284.49	16.14	3.03	-116.27	163.12	592.84	424.61	406.79	17.82	23.826	
3,500.00	3,416.20	3,377.65	3,377.21	16.68	3.00	-119.10	162.06	591.97	435.28	417.11	18.17	23.962	
3,600.00	3,513.13	3,471.51	3,471.07	17.21	2.98	-121.81	161.89	591.16	447.99	429.46	18.53	24.180	
3,700.00	3,610.06	3,566.98	3,566.54	17.75	2.98	-124.42	162.13	590.28	462.15	443.25	18.90	24.451	
3,800.00	3,706.98	3,663.26	3,662.81	18.29	2.99	-126.91	162.47	589.18	477.42	458.15	19.28	24.768	
3,900.00	3,803.91	3,760.37	3,759.90	18.82	3.00	-129.30	162.74	587.86	493.56	473.92	19.65	25.123	
4,000.00	3,900.83	3,857.93	3,857.45	19.36	3.01	-131.61	162.69	586.06	510.36	490.35	20.01	25.509	
4,100.00	3,997.76	3,954.38	3,953.88	19.89	3.03	-133.79	162.36	583.98	527.78	507.42	20.36	25.925	
4,200.00	4,094.68	4,049.18	4,048.65	20.43	3.05	-135.83	162.08	581.63	546.10	525.40	20.70	26.379	
4,300.00	4,191.61	4,142.25	4,141.68	20.97	3.08	-137.72	162.09	579.03	565.49	544.45	21.04	26.877	
4,400.00	4,288.54	4,235.37	4,234.75	21.50	3.12	-139.51	162.58	575.96	586.15	564.77	21.38	27.412	
4,500.00	4,385.46	4,330.31	4,329.63	22.04	3.17	-141.22	163.29	572.77	607.59	585.85	21.74	27.945	
4,600.00	4,482.39	4,423.95	4,423.22	22.58	3.24	-142.75	164.45	569.82	629.85	607.74	22.11	28.491	
4,700.00	4,579.31	4,518.83	4,518.04	23.11	3.32	-144.16	166.15	567.05	652.85	630.36	22.49	29.025	
4,800.00	4,676.40	4,619.38	4,618.54	23.64	3.41	-145.57	168.12	564.84	675.42	652.50	22.93	29.459	
4,900.00	4,773.90	4,722.70	4,721.85	24.15	3.51	-146.81	169.60	563.38	696.01	672.63	23.38	29.770	
5,000.00	4,871.76	4,822.84	4,821.98	24.63	3.61	-147.88	170.41	562.07	714.82	691.00	23.81	30.017	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KIYOTA 44-35 (EXISTING) - CPR WELL - GYRO													Offset Site Error:	0.00 usft
Survey Program: 100- GyroFlex													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,100.00	4,969.97	4,923.82	4,922.95	25.09	3.70	-148.83	170.86	560.95	731.94	707.69	24.25	30.186		
5,200.00	5,068.49	5,024.64	5,023.76	25.53	3.78	-149.67	170.80	559.77	747.36	722.70	24.67	30.300		
5,300.00	5,167.30	5,126.23	5,125.35	25.95	3.84	-150.43	170.35	558.65	761.06	735.99	25.07	30.359		
5,400.00	5,266.36	5,227.52	5,226.62	26.35	3.90	-151.10	169.47	557.66	772.94	747.49	25.45	30.365		
5,500.00	5,365.64	5,326.26	5,325.36	26.73	3.95	-151.66	168.56	556.73	783.31	757.49	25.82	30.334		
5,600.00	5,465.12	5,425.05	5,424.14	27.09	4.01	-152.13	167.80	555.90	792.26	766.07	26.19	30.246		
5,700.00	5,564.76	5,523.42	5,522.50	27.44	4.08	-152.51	167.30	555.16	799.86	773.29	26.57	30.103		
5,800.00	5,664.53	5,622.69	5,621.77	27.76	4.17	-152.80	167.08	554.62	806.01	779.05	26.96	29.893		
5,900.00	5,764.41	5,722.46	5,721.54	28.07	4.26	-152.97	167.34	554.51	810.72	783.35	27.37	29.621		
6,000.00	5,864.35	5,824.35	5,823.43	28.36	4.33	-153.02	168.04	555.26	813.65	785.87	27.78	29.290		
6,100.00	5,964.34	5,922.29	5,921.36	28.64	4.40	-152.99	168.92	556.11	815.11	786.95	28.16	28.946		
6,200.00	6,064.34	6,020.81	6,019.88	28.90	4.49	-40.28	169.63	556.44	815.54	787.00	28.54	28.573		
6,300.00	6,164.34	6,120.16	6,119.23	29.15	4.60	-40.25	170.26	556.44	816.02	787.08	28.94	28.195		
6,400.00	6,264.34	6,220.59	6,219.65	29.41	4.71	-40.22	170.92	556.50	816.49	787.14	29.35	27.819		
6,500.00	6,364.34	6,320.77	6,319.83	29.67	4.82	-40.18	171.60	556.59	816.95	787.19	29.76	27.453		
6,600.00	6,464.34	6,421.36	6,420.42	29.93	4.94	-40.16	172.03	556.55	817.30	787.12	30.18	27.083		
6,700.00	6,564.34	6,519.21	6,518.27	30.19	5.06	-40.16	172.44	556.27	817.81	787.22	30.59	26.735		
6,800.00	6,664.30	6,619.02	6,618.08	30.45	5.18	-39.85	173.02	555.97	817.06	786.05	31.01	26.348		
6,900.00	6,763.23	6,718.36	6,717.41	30.69	5.30	-41.01	173.47	555.52	807.01	775.63	31.38	25.718		
7,000.00	6,859.26	6,816.32	6,815.37	30.89	5.40	-43.50	173.47	554.87	786.62	754.95	31.68	24.834		
7,100.00	6,950.51	6,905.92	6,904.96	31.05	5.47	-47.32	173.33	554.08	757.20	725.33	31.87	23.758		
7,200.00	7,035.21	6,990.08	6,989.12	31.18	5.55	-52.64	173.19	553.19	720.50	688.48	32.01	22.506		
7,300.00	7,111.70	7,068.21	7,067.25	31.27	5.61	-59.50	172.97	552.36	678.67	646.55	32.12	21.130		
7,400.00	7,178.50	7,134.93	7,133.97	31.31	5.67	-67.32	172.69	551.75	634.76	602.56	32.20	19.711		
7,500.00	7,234.32	7,189.86	7,188.89	31.33	5.71	-75.24	172.60	551.28	592.99	560.66	32.33	18.340		
7,600.00	7,278.05	7,233.57	7,232.60	31.31	5.76	-82.26	172.63	550.92	558.09	525.50	32.60	17.120		
7,700.00	7,308.86	7,264.60	7,263.63	31.26	5.80	-87.31	172.67	550.68	535.16	502.11	33.05	16.193		
7,786.86	7,324.65	7,280.63	7,279.66	31.20	5.82	-89.57	172.70	550.56	528.35	494.78	33.57	15.737		
7,800.00	7,326.13	7,282.15	7,281.18	31.19	5.82	-89.72	172.70	550.55	528.51	494.86	33.66	15.703 SF		
7,900.00	7,330.00	7,286.26	7,285.29	31.10	5.82	-89.60	172.71	550.51	540.22	505.92	34.30	15.751		
8,000.00	7,330.00	7,286.48	7,285.51	31.03	5.82	-89.62	172.71	550.51	569.49	534.61	34.88	16.328		
8,100.00	7,330.00	7,286.71	7,285.74	30.96	5.82	-89.65	172.71	550.51	613.84	578.51	35.34	17.371		
8,200.00	7,330.00	7,286.93	7,285.96	30.90	5.82	-89.67	172.71	550.51	670.29	634.63	35.66	18.795		
8,300.00	7,330.00	7,287.16	7,286.18	31.05	5.82	-89.70	172.71	550.51	736.05	700.17	35.88	20.516		
8,400.00	7,330.00	7,287.38	7,286.41	31.84	5.82	-89.72	172.71	550.51	808.86	772.85	36.01	22.463		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - KIYOTA 6-8-35 (EXISTING) - CPR WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 843-Geolink MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-71.53	192.62	-576.83	608.33					
100.00	100.00	85.33	85.33	0.14	0.15	-71.53	192.66	-576.80	608.13	607.84	0.29	2,124.791		
200.00	200.00	185.62	185.62	0.50	0.32	-71.51	192.82	-576.68	608.06	607.24	0.82	742.610		
300.00	300.00	285.90	285.90	0.85	0.50	-71.48	193.09	-576.47	607.95	606.60	1.35	449.857		
303.88	303.88	289.80	289.80	0.87	0.50	175.85	193.10	-576.46	607.95	606.58	1.37	443.199 CC, ES		
400.00	399.98	386.17	386.17	1.20	0.67	175.91	193.48	-576.18	609.54	607.66	1.87	325.245		
500.00	499.84	486.32	486.31	1.55	0.84	175.99	193.98	-575.79	614.55	612.16	2.40	256.332		
600.00	599.45	586.23	586.22	1.91	1.02	176.10	194.60	-575.32	623.00	620.07	2.93	212.792		
700.00	698.70	685.79	685.78	2.29	1.19	176.24	195.33	-574.77	634.87	631.41	3.46	183.372		
800.00	797.47	784.88	784.86	2.69	1.36	176.40	196.17	-574.13	650.15	646.15	4.00	162.543		
900.00	895.62	893.19	893.17	3.11	1.55	176.60	197.11	-572.98	668.53	663.98	4.56	146.634		
1,000.00	993.06	1,006.17	1,006.08	3.56	1.75	176.71	196.04	-569.72	688.01	682.88	5.13	134.068		
1,100.00	1,089.99	1,126.97	1,126.66	4.04	1.97	176.67	191.70	-563.82	706.86	701.14	5.72	123.518		
1,200.00	1,186.91	1,242.04	1,241.27	4.54	2.20	176.50	184.95	-556.16	723.40	717.10	6.31	114.728		
1,300.00	1,283.84	1,357.44	1,355.81	5.04	2.45	176.14	174.90	-546.53	737.40	730.50	6.90	106.925		
1,400.00	1,380.76	1,465.90	1,463.28	5.55	2.71	175.78	164.48	-536.11	749.96	742.48	7.48	100.250		
1,500.00	1,477.69	1,575.41	1,571.59	6.07	3.00	175.50	154.37	-523.60	760.90	752.83	8.07	94.261		
1,600.00	1,574.62	1,701.47	1,695.84	6.59	3.37	175.11	140.90	-507.16	769.95	761.24	8.71	88.414		
1,700.00	1,671.54	1,808.21	1,800.48	7.11	3.73	174.71	127.54	-490.88	776.22	766.91	9.31	83.366		
1,800.00	1,768.47	1,927.23	1,916.73	7.63	4.16	174.19	111.19	-471.34	781.03	771.08	9.95	78.493		
1,900.00	1,865.39	2,023.47	2,010.55	8.16	4.52	173.76	97.51	-454.79	785.00	774.45	10.55	74.411		
2,000.00	1,962.32	2,138.23	2,122.19	8.69	4.99	173.24	80.79	-434.16	788.12	776.92	11.20	70.385		
2,100.00	2,059.24	2,239.50	2,220.43	9.22	5.42	172.76	65.38	-414.98	790.19	778.36	11.83	66.820		
2,200.00	2,156.17	2,332.55	2,310.87	9.75	5.80	172.36	51.94	-397.72	792.89	780.46	12.44	63.743		
2,300.00	2,253.10	2,430.11	2,405.84	10.28	6.20	171.98	38.39	-379.94	796.13	783.06	13.06	60.941		
2,400.00	2,350.02	2,532.00	2,505.07	10.81	6.63	171.60	24.40	-361.54	799.61	785.91	13.71	58.343		
2,500.00	2,446.95	2,641.30	2,611.15	11.34	7.12	171.09	7.85	-341.08	802.09	787.71	14.38	55.769		
2,600.00	2,543.87	2,733.68	2,700.68	11.87	7.52	170.63	-6.73	-323.57	804.26	789.23	15.03	53.500		
2,700.00	2,640.80	2,827.79	2,792.19	12.40	7.93	170.18	-21.02	-306.89	807.82	792.13	15.69	51.483		
2,800.00	2,737.72	2,935.30	2,896.73	12.94	8.40	169.70	-37.01	-287.53	811.26	794.88	16.38	49.535		
2,900.00	2,834.65	3,030.16	2,988.93	13.47	8.81	169.32	-50.72	-269.98	814.33	797.29	17.04	47.787		
3,000.00	2,931.58	3,131.17	3,087.17	14.01	9.25	168.90	-65.48	-251.72	817.83	800.11	17.72	46.141 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well KIYOTA 4N-35H-O367 - Slot 4N
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4864.00usft
<b>Reference Site:</b>	S35-T3N-R67W (KIYOTA)	<b>MD Reference:</b>	23' KB @ 4864.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	KIYOTA 4N-35H-O367	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	PLAN #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S35-T3N-R67W (OFFSETS) - VANCE #31-36(EXISTING) - CPR WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 12-Geolink MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
10,400.00	7,330.00	7,408.06	7,290.79	55.32	21.17	92.06	3,522.25	1,326.21	780.42	729.48	50.94	15.321		
10,500.00	7,330.00	7,407.06	7,289.79	56.70	21.17	91.85	3,522.26	1,326.22	687.62	635.31	52.31	13.145		
10,600.00	7,330.00	7,406.08	7,288.81	58.09	21.16	91.64	3,522.27	1,326.23	597.16	542.79	54.37	10.983		
10,700.00	7,330.00	7,405.09	7,287.82	59.50	21.16	91.43	3,522.28	1,326.23	510.26	452.76	57.50	8.874		
10,800.00	7,330.00	7,404.11	7,286.84	60.91	21.16	91.23	3,522.29	1,326.24	429.11	366.89	62.22	6.896		
10,900.00	7,330.00	7,403.13	7,285.86	62.33	21.16	91.02	3,522.30	1,326.25	357.64	288.64	69.00	5.183		
11,000.00	7,330.00	7,402.15	7,284.88	63.76	21.16	90.82	3,522.31	1,326.26	302.77	225.50	77.27	3.918		
11,100.00	7,330.00	7,401.17	7,283.90	65.20	21.16	90.61	3,522.32	1,326.27	274.65	191.09	83.56	3.287		
11,131.19	7,330.00	7,400.87	7,283.60	65.65	21.16	90.55	3,522.33	1,326.27	272.88	188.60	84.28	3.238	CC, ES, SF	
11,200.00	7,330.00	7,400.20	7,282.93	66.64	21.16	90.41	3,522.33	1,326.28	281.42	198.16	83.26	3.380		
11,300.00	7,330.00	7,399.23	7,281.96	68.09	21.16	90.20	3,522.34	1,326.29	320.87	243.34	77.53	4.139		
11,400.00	7,330.00	7,398.26	7,280.99	69.55	21.16	90.00	3,522.35	1,326.30	383.03	311.96	71.07	5.389		
11,500.00	7,330.00	7,397.29	7,280.02	71.01	21.16	89.80	3,522.36	1,326.31	458.77	392.77	66.00	6.951		
11,600.00	7,330.00	7,396.33	7,279.06	72.48	21.15	89.60	3,522.37	1,326.32	542.42	480.06	62.36	8.698		
11,700.00	7,330.00	7,395.37	7,278.10	73.95	21.15	89.39	3,522.38	1,326.33	630.85	571.08	59.78	10.553		
11,800.00	7,330.00	7,394.41	7,277.14	75.43	21.15	89.19	3,522.39	1,326.34	722.31	664.40	57.91	12.474		
11,900.00	7,330.00	7,393.46	7,276.19	76.91	21.15	88.99	3,522.40	1,326.35	815.77	759.25	56.52	14.434		

# Cathedral Energy Services

## Anticollision Report

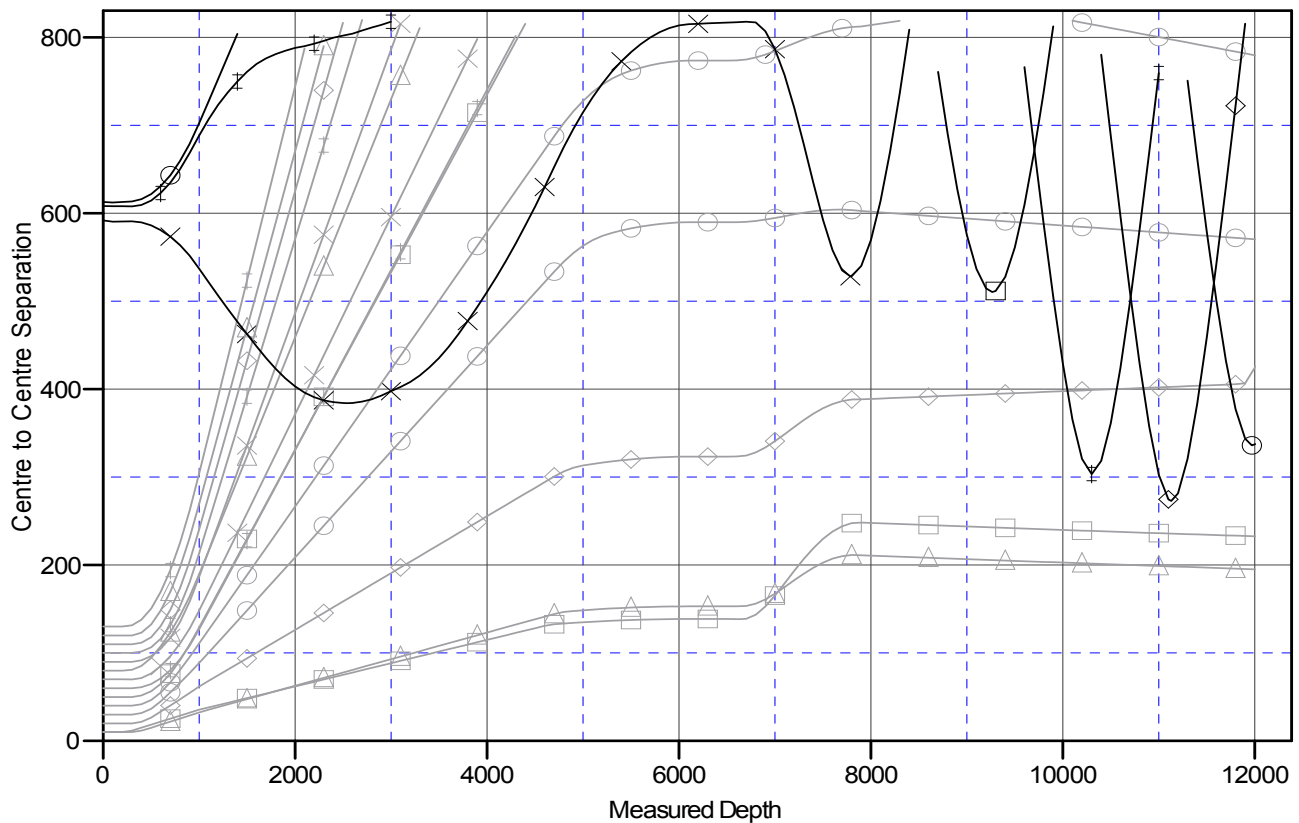
**Company:** Crestone Peak Resources  
**Project:** DJ BASIN  
**Reference Site:** S35-T3N-R67W (KIYOTA)  
**Site Error:** 0.00usft  
**Reference Well:** KIYOTA 4N-35H-O367  
**Well Error:** 0.00usft  
**Reference Wellbore:** OH  
**Reference Design:** PLAN #1

**Local Co-ordinate Reference:** Well KIYOTA 4N-35H-O367 - Slot 4N  
**TVD Reference:** 23' KB @ 4864.00usft  
**MD Reference:** 23' KB @ 4864.00usft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** USA EDM 5000 Multi Users DB  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to 23' KB @ 4864.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: KIYOTA 4N-35H-O367 - Slot 4N  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.42°

### Ladder Plot



### LEGEND

TA 4M-35H-O367, OH, PLAN#1 V0  
 TA 4H-35H-O367, OH, PLAN#1 V0  
 TA 4O-35H-O367, OH, PLAN#1 V0  
 TA 4K-35H-O367, OH, PLAN#1 V0  
 TA 4J-35H-O367, OH, PLAN#1 V0  
 TA 4C-35H-O367, OH, PLAN#1 V0  
 TA 4I-35H-O367, OH, PLAN#1 V0

KIYOTA 4A-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4G-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4L-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4E-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4B-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4F-35H-O367, OH, PLAN#1 V0  
 KIYOTA 4D-35H-O367, OH, PLAN#1 V0

KAWAKAMI 41-35 (EXISTING), CPR WELL,  
 KAWAKAMI 42-35 (EXISTING), CPR WELL,  
 KIYOTA 34-35 (EXISTING), CPR WELL, GYI  
 KIYOTA 43-35 (EXISTING), CPR WELL, GYI  
 KIYOTA 44-35 (EXISTING), CPR WELL, GYI  
 KIYOTA 6-8-35 (EXISTING), CPR WELL, SU  
 VANCE #31-36 (EXISTING), CPR WELL, SU