



**CRESTONE PEAK**  
RESOURCES

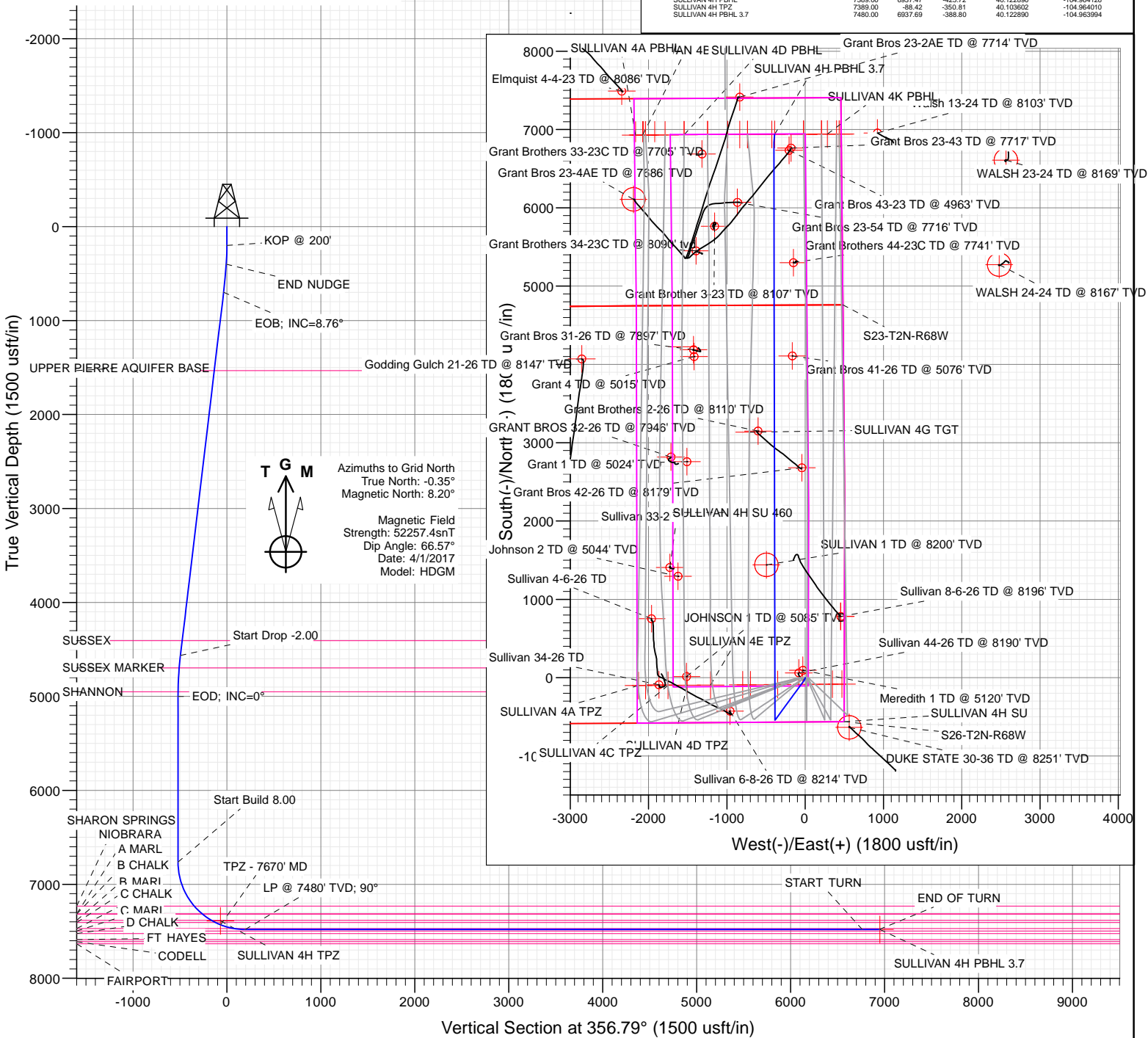
Project: DJ BASIN  
Site: S26-T2N-R68W  
Well: SULLIVAN 4H-26H-P268  
Wellbore: OH  
Design: PLAN #2

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	400.00	4.00	180.00	399.84	-6.98	0.00	2.00	180.00	-6.97	
4	700.52	8.76	216.24	698.51	-35.93	-13.53	2.00	59.26	-35.12	
5	4611.50	8.76	216.24	4563.92	-516.08	-365.50	0.00	0.00	-494.82	
6	5049.28	0.00	0.00	5000.00	-543.00	-385.24	2.00	180.00	-520.59	
7	6813.09	0.00	0.00	6763.80	-543.00	-385.24	0.00	0.00	-520.59	
8	7938.09	90.00	359.88	7480.00	173.20	-386.69	8.00	359.88	194.56	
9	14514.90	90.00	359.88	7480.00	6750.00	-400.00	0.00	0.00	6761.81	
10	14689.49	90.00	6.47	7480.00	6924.22	-390.33	3.77	90.00	6935.21	
11	14703.04	90.00	6.47	7480.00	6937.69	-388.80	0.00	0.00	6948.57	SULLIVAN 4H PBHL 3.7

PLAN #2  
SULLIVAN 4H-26H-P268  
16300 L/R  
23 KB @ 4987.00usft  
Ground Level @ 4965.00  
North American Datum 1983  
Well SULLIVAN 4H-26H-P268, Grid North

Name	Type TD	Target No Target (Freehand)	Azimuth	Origin Slot	Type	N/S	E/W	From TVD	TVD	+N/-S	+E/-W	Latitude	Longitude
SULLIVAN 4H PBHL			356.79			0.00	0.00	0.00	7389.00	6937.47	-425.72	40.122890	-104.964126
SULLIVAN 4H TPZ			356.79			0.00	0.00	0.00	7389.00	-88.42	-350.81	40.103802	-104.964010
SULLIVAN 4H PBHL 3.7			356.79			0.00	0.00	0.00	7480.00	6937.69	-388.80	40.122890	-104.963994



WELL DETAILS: SULLIVAN 4H-26H-P268

+N/-S	+E/-W	Northing	Ground Level:	4965.00	Latitude	Longitude
0.00	0.00	1281128.08	Easting	3150281.30	40.103839	-104.962754

**CATHEDRAL**



# Cathedral Energy Services

## Planning Report

<b>Database:</b> USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b> Well SULLIVAN 4H-26H-P268
<b>Company:</b> Crestone Peak Resources	<b>TVD Reference:</b> 23' KB @ 4987.00usft
<b>Project:</b> DJ BASIN	<b>MD Reference:</b> 23' KB @ 4987.00usft
<b>Site:</b> S26-T2N-R68W	<b>North Reference:</b> Grid
<b>Well:</b> SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> OH	
<b>Design:</b> PLAN #2	

<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		

<b>Site</b> S26-T2N-R68W					
<b>Site Position:</b>		<b>Northing:</b>	1,281,128.07 usft	<b>Latitude:</b>	40.103840
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,150,211.37 usft	<b>Longitude:</b>	-104.963004
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	0.35 °

<b>Well</b> SULLIVAN 4H-26H-P268						
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,281,128.08 usft	<b>Latitude:</b>	40.103839
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	3,150,281.30 usft	<b>Longitude:</b>	-104.962754
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	4,965.00 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	4/1/2017	8.55	66.57	52,257

<b>Design</b> PLAN #2				
<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	356.79

<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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	4.00	180.00	399.84	-6.98	0.00	2.00	2.00	0.00	180.00	
700.52	8.76	216.24	698.51	-35.93	-13.53	2.00	1.58	12.06	59.26	
4,611.50	8.76	216.24	4,563.92	-516.08	-365.50	0.00	0.00	0.00	0.00	
5,049.28	0.00	0.00	5,000.00	-543.00	-385.24	2.00	-2.00	0.00	180.00	
6,813.09	0.00	0.00	6,763.80	-543.00	-385.24	0.00	0.00	0.00	0.00	
7,938.09	90.00	359.88	7,480.00	173.20	-386.69	8.00	8.00	0.00	359.88	
14,514.90	90.00	359.88	7,480.00	6,750.00	-400.00	0.00	0.00	0.00	0.00	
14,689.49	90.00	6.47	7,480.00	6,924.22	-390.33	3.77	0.00	3.77	90.00	
14,703.04	90.00	6.47	7,480.00	6,937.69	-388.80	0.00	0.00	0.00	0.00	SULLIVAN 4H PBHL :

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site:</b>	S26-T2N-R68W	<b>North Reference:</b>	Grid
<b>Well:</b>	SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

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	KOP @ 200'
300.00	2.00	180.00	299.98	-1.75	0.00	-1.74	2.00	2.00	
400.00	4.00	180.00	399.84	-6.98	0.00	-6.97	2.00	2.00	END NUJGE
500.00	5.31	198.92	499.51	-14.84	-1.50	-14.74	2.00	1.31	
600.00	6.95	209.69	598.94	-24.48	-6.00	-24.10	2.00	1.64	
700.00	8.75	216.22	698.00	-35.87	-13.49	-35.06	2.00	1.79	
700.52	8.76	216.24	698.51	-35.93	-13.53	-35.12	2.00	1.84	EOB; INC=8.76°
800.00	8.76	216.24	796.84	-48.15	-22.49	-46.81	0.00	0.00	
900.00	8.76	216.24	895.67	-60.42	-31.49	-58.57	0.00	0.00	
1,000.00	8.76	216.24	994.50	-72.70	-40.49	-70.32	0.00	0.00	
1,100.00	8.76	216.24	1,093.34	-84.98	-49.49	-82.07	0.00	0.00	
1,200.00	8.76	216.24	1,192.17	-97.25	-58.49	-93.83	0.00	0.00	
1,300.00	8.76	216.24	1,291.01	-109.53	-67.49	-105.58	0.00	0.00	
1,400.00	8.76	216.24	1,389.84	-121.81	-76.48	-117.34	0.00	0.00	
1,500.00	8.76	216.24	1,488.68	-134.08	-85.48	-129.09	0.00	0.00	
1,544.84	8.76	216.24	1,533.00	-139.59	-89.52	-134.36	0.00	0.00	UPPER PIERRE AQUIFER BASE
1,600.00	8.76	216.24	1,587.51	-146.36	-94.48	-140.84	0.00	0.00	
1,700.00	8.76	216.24	1,686.35	-158.64	-103.48	-152.60	0.00	0.00	
1,800.00	8.76	216.24	1,785.18	-170.91	-112.48	-164.35	0.00	0.00	
1,900.00	8.76	216.24	1,884.02	-183.19	-121.48	-176.11	0.00	0.00	
2,000.00	8.76	216.24	1,982.85	-195.47	-130.48	-187.86	0.00	0.00	
2,100.00	8.76	216.24	2,081.69	-207.74	-139.48	-199.61	0.00	0.00	
2,200.00	8.76	216.24	2,180.52	-220.02	-148.48	-211.37	0.00	0.00	
2,300.00	8.76	216.24	2,279.36	-232.30	-157.48	-223.12	0.00	0.00	
2,400.00	8.76	216.24	2,378.19	-244.57	-166.48	-234.88	0.00	0.00	
2,500.00	8.76	216.24	2,477.02	-256.85	-175.48	-246.63	0.00	0.00	
2,600.00	8.76	216.24	2,575.86	-269.13	-184.48	-258.38	0.00	0.00	
2,700.00	8.76	216.24	2,674.69	-281.40	-193.48	-270.14	0.00	0.00	
2,800.00	8.76	216.24	2,773.53	-293.68	-202.48	-281.89	0.00	0.00	
2,900.00	8.76	216.24	2,872.36	-305.96	-211.48	-293.65	0.00	0.00	
3,000.00	8.76	216.24	2,971.20	-318.23	-220.48	-305.40	0.00	0.00	
3,100.00	8.76	216.24	3,070.03	-330.51	-229.48	-317.15	0.00	0.00	
3,200.00	8.76	216.24	3,168.87	-342.79	-238.47	-328.91	0.00	0.00	
3,300.00	8.76	216.24	3,267.70	-355.07	-247.47	-340.66	0.00	0.00	
3,400.00	8.76	216.24	3,366.54	-367.34	-256.47	-352.42	0.00	0.00	
3,500.00	8.76	216.24	3,465.37	-379.62	-265.47	-364.17	0.00	0.00	
3,600.00	8.76	216.24	3,564.21	-391.90	-274.47	-375.92	0.00	0.00	
3,700.00	8.76	216.24	3,663.04	-404.17	-283.47	-387.68	0.00	0.00	
3,800.00	8.76	216.24	3,761.88	-416.45	-292.47	-399.43	0.00	0.00	
3,900.00	8.76	216.24	3,860.71	-428.73	-301.47	-411.19	0.00	0.00	
4,000.00	8.76	216.24	3,959.54	-441.00	-310.47	-422.94	0.00	0.00	
4,100.00	8.76	216.24	4,058.38	-453.28	-319.47	-434.69	0.00	0.00	
4,200.00	8.76	216.24	4,157.21	-465.56	-328.47	-446.45	0.00	0.00	
4,300.00	8.76	216.24	4,256.05	-477.83	-337.47	-458.20	0.00	0.00	
4,400.00	8.76	216.24	4,354.88	-490.11	-346.47	-469.95	0.00	0.00	
4,451.72	8.76	216.24	4,406.00	-496.46	-351.12	-476.03	0.00	0.00	SUSSEX
4,500.00	8.76	216.24	4,453.72	-502.39	-355.47	-481.71	0.00	0.00	
4,600.00	8.76	216.24	4,552.55	-514.66	-364.47	-493.46	0.00	0.00	
4,611.50	8.76	216.24	4,563.92	-516.08	-365.50	-494.82	0.00	0.00	Start Drop -2.00
4,700.00	6.99	216.24	4,651.58	-525.85	-372.67	-504.17	2.00	-2.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site:</b>	S26-T2N-R68W	<b>North Reference:</b>	Grid
<b>Well:</b>	SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

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
4,744.71	6.09	216.24	4,696.00	-529.95	-375.68	-508.10	2.00	-2.00	SUSSEX MARKER
4,800.00	4.99	216.24	4,751.03	-534.26	-378.83	-512.22	2.00	-2.00	
4,900.00	2.99	216.24	4,850.78	-539.86	-382.94	-517.59	2.00	-2.00	
4,999.28	1.00	216.24	4,950.00	-542.65	-384.98	-520.26	2.00	-2.00	SHANNON
5,000.00	0.99	216.24	4,950.72	-542.66	-384.99	-520.27	2.00	-2.00	
5,049.28	0.00	0.00	5,000.00	-543.00	-385.24	-520.59	2.00	-2.00	EOD; INC=0°
5,100.00	0.00	0.00	5,050.72	-543.00	-385.24	-520.59	0.00	0.00	
5,200.00	0.00	0.00	5,150.72	-543.00	-385.24	-520.59	0.00	0.00	
5,300.00	0.00	0.00	5,250.72	-543.00	-385.24	-520.59	0.00	0.00	
5,400.00	0.00	0.00	5,350.72	-543.00	-385.24	-520.59	0.00	0.00	
5,500.00	0.00	0.00	5,450.72	-543.00	-385.24	-520.59	0.00	0.00	
5,600.00	0.00	0.00	5,550.72	-543.00	-385.24	-520.59	0.00	0.00	
5,700.00	0.00	0.00	5,650.72	-543.00	-385.24	-520.59	0.00	0.00	
5,800.00	0.00	0.00	5,750.72	-543.00	-385.24	-520.59	0.00	0.00	
5,900.00	0.00	0.00	5,850.72	-543.00	-385.24	-520.59	0.00	0.00	
6,000.00	0.00	0.00	5,950.72	-543.00	-385.24	-520.59	0.00	0.00	
6,100.00	0.00	0.00	6,050.72	-543.00	-385.24	-520.59	0.00	0.00	
6,200.00	0.00	0.00	6,150.72	-543.00	-385.24	-520.59	0.00	0.00	
6,300.00	0.00	0.00	6,250.72	-543.00	-385.24	-520.59	0.00	0.00	
6,400.00	0.00	0.00	6,350.72	-543.00	-385.24	-520.59	0.00	0.00	
6,500.00	0.00	0.00	6,450.72	-543.00	-385.24	-520.59	0.00	0.00	
6,600.00	0.00	0.00	6,550.72	-543.00	-385.24	-520.59	0.00	0.00	
6,700.00	0.00	0.00	6,650.72	-543.00	-385.24	-520.59	0.00	0.00	
6,800.00	0.00	0.00	6,750.72	-543.00	-385.24	-520.59	0.00	0.00	
6,813.09	0.00	0.00	6,763.80	-543.00	-385.24	-520.59	0.00	0.00	Start Build 8.00
6,900.00	6.95	359.88	6,850.50	-537.73	-385.25	-515.33	8.00	8.00	
7,000.00	14.95	359.88	6,948.60	-518.75	-385.29	-496.38	8.00	8.00	
7,100.00	22.95	359.88	7,043.10	-486.29	-385.35	-463.97	8.00	8.00	
7,200.00	30.95	359.88	7,132.17	-441.01	-385.45	-418.75	8.00	8.00	
7,300.00	38.95	359.88	7,214.06	-383.76	-385.56	-361.59	8.00	8.00	
7,322.06	40.72	359.88	7,231.00	-369.63	-385.59	-347.48	8.00	8.00	SHARON SPRINGS
7,400.00	46.95	359.88	7,287.20	-315.68	-385.70	-293.60	8.00	8.00	
7,438.96	50.07	359.88	7,313.00	-286.50	-385.76	-264.47	8.00	8.00	NIOBRARA
7,445.22	50.57	359.88	7,317.00	-281.68	-385.77	-259.65	8.00	8.00	A MARL
7,500.00	54.95	359.88	7,350.14	-238.08	-385.86	-216.11	8.00	8.00	
7,561.00	59.83	359.88	7,383.00	-186.71	-385.96	-164.82	8.00	8.00	B CHALK
7,600.00	62.95	359.88	7,401.67	-152.47	-386.03	-130.63	8.00	8.00	
7,609.64	63.72	359.88	7,406.00	-143.85	-386.05	-122.03	8.00	8.00	B MARL
7,670.27	68.57	359.88	7,430.51	-88.42	-386.16	-66.68	8.00	8.00	TPZ - 7670' MD
7,700.00	70.95	359.88	7,440.79	-60.53	-386.22	-38.82	8.00	8.00	
7,800.00	78.95	359.88	7,466.73	35.96	-386.41	57.53	8.00	8.00	
7,818.26	80.41	359.88	7,470.00	53.93	-386.45	75.47	8.00	8.00	C CHALK
7,900.00	86.95	359.88	7,478.99	135.13	-386.61	156.55	8.00	8.00	
7,938.09	90.00	359.88	7,480.00	173.20	-386.69	194.56	8.00	8.00	LP @ 7480' TVD; 90°
8,000.00	90.00	359.88	7,480.00	235.11	-386.81	256.39	0.00	0.00	
8,100.00	90.00	359.88	7,480.00	335.11	-387.02	356.24	0.00	0.00	
8,200.00	90.00	359.88	7,480.00	435.11	-387.22	456.09	0.00	0.00	
8,300.00	90.00	359.88	7,480.00	535.11	-387.42	555.95	0.00	0.00	
8,400.00	90.00	359.88	7,480.00	635.11	-387.62	655.80	0.00	0.00	
8,500.00	90.00	359.88	7,480.00	735.11	-387.83	755.66	0.00	0.00	
8,600.00	90.00	359.88	7,480.00	835.11	-388.03	855.51	0.00	0.00	
8,700.00	90.00	359.88	7,480.00	935.11	-388.23	955.37	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 SULLIVAN 4H-26H-P268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4987.00usft
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<b>Well:</b>	SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

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
8,800.00	90.00	359.88	7,480.00	1,035.11	-388.43	1,055.22	0.00	0.00	
8,900.00	90.00	359.88	7,480.00	1,135.11	-388.64	1,155.08	0.00	0.00	
9,000.00	90.00	359.88	7,480.00	1,235.11	-388.84	1,254.93	0.00	0.00	
9,100.00	90.00	359.88	7,480.00	1,335.11	-389.04	1,354.78	0.00	0.00	
9,200.00	90.00	359.88	7,480.00	1,435.11	-389.24	1,454.64	0.00	0.00	
9,300.00	90.00	359.88	7,480.00	1,535.11	-389.45	1,554.49	0.00	0.00	
9,400.00	90.00	359.88	7,480.00	1,635.11	-389.65	1,654.35	0.00	0.00	
9,500.00	90.00	359.88	7,480.00	1,735.11	-389.85	1,754.20	0.00	0.00	
9,600.00	90.00	359.88	7,480.00	1,835.11	-390.05	1,854.06	0.00	0.00	
9,700.00	90.00	359.88	7,480.00	1,935.11	-390.26	1,953.91	0.00	0.00	
9,800.00	90.00	359.88	7,480.00	2,035.11	-390.46	2,053.77	0.00	0.00	
9,900.00	90.00	359.88	7,480.00	2,135.11	-390.66	2,153.62	0.00	0.00	
10,000.00	90.00	359.88	7,480.00	2,235.11	-390.86	2,253.47	0.00	0.00	
10,100.00	90.00	359.88	7,480.00	2,335.11	-391.06	2,353.33	0.00	0.00	
10,200.00	90.00	359.88	7,480.00	2,435.10	-391.27	2,453.18	0.00	0.00	
10,300.00	90.00	359.88	7,480.00	2,535.10	-391.47	2,553.04	0.00	0.00	
10,400.00	90.00	359.88	7,480.00	2,635.10	-391.67	2,652.89	0.00	0.00	
10,500.00	90.00	359.88	7,480.00	2,735.10	-391.87	2,752.75	0.00	0.00	
10,600.00	90.00	359.88	7,480.00	2,835.10	-392.08	2,852.60	0.00	0.00	
10,700.00	90.00	359.88	7,480.00	2,935.10	-392.28	2,952.46	0.00	0.00	
10,800.00	90.00	359.88	7,480.00	3,035.10	-392.48	3,052.31	0.00	0.00	
10,900.00	90.00	359.88	7,480.00	3,135.10	-392.68	3,152.16	0.00	0.00	
11,000.00	90.00	359.88	7,480.00	3,235.10	-392.89	3,252.02	0.00	0.00	
11,100.00	90.00	359.88	7,480.00	3,335.10	-393.09	3,351.87	0.00	0.00	
11,200.00	90.00	359.88	7,480.00	3,435.10	-393.29	3,451.73	0.00	0.00	
11,300.00	90.00	359.88	7,480.00	3,535.10	-393.49	3,551.58	0.00	0.00	
11,400.00	90.00	359.88	7,480.00	3,635.10	-393.70	3,651.44	0.00	0.00	
11,500.00	90.00	359.88	7,480.00	3,735.10	-393.90	3,751.29	0.00	0.00	
11,600.00	90.00	359.88	7,480.00	3,835.10	-394.10	3,851.15	0.00	0.00	
11,700.00	90.00	359.88	7,480.00	3,935.10	-394.30	3,951.00	0.00	0.00	
11,800.00	90.00	359.88	7,480.00	4,035.10	-394.51	4,050.85	0.00	0.00	
11,900.00	90.00	359.88	7,480.00	4,135.10	-394.71	4,150.71	0.00	0.00	
12,000.00	90.00	359.88	7,480.00	4,235.10	-394.91	4,250.56	0.00	0.00	
12,100.00	90.00	359.88	7,480.00	4,335.10	-395.11	4,350.42	0.00	0.00	
12,200.00	90.00	359.88	7,480.00	4,435.10	-395.31	4,450.27	0.00	0.00	
12,300.00	90.00	359.88	7,480.00	4,535.10	-395.52	4,550.13	0.00	0.00	
12,400.00	90.00	359.88	7,480.00	4,635.10	-395.72	4,649.98	0.00	0.00	
12,500.00	90.00	359.88	7,480.00	4,735.10	-395.92	4,749.84	0.00	0.00	
12,600.00	90.00	359.88	7,480.00	4,835.10	-396.12	4,849.69	0.00	0.00	
12,700.00	90.00	359.88	7,480.00	4,935.10	-396.33	4,949.54	0.00	0.00	
12,800.00	90.00	359.88	7,480.00	5,035.10	-396.53	5,049.40	0.00	0.00	
12,900.00	90.00	359.88	7,480.00	5,135.10	-396.73	5,149.25	0.00	0.00	
13,000.00	90.00	359.88	7,480.00	5,235.10	-396.93	5,249.11	0.00	0.00	
13,100.00	90.00	359.88	7,480.00	5,335.10	-397.14	5,348.96	0.00	0.00	
13,200.00	90.00	359.88	7,480.00	5,435.10	-397.34	5,448.82	0.00	0.00	
13,300.00	90.00	359.88	7,480.00	5,535.10	-397.54	5,548.67	0.00	0.00	
13,400.00	90.00	359.88	7,480.00	5,635.10	-397.74	5,648.53	0.00	0.00	
13,500.00	90.00	359.88	7,480.00	5,735.10	-397.95	5,748.38	0.00	0.00	
13,600.00	90.00	359.88	7,480.00	5,835.10	-398.15	5,848.23	0.00	0.00	
13,700.00	90.00	359.88	7,480.00	5,935.10	-398.35	5,948.09	0.00	0.00	
13,800.00	90.00	359.88	7,480.00	6,035.10	-398.55	6,047.94	0.00	0.00	
13,900.00	90.00	359.88	7,480.00	6,135.10	-398.76	6,147.80	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 SULLIVAN 4H-26H-P268
<b>Company:</b> Crestone Peak Resources	<b>TVD Reference:</b> 23' KB @ 4987.00usft
<b>Project:</b> DJ BASIN	<b>MD Reference:</b> 23' KB @ 4987.00usft
<b>Site:</b> S26-T2N-R68W	<b>North Reference:</b> Grid
<b>Well:</b> SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> OH	
<b>Design:</b> PLAN #2	

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
14,000.00	90.00	359.88	7,480.00	6,235.10	-398.96	6,247.65	0.00	0.00	
14,100.00	90.00	359.88	7,480.00	6,335.10	-399.16	6,347.51	0.00	0.00	
14,200.00	90.00	359.88	7,480.00	6,435.10	-399.36	6,447.36	0.00	0.00	
14,300.00	90.00	359.88	7,480.00	6,535.10	-399.57	6,547.22	0.00	0.00	
14,400.00	90.00	359.88	7,480.00	6,635.10	-399.77	6,647.07	0.00	0.00	
14,500.00	90.00	359.88	7,480.00	6,735.10	-399.97	6,746.92	0.00	0.00	
14,514.90	90.00	359.88	7,480.00	6,750.00	-400.00	6,761.81	0.00	0.00	START TURN
14,600.00	90.00	3.09	7,480.00	6,835.06	-397.79	6,846.61	3.77	0.00	
14,689.49	90.00	6.47	7,480.00	6,924.22	-390.33	6,935.21	3.77	0.00	
14,695.70	90.00	6.47	7,480.00	6,930.39	-389.63	6,941.34	0.00	0.00	END OF TURN
14,700.00	90.00	6.47	7,480.00	6,934.67	-389.15	6,945.58	0.00	0.00	
14,703.04	90.00	6.47	7,480.00	6,937.69	-388.80	6,948.57	0.00	0.00	TD at 14703.04

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SULLIVAN 4H TPZ - hit/miss target - Shape - Point	0.00	0.00	7,389.00	-88.42	-350.81	1,281,039.66	3,149,930.50	40.103602	-104.964010
- plan misses target center by 52.23usft at 7653.42usft MD (7424.17 TVD, -104.03 N, -386.13 E)									
SULLIVAN 4H PBHL - Point	0.00	0.00	7,389.00	6,937.47	-425.72	1,288,065.55	3,149,855.59	40.122890	-104.964126
- plan misses target center by 98.10usft at 14698.67usft MD (7480.00 TVD, 6933.34 N, -389.30 E)									
SULLIVAN 4H PBHL 3.7 - Point	0.00	0.00	7,480.00	6,937.69	-388.80	1,288,065.77	3,149,892.50	40.122890	-104.963994
- plan hits target center									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,544.84	1,533.00	UPPER PIERRE AQUIFER BASE				
4,451.72	4,406.00	SUSSEX				
4,744.71	4,696.00	SUSSEX MARKER				
4,999.28	4,950.00	SHANNON				
7,322.06	7,231.00	SHARON SPRINGS				
7,438.96	7,313.00	NIOBRARA				
7,445.22	7,317.00	A MARL				
7,561.00	7,383.00	B CHALK				
7,609.64	7,406.00	B MARL				
7,818.26	7,470.00	C CHALK				

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site:</b>	S26-T2N-R68W	<b>North Reference:</b>	Grid
<b>Well:</b>	SULLIVAN 4H-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	KOP @ 200'
400.00	399.84	-6.98	0.00	END NUDGE
700.52	698.51	-35.93	-13.53	EOB; INC=8.76°
4,611.50	4,563.92	-516.08	-365.50	Start Drop -2.00
5,049.28	5,000.00	-543.00	-385.24	EOD; INC=0°
6,813.09	6,763.80	-543.00	-385.24	Start Build 8.00
7,670.27	7,430.51	-88.42	-386.16	TPZ - 7670' MD
7,938.09	7,480.00	173.20	-386.69	LP @ 7480' TVD; 90°
14,514.90	7,480.00	6,750.00	-400.00	START TURN
14,695.70	7,480.00	6,930.40	-389.66	END OF TURN
14,703.04	7,480.00	6,937.69	-388.80	TD at 14703.04

# **Crestone Peak Resources**

**DJ BASIN**

**S26-T2N-R68W**

**SULLIVAN 4H-26H-P268**

**OH**

**PLAN #2**

## **Anticollision Report**

**31 March, 2017**



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<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 1,500.00usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>		<b>Date</b>	3/31/2017		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	14,702.72	PLAN #2 (OH)	MWD+HDGM	OWSG MWD + HDGM	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
S26-T2N-R68W						
Billings 1 - CPR WELL - GYRO						Out of range
Billings 31-34 - CPR WELL - SURVEYS						Out of range
Billings 32-34 - CPR WELL - GYRO						Out of range
Billings 41-34 - CPR WELL - SURVEYS						Out of range
Billings 42-34 - Existing - SURVEYS						Out of range
Billings 8-4-34 - CPR WELL - SURVEYS						Out of range
Bybee 5 - Wellbore #1 - PLAN #1	14,703.04	12,639.47	720.08	537.49	3.944	CC, ES, SF
Duke State 30-36 - KMG WELL - SURVEYS	6,697.65	6,718.44	955.07	898.91	17.009	CC
Duke State 30-36 - KMG WELL - SURVEYS	7,000.00	7,042.41	955.20	897.37	16.516	ES
Duke State 30-36 - KMG WELL - SURVEYS	7,050.00	7,087.22	955.84	897.93	16.504	SF
Elmquist 0-0-23 - CPR WELL - SURVEYS						Out of range
Elmquist 1 - CPR WELL - GYRO						Out of range
Elmquist 12-23 - CPR WELL - GYRO						Out of range
Elmquist 21-23 - CPR WELL - SURVEYS						Out of range
Elmquist 2-4-23 - CPR WELL - SURVEYS						Out of range
Elmquist 4-2-23 - CPR WELL - SURVEYS						Out of range
Elmquist 4-4-23 - CPR WELL - SURVEYS						Out of range
Godding Gulch 21-26 - CPR WELL - SURVEYS						Out of range
Grant 1 - KPK WELL - NO SURVEYS						Out of range
Grant 4 - KPK WELL - NO SURVEYS						Out of range
Grant Bros 23-2AE - EXTRACTION - SURVEYS	14,703.04	7,852.22	660.59	541.01	5.524	CC, ES, SF
Grant Bros 23-43 - EXTRACTION - SURVEYS	14,521.96	7,730.80	218.52	73.68	1.509	CC, ES, SF
Grant Bros 23-4AE - EXTRACTION - SURVEYS						Out of range
Grant Bros 23-54 - EXTRACTION - SURVEYS	13,838.49	7,545.43	444.18	319.49	3.562	CC, ES, SF
Grant Bros 31-26 - CPR WELL - GYRO	11,949.60	7,428.31	1,034.89	946.82	11.751	CC, ES
Grant Bros 31-26 - CPR WELL - GYRO	12,100.00	7,429.36	1,045.76	955.84	11.630	SF
Grant Bros 32-26 - CPR - GYRO	10,576.10	7,448.50	1,326.63	1,258.29	19.413	CC
Grant Bros 32-26 - CPR - GYRO	10,600.00	7,448.97	1,326.84	1,258.15	19.316	ES
Grant Bros 32-26 - CPR - GYRO	10,800.00	7,452.95	1,345.38	1,274.27	18.918	SF
Grant Bros 3-23 - CPR WELL - SURVEYS	13,537.63	7,436.62	764.52	658.99	7.245	CC, ES
Grant Bros 3-23 - CPR WELL - SURVEYS	13,600.00	7,435.70	767.06	660.68	7.211	SF
Grant Bros 41-26 - SUNDANCE WELL - NO SURVEYS						Out of range
Grant Bros 42-26 - CPR WELL - SURVEYS	10,439.85	7,505.57	346.79	275.68	4.877	CC, ES, SF
Grant Bros 43-23 - SUNDANCE WELL - NO SURVEYS						Out of range
Grant Brothers 2-26 - CPR - NO SURVEYS	10,914.59	7,437.99	209.53	136.42	2.866	CC, ES, SF
Grant Brothers 33-23C - EXTRACTION - NO SURVEYS	14,454.03	7,403.99	917.55	791.55	7.282	CC, ES
Grant Brothers 33-23C - EXTRACTION - NO SURVEYS	14,514.90	7,403.99	919.57	792.70	7.248	SF
Grant Brothers 34-23C - EXTRACTION - GYRO	13,214.34	7,415.45	991.58	885.26	9.326	CC, ES
Grant Brothers 34-23C - EXTRACTION - GYRO	13,300.00	7,415.79	995.28	887.78	9.259	SF
Grant Brothers 44-23C - EXTRACTION - GYRO	13,064.51	7,450.64	246.54	142.34	2.366	CC, ES, SF
Haley 31-22 - CPR WELL - SURVEYS						Out of range
Haley 41-22 - CPR WELL - SURVEYS						Out of range
Haley 4-2-22 - CPR WELL - SURVEYS						Out of range
Haley 8-2-22 - CPR WELL - SURVEYS						Out of range
Haley 8-4-22 - CPR WELL - SURVEYS						Out of range
Johnson 1 - KPK - NO SURVEYS	5,110.45	5,011.17	1,259.32	1,229.72	42.543	CC
Johnson 1 - KPK - NO SURVEYS	5,200.00	5,085.00	1,259.41	1,229.43	41.997	ES
Johnson 1 - KPK - NO SURVEYS	5,300.00	5,085.00	1,264.62	1,234.44	41.901	SF
Johnson 2 - KPK WELL - NO SURVEYS						Out of range
Meredith 1 - KPK WELL - NO SURVEYS	200.00	171.99	97.30	96.50	121.831	CC, ES
Meredith 1 - KPK WELL - NO SURVEYS	5,200.00	5,119.99	729.44	701.78	26.377	SF
Puritan 6-4-34 - CPR WELL - SURVEYS						Out of range
Sullivan 1 - CPR - NO SURVEYS	9,205.08	7,464.00	105.62	59.30	2.280	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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
S26-T2N-R68W						
Sullivan 33-26 - CPR WELL - SURVEYS	9,177.09	7,440.05	1,340.55	1,295.62	29.836	CC
Sullivan 33-26 - CPR WELL - SURVEYS	9,200.00	7,439.96	1,340.75	1,295.57	29.676	ES
Sullivan 33-26 - CPR WELL - SURVEYS	9,500.00	7,438.76	1,378.89	1,330.93	28.751	SF
Sullivan 34-26 - CPR WELL - SURVEYS	7,654.60	7,376.42	1,479.08	1,439.00	36.904	CC, ES
Sullivan 34-26 - CPR WELL - SURVEYS	7,800.00	7,420.39	1,485.47	1,445.02	36.726	SF
Sullivan 44-26 - CPR WELL - GYRO	597.43	570.46	12.06	9.15	4.148	CC
Sullivan 44-26 - CPR WELL - GYRO	600.00	573.01	12.06	9.14	4.130	ES, SF
Sullivan 4-6-26 - CPR WELL - SURVEYS						Out of range
SULLIVAN 4A-26H-P268 - OH - PLAN #4	200.00	200.00	69.93	68.94	70.301	CC, ES
SULLIVAN 4A-26H-P268 - OH - PLAN #4	900.00	878.00	123.31	116.94	19.382	SF
SULLIVAN 4B-26H-P268 - OH - PLAN #4	200.00	200.00	59.86	58.87	60.178	CC
SULLIVAN 4B-26H-P268 - OH - PLAN #4	300.00	299.98	59.89	58.19	35.298	ES
SULLIVAN 4B-26H-P268 - OH - PLAN #4	900.00	884.63	99.12	92.87	15.865	SF
SULLIVAN 4C-26H-P268 - OH - PLAN #3	200.00	200.00	49.79	48.80	50.055	CC
SULLIVAN 4C-26H-P268 - OH - PLAN #3	400.00	399.84	50.29	47.89	20.952	ES
SULLIVAN 4C-26H-P268 - OH - PLAN #3	14,703.04	14,901.25	1,399.92	1,166.42	5.995	SF
SULLIVAN 4D-26H-P268 - OH - PLAN #2	200.00	200.00	40.00	39.01	40.213	CC
SULLIVAN 4D-26H-P268 - OH - PLAN #2	500.00	499.51	41.31	38.19	13.248	ES
SULLIVAN 4D-26H-P268 - OH - PLAN #2	14,703.04	14,745.41	1,160.40	927.09	4.974	SF
SULLIVAN 4E-26H-P268 - OH - PLAN #2	200.00	200.00	29.93	28.94	30.091	CC
SULLIVAN 4E-26H-P268 - OH - PLAN #2	300.00	299.98	29.99	28.30	17.678	ES
SULLIVAN 4E-26H-P268 - OH - PLAN #2	14,689.49	14,612.38	855.59	623.45	3.686	SF
SULLIVAN 4F-26H-P268 - OH - PLAN #2	200.00	200.00	19.86	18.87	19.965	CC
SULLIVAN 4F-26H-P268 - OH - PLAN #2	300.00	299.76	20.46	18.77	12.128	ES
SULLIVAN 4F-26H-P268 - OH - PLAN #2	14,689.49	14,856.87	612.64	384.03	2.680	SF
SULLIVAN 4G-26H-P268 - OH - PLAN #2	214.73	214.73	9.79	8.69	8.915	CC
SULLIVAN 4G-26H-P268 - OH - PLAN #2	300.00	299.98	9.94	8.24	5.857	ES
SULLIVAN 4G-26H-P268 - OH - PLAN #2	13,800.00	13,700.00	270.68	72.44	1.365	Level 3, SF
SULLIVAN 4I-26H-P268 - OH - PLAN #2	200.00	200.00	10.07	9.08	10.123	CC
SULLIVAN 4I-26H-P268 - OH - PLAN #2	300.00	299.98	10.23	8.53	6.028	ES
SULLIVAN 4I-26H-P268 - OH - PLAN #2	14,703.04	14,595.72	378.86	149.73	1.653	SF
SULLIVAN 4J-26H-P268 - OH - PLAN #2	200.00	200.00	20.14	19.15	20.246	CC
SULLIVAN 4J-26H-P268 - OH - PLAN #2	300.00	299.98	20.22	18.53	11.919	ES
SULLIVAN 4J-26H-P268 - OH - PLAN #2	14,703.04	14,691.86	597.89	363.42	2.550	SF
SULLIVAN 4K-26H-P268 - OH - PLAN #2	200.00	200.00	30.21	29.22	30.370	CC
SULLIVAN 4K-26H-P268 - OH - PLAN #2	300.00	299.98	30.27	28.57	17.840	ES
SULLIVAN 4K-26H-P268 - OH - PLAN #2	14,703.04	14,811.90	800.55	569.38	3.463	SF
SULLIVAN 4L-26H-P268 - OH - PLAN #2	200.00	200.00	40.00	39.01	40.213	CC, ES
SULLIVAN 4L-26H-P268 - OH - PLAN #2	14,703.04	14,647.70	823.01	588.87	3.515	SF
Sullivan 6-8-26 - CPR - SURVEYS	5,190.41	5,236.05	562.08	530.61	17.858	CC
Sullivan 6-8-26 - CPR - SURVEYS	5,840.00	5,885.67	562.41	528.16	16.421	ES
Sullivan 6-8-26 - CPR - SURVEYS	7,400.00	7,382.43	591.91	549.14	13.840	SF
Sullivan 8-6-26 - CPR WELL - SURVEYS	8,500.00	7,560.38	837.98	769.09	12.164	SF
Sullivan 8-6-26 - CPR WELL - SURVEYS	8,545.76	7,560.07	836.73	768.00	12.174	CC, ES
Walsh 13-24 - CPR WELL - SURVEYS	14,703.04	7,655.94	1,392.65	1,261.79	10.642	CC, ES, SF
Walsh 23-24 - PDC - GYRO						Out of range
Walsh 24-24 - PDC - GYRO						Out of range

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+HDGM													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)					
13,700.00	7,480.00	12,639.47	7,272.00	101.56	87.87	-78.53	7,256.16	-1,022.22	1,466.39	1,372.23	94.15	15.574			
13,800.00	7,480.00	12,639.47	7,272.00	103.08	87.87	-78.53	7,256.16	-1,022.22	1,376.89	1,277.97	98.92	13.919			
13,900.00	7,480.00	12,639.47	7,272.00	104.61	87.87	-78.53	7,256.16	-1,022.22	1,288.94	1,184.56	104.38	12.349			
14,000.00	7,480.00	12,639.47	7,272.00	106.14	87.87	-78.53	7,256.16	-1,022.22	1,202.87	1,092.24	110.63	10.873			
14,100.00	7,480.00	12,639.47	7,272.00	107.68	87.87	-78.53	7,256.16	-1,022.22	1,119.12	1,001.33	117.80	9.500			
14,200.00	7,480.00	12,639.47	7,272.00	109.21	87.87	-78.53	7,256.16	-1,022.22	1,038.25	912.27	125.98	8.241			
14,300.00	7,480.00	12,639.47	7,272.00	110.75	87.87	-78.53	7,256.16	-1,022.22	960.99	825.71	135.28	7.104			
14,400.00	7,480.00	12,639.47	7,272.00	112.28	87.87	-78.53	7,256.16	-1,022.22	888.28	742.57	145.71	6.096			
14,500.00	7,480.00	12,639.47	7,272.00	113.82	87.87	-78.53	7,256.16	-1,022.22	821.33	664.14	157.19	5.225			
14,514.90	7,480.00	12,639.47	7,272.00	114.05	87.87	-78.53	7,256.16	-1,022.22	811.93	652.96	158.97	5.107			
14,600.00	7,480.00	12,639.47	7,272.00	115.34	87.87	-78.97	7,256.16	-1,022.22	763.62	594.05	169.57	4.503			
14,689.49	7,480.00	12,639.47	7,272.00	116.66	87.87	-79.28	7,256.16	-1,022.22	724.80	543.86	180.94	4.006			
14,703.04	7,480.00	12,639.47	7,272.00	116.84	87.87	-79.28	7,256.16	-1,022.22	720.08	537.49	182.59	3.944	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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Duke State 30-36 - KMG WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 40-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance			Total	Separation	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)	Uncertainty Axis		Factor	
2,500.00	2,477.02	2,855.24	2,836.60	9.88	12.56	-94.69	-1,060.77	1,024.05	1,493.83	1,472.93	20.89	71.495		
2,600.00	2,575.86	2,940.61	2,919.08	10.30	13.17	-95.38	-1,045.58	1,008.14	1,469.47	1,447.74	21.73	67.632		
2,700.00	2,674.69	3,030.46	3,006.09	10.73	13.82	-96.10	-1,030.41	991.67	1,446.09	1,423.52	22.57	64.058		
2,800.00	2,773.53	3,129.53	3,102.01	11.15	14.57	-96.91	-1,013.70	973.36	1,422.87	1,399.42	23.45	60.676		
2,900.00	2,872.36	3,219.81	3,189.41	11.58	15.26	-97.69	-998.37	956.70	1,399.89	1,375.57	24.32	57.563		
3,000.00	2,971.20	3,305.79	3,272.76	12.01	15.91	-98.46	-983.78	941.46	1,377.82	1,352.63	25.19	54.694		
3,100.00	3,070.03	3,390.79	3,355.32	12.43	16.55	-99.21	-970.26	926.45	1,356.65	1,330.58	26.06	52.052		
3,200.00	3,168.87	3,478.66	3,440.90	12.86	17.20	-99.97	-957.26	911.32	1,336.66	1,309.72	26.94	49.614		
3,300.00	3,267.70	3,567.46	3,546.66	13.28	18.04	-100.99	-940.10	892.42	1,316.36	1,288.48	27.88	47.219		
3,400.00	3,366.54	3,681.30	3,637.80	13.71	18.77	-101.94	-924.37	876.57	1,296.41	1,267.60	28.81	45.000		
3,500.00	3,465.37	3,784.50	3,737.98	14.14	19.59	-102.98	-907.46	858.43	1,276.39	1,246.63	29.76	42.888		
3,600.00	3,564.21	3,877.30	3,828.10	14.56	20.33	-103.89	-893.37	841.36	1,256.53	1,225.84	30.69	40.944		
3,700.00	3,663.04	3,970.97	3,919.09	14.99	21.07	-104.88	-878.47	824.89	1,237.46	1,205.82	31.64	39.106		
3,800.00	3,761.88	4,069.64	4,014.74	15.42	21.88	-106.03	-861.07	808.00	1,218.54	1,185.89	32.65	37.326		
3,900.00	3,860.71	4,163.48	4,105.70	15.84	22.66	-107.17	-844.47	791.99	1,200.13	1,166.47	33.66	35.659		
4,000.00	3,959.54	4,263.68	4,202.80	16.27	23.49	-108.41	-826.62	774.84	1,182.16	1,147.46	34.70	34.070		
4,100.00	4,058.38	4,360.00	4,295.93	16.70	24.32	-109.69	-808.57	758.19	1,164.25	1,128.48	35.77	32.551		
4,200.00	4,157.21	4,448.16	4,381.25	17.12	25.07	-110.89	-792.06	743.34	1,147.35	1,110.51	36.84	31.144		
4,300.00	4,256.05	4,564.97	4,494.54	17.55	26.04	-112.40	-772.68	722.53	1,130.89	1,092.95	37.94	29.807		
4,400.00	4,354.88	4,667.28	4,593.27	17.98	26.94	-113.76	-755.10	702.27	1,112.83	1,073.79	39.04	28.503		
4,500.00	4,453.72	4,763.69	4,686.26	18.40	27.79	-115.12	-738.05	683.39	1,095.48	1,055.30	40.17	27.271		
4,600.00	4,552.55	4,846.06	4,765.84	18.83	28.51	-116.27	-724.09	667.35	1,079.05	1,037.76	41.29	26.135		
4,611.50	4,563.92	4,854.97	4,774.48	18.88	28.58	-116.40	-722.63	665.68	1,077.29	1,035.88	41.42	26.012		
4,700.00	4,651.58	4,931.51	4,848.72	19.25	29.22	-117.18	-710.33	651.75	1,063.92	1,021.52	42.40	25.093		
4,800.00	4,751.03	5,022.19	4,936.72	19.64	29.99	-118.03	-695.34	635.76	1,048.29	1,004.78	43.51	24.094		
4,900.00	4,850.78	5,108.64	5,020.68	20.00	30.70	-118.71	-680.90	621.14	1,032.13	987.55	44.58	23.150		
5,000.00	4,950.72	5,183.85	5,094.08	20.34	31.29	-119.11	-669.55	609.25	1,016.01	970.45	45.56	22.300		
5,049.28	5,000.00	5,214.39	5,124.04	20.49	31.52	-97.05	-665.47	605.02	1,008.58	962.60	45.98	21.937		
5,100.00	5,050.72	5,240.00	5,149.26	20.63	31.69	96.89	-662.33	601.87	1,001.70	955.35	46.35	21.612		
5,200.00	5,150.72	5,320.00	5,228.41	20.91	32.19	96.47	-654.06	593.68	990.33	943.19	47.14	21.007		
5,300.00	5,250.72	5,405.72	5,313.54	21.19	32.66	96.13	-647.28	586.38	980.96	933.06	47.91	20.477		
5,400.00	5,350.72	5,492.08	5,399.46	21.48	33.10	95.82	-641.37	579.94	972.84	924.19	48.65	19.998		
5,500.00	5,450.72	5,570.64	5,477.78	21.77	33.47	95.61	-637.35	575.27	966.43	917.13	49.30	19.602		
5,600.00	5,550.72	5,640.00	5,547.05	22.06	33.75	95.48	-634.93	573.01	962.84	912.99	49.85	19.315		
5,680.00	5,630.71	5,700.67	5,607.70	22.29	33.92	95.41	-633.76	572.51	962.04	911.81	50.23	19.152		
5,700.00	5,650.72	5,720.00	5,627.04	22.35	33.96	95.40	-633.60	572.59	962.10	911.77	50.33	19.115		
5,800.00	5,750.72	5,816.85	5,723.88	22.65	34.15	95.41	-633.77	573.30	962.84	911.99	50.85	18.936		
5,900.00	5,850.72	5,932.96	5,839.99	22.94	34.34	95.44	-634.30	572.60	962.26	910.84	51.42	18.713		
6,000.00	5,950.72	6,021.04	5,928.07	23.24	34.55	95.44	-634.09	572.08	961.64	909.72	51.92	18.520		
6,100.00	6,050.72	6,124.18	6,031.20	23.54	34.79	95.38	-633.19	572.10	961.58	909.06	52.52	18.308		
6,200.00	6,150.72	6,237.92	6,144.93	23.84	35.06	95.37	-632.90	570.59	960.20	907.04	53.16	18.061		
6,300.00	6,250.72	6,337.42	6,244.42	24.15	35.32	95.36	-632.48	569.05	958.62	904.87	53.76	17.832		
6,400.00	6,350.72	6,440.00	6,346.97	24.45	35.62	95.33	-631.83	566.87	956.44	902.05	54.39	17.585		
6,500.00	6,450.72	6,525.05	6,432.01	24.76	35.90	95.27	-630.80	566.09	955.38	900.40	54.98	17.378		
6,600.00	6,550.72	6,621.24	6,528.19	25.06	36.14	95.22	-629.91	566.04	955.25	899.69	55.56	17.194		
6,697.65	6,648.37	6,718.44	6,625.39	25.37	36.39	95.15	-628.70	565.97	955.07	898.91	56.15	17.009 CC		
6,700.00	6,650.72	6,720.00	6,626.95	25.37	36.39	95.15	-628.68	565.97	955.07	898.90	56.16	17.006		
6,800.00	6,750.72	6,816.82	6,723.76	25.68	36.52	95.12	-628.21	566.39	955.45	898.83	56.62	16.876		
6,813.09	6,763.80	6,830.91	6,737.85	25.72	36.54	95.11	-628.12	566.45	955.50	898.81	56.68	16.856		
6,850.00	6,800.70	6,871.35	6,778.29	25.84	36.61	95.26	-627.75	566.54	955.63	898.73	56.90	16.796		
6,900.00	6,850.50	6,936.98	6,843.91	25.98	36.82	95.53	-626.61	566.10	955.64	898.34	57.30	16.679		
6,950.00	6,899.88	6,994.70	6,901.60	26.11	37.04	96.01	-625.20	564.90	955.25	897.62	57.64	16.574		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft			
Survey Program: 40-MWD													Offset Well Error:		0.00 usft		
Reference													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					
6,979.60	6,928.83	7,023.31	6,930.19	26.19	37.13	96.36	-624.76	564.20	955.15	897.39	57.76	16.536					
7,000.00	6,948.60	7,042.41	6,949.29	26.24	37.19	96.63	-624.65	563.73	955.20	897.37	57.83	16.516 ES					
7,050.00	6,996.42	7,087.22	6,994.09	26.35	37.28	97.37	-624.84	562.65	955.84	897.93	57.92	16.504 SF					
7,100.00	7,043.10	7,129.22	7,036.08	26.46	37.33	98.17	-625.28	561.78	957.41	899.48	57.93	16.528					
7,150.00	7,088.43	7,169.77	7,076.61	26.55	37.38	99.01	-625.82	561.11	960.10	902.20	57.90	16.582					
7,200.00	7,132.17	7,208.43	7,115.27	26.64	37.43	99.82	-626.37	560.65	964.11	906.26	57.84	16.667					
7,250.00	7,174.12	7,245.53	7,152.36	26.71	37.48	100.60	-626.88	560.40	969.61	911.83	57.78	16.782					
7,300.00	7,214.06	7,280.00	7,186.83	26.78	37.54	101.26	-627.40	560.31	976.75	919.05	57.70	16.928					
7,350.00	7,251.82	7,315.58	7,222.41	26.85	37.62	101.93	-628.01	560.31	985.68	928.04	57.64	17.100					
7,400.00	7,287.20	7,347.71	7,254.53	26.90	37.69	102.40	-628.66	560.38	996.55	938.98	57.57	17.310					
7,450.00	7,320.02	7,378.83	7,285.64	26.96	37.77	102.74	-629.34	560.50	1,009.46	951.95	57.51	17.553					
7,500.00	7,350.14	7,408.28	7,315.09	27.01	37.84	102.88	-629.95	560.62	1,024.46	967.01	57.45	17.832					
7,550.00	7,377.40	7,434.87	7,341.67	27.07	37.91	102.75	-630.47	560.74	1,041.62	984.23	57.40	18.147					
7,600.00	7,401.67	7,458.42	7,365.22	27.13	37.97	102.31	-630.91	560.85	1,060.98	1,003.63	57.35	18.500					
7,650.00	7,422.84	7,478.85	7,385.64	27.19	38.02	101.52	-631.29	560.95	1,082.51	1,025.20	57.31	18.889					
7,700.00	7,440.79	7,496.09	7,402.88	27.27	38.07	100.36	-631.59	561.04	1,106.18	1,048.90	57.28	19.313					
7,750.00	7,455.44	7,510.03	7,416.82	27.36	38.11	98.78	-631.84	561.11	1,131.88	1,074.62	57.25	19.770					
7,800.00	7,466.73	7,520.59	7,427.37	27.46	38.14	96.77	-632.02	561.17	1,159.47	1,102.24	57.23	20.259					
7,850.00	7,474.59	7,527.79	7,434.57	27.59	38.16	94.31	-632.14	561.20	1,188.79	1,131.57	57.22	20.775					
7,900.00	7,478.99	7,531.44	7,438.23	27.73	38.17	91.40	-632.20	561.22	1,219.63	1,162.42	57.22	21.317					
7,938.09	7,480.00	7,531.83	7,438.62	27.85	38.17	88.89	-632.21	561.23	1,244.01	1,186.80	57.21	21.744					
8,000.00	7,480.00	7,530.77	7,437.56	28.08	38.16	88.82	-632.19	561.22	1,285.05	1,227.83	57.22	22.458					
8,100.00	7,480.00	7,529.05	7,435.83	28.53	38.16	88.72	-632.16	561.21	1,354.69	1,297.40	57.29	23.646					
8,200.00	7,480.00	7,527.31	7,434.10	29.06	38.15	88.61	-632.13	561.20	1,427.95	1,370.54	57.41	24.874					

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 23-2AE - EXTRACTION - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 118-ISCWSA 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		
13,800.00	7,480.00	7,862.81	7,463.80	103.08	41.19	-94.60	7,413.38	-845.90	1,449.50	1,380.32	69.18	20.952		
13,900.00	7,480.00	7,861.64	7,462.63	104.61	41.19	-94.45	7,413.39	-845.95	1,354.70	1,283.10	71.60	18.921		
14,000.00	7,480.00	7,860.46	7,461.45	106.14	41.19	-94.30	7,413.40	-846.00	1,260.70	1,186.26	74.45	16.935		
14,100.00	7,480.00	7,859.26	7,460.25	107.68	41.19	-94.15	7,413.42	-846.05	1,167.70	1,089.88	77.82	15.005		
14,200.00	7,480.00	7,858.05	7,459.04	109.21	41.19	-93.99	7,413.44	-846.10	1,075.96	994.11	81.85	13.146		
14,300.00	7,480.00	7,856.82	7,457.82	110.75	41.19	-93.84	7,413.45	-846.15	985.82	899.15	86.67	11.374		
14,400.00	7,480.00	7,855.59	7,456.58	112.28	41.19	-93.68	7,413.47	-846.20	897.76	805.29	92.48	9.708		
14,500.00	7,480.00	7,854.33	7,455.33	113.82	41.19	-93.52	7,413.48	-846.25	812.48	712.96	99.52	8.164		
14,514.90	7,480.00	7,854.15	7,455.14	114.05	41.19	-93.49	7,413.49	-846.26	800.06	699.38	100.68	7.946		
14,600.00	7,480.00	7,853.16	7,454.16	115.34	41.18	-93.13	7,413.50	-846.30	732.42	624.18	108.24	6.767		
14,689.49	7,480.00	7,852.33	7,453.33	116.66	41.18	-92.85	7,413.51	-846.33	669.32	551.39	117.93	5.676		
14,703.04	7,480.00	7,852.22	7,453.22	116.84	41.18	-92.84	7,413.51	-846.34	660.59	541.01	119.58	5.524	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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Bros 23-43 - EXTRACTION - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 177-ISCWSA MWD														
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	
13,100.00	7,480.00	7,704.49	7,401.70	92.43	37.66	83.14	6,755.99	-181.48	1,437.40	1,377.86	59.55	24.138		
13,200.00	7,480.00	7,706.32	7,403.53	93.94	37.66	83.61	6,756.02	-181.48	1,338.67	1,278.65	60.02	22.306		
13,300.00	7,480.00	7,708.15	7,405.36	95.46	37.66	84.09	6,756.06	-181.48	1,240.14	1,179.55	60.59	20.468		
13,400.00	7,480.00	7,709.99	7,407.19	96.98	37.67	84.56	6,756.09	-181.48	1,141.85	1,080.55	61.30	18.627		
13,500.00	7,480.00	7,711.82	7,409.03	98.50	37.67	85.04	6,756.13	-181.48	1,043.89	981.69	62.21	16.781		
13,600.00	7,480.00	7,713.67	7,410.87	100.03	37.67	85.52	6,756.16	-181.48	946.36	882.99	63.37	14.934		
13,700.00	7,480.00	7,715.51	7,412.72	101.56	37.67	86.00	6,756.20	-181.48	849.39	784.49	64.90	13.088		
13,800.00	7,480.00	7,717.36	7,414.56	103.08	37.67	86.48	6,756.23	-181.48	753.21	686.27	66.95	11.251		
13,900.00	7,480.00	7,719.21	7,416.41	104.61	37.68	86.97	6,756.26	-181.48	658.17	588.41	69.76	9.435		
14,000.00	7,480.00	7,721.06	7,418.27	106.14	37.68	87.45	6,756.30	-181.48	564.84	491.12	73.72	7.662		
14,100.00	7,480.00	7,722.92	7,420.13	107.68	37.68	87.94	6,756.33	-181.48	474.22	394.72	79.50	5.965		
14,200.00	7,480.00	7,724.78	7,421.99	109.21	37.68	88.42	6,756.37	-181.48	388.23	299.88	88.35	4.394		
14,300.00	7,480.00	7,726.65	7,423.85	110.75	37.68	88.91	6,756.40	-181.48	310.73	208.52	102.22	3.040		
14,400.00	7,480.00	7,728.52	7,425.72	112.28	37.69	89.40	6,756.44	-181.48	249.76	127.12	122.64	2.036		
14,500.00	7,480.00	7,730.39	7,427.59	113.82	37.69	89.89	6,756.47	-181.48	219.53	76.97	142.57	1.540		
14,514.90	7,480.00	7,730.67	7,427.87	114.05	37.69	89.97	6,756.48	-181.48	218.61	74.38	144.24	1.516		
14,521.96	7,480.00	7,730.80	7,428.00	114.16	37.69	90.00	6,756.48	-181.48	218.52	73.68	144.84	1.509	CC, ES, SF	
14,600.00	7,480.00	7,732.26	7,429.46	115.34	37.69	90.38	6,756.51	-181.48	230.13	86.72	143.41	1.605		
14,689.49	7,480.00	7,733.94	7,431.14	116.66	37.69	90.79	6,756.54	-181.48	267.85	139.15	128.70	2.081		
14,703.04	7,480.00	7,734.19	7,431.39	116.84	37.69	90.86	6,756.54	-181.48	275.33	149.32	126.01	2.185		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Bros 23-54 - EXTRACTION - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 118-ISCWSA MWD														
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	
12,500.00	7,480.00	7,543.02	7,430.93	83.38	23.11	-90.25	6,072.68	-842.81	1,410.26	1,352.41	57.86	24.375		
12,600.00	7,480.00	7,543.21	7,431.11	84.88	23.11	-90.27	6,072.68	-842.81	1,315.73	1,256.20	59.53	22.100		
12,700.00	7,480.00	7,543.39	7,431.29	86.39	23.11	-90.30	6,072.69	-842.81	1,222.07	1,160.53	61.54	19.857		
12,800.00	7,480.00	7,543.57	7,431.47	87.89	23.11	-90.32	6,072.69	-842.80	1,129.49	1,065.53	63.96	17.659		
12,900.00	7,480.00	7,543.75	7,431.66	89.40	23.11	-90.34	6,072.69	-842.80	1,038.29	971.41	66.89	15.523		
13,000.00	7,480.00	7,543.94	7,431.84	90.91	23.12	-90.37	6,072.69	-842.80	948.87	878.43	70.44	13.470		
13,100.00	7,480.00	7,544.12	7,432.02	92.43	23.12	-90.39	6,072.69	-842.80	861.78	787.01	74.77	11.526		
13,200.00	7,480.00	7,544.30	7,432.20	93.94	23.12	-90.41	6,072.69	-842.80	777.79	697.76	80.04	9.718		
13,300.00	7,480.00	7,544.47	7,432.38	95.46	23.12	-90.44	6,072.69	-842.80	698.04	611.65	86.39	8.080		
13,400.00	7,480.00	7,544.65	7,432.55	96.98	23.12	-90.46	6,072.69	-842.79	624.15	530.23	93.93	6.645		
13,500.00	7,480.00	7,544.83	7,432.73	98.50	23.12	-90.48	6,072.69	-842.79	558.45	455.96	102.49	5.449		
13,600.00	7,480.00	7,545.01	7,432.91	100.03	23.12	-90.50	6,072.69	-842.79	504.15	392.72	111.44	4.524		
13,700.00	7,480.00	7,545.18	7,433.08	101.56	23.12	-90.53	6,072.69	-842.79	465.27	345.94	119.33	3.899		
13,800.00	7,480.00	7,545.36	7,433.26	103.08	23.12	-90.55	6,072.69	-842.79	445.84	321.77	124.08	3.593		
13,838.49	7,480.00	7,545.43	7,433.33	103.67	23.12	-90.56	6,072.69	-842.79	444.18	319.49	124.69	3.562	CC, ES, SF	
13,900.00	7,480.00	7,545.53	7,433.44	104.61	23.12	-90.57	6,072.69	-842.79	448.42	324.28	124.13	3.612		
14,000.00	7,480.00	7,545.71	7,433.61	106.14	23.12	-90.59	6,072.69	-842.78	472.63	352.84	119.79	3.945		
14,100.00	7,480.00	7,545.88	7,433.78	107.68	23.12	-90.62	6,072.69	-842.78	515.44	402.56	112.89	4.566		
14,200.00	7,480.00	7,546.05	7,433.96	109.21	23.12	-90.64	6,072.69	-842.78	572.70	467.38	105.31	5.438		
14,300.00	7,480.00	7,546.23	7,434.13	110.75	23.12	-90.66	6,072.69	-842.78	640.53	542.33	98.20	6.523		
14,400.00	7,480.00	7,546.40	7,434.30	112.28	23.12	-90.68	6,072.69	-842.78	715.95	623.96	91.99	7.783		
14,500.00	7,480.00	7,546.57	7,434.47	113.82	23.12	-90.71	6,072.69	-842.78	796.80	710.07	86.73	9.187		
14,514.90	7,480.00	7,546.60	7,434.50	114.05	23.12	-90.71	6,072.69	-842.78	809.21	723.18	86.03	9.406		
14,600.00	7,480.00	7,546.76	7,434.66	115.34	23.12	-90.80	6,072.69	-842.77	882.75	800.21	82.54	10.695		
14,689.49	7,480.00	7,546.99	7,434.89	116.66	23.12	-90.95	6,072.69	-842.77	964.28	884.54	79.74	12.093		
14,703.04	7,480.00	7,547.02	7,434.93	116.84	23.12	-90.96	6,072.69	-842.77	976.90	896.97	79.94	12.221		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 100-VESSI_GYROFLEX													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	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)					
10,900.00	7,480.00	7,421.58	7,419.05	59.97	12.93	-90.06	4,182.56	-1,429.71	1,473.97	1,416.21	57.77	25.516			
11,000.00	7,480.00	7,422.18	7,419.65	61.39	12.93	-90.09	4,182.57	-1,429.71	1,404.52	1,344.22	60.30	23.291			
11,100.00	7,480.00	7,422.79	7,420.26	62.82	12.93	-90.12	4,182.57	-1,429.70	1,338.95	1,275.88	63.07	21.230			
11,200.00	7,480.00	7,423.40	7,420.87	64.25	12.93	-90.16	4,182.57	-1,429.70	1,277.84	1,211.78	66.05	19.345			
11,300.00	7,480.00	7,424.03	7,421.50	65.69	12.93	-90.19	4,182.58	-1,429.70	1,221.86	1,152.64	69.22	17.652			
11,400.00	7,480.00	7,424.66	7,422.13	67.14	12.94	-90.23	4,182.58	-1,429.69	1,171.77	1,099.26	72.51	16.160			
11,500.00	7,480.00	7,425.30	7,422.77	68.59	12.94	-90.26	4,182.59	-1,429.69	1,128.33	1,052.49	75.84	14.877			
11,600.00	7,480.00	7,425.95	7,423.42	70.05	12.94	-90.30	4,182.59	-1,429.68	1,092.34	1,013.23	79.10	13.809			
11,700.00	7,480.00	7,426.62	7,424.08	71.51	12.94	-90.34	4,182.59	-1,429.68	1,064.56	982.39	82.17	12.956			
11,800.00	7,480.00	7,427.29	7,424.76	72.98	12.94	-90.37	4,182.60	-1,429.67	1,045.64	960.75	84.89	12.317			
11,900.00	7,480.00	7,427.97	7,425.44	74.46	12.94	-90.41	4,182.60	-1,429.67	1,036.07	948.92	87.15	11.888			
11,949.60	7,480.00	7,428.31	7,425.78	75.19	12.94	-90.43	4,182.61	-1,429.66	1,034.89	946.82	88.07	11.751	CC, ES		
12,000.00	7,480.00	7,428.66	7,426.13	75.93	12.94	-90.45	4,182.61	-1,429.66	1,036.11	947.27	88.84	11.662			
12,100.00	7,480.00	7,429.36	7,426.83	77.42	12.94	-90.49	4,182.61	-1,429.66	1,045.76	955.84	89.92	11.630	SF		
12,200.00	7,480.00	7,430.07	7,427.54	78.90	12.94	-90.53	4,182.62	-1,429.65	1,064.75	974.38	90.37	11.782			
12,300.00	7,480.00	7,430.80	7,428.27	80.39	12.95	-90.57	4,182.62	-1,429.64	1,092.60	1,002.34	90.26	12.105			
12,400.00	7,480.00	7,431.53	7,429.00	81.89	12.95	-90.61	4,182.63	-1,429.64	1,128.65	1,038.99	89.66	12.588			
12,500.00	7,480.00	7,432.28	7,429.75	83.38	12.95	-90.65	4,182.63	-1,429.63	1,172.14	1,083.46	88.68	13.217			
12,600.00	7,480.00	7,433.03	7,430.50	84.88	12.95	-90.69	4,182.64	-1,429.63	1,222.29	1,134.86	87.42	13.981			
12,700.00	7,480.00	7,433.80	7,431.27	86.39	12.95	-90.73	4,182.64	-1,429.62	1,278.31	1,192.32	85.98	14.867			
12,800.00	7,480.00	7,434.59	7,432.05	87.89	12.95	-90.78	4,182.65	-1,429.62	1,339.45	1,255.02	84.44	15.863			
12,900.00	7,480.00	7,435.38	7,432.85	89.40	12.95	-90.82	4,182.65	-1,429.61	1,405.06	1,322.22	82.84	16.960			
13,000.00	7,480.00	7,436.19	7,433.66	90.91	12.95	-90.87	4,182.66	-1,429.60	1,474.54	1,393.29	81.25	18.147			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Bros 32-26 - CPR - GYRO													Offset Well Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX														
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		
9,900.00	7,480.00	7,435.61	7,432.67	46.38	12.99	-90.37	2,808.27	-1,718.69	1,488.92	1,433.62	55.30	26.926		
10,000.00	7,480.00	7,437.47	7,434.52	47.68	13.00	-90.45	2,808.31	-1,718.66	1,446.27	1,388.97	57.30	25.241		
10,100.00	7,480.00	7,439.34	7,436.40	48.99	13.00	-90.54	2,808.34	-1,718.63	1,409.44	1,350.09	59.35	23.746		
10,200.00	7,480.00	7,441.24	7,438.29	50.32	13.00	-90.62	2,808.38	-1,718.60	1,378.89	1,317.47	61.42	22.452		
10,300.00	7,480.00	7,443.14	7,440.20	51.66	13.01	-90.70	2,808.42	-1,718.56	1,355.04	1,291.61	63.43	21.362		
10,400.00	7,480.00	7,445.07	7,442.12	53.02	13.01	-90.78	2,808.45	-1,718.53	1,338.26	1,272.91	65.35	20.478		
10,500.00	7,480.00	7,447.01	7,444.06	54.39	13.01	-90.87	2,808.49	-1,718.50	1,328.81	1,261.69	67.12	19.797		
10,576.10	7,480.00	7,448.50	7,445.55	55.44	13.02	-90.93	2,808.52	-1,718.48	1,326.63	1,258.29	68.34	19.413 CC		
10,600.00	7,480.00	7,448.97	7,446.02	55.77	13.02	-90.95	2,808.53	-1,718.47	1,326.84	1,258.15	68.69	19.316 ES		
10,700.00	7,480.00	7,450.95	7,448.00	57.16	13.02	-91.04	2,808.57	-1,718.44	1,332.40	1,262.37	70.03	19.026		
10,800.00	7,480.00	7,452.95	7,450.00	58.56	13.02	-91.12	2,808.61	-1,718.41	1,345.38	1,274.27	71.12	18.918 SF		
10,900.00	7,480.00	7,454.96	7,452.01	59.97	13.03	-91.21	2,808.65	-1,718.37	1,365.58	1,293.64	71.94	18.983		
11,000.00	7,480.00	7,456.99	7,454.04	61.39	13.03	-91.30	2,808.69	-1,718.34	1,392.68	1,320.17	72.51	19.207		
11,100.00	7,480.00	7,459.05	7,456.09	62.82	13.04	-91.39	2,808.73	-1,718.31	1,426.29	1,353.45	72.84	19.581		
11,200.00	7,480.00	7,461.12	7,458.16	64.25	13.04	-91.48	2,808.77	-1,718.27	1,465.96	1,393.00	72.96	20.092		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Bros 3-23 - CPR WELL - SURVEYS												Offset Well Error:	0.00 usft
Survey Program: 100-Gyro													
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	
12,300.00	7,480.00	7,455.31	7,452.97	80.39	6.52	-91.87	5,770.88	-1,162.37	1,454.59	1,401.59	53.00	27.446	
12,400.00	7,480.00	7,453.77	7,451.43	81.89	6.51	-91.76	5,770.90	-1,162.38	1,370.54	1,314.76	55.78	24.572	
12,500.00	7,480.00	7,452.23	7,449.89	83.38	6.51	-91.64	5,770.93	-1,162.39	1,288.76	1,229.83	58.93	21.868	
12,600.00	7,480.00	7,450.70	7,448.36	84.88	6.51	-91.53	5,770.95	-1,162.41	1,209.72	1,147.22	62.50	19.355	
12,700.00	7,480.00	7,449.17	7,446.83	86.39	6.51	-91.41	5,770.98	-1,162.42	1,133.99	1,067.48	66.51	17.049	
12,800.00	7,480.00	7,447.65	7,445.31	87.89	6.51	-91.30	5,771.00	-1,162.43	1,062.29	991.30	70.98	14.965	
12,900.00	7,480.00	7,446.14	7,443.80	89.40	6.51	-91.18	5,771.03	-1,162.44	995.47	919.58	75.89	13.117	
13,000.00	7,480.00	7,444.63	7,442.29	90.91	6.51	-91.07	5,771.05	-1,162.45	934.59	853.42	81.17	11.514	
13,100.00	7,480.00	7,443.13	7,440.78	92.43	6.50	-90.96	5,771.07	-1,162.46	880.88	794.21	86.68	10.163	
13,200.00	7,480.00	7,441.63	7,439.29	93.94	6.50	-90.85	5,771.10	-1,162.47	835.73	743.58	92.16	9.068	
13,300.00	7,480.00	7,440.14	7,437.80	95.46	6.50	-90.73	5,771.12	-1,162.48	800.59	703.31	97.27	8.230	
13,400.00	7,480.00	7,438.65	7,436.31	96.98	6.50	-90.62	5,771.15	-1,162.49	776.80	675.20	101.60	7.646	
13,500.00	7,480.00	7,437.17	7,434.83	98.50	6.50	-90.51	5,771.17	-1,162.51	765.44	660.72	104.73	7.309	
13,537.63	7,480.00	7,436.62	7,434.28	99.08	6.50	-90.47	5,771.18	-1,162.51	764.52	658.99	105.53	7.245 CC, ES	
13,600.00	7,480.00	7,435.70	7,433.36	100.03	6.50	-90.40	5,771.19	-1,162.52	767.06	660.68	106.37	7.211 SF	
13,700.00	7,480.00	7,434.23	7,431.89	101.56	6.50	-90.29	5,771.22	-1,162.53	781.57	675.10	106.47	7.341	
13,800.00	7,480.00	7,432.77	7,430.43	103.08	6.50	-90.18	5,771.24	-1,162.54	808.28	703.10	105.17	7.685	
13,900.00	7,480.00	7,431.31	7,428.97	104.61	6.49	-90.07	5,771.26	-1,162.56	846.03	743.24	102.80	8.230	
14,000.00	7,480.00	7,429.86	7,427.52	106.14	6.49	-89.96	5,771.28	-1,162.57	893.43	793.73	99.71	8.961	
14,100.00	7,480.00	7,428.41	7,426.07	107.68	6.49	-89.86	5,771.31	-1,162.58	949.04	852.80	96.24	9.861	
14,200.00	7,480.00	7,426.97	7,424.63	109.21	6.49	-89.75	5,771.33	-1,162.60	1,011.49	918.85	92.65	10.918	
14,300.00	7,480.00	7,425.53	7,423.19	110.75	6.49	-89.64	5,771.35	-1,162.61	1,079.61	990.51	89.11	12.116	
14,400.00	7,480.00	7,424.10	7,421.76	112.28	6.49	-89.53	5,771.37	-1,162.62	1,152.39	1,066.66	85.73	13.442	
14,500.00	7,480.00	7,422.68	7,420.34	113.82	6.49	-89.43	5,771.40	-1,162.64	1,229.00	1,146.43	82.57	14.884	
14,514.90	7,480.00	7,422.47	7,420.13	114.05	6.49	-89.41	5,771.40	-1,162.64	1,240.70	1,158.58	82.12	15.108	
14,600.00	7,480.00	7,421.28	7,418.94	115.34	6.49	-89.27	5,771.42	-1,162.65	1,310.12	1,230.38	79.74	16.430	
14,689.49	7,480.00	7,420.09	7,417.75	116.66	6.48	-89.08	5,771.44	-1,162.66	1,387.63	1,310.00	77.62	17.876	
14,703.04	7,480.00	7,419.91	7,417.57	116.84	6.48	-89.06	5,771.44	-1,162.66	1,399.68	1,321.89	77.79	17.993	

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Bros 42-26 - CPR WELL - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 951-ISCWSA MWD														
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		
9,000.00	7,480.00	7,499.42	7,434.30	35.76	19.80	88.89	2,675.63	-44.98	1,481.01	1,434.11	46.89	31.581		
9,100.00	7,480.00	7,499.85	7,434.73	36.82	19.80	88.96	2,675.63	-44.98	1,383.99	1,336.79	47.19	29.326		
9,200.00	7,480.00	7,500.28	7,435.16	37.91	19.80	89.03	2,675.63	-44.97	1,287.42	1,239.86	47.56	27.071		
9,300.00	7,480.00	7,500.71	7,435.59	39.04	19.81	89.11	2,675.63	-44.97	1,191.42	1,143.42	48.01	24.819		
9,400.00	7,480.00	7,501.14	7,436.02	40.20	19.81	89.18	2,675.63	-44.97	1,096.14	1,047.58	48.56	22.572		
9,500.00	7,480.00	7,501.57	7,436.45	41.39	19.81	89.25	2,675.64	-44.97	1,001.78	952.51	49.27	20.334		
9,600.00	7,480.00	7,502.00	7,436.87	42.60	19.81	89.32	2,675.64	-44.97	908.62	858.45	50.17	18.111		
9,700.00	7,480.00	7,502.42	7,437.30	43.84	19.81	89.39	2,675.64	-44.97	817.08	765.75	51.34	15.916		
9,800.00	7,480.00	7,502.85	7,437.73	45.10	19.81	89.46	2,675.64	-44.97	727.78	674.91	52.87	13.765		
9,900.00	7,480.00	7,503.28	7,438.15	46.38	19.81	89.53	2,675.64	-44.97	641.63	586.73	54.90	11.688		
10,000.00	7,480.00	7,503.70	7,438.58	47.68	19.81	89.60	2,675.65	-44.97	560.11	502.55	57.56	9.730		
10,100.00	7,480.00	7,504.13	7,439.00	48.99	19.81	89.67	2,675.65	-44.97	485.55	424.58	60.97	7.963		
10,200.00	7,480.00	7,504.55	7,439.43	50.32	19.81	89.74	2,675.65	-44.97	421.65	356.65	65.00	6.487		
10,300.00	7,480.00	7,504.98	7,439.85	51.66	19.81	89.81	2,675.65	-44.97	373.92	305.03	68.89	5.428		
10,400.00	7,480.00	7,505.40	7,440.28	53.02	19.81	89.88	2,675.65	-44.97	349.07	277.99	71.07	4.911		
10,439.85	7,480.00	7,505.57	7,440.44	53.57	19.81	89.91	2,675.65	-44.97	346.79	275.68	71.11	4.877	CC, ES, SF	
10,500.00	7,480.00	7,505.82	7,440.70	54.39	19.81	89.95	2,675.65	-44.97	351.97	281.79	70.18	5.015		
10,600.00	7,480.00	7,506.24	7,441.12	55.77	19.81	90.02	2,675.66	-44.97	381.98	315.13	66.85	5.714		
10,700.00	7,480.00	7,506.67	7,441.54	57.16	19.81	90.09	2,675.66	-44.96	433.52	370.70	62.82	6.901		
10,800.00	7,480.00	7,507.09	7,441.96	58.56	19.81	90.16	2,675.66	-44.96	499.97	440.78	59.19	8.447		
10,900.00	7,480.00	7,507.51	7,442.38	59.97	19.82	90.23	2,675.66	-44.96	576.19	519.90	56.29	10.236		
11,000.00	7,480.00	7,507.93	7,442.80	61.39	19.82	90.30	2,675.66	-44.96	658.81	604.73	54.08	12.182		
11,100.00	7,480.00	7,508.34	7,443.22	62.82	19.82	90.37	2,675.67	-44.96	745.69	693.28	52.41	14.227		
11,200.00	7,480.00	7,508.76	7,443.64	64.25	19.82	90.44	2,675.67	-44.96	835.51	784.36	51.15	16.335		
11,300.00	7,480.00	7,509.18	7,444.06	65.69	19.82	90.51	2,675.67	-44.96	927.42	877.24	50.18	18.480		
11,400.00	7,480.00	7,509.60	7,444.48	67.14	19.82	90.57	2,675.67	-44.96	1,020.85	971.41	49.44	20.649		
11,500.00	7,480.00	7,510.02	7,444.89	68.59	19.82	90.64	2,675.67	-44.96	1,115.42	1,066.57	48.86	22.831		
11,600.00	7,480.00	7,510.43	7,445.31	70.05	19.82	90.71	2,675.67	-44.96	1,210.86	1,162.47	48.40	25.020		
11,700.00	7,480.00	7,510.85	7,445.72	71.51	19.82	90.78	2,675.68	-44.96	1,306.99	1,258.96	48.03	27.213		
11,800.00	7,480.00	7,511.26	7,446.14	72.98	19.82	90.85	2,675.68	-44.96	1,403.65	1,355.92	47.74	29.405		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Brothers 2-26 - CPR - NO SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 8110-Geolink MWD														
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	
9,500.00	7,480.00	7,437.99	7,437.99	41.39	12.98	-90.00	3,149.26	-602.25	1,430.02	1,390.51	39.51	36.194		
9,600.00	7,480.00	7,437.99	7,437.99	42.60	12.98	-90.00	3,149.26	-602.25	1,331.18	1,291.58	39.59	33.622		
9,700.00	7,480.00	7,437.99	7,437.99	43.84	12.98	-90.00	3,149.26	-602.25	1,232.52	1,192.82	39.70	31.045		
9,800.00	7,480.00	7,437.99	7,437.99	45.10	12.98	-90.00	3,149.26	-602.25	1,134.11	1,094.26	39.85	28.461		
9,900.00	7,480.00	7,437.99	7,437.99	46.38	12.98	-90.00	3,149.26	-602.25	1,035.99	995.94	40.05	25.868		
10,000.00	7,480.00	7,437.99	7,437.99	47.68	12.98	-90.00	3,149.26	-602.25	938.28	897.95	40.33	23.264		
10,100.00	7,480.00	7,437.99	7,437.99	48.99	12.98	-90.00	3,149.26	-602.25	841.10	800.36	40.74	20.647		
10,200.00	7,480.00	7,437.99	7,437.99	50.32	12.98	-90.00	3,149.26	-602.25	744.67	703.34	41.33	18.016		
10,300.00	7,480.00	7,437.99	7,437.99	51.66	12.98	-90.00	3,149.26	-602.25	649.32	607.08	42.24	15.373		
10,400.00	7,480.00	7,437.99	7,437.99	53.02	12.98	-90.00	3,149.26	-602.25	555.61	511.96	43.65	12.728		
10,500.00	7,480.00	7,437.99	7,437.99	54.39	12.98	-90.00	3,149.26	-602.25	464.52	418.58	45.94	10.111		
10,600.00	7,480.00	7,437.99	7,437.99	55.77	12.98	-90.00	3,149.26	-602.25	377.98	328.24	49.74	7.599		
10,700.00	7,480.00	7,437.99	7,437.99	57.16	12.98	-90.00	3,149.26	-602.25	299.92	243.94	55.98	5.358		
10,800.00	7,480.00	7,437.99	7,437.99	58.56	12.98	-90.00	3,149.26	-602.25	238.82	173.83	64.99	3.675		
10,900.00	7,480.00	7,437.99	7,437.99	59.97	12.98	-90.00	3,149.26	-602.25	210.04	137.38	72.66	2.891		
10,914.59	7,480.00	7,437.99	7,437.99	60.18	12.98	-90.00	3,149.26	-602.25	209.53	136.42	73.12	2.866	CC, ES, SF	
11,000.00	7,480.00	7,437.99	7,437.99	61.39	12.98	-90.00	3,149.26	-602.25	226.28	154.85	71.43	3.168		
11,100.00	7,480.00	7,437.99	7,437.99	62.82	12.98	-90.00	3,149.26	-602.25	279.79	215.30	64.50	4.338		
11,200.00	7,480.00	7,437.99	7,437.99	64.25	12.98	-90.00	3,149.26	-602.25	354.07	295.92	58.15	6.089		
11,300.00	7,480.00	7,437.99	7,437.99	65.69	12.98	-90.00	3,149.26	-602.25	438.69	384.99	53.70	8.170		
11,400.00	7,480.00	7,437.99	7,437.99	67.14	12.98	-90.00	3,149.26	-602.25	528.71	478.01	50.70	10.427		
11,500.00	7,480.00	7,437.99	7,437.99	68.59	12.98	-90.00	3,149.26	-602.25	621.79	573.13	48.66	12.779		
11,600.00	7,480.00	7,437.99	7,437.99	70.05	12.98	-90.00	3,149.26	-602.25	716.73	669.52	47.21	15.181		
11,700.00	7,480.00	7,437.99	7,437.99	71.51	12.98	-90.00	3,149.26	-602.25	812.89	766.72	46.17	17.607		
11,800.00	7,480.00	7,437.99	7,437.99	72.98	12.98	-90.00	3,149.26	-602.25	909.87	864.48	45.39	20.046		
11,900.00	7,480.00	7,437.99	7,437.99	74.46	12.98	-90.00	3,149.26	-602.25	1,007.45	962.65	44.80	22.489		
12,000.00	7,480.00	7,437.99	7,437.99	75.93	12.98	-90.00	3,149.26	-602.25	1,105.46	1,061.12	44.34	24.932		
12,100.00	7,480.00	7,437.99	7,437.99	77.42	12.98	-90.00	3,149.26	-602.25	1,203.79	1,159.82	43.98	27.373		
12,200.00	7,480.00	7,437.99	7,437.99	78.90	12.98	-90.00	3,149.26	-602.25	1,302.38	1,258.69	43.69	29.810		
12,300.00	7,480.00	7,437.99	7,437.99	80.39	12.98	-90.00	3,149.26	-602.25	1,401.17	1,357.71	43.46	32.241		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Brothers 33-23C - EXTRACTION - NO SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 8100-Geolink MWD														
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	
13,300.00	7,480.00	7,403.99	7,403.99	95.46	12.92	-90.00	6,687.27	-1,317.43	1,474.34	1,399.95	74.40	19.817		
13,400.00	7,480.00	7,403.99	7,403.99	96.98	12.92	-90.00	6,687.27	-1,317.43	1,397.46	1,319.24	78.22	17.866		
13,500.00	7,480.00	7,403.99	7,403.99	98.50	12.92	-90.00	6,687.27	-1,317.43	1,323.66	1,241.26	82.40	16.063		
13,600.00	7,480.00	7,403.99	7,403.99	100.03	12.92	-90.00	6,687.27	-1,317.43	1,253.50	1,166.55	86.95	14.416		
13,700.00	7,480.00	7,403.99	7,403.99	101.56	12.92	-90.00	6,687.27	-1,317.43	1,187.63	1,095.79	91.84	12.932		
13,800.00	7,480.00	7,403.99	7,403.99	103.08	12.92	-90.00	6,687.27	-1,317.43	1,126.79	1,029.78	97.01	11.615		
13,900.00	7,480.00	7,403.99	7,403.99	104.61	12.92	-90.00	6,687.27	-1,317.43	1,071.85	969.48	102.37	10.470		
14,000.00	7,480.00	7,403.99	7,403.99	106.14	12.92	-90.00	6,687.27	-1,317.43	1,023.74	915.98	107.76	9.500		
14,100.00	7,480.00	7,403.99	7,403.99	107.68	12.92	-90.00	6,687.27	-1,317.43	983.48	870.50	112.98	8.705		
14,200.00	7,480.00	7,403.99	7,403.99	109.21	12.92	-90.00	6,687.27	-1,317.43	952.07	834.31	117.76	8.085		
14,300.00	7,480.00	7,403.99	7,403.99	110.75	12.92	-90.00	6,687.27	-1,317.43	930.39	808.59	121.80	7.639		
14,400.00	7,480.00	7,403.99	7,403.99	112.28	12.92	-90.00	6,687.27	-1,317.43	919.14	794.29	124.85	7.362		
14,454.03	7,480.00	7,403.99	7,403.99	113.11	12.92	-90.00	6,687.27	-1,317.43	917.55	791.55	126.01	7.282	CC, ES	
14,500.00	7,480.00	7,403.99	7,403.99	113.82	12.92	-90.00	6,687.27	-1,317.43	918.70	792.00	126.71	7.251		
14,514.90	7,480.00	7,403.99	7,403.99	114.05	12.92	-90.00	6,687.27	-1,317.43	919.57	792.70	126.87	7.248	SF	
14,600.00	7,480.00	7,403.99	7,403.99	115.34	12.92	-90.00	6,687.27	-1,317.43	931.44	804.15	127.29	7.318		
14,689.49	7,480.00	7,403.99	7,403.99	116.66	12.92	-90.00	6,687.27	-1,317.43	956.90	830.12	126.77	7.548		
14,703.04	7,480.00	7,403.99	7,403.99	116.84	12.92	-90.00	6,687.27	-1,317.43	961.80	835.12	126.68	7.592		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Brothers 34-23C - EXTRACTION - GYRO													Offset Well Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX, 8090-MWD+HDGM														
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	
12,100.00	7,480.00	7,411.00	7,410.25	77.42	12.21	-89.32	5,447.41	-1,388.89	1,491.63	1,425.70	65.93	22.623		
12,200.00	7,480.00	7,411.40	7,410.65	78.90	12.21	-89.34	5,447.41	-1,388.89	1,418.49	1,349.35	69.14	20.516		
12,300.00	7,480.00	7,411.80	7,411.05	80.39	12.21	-89.37	5,447.42	-1,388.89	1,348.79	1,276.16	72.63	18.571		
12,400.00	7,480.00	7,412.20	7,411.45	81.89	12.21	-89.39	5,447.42	-1,388.90	1,283.11	1,206.72	76.39	16.797		
12,500.00	7,480.00	7,412.60	7,411.85	83.38	12.21	-89.41	5,447.42	-1,388.90	1,222.09	1,141.70	80.39	15.202		
12,600.00	7,480.00	7,413.00	7,412.24	84.88	12.21	-89.44	5,447.42	-1,388.90	1,166.47	1,081.89	84.58	13.792		
12,700.00	7,480.00	7,413.40	7,412.64	86.39	12.21	-89.46	5,447.42	-1,388.91	1,117.04	1,028.19	88.85	12.573		
12,800.00	7,480.00	7,413.79	7,413.04	87.89	12.21	-89.48	5,447.42	-1,388.91	1,074.67	981.59	93.08	11.546		
12,900.00	7,480.00	7,414.19	7,413.44	89.40	12.21	-89.51	5,447.43	-1,388.91	1,040.21	943.11	97.10	10.712		
13,000.00	7,480.00	7,414.59	7,413.84	90.91	12.21	-89.53	5,447.43	-1,388.92	1,014.48	913.75	100.73	10.071		
13,100.00	7,480.00	7,414.99	7,414.24	92.43	12.21	-89.55	5,447.43	-1,388.92	998.15	894.38	103.77	9.619		
13,200.00	7,480.00	7,415.39	7,414.64	93.94	12.21	-89.57	5,447.43	-1,388.92	991.69	885.62	106.06	9.350		
13,214.34	7,480.00	7,415.45	7,414.69	94.16	12.21	-89.58	5,447.43	-1,388.92	991.58	885.26	106.32	9.326	CC, ES	
13,300.00	7,480.00	7,415.79	7,415.04	95.46	12.21	-89.60	5,447.43	-1,388.92	995.28	887.78	107.49	9.259	SF	
13,400.00	7,480.00	7,416.19	7,415.43	96.98	12.21	-89.62	5,447.43	-1,388.93	1,008.81	900.77	108.04	9.337		
13,500.00	7,480.00	7,416.58	7,415.83	98.50	12.21	-89.64	5,447.43	-1,388.93	1,031.91	924.15	107.76	9.576		
13,600.00	7,480.00	7,416.98	7,416.23	100.03	12.21	-89.67	5,447.44	-1,388.93	1,063.94	957.18	106.76	9.965		
13,700.00	7,480.00	7,417.38	7,416.63	101.56	12.21	-89.69	5,447.44	-1,388.94	1,104.13	998.93	105.20	10.496		
13,800.00	7,480.00	7,417.78	7,417.03	103.08	12.21	-89.71	5,447.44	-1,388.94	1,151.62	1,048.40	103.22	11.157		
13,900.00	7,480.00	7,418.18	7,417.43	104.61	12.21	-89.74	5,447.44	-1,388.94	1,205.55	1,104.58	100.98	11.939		
14,000.00	7,480.00	7,418.58	7,417.83	106.14	12.22	-89.76	5,447.44	-1,388.94	1,265.11	1,166.52	98.59	12.832		
14,100.00	7,480.00	7,418.98	7,418.22	107.68	12.22	-89.78	5,447.44	-1,388.95	1,329.52	1,233.36	96.15	13.827		
14,200.00	7,480.00	7,419.38	7,418.62	109.21	12.22	-89.80	5,447.45	-1,388.95	1,398.12	1,304.38	93.74	14.915		
14,300.00	7,480.00	7,419.77	7,419.02	110.75	12.22	-89.83	5,447.45	-1,388.95	1,470.33	1,378.94	91.40	16.087		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Grant Brothers 44-23C - EXTRACTION - GYRO													Offset Well Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX, 7741-MWD+HDGM														
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	
11,600.00	7,480.00	7,455.74	7,455.15	70.05	12.36	91.20	5,300.09	-150.53	1,485.11	1,442.91	42.20	35.189		
11,700.00	7,480.00	7,455.39	7,454.80	71.51	12.36	91.12	5,300.09	-150.53	1,386.60	1,343.89	42.71	32.465		
11,800.00	7,480.00	7,455.05	7,454.45	72.98	12.36	91.03	5,300.10	-150.53	1,288.31	1,244.99	43.32	29.738		
11,900.00	7,480.00	7,454.70	7,454.10	74.46	12.36	90.95	5,300.10	-150.53	1,190.32	1,146.25	44.07	27.010		
12,000.00	7,480.00	7,454.35	7,453.76	75.93	12.35	90.87	5,300.10	-150.53	1,092.68	1,047.69	44.99	24.285		
12,100.00	7,480.00	7,454.00	7,453.41	77.42	12.35	90.79	5,300.10	-150.53	995.52	949.36	46.16	21.567		
12,200.00	7,480.00	7,453.65	7,453.06	78.90	12.35	90.71	5,300.10	-150.53	898.97	851.32	47.65	18.865		
12,300.00	7,480.00	7,453.30	7,452.71	80.39	12.35	90.63	5,300.10	-150.53	803.28	753.68	49.60	16.195		
12,400.00	7,480.00	7,452.95	7,452.36	81.89	12.35	90.55	5,300.10	-150.53	708.77	656.57	52.19	13.580		
12,500.00	7,480.00	7,452.61	7,452.01	83.38	12.35	90.47	5,300.10	-150.53	616.00	560.27	55.72	11.055		
12,600.00	7,480.00	7,452.26	7,451.66	84.88	12.35	90.39	5,300.11	-150.53	525.88	465.26	60.62	8.675		
12,700.00	7,480.00	7,451.91	7,451.32	86.39	12.35	90.31	5,300.11	-150.53	440.05	372.54	67.52	6.518		
12,800.00	7,480.00	7,451.56	7,450.97	87.89	12.35	90.22	5,300.11	-150.53	361.59	284.44	77.14	4.687		
12,900.00	7,480.00	7,451.21	7,450.62	89.40	12.35	90.14	5,300.11	-150.53	296.39	206.87	89.52	3.311		
13,000.00	7,480.00	7,450.86	7,450.27	90.91	12.35	90.06	5,300.11	-150.53	254.84	153.69	101.14	2.520		
13,064.51	7,480.00	7,450.64	7,450.04	91.89	12.35	90.01	5,300.11	-150.53	246.54	142.34	104.20	2.366	CC, ES, SF	
13,100.00	7,480.00	7,450.51	7,449.92	92.43	12.35	89.98	5,300.11	-150.53	249.08	145.55	103.52	2.406		
13,200.00	7,480.00	7,450.17	7,449.57	93.94	12.35	89.90	5,300.11	-150.53	281.31	186.78	94.53	2.976		
13,300.00	7,480.00	7,449.82	7,449.22	95.46	12.35	89.82	5,300.11	-150.53	340.93	258.65	82.28	4.143		
13,400.00	7,480.00	7,449.47	7,448.87	96.98	12.35	89.74	5,300.12	-150.53	416.33	344.26	72.07	5.777		
13,500.00	7,480.00	7,449.12	7,448.53	98.50	12.35	89.66	5,300.12	-150.53	500.43	435.83	64.59	7.747		
13,600.00	7,480.00	7,448.77	7,448.18	100.03	12.35	89.58	5,300.12	-150.53	589.51	530.24	59.27	9.947		
13,700.00	7,480.00	7,448.42	7,447.83	101.56	12.35	89.50	5,300.12	-150.53	681.63	626.19	55.43	12.296		
13,800.00	7,480.00	7,448.07	7,447.48	103.08	12.35	89.41	5,300.12	-150.53	775.70	723.07	52.63	14.738		
13,900.00	7,480.00	7,447.73	7,447.13	104.61	12.35	89.33	5,300.12	-150.53	871.10	820.56	50.54	17.235		
14,000.00	7,480.00	7,447.38	7,446.78	106.14	12.35	89.25	5,300.12	-150.53	967.42	918.47	48.95	19.762		
14,100.00	7,480.00	7,447.03	7,446.43	107.68	12.35	89.17	5,300.12	-150.53	1,064.42	1,016.70	47.73	22.301		
14,200.00	7,480.00	7,446.68	7,446.09	109.21	12.35	89.09	5,300.12	-150.53	1,161.94	1,115.17	46.77	24.843		
14,300.00	7,480.00	7,446.33	7,445.74	110.75	12.35	89.01	5,300.13	-150.53	1,259.84	1,213.83	46.01	27.381		
14,400.00	7,480.00	7,445.98	7,445.39	112.28	12.35	88.93	5,300.13	-150.53	1,358.04	1,312.64	45.40	29.911		
14,500.00	7,480.00	7,445.63	7,445.04	113.82	12.35	88.85	5,300.13	-150.53	1,456.49	1,411.58	44.91	32.430		
14,514.90	7,480.00	7,445.58	7,444.99	114.05	12.35	88.84	5,300.13	-150.53	1,471.19	1,426.34	44.85	32.804		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 5085-MWD+HDGM													Offset Well Error:	0.00 usft		
Reference				Offset				Semi Major Axis		Distance				Total Uncertainty Axis	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)						
800.00	796.84	746.84	746.84	2.71	1.34	56.42	13.13	-1,515.11	1,493.88	1,489.83	4.05	369.302				
900.00	895.67	845.67	845.67	3.12	1.52	56.90	13.13	-1,515.11	1,485.44	1,480.82	4.62	321.537				
1,000.00	994.50	944.50	944.50	3.54	1.69	57.39	13.13	-1,515.11	1,477.12	1,471.92	5.20	284.133				
1,100.00	1,093.34	1,043.34	1,043.34	3.95	1.87	57.89	13.13	-1,515.11	1,468.90	1,463.12	5.78	254.104				
1,200.00	1,192.17	1,142.17	1,142.17	4.37	2.05	58.39	13.13	-1,515.11	1,460.80	1,454.43	6.37	229.495				
1,300.00	1,291.01	1,241.01	1,241.01	4.79	2.22	58.90	13.13	-1,515.11	1,452.81	1,445.86	6.95	208.980				
1,400.00	1,389.84	1,339.84	1,339.84	5.21	2.40	59.41	13.13	-1,515.11	1,444.94	1,437.40	7.54	191.628				
1,500.00	1,488.68	1,438.68	1,438.68	5.63	2.58	59.93	13.13	-1,515.11	1,437.18	1,429.05	8.13	176.769				
1,600.00	1,587.51	1,537.51	1,537.51	6.05	2.76	60.45	13.13	-1,515.11	1,429.55	1,420.83	8.72	163.907				
1,700.00	1,686.35	1,636.35	1,636.35	6.48	2.93	60.98	13.13	-1,515.11	1,422.04	1,412.72	9.31	152.671				
1,800.00	1,785.18	1,735.18	1,735.18	6.90	3.11	61.51	13.13	-1,515.11	1,414.65	1,404.74	9.91	142.774				
1,900.00	1,884.02	1,834.02	1,834.02	7.33	3.29	62.05	13.13	-1,515.11	1,407.39	1,396.88	10.50	133.994				
2,000.00	1,982.85	1,932.85	1,932.85	7.75	3.46	62.60	13.13	-1,515.11	1,400.25	1,389.15	11.10	126.154				
2,100.00	2,081.69	2,031.69	2,031.69	8.17	3.64	63.15	13.13	-1,515.11	1,393.25	1,381.55	11.70	119.115				
2,200.00	2,180.52	2,130.52	2,130.52	8.60	3.82	63.71	13.13	-1,515.11	1,386.37	1,374.08	12.29	112.761				
2,300.00	2,279.36	2,229.36	2,229.36	9.03	4.00	64.27	13.13	-1,515.11	1,379.63	1,366.74	12.89	107.000				
2,400.00	2,378.19	2,328.19	2,328.19	9.45	4.17	64.83	13.13	-1,515.11	1,373.03	1,359.54	13.49	101.753				
2,500.00	2,477.02	2,427.02	2,427.02	9.88	4.35	65.41	13.13	-1,515.11	1,366.56	1,352.47	14.09	96.957				
2,600.00	2,575.86	2,525.86	2,525.86	10.30	4.53	65.98	13.13	-1,515.11	1,360.24	1,345.54	14.70	92.558				
2,700.00	2,674.69	2,624.69	2,624.69	10.73	4.70	66.57	13.13	-1,515.11	1,354.05	1,338.75	15.30	88.509				
2,800.00	2,773.53	2,723.53	2,723.53	11.15	4.88	67.15	13.13	-1,515.11	1,348.01	1,332.11	15.90	84.772				
2,900.00	2,872.36	2,822.36	2,822.36	11.58	5.06	67.75	13.13	-1,515.11	1,342.11	1,325.61	16.51	81.313				
3,000.00	2,971.20	2,921.20	2,921.20	12.01	5.24	68.34	13.13	-1,515.11	1,336.36	1,319.25	17.11	78.104				
3,100.00	3,070.03	3,020.03	3,020.03	12.43	5.41	68.95	13.13	-1,515.11	1,330.77	1,313.05	17.72	75.119				
3,200.00	3,168.87	3,118.87	3,118.87	12.86	5.59	69.56	13.13	-1,515.11	1,325.32	1,307.00	18.32	72.338				
3,300.00	3,267.70	3,217.70	3,217.70	13.28	5.77	70.17	13.13	-1,515.11	1,320.02	1,301.09	18.93	69.741				
3,400.00	3,366.54	3,316.54	3,316.54	13.71	5.94	70.79	13.13	-1,515.11	1,314.88	1,295.35	19.53	67.311				
3,500.00	3,465.37	3,415.37	3,415.37	14.14	6.12	71.41	13.13	-1,515.11	1,309.90	1,289.76	20.14	65.033				
3,600.00	3,564.21	3,514.21	3,514.21	14.56	6.30	72.03	13.13	-1,515.11	1,305.07	1,284.32	20.75	62.895				
3,700.00	3,663.04	3,613.04	3,613.04	14.99	6.48	72.67	13.13	-1,515.11	1,300.41	1,279.05	21.36	60.885				
3,800.00	3,761.88	3,711.88	3,711.88	15.42	6.65	73.30	13.13	-1,515.11	1,295.91	1,273.94	21.97	58.993				
3,900.00	3,860.71	3,810.71	3,810.71	15.84	6.83	73.94	13.13	-1,515.11	1,291.57	1,268.99	22.58	57.209				
4,000.00	3,959.54	3,909.54	3,909.54	16.27	7.01	74.59	13.13	-1,515.11	1,287.39	1,264.21	23.19	55.526				
4,100.00	4,058.38	4,008.38	4,008.38	16.70	7.18	75.23	13.13	-1,515.11	1,283.39	1,259.59	23.80	53.935				
4,200.00	4,157.21	4,107.21	4,107.21	17.12	7.36	75.89	13.13	-1,515.11	1,279.55	1,255.14	24.40	52.430				
4,300.00	4,256.05	4,206.05	4,206.05	17.55	7.54	76.54	13.13	-1,515.11	1,275.88	1,250.87	25.01	51.005				
4,400.00	4,354.88	4,304.88	4,304.88	17.98	7.72	77.20	13.13	-1,515.11	1,272.38	1,246.76	25.62	49.654				
4,500.00	4,453.72	4,403.72	4,403.72	18.40	7.89	77.86	13.13	-1,515.11	1,269.06	1,242.83	26.24	48.373				
4,600.00	4,552.55	4,502.55	4,502.55	18.83	8.07	78.53	13.13	-1,515.11	1,265.91	1,239.07	26.85	47.156				
4,611.50	4,563.92	4,513.92	4,513.92	18.88	8.09	78.61	13.13	-1,515.11	1,265.56	1,238.65	26.92	47.020				
4,700.00	4,651.58	4,601.58	4,601.58	19.25	8.25	79.09	13.13	-1,515.11	1,263.20	1,235.75	27.44	46.027				
4,800.00	4,751.03	4,701.03	4,701.03	19.64	8.43	79.52	13.13	-1,515.11	1,261.25	1,233.23	28.02	45.017				
4,900.00	4,850.78	4,800.78	4,800.78	20.00	8.60	79.80	13.13	-1,515.11	1,260.00	1,231.44	28.56	44.113				
5,000.00	4,950.72	4,900.72	4,900.72	20.34	8.78	79.95	13.13	-1,515.11	1,259.39	1,230.31	29.08	43.305				
5,049.28	5,000.00	4,950.00	4,950.00	20.49	8.87	-63.79	13.13	-1,515.11	1,259.32	1,230.00	29.32	42.951				
5,100.00	5,050.72	5,000.72	5,000.72	20.63	8.96	-63.79	13.13	-1,515.11	1,259.32	1,229.76	29.55	42.613				
5,110.45	5,061.17	5,011.17	5,011.17	20.66	8.98	-63.79	13.13	-1,515.11	1,259.32	1,229.72	29.60	42.543 CC				
5,200.00	5,150.72	5,085.00	5,085.00	20.91	9.11	-63.79	13.13	-1,515.11	1,259.41	1,229.43	29.99	41.997 ES				
5,300.00	5,250.72	5,085.00	5,085.00	21.19	9.11	-63.79	13.13	-1,515.11	1,264.62	1,234.44	30.18	41.901 SF				
5,400.00	5,350.72	5,085.00	5,085.00	21.48	9.11	-63.79	13.13	-1,515.11	1,277.66	1,247.46	30.20	42.312				
5,500.00	5,450.72	5,085.00	5,085.00	21.77	9.11	-63.79	13.13	-1,515.11	1,298.29	1,268.24	30.04	43.213				
5,600.00	5,550.72	5,085.00	5,085.00	22.06	9.11	-63.79	13.13	-1,515.11	1,326.16	1,296.42	29.74	44.590				

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 5085-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	
5,700.00	5,650.72	5,085.00	5,085.00	22.35	9.11	-63.79	13.13	-1,515.11	1,360.82	1,331.51	29.31	46.424	
5,800.00	5,750.72	5,085.00	5,085.00	22.65	9.11	-63.79	13.13	-1,515.11	1,401.78	1,372.99	28.79	48.698	
5,900.00	5,850.72	5,085.00	5,085.00	22.94	9.11	-63.79	13.13	-1,515.11	1,448.49	1,420.31	28.18	51.396	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
S26-T2N-R68W - Meredith 1 - KPK WELL - NO SURVEYS												Offset Well Error:	0.00 usft	
Survey Program: 5120-Geolink MWD														
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	-16.88	93.11	-28.26	101.25					
100.00	100.00	71.99	71.99	0.14	0.13	-16.88	93.11	-28.26	97.30	97.03	0.27	366.276		
200.00	200.00	171.99	171.99	0.50	0.30	-16.88	93.11	-28.26	97.30	96.50	0.80	121.831	CC, ES	
300.00	299.98	271.97	271.97	0.84	0.47	163.40	93.11	-28.26	98.97	97.65	1.32	75.067		
400.00	399.84	371.83	371.83	1.19	0.65	164.20	93.11	-28.26	104.00	102.16	1.84	56.460		
500.00	499.51	471.50	471.50	1.55	0.82	147.05	93.11	-28.26	111.22	108.84	2.37	46.899		
600.00	598.94	570.93	570.93	1.92	1.00	139.38	93.11	-28.26	119.67	116.77	2.90	41.197		
700.52	698.51	670.50	670.50	2.32	1.17	136.91	93.11	-28.26	129.88	126.43	3.45	37.662		
800.00	796.84	768.83	768.83	2.71	1.34	141.09	93.11	-28.26	141.37	137.38	3.99	35.438		
900.00	895.67	867.66	867.66	3.12	1.51	144.65	93.11	-28.26	153.56	149.03	4.53	33.889		
1,000.00	994.50	966.49	966.49	3.54	1.69	147.67	93.11	-28.26	166.26	161.18	5.07	32.772		
1,100.00	1,093.34	1,065.33	1,065.33	3.95	1.86	150.27	93.11	-28.26	179.34	173.73	5.61	31.943		
1,200.00	1,192.17	1,164.16	1,164.16	4.37	2.03	152.51	93.11	-28.26	192.75	186.59	6.16	31.314		
1,300.00	1,291.01	1,263.00	1,263.00	4.79	2.20	154.45	93.11	-28.26	206.40	199.70	6.70	30.825		
1,400.00	1,389.84	1,361.83	1,361.83	5.21	2.38	156.16	93.11	-28.26	220.26	213.02	7.24	30.438		
1,500.00	1,488.68	1,460.67	1,460.67	5.63	2.55	157.66	93.11	-28.26	234.29	226.51	7.78	30.128		
1,600.00	1,587.51	1,559.50	1,559.50	6.05	2.72	158.99	93.11	-28.26	248.46	240.14	8.32	29.875		
1,700.00	1,686.35	1,658.34	1,658.34	6.48	2.89	160.18	93.11	-28.26	262.74	253.89	8.86	29.666		
1,800.00	1,785.18	1,757.17	1,757.17	6.90	3.07	161.25	93.11	-28.26	277.13	267.73	9.40	29.492		
1,900.00	1,884.02	1,856.01	1,856.01	7.33	3.24	162.21	93.11	-28.26	291.60	281.66	9.94	29.345		
2,000.00	1,982.85	1,954.84	1,954.84	7.75	3.41	163.08	93.11	-28.26	306.14	295.67	10.48	29.219		
2,100.00	2,081.69	2,053.68	2,053.68	8.17	3.58	163.87	93.11	-28.26	320.75	309.73	11.02	29.112		
2,200.00	2,180.52	2,152.51	2,152.51	8.60	3.76	164.59	93.11	-28.26	335.41	323.86	11.56	29.019		
2,300.00	2,279.36	2,251.35	2,251.35	9.03	3.93	165.25	93.11	-28.26	350.12	338.02	12.10	28.938		
2,400.00	2,378.19	2,350.18	2,350.18	9.45	4.10	165.86	93.11	-28.26	364.87	352.24	12.64	28.867		
2,500.00	2,477.02	2,449.01	2,449.01	9.88	4.27	166.42	93.11	-28.26	379.66	366.48	13.18	28.805		
2,600.00	2,575.86	2,547.85	2,547.85	10.30	4.45	166.94	93.11	-28.26	394.49	380.76	13.72	28.750		
2,700.00	2,674.69	2,646.68	2,646.68	10.73	4.62	167.42	93.11	-28.26	409.34	395.07	14.26	28.701		
2,800.00	2,773.53	2,745.52	2,745.52	11.15	4.79	167.87	93.11	-28.26	424.21	409.41	14.80	28.657		
2,900.00	2,872.36	2,844.35	2,844.35	11.58	4.96	168.28	93.11	-28.26	439.11	423.77	15.34	28.617		
3,000.00	2,971.20	2,943.19	2,943.19	12.01	5.14	168.67	93.11	-28.26	454.04	438.15	15.89	28.582		
3,100.00	3,070.03	3,042.02	3,042.02	12.43	5.31	169.04	93.11	-28.26	468.98	452.55	16.43	28.549		
3,200.00	3,168.87	3,140.86	3,140.86	12.86	5.48	169.38	93.11	-28.26	483.94	466.97	16.97	28.520		
3,300.00	3,267.70	3,239.69	3,239.69	13.28	5.65	169.70	93.11	-28.26	498.91	481.40	17.51	28.493		
3,400.00	3,366.54	3,338.53	3,338.53	13.71	5.83	170.01	93.11	-28.26	513.90	495.85	18.05	28.469		
3,500.00	3,465.37	3,437.36	3,437.36	14.14	6.00	170.29	93.11	-28.26	528.91	510.31	18.59	28.447		
3,600.00	3,564.21	3,536.20	3,536.20	14.56	6.17	170.56	93.11	-28.26	543.92	524.79	19.13	28.426		
3,700.00	3,663.04	3,635.03	3,635.03	14.99	6.34	170.82	93.11	-28.26	558.95	539.27	19.68	28.407		
3,800.00	3,761.88	3,733.87	3,733.87	15.42	6.52	171.06	93.11	-28.26	573.98	553.76	20.22	28.390		
3,900.00	3,860.71	3,832.70	3,832.70	15.84	6.69	171.29	93.11	-28.26	589.03	568.27	20.76	28.374		
4,000.00	3,959.54	3,931.53	3,931.53	16.27	6.86	171.51	93.11	-28.26	604.08	582.78	21.30	28.359		
4,100.00	4,058.38	4,030.37	4,030.37	16.70	7.03	171.72	93.11	-28.26	619.15	597.30	21.84	28.345		
4,200.00	4,157.21	4,129.20	4,129.20	17.12	7.21	171.92	93.11	-28.26	634.22	611.83	22.39	28.332		
4,300.00	4,256.05	4,228.04	4,228.04	17.55	7.38	172.11	93.11	-28.26	649.29	626.37	22.93	28.320		
4,400.00	4,354.88	4,326.87	4,326.87	17.98	7.55	172.29	93.11	-28.26	664.38	640.91	23.47	28.309		
4,500.00	4,453.72	4,425.71	4,425.71	18.40	7.72	172.46	93.11	-28.26	679.47	655.46	24.01	28.298		
4,600.00	4,552.55	4,524.54	4,524.54	18.83	7.90	172.62	93.11	-28.26	694.57	670.01	24.55	28.288		
4,611.50	4,563.92	4,535.91	4,535.91	18.88	7.92	172.64	93.11	-28.26	696.30	671.69	24.62	28.287		
4,700.00	4,651.58	4,623.57	4,623.57	19.25	8.07	172.80	93.11	-28.26	708.32	683.23	25.09	28.228		
4,800.00	4,751.03	4,723.02	4,723.02	19.64	8.24	172.93	93.11	-28.26	718.67	693.04	25.63	28.042		
4,900.00	4,850.78	4,822.77	4,822.77	20.00	8.42	173.01	93.11	-28.26	725.57	699.41	26.16	27.738		
5,000.00	4,950.72	4,922.71	4,922.71	20.34	8.59	173.05	93.11	-28.26	729.01	702.33	26.68	27.323		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Meredith 1 - KPK WELL - NO SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 5120-Geolink MWD														
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		
5,049.28	5,000.00	4,971.99	4,971.99	20.49	8.68	29.30	93.11	-28.26	729.43	702.50	26.93	27.086		
5,100.00	5,050.72	5,022.71	5,022.71	20.63	8.77	29.30	93.11	-28.26	729.43	702.25	27.18	26.839		
5,115.74	5,066.45	5,038.44	5,038.44	20.67	8.79	29.30	93.11	-28.26	729.43	702.18	27.26	26.763		
5,200.00	5,150.72	5,119.99	5,119.99	20.91	8.94	29.30	93.11	-28.26	729.44	701.78	27.65	26.377 SF		
5,300.00	5,250.72	5,119.99	5,119.99	21.19	8.94	29.30	93.11	-28.26	736.63	709.23	27.40	26.887		
5,400.00	5,350.72	5,119.99	5,119.99	21.48	8.94	29.30	93.11	-28.26	757.07	730.34	26.73	28.323		
5,500.00	5,450.72	5,119.99	5,119.99	21.77	8.94	29.30	93.11	-28.26	789.75	764.00	25.75	30.667		
5,600.00	5,550.72	5,119.99	5,119.99	22.06	8.94	29.30	93.11	-28.26	833.22	808.63	24.58	33.892		
5,700.00	5,650.72	5,119.99	5,119.99	22.35	8.94	29.30	93.11	-28.26	885.89	862.55	23.34	37.962		
5,800.00	5,750.72	5,119.99	5,119.99	22.65	8.94	29.30	93.11	-28.26	946.22	924.13	22.09	42.831		
5,900.00	5,850.72	5,119.99	5,119.99	22.94	8.94	29.30	93.11	-28.26	1,012.86	991.95	20.91	48.447		
6,000.00	5,950.72	5,119.99	5,119.99	23.24	8.94	29.30	93.11	-28.26	1,084.63	1,064.82	19.81	54.755		
6,100.00	6,050.72	5,119.99	5,119.99	23.54	8.94	29.30	93.11	-28.26	1,160.59	1,141.78	18.81	61.692		
6,200.00	6,150.72	5,119.99	5,119.99	23.84	8.94	29.30	93.11	-28.26	1,239.96	1,222.04	17.92	69.197		
6,300.00	6,250.72	5,119.99	5,119.99	24.15	8.94	29.30	93.11	-28.26	1,322.14	1,305.01	17.13	77.204		
6,400.00	6,350.72	5,119.99	5,119.99	24.45	8.94	29.30	93.11	-28.26	1,406.63	1,390.20	16.42	85.646		
6,500.00	6,450.72	5,119.99	5,119.99	24.76	8.94	29.30	93.11	-28.26	1,493.03	1,477.22	15.81	94.456		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 1 - CPR - NO SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 8200-ISCWSA MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
7,750.00	7,455.44	7,439.44	7,439.44	27.36	8.35	-15.64	1,439.98	-494.87	1,456.76	1,422.14	34.63	42.071		
7,800.00	7,466.73	7,450.73	7,450.73	27.46	8.36	-21.43	1,439.98	-494.87	1,408.20	1,373.55	34.65	40.646		
7,850.00	7,474.59	7,458.59	7,458.59	27.59	8.37	-32.43	1,439.98	-494.87	1,358.97	1,324.32	34.66	39.212		
7,900.00	7,478.99	7,462.99	7,462.99	27.73	8.37	-56.70	1,439.98	-494.87	1,309.33	1,274.67	34.66	37.774		
7,938.09	7,480.00	7,464.00	7,464.00	27.85	8.37	-90.00	1,439.98	-494.87	1,271.39	1,236.73	34.66	36.678		
8,000.00	7,480.00	7,464.00	7,464.00	28.08	8.37	-90.00	1,439.98	-494.87	1,209.70	1,175.04	34.66	34.898		
8,100.00	7,480.00	7,464.00	7,464.00	28.53	8.37	-90.00	1,439.98	-494.87	1,110.12	1,075.45	34.66	32.025		
8,200.00	7,480.00	7,464.00	7,464.00	29.06	8.37	-90.00	1,439.98	-494.87	1,010.62	975.95	34.67	29.152		
8,300.00	7,480.00	7,464.00	7,464.00	29.68	8.37	-90.00	1,439.98	-494.87	911.23	876.55	34.67	26.280		
8,400.00	7,480.00	7,464.00	7,464.00	30.37	8.37	-90.00	1,439.98	-494.87	811.98	777.30	34.69	23.410		
8,500.00	7,480.00	7,464.00	7,464.00	31.13	8.37	-90.00	1,439.98	-494.87	712.95	678.24	34.71	20.541		
8,600.00	7,480.00	7,464.00	7,464.00	31.95	8.37	-90.00	1,439.98	-494.87	614.23	579.48	34.75	17.676		
8,700.00	7,480.00	7,464.00	7,464.00	32.83	8.37	-90.00	1,439.98	-494.87	516.01	481.18	34.83	14.814		
8,800.00	7,480.00	7,464.00	7,464.00	33.76	8.37	-90.00	1,439.98	-494.87	418.63	383.62	35.00	11.959		
8,900.00	7,480.00	7,464.00	7,464.00	34.74	8.37	-90.00	1,439.98	-494.87	322.85	287.45	35.40	9.120		
9,000.00	7,480.00	7,464.00	7,464.00	35.76	8.37	-90.00	1,439.98	-494.87	230.68	194.21	36.47	6.325		
9,100.00	7,480.00	7,464.00	7,464.00	36.82	8.37	-90.00	1,439.98	-494.87	148.99	109.17	39.82	3.741		
9,200.00	7,480.00	7,464.00	7,464.00	37.91	8.37	-90.00	1,439.98	-494.87	105.74	59.56	46.18	2.290		
9,205.08	7,480.00	7,464.00	7,464.00	37.97	8.37	-90.00	1,439.98	-494.87	105.62	59.30	46.31	2.280	CC, ES, SF	
9,300.00	7,480.00	7,464.00	7,464.00	39.04	8.37	-90.00	1,439.98	-494.87	142.00	99.01	42.99	3.303		
9,400.00	7,480.00	7,464.00	7,464.00	40.20	8.37	-90.00	1,439.98	-494.87	221.69	182.54	39.15	5.663		
9,500.00	7,480.00	7,464.00	7,464.00	41.39	8.37	-90.00	1,439.98	-494.87	313.26	275.77	37.49	8.355		
9,600.00	7,480.00	7,464.00	7,464.00	42.60	8.37	-90.00	1,439.98	-494.87	408.80	372.08	36.71	11.135		
9,700.00	7,480.00	7,464.00	7,464.00	43.84	8.37	-90.00	1,439.98	-494.87	506.06	469.77	36.29	13.944		
9,800.00	7,480.00	7,464.00	7,464.00	45.10	8.37	-90.00	1,439.98	-494.87	604.22	568.18	36.04	16.764		
9,900.00	7,480.00	7,464.00	7,464.00	46.38	8.37	-90.00	1,439.98	-494.87	702.90	667.01	35.89	19.587		
10,000.00	7,480.00	7,464.00	7,464.00	47.68	8.37	-90.00	1,439.98	-494.87	801.90	766.12	35.78	22.410		
10,100.00	7,480.00	7,464.00	7,464.00	48.99	8.37	-90.00	1,439.98	-494.87	901.13	865.41	35.72	25.231		
10,200.00	7,480.00	7,464.00	7,464.00	50.32	8.37	-90.00	1,439.98	-494.87	1,000.51	964.84	35.67	28.049		
10,300.00	7,480.00	7,464.00	7,464.00	51.66	8.37	-90.00	1,439.98	-494.87	1,100.00	1,064.36	35.64	30.864		
10,400.00	7,480.00	7,464.00	7,464.00	53.02	8.37	-90.00	1,439.98	-494.87	1,199.58	1,163.95	35.62	33.674		
10,500.00	7,480.00	7,464.00	7,464.00	54.39	8.37	-90.00	1,439.98	-494.87	1,299.22	1,263.60	35.62	36.479		
10,600.00	7,480.00	7,464.00	7,464.00	55.77	8.37	-90.00	1,439.98	-494.87	1,398.91	1,363.30	35.61	39.280		
10,700.00	7,480.00	7,464.00	7,464.00	57.16	8.37	-90.00	1,439.98	-494.87	1,498.64	1,463.02	35.62	42.075		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Sullivan 33-26 - CPR WELL - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 100- GyroFlex														
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	
8,600.00	7,480.00	7,442.27	7,441.54	31.95	7.44	-90.41	1,409.47	-1,729.71	1,459.49	1,421.13	38.35	38.053		
8,700.00	7,480.00	7,441.89	7,441.16	32.83	7.44	-90.39	1,409.48	-1,729.72	1,422.92	1,383.53	39.39	36.128		
8,800.00	7,480.00	7,441.51	7,440.78	33.76	7.44	-90.38	1,409.48	-1,729.72	1,392.58	1,352.08	40.50	34.383		
8,900.00	7,480.00	7,441.13	7,440.40	34.74	7.44	-90.36	1,409.48	-1,729.72	1,368.89	1,327.21	41.67	32.847		
9,000.00	7,480.00	7,440.74	7,440.01	35.76	7.44	-90.34	1,409.48	-1,729.72	1,352.20	1,309.33	42.87	31.541		
9,100.00	7,480.00	7,440.35	7,439.62	36.82	7.44	-90.33	1,409.48	-1,729.72	1,342.77	1,298.72	44.05	30.482		
9,177.09	7,480.00	7,440.05	7,439.32	37.66	7.44	-90.31	1,409.48	-1,729.73	1,340.55	1,295.62	44.93	29.836 CC		
9,200.00	7,480.00	7,439.96	7,439.23	37.91	7.44	-90.31	1,409.48	-1,729.73	1,340.75	1,295.57	45.18	29.676 ES		
9,300.00	7,480.00	7,439.57	7,438.83	39.04	7.44	-90.29	1,409.49	-1,729.73	1,346.17	1,299.95	46.22	29.123		
9,400.00	7,480.00	7,439.17	7,438.43	40.20	7.44	-90.28	1,409.49	-1,729.73	1,358.96	1,311.80	47.16	28.819		
9,500.00	7,480.00	7,438.76	7,438.03	41.39	7.44	-90.26	1,409.49	-1,729.73	1,378.89	1,330.93	47.96	28.751 SF		
9,600.00	7,480.00	7,438.36	7,437.63	42.60	7.44	-90.24	1,409.49	-1,729.74	1,405.68	1,357.05	48.63	28.907		
9,700.00	7,480.00	7,437.95	7,437.22	43.84	7.44	-90.22	1,409.49	-1,729.74	1,438.93	1,389.77	49.16	29.270		
9,800.00	7,480.00	7,437.54	7,436.80	45.10	7.44	-90.21	1,409.49	-1,729.74	1,478.21	1,428.64	49.57	29.823		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 34-26 - CPR WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 100-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		
7,350.00	7,251.82	7,192.84	7,185.45	26.85	12.85	-82.56	-106.39	-1,864.40	1,498.96	1,459.55	39.42	38.027		
7,400.00	7,287.20	7,232.34	7,224.95	26.90	12.91	-84.02	-105.86	-1,864.74	1,493.90	1,454.37	39.53	37.790		
7,450.00	7,320.02	7,270.25	7,262.85	26.96	12.97	-85.47	-105.24	-1,864.93	1,489.23	1,449.59	39.64	37.568		
7,500.00	7,350.14	7,304.39	7,296.99	27.01	13.03	-86.84	-104.59	-1,865.00	1,485.16	1,445.41	39.75	37.365		
7,550.00	7,377.40	7,330.62	7,323.21	27.07	13.07	-87.93	-104.07	-1,865.04	1,481.97	1,442.12	39.85	37.189		
7,600.00	7,401.67	7,354.09	7,346.67	27.13	13.11	-88.88	-103.61	-1,865.11	1,479.90	1,439.94	39.96	37.038		
7,650.00	7,422.84	7,374.67	7,367.25	27.19	13.14	-89.66	-103.21	-1,865.19	1,479.09	1,439.02	40.07	36.915		
7,654.60	7,424.62	7,376.42	7,369.00	27.20	13.15	-89.72	-103.17	-1,865.20	1,479.08	1,439.00	40.08	36.904	CC, ES	
7,700.00	7,440.79	7,392.28	7,384.86	27.27	13.17	-90.24	-102.87	-1,865.27	1,479.68	1,439.49	40.19	36.821		
7,750.00	7,455.44	7,407.65	7,400.23	27.36	13.20	-90.64	-102.57	-1,865.36	1,481.78	1,441.47	40.31	36.757		
7,800.00	7,466.73	7,420.39	7,412.97	27.46	13.22	-90.82	-102.33	-1,865.42	1,485.47	1,445.02	40.45	36.726	SF	
7,850.00	7,474.59	7,429.52	7,422.09	27.59	13.23	-90.74	-102.16	-1,865.47	1,490.80	1,450.21	40.59	36.728		
7,900.00	7,478.99	7,435.00	7,427.58	27.73	13.24	-90.39	-102.07	-1,865.49	1,497.78	1,457.04	40.74	36.766		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Sullivan 44-26 - CPR WELL - GYRO													Offset Well Error:	0.00 usft
Survey Program: 100-Geolink MWD														
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	-131.27	-14.65	-16.70	34.20					
100.00	100.00	73.95	73.95	0.14	0.13	-131.91	-14.88	-16.58	22.28	22.01	0.27	82.554		
200.00	200.00	173.87	173.86	0.50	0.30	-133.94	-15.72	-16.31	22.65	21.85	0.80	28.185		
300.00	299.98	273.90	273.89	0.84	0.48	47.82	-16.51	-16.29	21.99	20.67	1.32	16.636		
400.00	399.84	373.81	373.80	1.19	0.65	58.63	-16.91	-16.26	19.05	17.21	1.84	10.342		
500.00	499.51	473.52	473.51	1.55	0.83	62.26	-17.16	-16.26	14.94	12.56	2.38	6.285		
597.43	596.39	570.46	570.45	1.91	1.00	92.84	-17.76	-16.04	12.06	9.15	2.91	4.148	CC	
600.00	598.94	573.01	573.00	1.92	1.00	94.04	-17.78	-16.03	12.06	9.14	2.92	4.130	ES, SF	
700.52	698.51	672.64	672.63	2.32	1.18	136.37	-18.45	-15.71	17.62	14.17	3.45	5.104		
800.00	796.84	771.24	771.22	2.71	1.35	157.22	-19.34	-15.49	29.64	25.66	3.98	7.442		
900.00	895.67	870.13	870.10	3.12	1.52	165.20	-20.67	-15.76	42.75	38.23	4.52	9.466		
1,000.00	994.50	968.77	968.74	3.54	1.69	168.56	-21.10	-16.50	56.90	51.85	5.05	11.268		
1,100.00	1,093.34	1,067.56	1,067.53	3.95	1.87	170.41	-21.05	-17.26	71.59	66.00	5.59	12.816		
1,200.00	1,192.17	1,166.47	1,166.44	4.37	2.04	171.68	-21.04	-17.93	86.34	80.21	6.12	14.099		
1,300.00	1,291.01	1,265.53	1,265.49	4.79	2.21	172.67	-21.15	-18.50	101.05	94.38	6.66	15.165		
1,400.00	1,389.84	1,364.41	1,364.36	5.21	2.38	173.38	-21.35	-19.20	115.64	108.44	7.20	16.056		
1,500.00	1,488.68	1,463.39	1,463.34	5.63	2.56	173.88	-21.43	-19.94	130.33	122.59	7.74	16.832		
1,600.00	1,587.51	1,562.44	1,562.39	6.05	2.73	174.28	-21.62	-20.76	144.90	136.61	8.28	17.490		
1,700.00	1,686.35	1,661.52	1,661.47	6.48	2.90	174.62	-21.89	-21.58	159.40	150.58	8.83	18.060		
1,800.00	1,785.18	1,760.65	1,760.60	6.90	3.08	174.83	-22.15	-22.63	173.80	164.43	9.37	18.551		
1,900.00	1,884.02	1,859.53	1,859.46	7.33	3.25	174.93	-22.31	-23.94	188.15	178.24	9.91	18.985		
2,000.00	1,982.85	1,958.35	1,958.27	7.75	3.42	174.87	-22.12	-25.63	202.59	192.14	10.45	19.383		
2,100.00	2,081.69	2,056.49	2,056.39	8.17	3.60	174.71	-21.62	-27.58	217.17	206.18	10.99	19.760		
2,200.00	2,180.52	2,154.38	2,154.26	8.60	3.77	174.54	-20.62	-29.39	232.26	220.73	11.53	20.148		
2,300.00	2,279.36	2,252.55	2,252.40	9.03	3.94	174.40	-19.37	-31.00	247.66	235.59	12.07	20.524		
2,400.00	2,378.19	2,351.95	2,351.79	9.45	4.12	174.32	-18.11	-32.39	263.19	250.57	12.61	20.865		
2,500.00	2,477.02	2,452.40	2,452.22	9.88	4.29	174.25	-17.31	-34.07	278.17	265.00	13.17	21.126		
2,600.00	2,575.86	2,552.04	2,551.84	10.30	4.47	174.18	-16.89	-35.99	292.71	278.99	13.72	21.341		
2,700.00	2,674.69	2,650.93	2,650.70	10.73	4.64	174.11	-16.51	-37.97	307.18	292.92	14.26	21.541		
2,800.00	2,773.53	2,749.93	2,749.68	11.15	4.82	174.03	-16.06	-39.99	321.68	306.88	14.81	21.728		
2,900.00	2,872.36	2,849.60	2,849.34	11.58	5.00	173.95	-15.67	-42.14	336.08	320.72	15.35	21.888		
3,000.00	2,971.20	2,948.72	2,948.43	12.01	5.17	173.88	-15.49	-44.38	350.25	334.35	15.90	22.026		
3,100.00	3,070.03	3,046.63	3,046.31	12.43	5.34	173.81	-15.13	-46.54	364.60	348.16	16.44	22.176		
3,200.00	3,168.87	3,145.02	3,144.68	12.86	5.52	173.72	-14.45	-48.69	379.24	362.26	16.98	22.329		
3,300.00	3,267.70	3,242.94	3,242.57	13.28	5.69	173.62	-13.68	-50.91	393.93	376.41	17.52	22.479		
3,400.00	3,366.54	3,338.50	3,338.11	13.71	5.86	173.55	-12.52	-52.65	409.21	391.16	18.05	22.670		
3,500.00	3,465.37	3,434.50	3,434.08	14.14	6.03	173.50	-10.67	-53.88	425.35	406.77	18.58	22.894		
3,600.00	3,564.21	3,533.82	3,533.38	14.56	6.21	173.47	-8.64	-54.98	441.68	422.56	19.13	23.091		
3,700.00	3,663.04	3,634.02	3,633.55	14.99	6.38	173.42	-6.84	-56.37	457.67	437.99	19.68	23.253		
3,800.00	3,761.88	3,732.91	3,732.41	15.42	6.56	173.37	-5.14	-57.86	473.53	453.30	20.23	23.409		
3,900.00	3,860.71	3,831.53	3,831.00	15.84	6.73	173.33	-3.47	-59.36	489.37	468.59	20.77	23.558		
4,000.00	3,959.54	3,931.22	3,930.68	16.27	6.91	173.32	-1.91	-60.52	505.26	483.94	21.32	23.695		
4,100.00	4,058.38	4,032.06	4,031.49	16.70	7.09	173.30	-0.78	-62.16	520.55	498.67	21.88	23.790		
4,200.00	4,157.21	4,128.09	4,127.50	17.12	7.26	173.28	0.59	-63.55	536.18	513.77	22.41	23.925		
4,300.00	4,256.05	4,226.99	4,226.39	17.55	7.43	173.25	2.15	-64.99	551.94	528.98	22.96	24.042		
4,400.00	4,354.88	4,324.55	4,323.92	17.98	7.61	173.22	3.83	-66.46	567.81	544.31	23.50	24.166		
4,500.00	4,453.72	4,421.55	4,420.90	18.40	7.78	173.20	5.61	-67.61	583.93	559.90	24.03	24.299		
4,600.00	4,552.55	4,518.60	4,517.91	18.83	7.95	173.16	7.83	-68.92	600.35	575.78	24.57	24.437		
4,611.50	4,563.92	4,529.90	4,529.21	18.88	7.97	173.15	8.11	-69.09	602.25	577.62	24.63	24.452		
4,700.00	4,651.58	4,616.88	4,616.14	19.25	8.13	173.11	10.31	-70.38	615.58	590.47	25.11	24.517		
4,800.00	4,751.03	4,714.72	4,713.94	19.64	8.30	173.01	12.97	-71.82	627.57	601.93	25.64	24.476		
4,900.00	4,850.78	4,812.33	4,811.50	20.00	8.48	172.86	15.93	-73.33	636.35	610.19	26.16	24.323		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 44-26 - CPR WELL - GYRO													Offset Site Error:	0.00 usft
Survey Program: 100-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		
5,000.00	4,950.72	4,907.42	4,906.51	20.34	8.65	172.64	19.46	-74.80	642.28	615.62	26.66	24.089		
5,049.28	5,000.00	4,956.91	4,955.96	20.49	8.74	28.75	21.49	-75.61	644.09	617.17	26.92	23.928		
5,100.00	5,050.72	5,007.77	5,006.76	20.63	8.83	28.58	23.60	-76.52	645.50	618.33	27.17	23.757		
5,200.00	5,150.72	5,107.34	5,106.24	20.91	9.01	28.30	27.62	-78.02	648.33	620.66	27.67	23.434		
5,300.00	5,250.72	5,210.43	5,209.24	21.19	9.20	28.03	31.46	-79.40	650.98	622.80	28.19	23.097		
5,400.00	5,350.72	5,316.93	5,315.69	21.48	9.39	27.77	34.48	-81.12	652.73	624.01	28.73	22.723		
5,500.00	5,450.72	5,413.54	5,412.25	21.77	9.56	27.56	36.99	-82.50	654.36	625.16	29.21	22.406		
5,600.00	5,550.72	5,509.88	5,508.55	22.06	9.74	27.38	39.86	-83.34	656.61	626.92	29.68	22.121		
5,700.00	5,650.72	5,614.88	5,613.50	22.35	9.92	27.20	42.74	-84.15	658.69	628.47	30.22	21.800		
5,800.00	5,750.72	5,718.21	5,716.80	22.65	10.11	27.01	44.99	-85.51	660.03	629.29	30.74	21.472		
5,900.00	5,850.72	5,814.62	5,813.17	22.94	10.28	26.80	47.39	-87.00	661.54	630.32	31.22	21.187		
6,000.00	5,950.72	5,915.03	5,913.54	23.24	10.46	26.61	49.94	-88.23	663.26	631.53	31.73	20.903		
6,100.00	6,050.72	6,015.36	6,013.85	23.54	10.64	26.51	51.91	-88.53	664.89	632.65	32.23	20.627		
6,200.00	6,150.72	6,114.55	6,113.03	23.84	10.81	26.51	53.48	-87.71	666.68	633.95	32.73	20.370		
6,300.00	6,250.72	6,221.15	6,219.61	24.15	10.99	26.55	54.35	-86.71	667.82	634.55	33.27	20.075		
6,400.00	6,350.72	6,321.64	6,320.10	24.45	11.17	26.55	55.09	-86.39	668.61	634.84	33.77	19.798		
6,500.00	6,450.72	6,425.66	6,424.12	24.76	11.35	26.55	55.42	-86.29	668.94	634.64	34.30	19.505		
6,600.00	6,550.72	6,525.74	6,524.20	25.06	11.52	26.56	55.42	-86.16	668.99	634.19	34.80	19.224		
6,700.00	6,650.72	6,625.05	6,623.50	25.37	11.69	26.58	55.44	-85.86	669.15	633.85	35.30	18.956		
6,800.00	6,750.72	6,725.44	6,723.90	25.68	11.86	26.60	55.42	-85.54	669.28	633.47	35.81	18.691		
6,813.09	6,763.80	6,738.41	6,736.87	25.72	11.88	26.61	55.42	-85.50	669.29	633.42	35.87	18.657		
6,850.00	6,800.70	6,775.00	6,773.46	25.84	11.95	26.79	55.44	-85.40	668.50	632.45	36.06	18.541		
6,900.00	6,850.50	6,824.18	6,822.64	25.98	12.03	27.10	55.49	-85.26	664.76	628.47	36.30	18.314		
6,950.00	6,899.88	6,872.76	6,871.22	26.11	12.12	27.67	55.58	-85.07	658.01	621.47	36.53	18.012		
7,000.00	6,948.60	6,921.01	6,919.47	26.24	12.20	28.52	55.69	-84.81	648.29	611.53	36.76	17.637		
7,050.00	6,996.42	6,968.79	6,967.24	26.35	12.28	29.66	55.82	-84.56	635.66	598.68	36.98	17.191		
7,100.00	7,043.10	7,015.69	7,014.15	26.46	12.36	31.15	55.97	-84.34	620.22	583.03	37.19	16.678		
7,150.00	7,088.43	7,061.72	7,060.18	26.55	12.44	33.01	56.12	-84.20	602.08	564.69	37.39	16.103		
7,200.00	7,132.17	7,106.21	7,104.67	26.64	12.52	35.31	56.26	-84.17	581.42	543.83	37.58	15.470		
7,250.00	7,174.12	7,149.13	7,147.58	26.71	12.59	38.12	56.37	-84.20	558.44	520.67	37.77	14.786		
7,300.00	7,214.06	7,189.94	7,188.39	26.78	12.67	41.49	56.42	-84.26	533.42	495.48	37.94	14.058		
7,350.00	7,251.82	7,227.23	7,225.68	26.85	12.73	45.41	56.44	-84.32	506.74	468.64	38.11	13.298		
7,400.00	7,287.20	7,261.80	7,260.25	26.90	12.79	49.91	56.48	-84.31	478.89	440.62	38.27	12.515		
7,450.00	7,320.02	7,293.92	7,292.38	26.96	12.84	55.00	56.53	-84.23	450.36	411.93	38.43	11.719		
7,500.00	7,350.14	7,323.71	7,322.16	27.01	12.90	60.58	56.60	-84.13	421.76	383.15	38.61	10.924		
7,550.00	7,377.40	7,350.84	7,349.30	27.07	12.94	66.44	56.71	-84.04	393.83	355.02	38.81	10.148		
7,600.00	7,401.67	7,375.13	7,373.58	27.13	12.99	72.26	56.83	-83.96	367.50	328.46	39.04	9.413		
7,650.00	7,422.84	7,396.44	7,394.89	27.19	13.02	77.73	56.96	-83.90	343.92	304.61	39.31	8.748		
7,700.00	7,440.79	7,414.54	7,413.00	27.27	13.05	82.49	57.08	-83.85	324.44	284.81	39.63	8.186		
7,750.00	7,455.44	7,429.34	7,427.80	27.36	13.08	86.30	57.17	-83.79	310.50	270.52	39.98	7.767		
7,800.00	7,466.73	7,440.79	7,439.24	27.46	13.10	88.98	57.24	-83.74	303.42	263.11	40.31	7.527		
7,820.79	7,470.42	7,444.55	7,443.00	27.52	13.11	89.73	57.26	-83.73	302.73	262.29	40.44	7.486		
7,850.00	7,474.59	7,448.84	7,447.29	27.59	13.11	90.42	57.29	-83.71	304.10	263.52	40.59	7.492		
7,900.00	7,478.99	7,453.46	7,451.91	27.73	13.12	90.59	57.31	-83.68	312.77	272.00	40.77	7.672		
7,938.09	7,480.00	7,454.67	7,453.12	27.85	13.12	89.84	57.32	-83.68	324.41	283.58	40.83	7.946		
8,000.00	7,480.00	7,455.02	7,453.47	28.08	13.12	89.90	57.32	-83.68	351.43	310.60	40.82	8.608		
8,100.00	7,480.00	7,455.57	7,454.02	28.53	13.13	90.01	57.33	-83.67	411.32	370.65	40.67	10.114		
8,200.00	7,480.00	7,456.13	7,454.58	29.06	13.13	90.11	57.33	-83.67	484.62	444.15	40.47	11.975		
8,300.00	7,480.00	7,456.68	7,455.13	29.68	13.13	90.22	57.33	-83.67	566.16	525.87	40.29	14.051		
8,400.00	7,480.00	7,457.22	7,455.68	30.37	13.13	90.32	57.34	-83.66	652.85	612.70	40.15	16.261		
8,500.00	7,480.00	7,457.77	7,456.22	31.13	13.13	90.42	57.34	-83.66	742.89	702.86	40.04	18.556		
8,600.00	7,480.00	7,458.32	7,456.77	31.95	13.13	90.53	57.34	-83.66	835.21	795.26	39.95	20.907		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 100-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		
8,700.00	7,480.00	7,458.86	7,457.31	32.83	13.13	90.63	57.35	-83.66	929.11	889.23	39.88	23.296		
8,800.00	7,480.00	7,459.40	7,457.85	33.76	13.13	90.73	57.35	-83.65	1,024.17	984.34	39.83	25.712		
8,900.00	7,480.00	7,459.94	7,458.39	34.74	13.13	90.83	57.35	-83.65	1,120.09	1,080.29	39.79	28.148		
9,000.00	7,480.00	7,460.47	7,458.92	35.76	13.13	90.93	57.35	-83.65	1,216.66	1,176.90	39.76	30.597		
9,100.00	7,480.00	7,461.01	7,459.46	36.82	13.13	91.03	57.36	-83.64	1,313.75	1,274.01	39.74	33.057		
9,200.00	7,480.00	7,461.54	7,459.99	37.91	13.14	91.13	57.36	-83.64	1,411.25	1,371.52	39.73	35.524		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4A-26H-P268 - OH - PLAN #4													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	-90.02	-0.02	-69.93	69.93	69.66	0.28	251.724		
100.00	100.00	100.00	100.00	0.14	0.14	-90.02	-0.02	-69.93	69.93	68.94	0.99	70.301	CC, ES	
200.00	200.00	200.00	200.00	0.50	0.50	-90.02	-0.02	-69.93	69.93	69.86	1.72	41.661		
300.00	299.98	297.67	297.65	0.84	0.84	90.93	-0.50	-71.53	71.58	74.15	2.47	31.080		
400.00	399.84	395.10	394.95	1.19	1.19	93.53	-1.92	-76.30	76.62	80.51	3.22	25.971		
500.00	499.51	492.22	491.71	1.55	1.54	77.92	-4.28	-84.20	83.74	87.49	3.99	22.933		
600.00	598.94	589.11	587.92	1.92	1.91	70.38	-7.57	-95.22	91.47	95.14	4.77	20.951		
700.52	698.51	686.29	683.95	2.32	2.30	66.94	-11.79	-109.39	99.91	104.57	5.56	19.815		
800.00	796.84	782.15	778.16	2.71	2.71	69.31	-16.88	-126.42	110.13	116.94	6.36	19.382	SF	
900.00	895.67	878.00	871.69	3.12	3.14	70.42	-22.85	-146.46	123.31	132.06	7.18	19.392		
1,000.00	994.50	973.12	963.77	3.54	3.61	70.56	-29.67	-169.29	139.24	149.88	8.00	19.740		
1,100.00	1,093.34	1,067.45	1,054.26	3.95	4.11	70.02	-37.28	-194.82	157.87	168.97	8.80	20.194		
1,200.00	1,192.17	1,165.43	1,147.82	4.37	4.66	69.31	-45.61	-222.71	177.78	188.08	9.62	20.550		
1,300.00	1,291.01	1,263.41	1,241.37	4.79	5.22	68.75	-53.93	-250.60	197.70	207.19	10.45	20.836		
1,400.00	1,389.84	1,361.39	1,334.93	5.21	5.79	68.28	-62.25	-278.48	217.64	226.31	11.28	21.068		
1,500.00	1,488.68	1,459.37	1,428.49	5.63	6.36	67.90	-70.57	-306.37	237.59	245.43	12.11	21.260		
1,600.00	1,587.51	1,557.35	1,522.04	6.05	6.94	67.57	-78.89	-334.26	257.55	264.56	12.96	21.421		
1,700.00	1,686.35	1,655.32	1,615.60	6.48	7.52	67.29	-87.21	-362.14	277.51	283.68	13.80	21.557		
1,800.00	1,785.18	1,753.30	1,709.16	6.90	8.11	67.05	-95.53	-390.03	297.48	302.81	14.65	21.673		
1,900.00	1,884.02	1,851.28	1,802.71	7.33	8.70	66.84	-103.85	-417.92	317.46	321.94	15.50	21.773		
2,000.00	1,982.85	1,949.26	1,896.27	7.75	9.28	66.65	-112.17	-445.80	337.43	341.07	16.35	21.861		
2,100.00	2,081.69	2,047.24	1,989.83	8.17	9.87	66.49	-120.49	-473.69	357.42	360.20	17.20	21.938		
2,200.00	2,180.52	2,145.22	2,083.38	8.60	10.47	66.34	-128.81	-501.58	377.40	379.33	18.06	22.005		
2,300.00	2,279.36	2,243.20	2,176.94	9.03	11.06	66.21	-137.13	-529.46	397.39	398.46	18.92	22.065		
2,400.00	2,378.19	2,341.17	2,270.50	9.45	11.65	66.09	-145.45	-557.35	417.38	417.59	19.77	22.119		
2,500.00	2,477.02	2,439.15	2,364.05	9.88	12.25	65.98	-153.77	-585.24	437.37	436.72	20.63	22.167		
2,600.00	2,575.86	2,537.13	2,457.61	10.30	12.84	65.88	-162.09	-613.12	457.36	445.86	21.49	22.211		
2,700.00	2,674.69	2,635.11	2,551.17	10.73	13.44	65.79	-170.41	-641.01	477.35	474.99	22.35	22.250		
2,800.00	2,773.53	2,733.09	2,644.72	11.15	14.03	65.70	-178.73	-668.90	497.34	494.12	23.21	22.286		
2,900.00	2,872.36	2,831.07	2,738.28	11.58	14.63	65.62	-187.06	-696.78	517.34	513.26	24.08	22.319		
3,000.00	2,971.20	2,929.04	2,831.84	12.01	15.23	65.55	-195.38	-724.67	537.33	532.39	25.80	22.377		
3,100.00	3,070.03	3,027.02	2,925.39	12.43	15.82	65.49	-203.70	-752.56	557.33	551.53	26.66	22.402		
3,200.00	3,168.87	3,125.00	3,018.95	12.86	16.42	65.42	-212.02	-780.44	577.33	579.66	27.53	22.426		
3,300.00	3,267.70	3,222.98	3,112.51	13.28	17.02	65.37	-220.34	-808.33	597.32	589.79	28.39	22.447		
3,400.00	3,366.54	3,320.96	3,206.06	13.71	17.62	65.31	-228.66	-836.22	617.32	628.06	29.26	22.468		
3,500.00	3,465.37	3,418.94	3,299.62	14.14	18.22	65.26	-236.98	-864.10	637.32	647.20	30.12	22.487		
3,600.00	3,564.21	3,516.91	3,393.18	14.56	18.81	65.21	-245.30	-891.99	657.32	666.33	30.99	22.504		
3,700.00	3,663.04	3,614.89	3,486.73	14.99	19.41	65.17	-253.62	-919.88	677.32	685.47	31.85	22.521		
3,800.00	3,761.88	3,712.87	3,580.29	15.42	20.01	65.13	-261.94	-947.76	697.32	704.60	32.72	22.536		
3,900.00	3,860.71	3,810.85	3,673.85	15.84	20.61	65.09	-270.26	-975.65	717.32	723.74	33.58	22.551		
4,000.00	3,959.54	3,908.83	3,767.40	16.27	21.21	65.05	-278.58	-1,003.54	737.32	742.87	34.45	22.564		
4,100.00	4,058.38	4,006.81	3,860.96	16.70	21.81	65.01	-286.90	-1,031.42	757.32	762.01	35.32	22.577		
4,200.00	4,157.21	4,104.78	3,954.52	17.12	22.41	64.98	-295.22	-1,059.31	777.32	781.14	36.18	22.590		
4,300.00	4,256.05	4,202.76	4,048.08	17.55	23.01	64.95	-303.54	-1,087.20	797.32	800.28	37.05	22.601		
4,400.00	4,354.88	4,300.74	4,141.63	17.98	23.61	64.92	-311.86	-1,115.08	817.32	819.41	37.91	22.612		
4,500.00	4,453.72	4,398.72	4,235.19	18.40	24.21	64.89	-320.18	-1,142.97	837.33	821.61	38.76	22.649		
4,600.00	4,552.55	4,496.70	4,328.75	18.83	24.81	64.86	-328.51	-1,170.86	857.33	839.14	39.55	22.753		
4,611.50	4,563.92	4,507.97	4,339.51	18.88	24.88	64.86	-329.46	-1,174.07	859.63	840.29	40.29	22.920		
4,700.00	4,651.58	4,594.54	4,422.17	19.25	25.41	65.09	-336.81	-1,198.71	877.90	860.36				
4,800.00	4,751.03	4,691.97	4,515.21	19.64	26.00	65.19	-345.09	-1,226.44	899.91	883.10				
4,900.00	4,850.78	4,788.87	4,607.73	20.00	26.59	65.13	-353.32	-1,254.02	923.39					
5,000.00	4,950.72	4,885.11	4,699.63	20.34	27.18	64.94	-361.49	-1,281.41	948.39					

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	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)	Between Centres (usft)	Between Ellipses (usft)			
5,049.28	5,000.00	4,932.27	4,744.66	20.49	27.47	-78.96	-365.50	-1,294.83	961.28	920.00	41.28	23.288			
5,100.00	5,050.72	4,980.70	4,790.90	20.63	27.77	-79.36	-369.61	-1,308.62	974.78	933.19	41.58	23.442			
5,200.00	5,150.72	5,076.19	4,882.08	20.91	28.35	-80.14	-377.72	-1,335.79	1,001.52	959.33	42.18	23.742			
5,300.00	5,250.72	5,171.67	4,973.26	21.19	28.94	-80.87	-385.83	-1,362.97	1,028.42	985.63	42.79	24.034			
5,400.00	5,350.72	5,267.16	5,064.44	21.48	29.52	-81.56	-393.94	-1,390.15	1,055.47	1,012.07	43.40	24.319			
5,500.00	5,450.72	5,362.65	5,155.62	21.77	30.11	-82.22	-402.04	-1,417.33	1,082.66	1,038.64	44.02	24.596			
5,600.00	5,550.72	5,458.13	5,246.79	22.06	30.69	-82.85	-410.15	-1,444.50	1,109.98	1,065.34	44.64	24.866			
5,700.00	5,650.72	5,553.62	5,337.97	22.35	31.28	-83.45	-418.26	-1,471.68	1,137.42	1,092.16	45.26	25.129			
5,800.00	5,750.72	5,649.11	5,429.15	22.65	31.86	-84.02	-426.37	-1,498.86	1,164.97	1,119.08	45.89	25.384			
5,900.00	5,850.72	5,744.60	5,520.33	22.94	32.45	-84.57	-434.48	-1,526.04	1,192.62	1,146.10	46.53	25.633			
6,000.00	5,950.72	5,840.08	5,611.51	23.24	33.03	-85.09	-442.59	-1,553.21	1,220.37	1,173.21	47.17	25.874			
6,100.00	6,050.72	5,935.57	5,702.68	23.54	33.62	-85.58	-450.70	-1,580.39	1,248.21	1,200.41	47.81	26.109			
6,200.00	6,150.72	6,031.06	5,793.86	23.84	34.20	-86.06	-458.81	-1,607.57	1,276.14	1,227.68	48.45	26.338			
6,300.00	6,250.72	6,126.54	5,885.04	24.15	34.79	-86.52	-466.92	-1,634.75	1,304.14	1,255.04	49.10	26.560			
6,400.00	6,350.72	6,222.03	5,976.22	24.45	35.37	-86.95	-475.03	-1,661.92	1,332.21	1,282.46	49.75	26.777			
6,500.00	6,450.72	6,317.52	6,067.39	24.76	35.96	-87.37	-483.13	-1,689.10	1,360.36	1,309.95	50.41	26.987			
6,600.00	6,550.72	6,413.01	6,158.57	25.06	36.54	-87.77	-491.24	-1,716.28	1,388.57	1,337.50	51.07	27.192			
6,700.00	6,650.72	6,508.49	6,249.75	25.37	37.13	-88.16	-499.35	-1,743.46	1,416.84	1,365.11	51.73	27.391			
6,800.00	6,750.72	6,603.98	6,340.93	25.68	37.72	-88.53	-507.46	-1,770.64	1,445.17	1,392.78	52.39	27.584			
6,813.09	6,763.80	6,616.48	6,352.86	25.72	37.79	-88.58	-508.52	-1,774.19	1,448.88	1,396.40	52.48	27.609			
6,850.00	6,800.70	6,651.63	6,386.43	25.84	38.01	-87.76	-511.51	-1,784.20	1,459.33	1,406.61	52.71	27.684			
6,900.00	6,850.50	6,698.82	6,431.49	25.98	38.30	-86.94	-515.52	-1,797.63	1,473.39	1,420.38	53.01	27.796			
6,950.00	6,899.88	6,745.32	6,475.89	26.11	38.58	-86.24	-519.46	-1,810.86	1,487.35	1,434.08	53.27	27.923			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft					
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft					
Reference													Semi Major Axis		Distance		Total Uncertainty Axis	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)									
0.00	0.00	0.00	0.00	0.00	0.00	-89.97	0.04	-59.86	59.86										
100.00	100.00	100.00	100.00	0.14	0.14	-89.97	0.04	-59.86	59.86	59.59	0.28	215.477							
200.00	200.00	200.00	200.00	0.50	0.50	-89.97	0.04	-59.86	59.86	58.87	0.99	60.178	CC						
200.41	200.41	200.41	200.41	0.50	0.50	90.03	0.04	-59.86	59.86	58.87	1.00	60.004							
300.00	299.98	299.98	299.98	0.84	0.85	91.70	0.04	-59.86	59.89	58.19	1.70	35.298	ES						
400.00	399.84	397.87	397.85	1.19	1.20	96.01	-0.36	-61.49	61.88	59.47	2.41	25.679							
500.00	499.51	495.56	495.41	1.55	1.54	82.39	-1.52	-66.35	66.33	63.18	3.15	21.056							
600.00	598.94	593.12	592.61	1.92	1.89	76.87	-3.46	-74.43	71.87	67.96	3.90	18.414							
700.52	698.51	691.03	689.82	2.32	2.26	75.35	-6.19	-85.77	78.61	73.93	4.67	16.829							
800.00	796.84	787.75	785.40	2.71	2.64	79.12	-9.64	-100.14	87.43	81.98	5.45	16.048							
900.00	895.67	884.63	880.58	3.12	3.05	80.91	-13.84	-117.67	99.12	92.87	6.25	15.865	SF						
1,000.00	994.50	980.93	974.54	3.54	3.48	81.20	-18.77	-138.18	113.36	106.31	7.06	16.062							
1,100.00	1,093.34	1,076.46	1,066.99	3.95	3.94	80.47	-24.38	-161.55	130.10	122.22	7.88	16.507							
1,200.00	1,192.17	1,171.65	1,158.28	4.37	4.44	79.11	-30.68	-187.77	149.32	140.61	8.71	17.151							
1,300.00	1,291.01	1,269.53	1,251.83	4.79	4.98	77.79	-37.40	-215.76	169.48	159.95	9.53	17.779							
1,400.00	1,389.84	1,367.41	1,345.38	5.21	5.52	76.75	-44.12	-243.75	189.71	179.34	10.37	18.301							
1,500.00	1,488.68	1,465.29	1,438.93	5.63	6.08	75.91	-50.84	-271.74	209.99	198.79	11.21	18.740							
1,600.00	1,587.51	1,563.17	1,532.48	6.05	6.65	75.22	-57.56	-299.73	230.31	218.26	12.05	19.114							
1,700.00	1,686.35	1,661.05	1,626.03	6.48	7.22	74.64	-64.28	-327.72	250.65	237.75	12.90	19.436							
1,800.00	1,785.18	1,758.93	1,719.58	6.90	7.79	74.15	-71.00	-355.71	271.01	257.26	13.75	19.715							
1,900.00	1,884.02	1,856.81	1,813.14	7.33	8.37	73.73	-77.72	-383.70	291.39	276.79	14.60	19.958							
2,000.00	1,982.85	1,954.69	1,906.69	7.75	8.95	73.36	-84.44	-411.69	311.78	296.33	15.46	20.173							
2,100.00	2,081.69	2,052.57	2,000.24	8.17	9.53	73.04	-91.16	-439.69	332.19	315.87	16.31	20.364							
2,200.00	2,180.52	2,150.45	2,093.79	8.60	10.12	72.75	-97.88	-467.68	352.60	335.43	17.17	20.534							
2,300.00	2,279.36	2,248.33	2,187.34	9.03	10.70	72.50	-104.60	-495.67	373.02	354.99	18.03	20.687							
2,400.00	2,378.19	2,346.21	2,280.89	9.45	11.29	72.27	-111.33	-523.66	393.44	374.55	18.89	20.824							
2,500.00	2,477.02	2,444.09	2,374.45	9.88	11.88	72.06	-118.05	-551.65	413.88	394.12	19.76	20.949							
2,600.00	2,575.86	2,541.97	2,468.00	10.30	12.47	71.88	-124.77	-579.64	434.31	413.69	20.62	21.063							
2,700.00	2,674.69	2,639.85	2,561.55	10.73	13.06	71.71	-131.49	-607.63	454.75	433.27	21.48	21.167							
2,800.00	2,773.53	2,737.73	2,655.10	11.15	13.65	71.55	-138.21	-635.62	475.20	452.85	22.35	21.262							
2,900.00	2,872.36	2,835.61	2,748.65	11.58	14.24	71.41	-144.93	-663.61	495.64	472.43	23.22	21.350							
3,000.00	2,971.20	2,933.49	2,842.20	12.01	14.83	71.28	-151.65	-691.60	516.09	492.01	24.08	21.431							
3,100.00	3,070.03	3,031.37	2,935.75	12.43	15.42	71.16	-158.37	-719.59	536.54	511.59	24.95	21.506							
3,200.00	3,168.87	3,129.25	3,029.31	12.86	16.01	71.05	-165.09	-747.58	557.00	531.18	25.82	21.575							
3,300.00	3,267.70	3,227.13	3,122.86	13.28	16.61	70.94	-171.81	-775.58	577.45	550.77	26.68	21.640							
3,400.00	3,366.54	3,325.01	3,216.41	13.71	17.20	70.85	-178.53	-803.57	597.91	570.36	27.55	21.701							
3,500.00	3,465.37	3,422.89	3,309.96	14.14	17.79	70.76	-185.25	-831.56	618.37	589.95	28.42	21.757							
3,600.00	3,564.21	3,520.77	3,403.51	14.56	18.39	70.67	-191.97	-859.55	638.83	609.54	29.29	21.810							
3,700.00	3,663.04	3,618.65	3,497.06	14.99	18.98	70.59	-198.70	-887.54	659.29	629.13	30.16	21.860							
3,800.00	3,761.88	3,716.54	3,590.62	15.42	19.58	70.52	-205.42	-915.53	679.75	648.72	31.03	21.907							
3,900.00	3,860.71	3,814.42	3,684.17	15.84	20.17	70.45	-212.14	-943.52	700.22	668.32	31.90	21.951							
4,000.00	3,959.54	3,912.30	3,777.72	16.27	20.76	70.38	-218.86	-971.51	720.68	687.91	32.77	21.992							
4,100.00	4,058.38	4,010.18	3,871.27	16.70	21.36	70.32	-225.58	-999.50	741.15	707.51	33.64	22.032							
4,200.00	4,157.21	4,108.06	3,964.82	17.12	21.95	70.26	-232.30	-1,027.49	761.61	727.10	34.51	22.069							
4,300.00	4,256.05	4,205.94	4,058.37	17.55	22.55	70.20	-239.02	-1,055.48	782.08	746.70	35.38	22.104							
4,400.00	4,354.88	4,303.82	4,151.92	17.98	23.14	70.15	-245.74	-1,083.47	802.55	766.30	36.25	22.138							
4,500.00	4,453.72	4,401.70	4,245.48	18.40	23.74	70.10	-252.46	-1,111.47	823.02	785.89	37.12	22.170							
4,600.00	4,552.55	4,499.58	4,339.03	18.83	24.33	70.05	-259.18	-1,139.46	843.49	805.49	38.00	22.200							
4,611.50	4,563.92	4,510.84	4,349.79	18.88	24.40	70.04	-259.96	-1,142.68	845.84	807.75	38.10	22.203							
4,700.00	4,651.58	4,597.34	4,432.47	19.25	24.93	70.27	-265.90	-1,167.41	864.41	825.57	38.85	22.253							
4,800.00	4,751.03	4,694.73	4,525.55	19.64	25.52	70.36	-272.58	-1,195.26	886.50	846.86	39.64	22.364							
4,900.00	4,850.78	4,791.63	4,618.17	20.00	26.11	70.27	-279.24	-1,222.98	909.78	869.40	40.38	22.532							

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
S26-T2N-R68W - SULLIVAN 4B-26H-P268 - OH - PLAN #4														
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	
5,000.00	4,950.72	4,887.93	4,710.20	20.34	26.70	70.04	-285.85	-1,250.51	934.31	893.25	41.06	22.754		
5,049.28	5,000.00	4,935.12	4,755.31	20.49	26.99	-73.88	-289.09	-1,264.01	946.88	905.51	41.37	22.888		
5,100.00	5,050.72	4,983.60	4,801.64	20.63	27.28	-74.32	-292.42	-1,277.87	960.01	918.34	41.67	23.037		
5,200.00	5,150.72	5,079.17	4,892.99	20.91	27.86	-75.14	-298.98	-1,305.20	986.05	943.78	42.27	23.326		
5,300.00	5,250.72	5,174.75	4,984.34	21.19	28.44	-75.93	-305.54	-1,332.54	1,012.28	969.40	42.88	23.608		
5,400.00	5,350.72	5,270.33	5,075.69	21.48	29.03	-76.67	-312.11	-1,359.87	1,038.68	995.19	43.49	23.884		
5,500.00	5,450.72	5,365.91	5,167.04	21.77	29.61	-77.38	-318.67	-1,387.20	1,065.23	1,021.13	44.10	24.153		
5,600.00	5,550.72	5,461.48	5,258.39	22.06	30.19	-78.05	-325.23	-1,414.53	1,091.93	1,047.21	44.72	24.416		
5,700.00	5,650.72	5,557.06	5,349.74	22.35	30.77	-78.70	-331.79	-1,441.87	1,118.77	1,073.43	45.34	24.672		
5,800.00	5,750.72	5,652.64	5,441.10	22.65	31.35	-79.31	-338.36	-1,469.20	1,145.74	1,099.76	45.97	24.922		
5,900.00	5,850.72	5,748.22	5,532.45	22.94	31.94	-79.89	-344.92	-1,496.53	1,172.82	1,126.21	46.60	25.166		
6,000.00	5,950.72	5,843.79	5,623.80	23.24	32.52	-80.45	-351.48	-1,523.86	1,200.01	1,152.77	47.24	25.403		
6,100.00	6,050.72	5,939.37	5,715.15	23.54	33.10	-80.99	-358.04	-1,551.20	1,227.30	1,179.42	47.88	25.634		
6,200.00	6,150.72	6,034.95	5,806.50	23.84	33.68	-81.50	-364.61	-1,578.53	1,254.69	1,206.17	48.52	25.860		
6,300.00	6,250.72	6,130.53	5,897.85	24.15	34.27	-81.99	-371.17	-1,605.86	1,282.17	1,233.00	49.16	26.079		
6,400.00	6,350.72	6,226.10	5,989.20	24.45	34.85	-82.46	-377.73	-1,633.19	1,309.73	1,259.92	49.81	26.293		
6,500.00	6,450.72	6,321.68	6,080.55	24.76	35.43	-82.91	-384.29	-1,660.52	1,337.37	1,286.91	50.47	26.501		
6,600.00	6,550.72	6,417.26	6,171.90	25.06	36.01	-83.34	-390.86	-1,687.86	1,365.09	1,313.97	51.12	26.703		
6,700.00	6,650.72	6,512.84	6,263.25	25.37	36.60	-83.75	-397.42	-1,715.19	1,392.87	1,341.09	51.78	26.901		
6,800.00	6,750.72	6,608.41	6,354.60	25.68	37.18	-84.15	-403.98	-1,742.52	1,420.72	1,368.28	52.44	27.093		
6,813.09	6,763.80	6,620.92	6,366.56	25.72	37.26	-84.20	-404.84	-1,746.10	1,424.37	1,371.84	52.53	27.118		
6,850.00	6,800.70	6,656.12	6,400.20	25.84	37.47	-83.42	-407.26	-1,756.16	1,434.57	1,381.81	52.76	27.190		
6,900.00	6,850.50	6,703.43	6,445.41	25.98	37.76	-82.67	-410.51	-1,769.69	1,448.09	1,395.04	53.05	27.296		
6,950.00	6,899.88	6,750.10	6,490.02	26.11	38.04	-82.07	-413.71	-1,783.04	1,461.26	1,407.95	53.31	27.411		
7,000.00	6,948.60	6,795.90	6,533.79	26.24	38.32	-81.60	-416.86	-1,796.14	1,474.09	1,420.55	53.53	27.535		
7,050.00	6,996.42	6,840.61	6,576.53	26.35	38.60	-81.26	-419.93	-1,808.92	1,486.63	1,432.90	53.73	27.669		
7,100.00	7,043.10	6,884.01	6,618.01	26.46	38.86	-81.02	-422.91	-1,821.33	1,498.92	1,445.02	53.90	27.812		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4C-26H-P268 - OH - PLAN #3													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance			Total	Separation	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)	Uncertainty Axis		Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-89.91	0.08	-49.79	49.79					
100.00	100.00	100.00	100.00	0.14	0.14	-89.91	0.08	-49.79	49.79	49.52	0.28	179.230		
200.00	200.00	200.00	200.00	0.50	0.50	-89.91	0.08	-49.79	49.79	48.80	0.99	50.055 CC		
200.01	200.01	200.01	200.01	0.50	0.50	-89.91	0.08	-49.79	49.79	48.80	0.99	50.051		
300.00	299.98	299.98	299.98	0.84	0.85	92.10	0.08	-49.79	49.83	48.13	1.70	29.367		
400.00	399.84	399.84	399.84	1.19	1.21	98.05	0.08	-49.79	50.29	47.89	2.40	20.952 ES		
500.00	499.51	498.10	498.08	1.55	1.56	86.99	-0.50	-51.37	51.91	48.79	3.12	16.660		
600.00	598.94	596.39	596.24	1.92	1.90	83.94	-2.24	-56.11	54.89	51.05	3.84	14.277		
700.52	698.51	695.23	694.71	2.32	2.25	84.60	-5.16	-64.06	59.28	54.69	4.59	12.909		
800.00	796.84	793.11	791.87	2.71	2.61	89.61	-9.21	-75.07	65.62	60.27	5.35	12.261		
900.00	895.67	891.43	889.02	3.12	2.99	91.48	-14.42	-89.26	74.15	68.01	6.14	12.080		
1,000.00	994.50	989.46	985.31	3.54	3.40	90.97	-20.76	-106.52	84.51	77.57	6.95	12.163		
1,100.00	1,093.34	1,086.96	1,080.40	3.95	3.83	88.90	-28.18	-126.74	96.75	88.97	7.78	12.437		
1,200.00	1,192.17	1,184.49	1,174.77	4.37	4.29	85.97	-36.66	-149.81	110.97	102.35	8.62	12.873		
1,300.00	1,291.01	1,283.23	1,270.13	4.79	4.78	83.41	-45.49	-173.85	125.90	116.43	9.47	13.300		
1,400.00	1,389.84	1,381.97	1,365.50	5.21	5.28	81.40	-54.32	-197.88	141.01	130.70	10.31	13.674		
1,500.00	1,488.68	1,480.71	1,460.87	5.63	5.78	79.78	-63.14	-221.91	156.26	145.10	11.16	14.002		
1,600.00	1,587.51	1,579.46	1,556.23	6.05	6.30	78.45	-71.97	-245.94	171.61	159.60	12.01	14.291		
1,700.00	1,686.35	1,678.20	1,651.60	6.48	6.82	77.33	-80.80	-269.97	187.04	174.18	12.86	14.546		
1,800.00	1,785.18	1,776.94	1,746.96	6.90	7.34	76.39	-89.63	-294.00	202.53	188.82	13.71	14.772		
1,900.00	1,884.02	1,875.68	1,842.33	7.33	7.87	75.58	-98.45	-318.03	218.06	203.50	14.56	14.974		
2,000.00	1,982.85	1,974.43	1,937.70	7.75	8.39	74.88	-107.28	-342.06	233.63	218.22	15.42	15.155		
2,100.00	2,081.69	2,073.17	2,033.06	8.17	8.92	74.26	-116.11	-366.10	249.23	232.96	16.27	15.319		
2,200.00	2,180.52	2,171.91	2,128.43	8.60	9.46	73.72	-124.94	-390.13	264.85	247.73	17.12	15.466		
2,300.00	2,279.36	2,270.66	2,223.80	9.03	9.99	73.24	-133.76	-414.16	280.50	262.52	17.98	15.601		
2,400.00	2,378.19	2,369.40	2,319.16	9.45	10.53	72.81	-142.59	-438.19	296.16	277.33	18.84	15.723		
2,500.00	2,477.02	2,468.14	2,414.53	9.88	11.06	72.42	-151.42	-462.22	311.84	292.15	19.69	15.836		
2,600.00	2,575.86	2,566.88	2,509.89	10.30	11.60	72.07	-160.24	-486.25	327.53	306.98	20.55	15.939		
2,700.00	2,674.69	2,665.63	2,605.26	10.73	12.14	71.75	-169.07	-510.28	343.23	321.82	21.41	16.034		
2,800.00	2,773.53	2,764.37	2,700.63	11.15	12.68	71.46	-177.90	-534.32	358.94	336.67	22.26	16.122		
2,900.00	2,872.36	2,863.11	2,795.99	11.58	13.21	71.19	-186.73	-558.35	374.66	351.53	23.12	16.203		
3,000.00	2,971.20	2,961.85	2,891.36	12.01	13.75	70.95	-195.55	-582.38	390.38	366.40	23.98	16.279		
3,100.00	3,070.03	3,060.60	2,986.72	12.43	14.29	70.72	-204.38	-606.41	406.11	381.27	24.84	16.349		
3,200.00	3,168.87	3,159.34	3,082.09	12.86	14.84	70.52	-213.21	-630.44	421.85	396.15	25.70	16.415		
3,300.00	3,267.70	3,258.08	3,177.46	13.28	15.38	70.32	-222.04	-654.47	437.59	411.03	26.56	16.477		
3,400.00	3,366.54	3,356.82	3,272.82	13.71	15.92	70.14	-230.86	-678.50	453.34	425.92	27.42	16.535		
3,500.00	3,465.37	3,455.57	3,368.19	14.14	16.46	69.97	-239.69	-702.53	469.09	440.81	28.28	16.589		
3,600.00	3,564.21	3,554.31	3,463.55	14.56	17.00	69.82	-248.52	-726.57	484.85	455.71	29.14	16.640		
3,700.00	3,663.04	3,653.05	3,558.92	14.99	17.54	69.67	-257.35	-750.60	500.60	470.61	30.00	16.688		
3,800.00	3,761.88	3,751.80	3,654.29	15.42	18.09	69.53	-266.17	-774.63	516.36	485.51	30.86	16.734		
3,900.00	3,860.71	3,850.54	3,749.65	15.84	18.63	69.40	-275.00	-798.66	532.13	500.41	31.72	16.777		
4,000.00	3,959.54	3,949.28	3,845.02	16.27	19.17	69.28	-283.83	-822.69	547.90	515.32	32.58	16.818		
4,100.00	4,058.38	4,048.02	3,940.38	16.70	19.71	69.16	-292.66	-846.72	563.66	530.22	33.44	16.856		
4,200.00	4,157.21	4,146.77	4,035.75	17.12	20.26	69.05	-301.48	-870.75	579.43	545.13	34.30	16.893		
4,300.00	4,256.05	4,245.51	4,131.12	17.55	20.80	68.95	-310.31	-894.78	595.21	560.05	35.16	16.928		
4,400.00	4,354.88	4,344.25	4,226.48	17.98	21.34	68.85	-319.14	-918.82	610.98	574.96	36.02	16.961		
4,500.00	4,453.72	4,442.99	4,321.85	18.40	21.89	68.76	-327.96	-942.85	626.76	589.87	36.88	16.993		
4,600.00	4,552.55	4,541.74	4,417.22	18.83	22.43	68.67	-336.79	-966.88	642.54	604.79	37.74	17.023		
4,611.50	4,563.92	4,553.10	4,428.19	18.88	22.49	68.66	-337.81	-969.64	644.35	606.51	37.84	17.027		
4,700.00	4,651.58	4,640.37	4,512.48	19.25	22.97	68.74	-345.61	-990.88	658.81	620.22	38.58	17.075		
4,800.00	4,751.03	4,738.68	4,607.42	19.64	23.52	68.61	-354.40	-1,014.81	676.34	636.98	39.37	17.181		
4,900.00	4,850.78	4,836.52	4,701.92	20.00	24.05	68.26	-363.14	-1,038.62	695.20	655.11	40.09	17.341		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4C-26H-P268 - OH - PLAN #3													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,000.00	4,950.72	4,933.78	4,795.86	20.34	24.59	67.71	-371.84	-1,062.29	715.47	674.72	40.76	17.555		
5,049.28	5,000.00	4,981.47	4,841.91	20.49	24.85	-76.38	-376.10	-1,073.90	726.01	684.96	41.06	17.683		
5,100.00	5,050.72	5,030.45	4,889.22	20.63	25.12	-76.94	-380.48	-1,085.82	737.09	695.74	41.35	17.826		
5,200.00	5,150.72	5,127.03	4,982.50	20.91	25.66	-78.00	-389.12	-1,109.32	759.13	717.19	41.93	18.103		
5,300.00	5,250.72	5,223.62	5,075.78	21.19	26.19	-79.00	-397.75	-1,132.83	781.40	738.88	42.52	18.376		
5,400.00	5,350.72	5,320.20	5,169.05	21.48	26.72	-79.95	-406.38	-1,156.33	803.90	760.78	43.12	18.645		
5,500.00	5,450.72	5,416.78	5,262.33	21.77	27.25	-80.85	-415.02	-1,179.84	826.59	782.88	43.72	18.908		
5,600.00	5,550.72	5,513.36	5,355.61	22.06	27.79	-81.70	-423.65	-1,203.34	849.47	805.15	44.32	19.166		
5,700.00	5,650.72	5,609.94	5,448.89	22.35	28.32	-82.51	-432.29	-1,226.85	872.52	827.59	44.93	19.419		
5,800.00	5,750.72	5,706.52	5,542.17	22.65	28.85	-83.27	-440.92	-1,250.35	895.73	850.19	45.55	19.666		
5,900.00	5,850.72	5,803.10	5,635.44	22.94	29.38	-84.00	-449.55	-1,273.86	919.09	872.92	46.17	19.908		
6,000.00	5,950.72	5,899.68	5,728.72	23.24	29.92	-84.69	-458.19	-1,297.36	942.57	895.78	46.79	20.145		
6,100.00	6,050.72	5,996.26	5,822.00	23.54	30.45	-85.35	-466.82	-1,320.87	966.19	918.77	47.42	20.376		
6,200.00	6,150.72	6,092.84	5,915.28	23.84	30.98	-85.97	-475.46	-1,344.37	989.92	941.86	48.05	20.601		
6,300.00	6,250.72	6,189.42	6,008.55	24.15	31.52	-86.57	-484.09	-1,367.88	1,013.75	965.06	48.69	20.822		
6,400.00	6,350.72	6,286.00	6,101.83	24.45	32.05	-87.14	-492.73	-1,391.38	1,037.69	988.36	49.33	21.037		
6,500.00	6,450.72	6,382.58	6,195.11	24.76	32.58	-87.68	-501.36	-1,414.89	1,061.72	1,011.75	49.97	21.247		
6,600.00	6,550.72	6,479.16	6,288.39	25.06	33.11	-88.20	-509.99	-1,438.39	1,085.84	1,035.22	50.62	21.451		
6,700.00	6,650.72	6,575.74	6,381.67	25.37	33.65	-88.70	-518.63	-1,461.90	1,110.04	1,058.77	51.27	21.651		
6,800.00	6,750.72	6,672.32	6,474.94	25.68	34.18	-89.18	-527.26	-1,485.40	1,134.31	1,082.39	51.92	21.846		
6,813.09	6,763.80	6,684.96	6,487.15	25.72	34.25	-89.24	-528.39	-1,488.48	1,137.49	1,085.48	52.01	21.871		
6,850.00	6,800.70	6,720.51	6,521.49	25.84	34.45	-88.60	-531.57	-1,497.13	1,146.46	1,094.22	52.24	21.945		
6,900.00	6,850.50	6,768.23	6,567.57	25.98	34.71	-88.04	-535.84	-1,508.75	1,158.57	1,106.05	52.53	22.057		
6,950.00	6,899.88	6,815.23	6,612.96	26.11	34.97	-87.64	-540.04	-1,520.18	1,170.67	1,117.89	52.78	22.181		
7,000.00	6,948.60	6,861.28	6,657.44	26.24	35.22	-87.36	-544.15	-1,531.39	1,182.78	1,129.78	53.00	22.318		
7,050.00	6,996.42	6,906.17	6,700.80	26.35	35.47	-87.20	-548.17	-1,542.32	1,194.98	1,141.79	53.18	22.468		
7,100.00	7,043.10	6,949.73	6,742.87	26.46	35.71	-87.12	-551.99	-1,552.92	1,207.34	1,154.00	53.34	22.633		
7,150.00	7,088.43	6,993.65	6,785.38	26.55	35.95	-87.07	-555.96	-1,563.74	1,219.92	1,166.42	53.50	22.803		
7,200.00	7,132.17	7,038.86	6,829.15	26.64	36.18	-87.03	-553.18	-1,575.02	1,232.68	1,179.02	53.66	22.973		
7,250.00	7,174.12	7,085.55	6,874.17	26.71	36.40	-87.01	-549.39	-1,586.78	1,245.56	1,191.73	53.83	23.140		
7,300.00	7,214.06	7,133.92	6,920.41	26.78	36.61	-87.02	-542.28	-1,599.03	1,258.52	1,204.51	54.01	23.301		
7,350.00	7,251.82	7,184.21	6,967.83	26.85	36.82	-87.05	-531.48	-1,611.78	1,271.48	1,217.27	54.21	23.456		
7,400.00	7,287.20	7,236.66	7,016.34	26.90	37.01	-87.11	-516.58	-1,625.02	1,284.38	1,229.96	54.42	23.601		
7,450.00	7,320.02	7,291.59	7,065.80	26.96	37.20	-87.21	-497.09	-1,638.74	1,297.14	1,242.49	54.65	23.736		
7,500.00	7,350.14	7,349.29	7,116.00	27.01	37.37	-87.35	-472.45	-1,652.93	1,309.66	1,254.78	54.89	23.861		
7,550.00	7,377.40	7,410.13	7,166.60	27.07	37.53	-87.54	-442.01	-1,667.52	1,321.86	1,266.72	55.14	23.975		
7,600.00	7,401.67	7,474.46	7,217.11	27.13	37.67	-87.76	-405.11	-1,682.42	1,333.61	1,278.22	55.39	24.076		
7,650.00	7,422.84	7,542.64	7,266.84	27.19	37.79	-88.03	-361.01	-1,697.51	1,344.80	1,289.15	55.65	24.164		
7,700.00	7,440.79	7,615.01	7,314.86	27.27	37.90	-88.32	-309.05	-1,712.56	1,355.29	1,299.37	55.92	24.236		
7,750.00	7,455.44	7,691.82	7,359.91	27.36	37.98	-88.65	-248.66	-1,727.30	1,364.93	1,308.74	56.20	24.289		
7,800.00	7,466.73	7,773.21	7,400.45	27.46	38.05	-88.97	-179.54	-1,741.34	1,373.56	1,317.07	56.49	24.316		
7,850.00	7,474.59	7,859.13	7,434.64	27.59	38.11	-89.29	-101.83	-1,754.19	1,381.00	1,324.20	56.81	24.311		
7,900.00	7,478.99	7,949.26	7,460.48	27.73	38.15	-89.56	-16.27	-1,765.31	1,387.11	1,329.95	57.16	24.265		
7,938.09	7,480.00	8,020.36	7,473.36	27.85	38.19	-89.73	53.28	-1,772.26	1,390.77	1,333.29	57.48	24.196		
8,000.00	7,480.00	8,129.75	7,480.00	28.08	38.25	-90.00	162.11	-1,779.67	1,394.77	1,336.71	58.05	24.025		
8,100.00	7,480.00	8,229.62	7,480.00	28.53	38.35	-90.00	261.85	-1,784.90	1,399.80	1,340.86	58.94	23.750		
8,200.00	7,480.00	8,329.50	7,480.00	29.06	38.50	-90.00	361.59	-1,790.13	1,404.83	1,344.86	59.98	23.423		
8,300.00	7,480.00	8,429.37	7,480.00	29.68	38.72	-90.00	461.32	-1,795.35	1,409.86	1,348.70	61.16	23.051		
8,400.00	7,480.00	8,529.24	7,480.00	30.37	39.00	-90.00	561.06	-1,800.58	1,414.90	1,352.40	62.49	22.641		
8,500.00	7,480.00	8,629.12	7,480.00	31.13	39.36	-90.00	660.80	-1,805.81	1,419.93	1,355.97	63.96	22.201		
8,600.00	7,480.00	8,728.99	7,480.00	31.95	39.80	-90.00	760.53	-1,811.03	1,424.96	1,359.41	65.54	21.740		
8,700.00	7,480.00	8,828.86	7,480.00	32.83	40.32	-90.00	860.27	-1,816.26	1,429.99	1,362.74	67.25	21.265		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4C-26H-P268 - OH - PLAN #3													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
8,800.00	7,480.00	8,928.74	7,480.00	33.76	40.91	-90.00	960.00	-1,821.49	1,435.02	1,365.96	69.06	20.780		
8,900.00	7,480.00	9,028.61	7,480.00	34.74	41.58	-90.00	1,059.74	-1,826.72	1,440.05	1,369.09	70.97	20.292		
9,000.00	7,480.00	9,128.48	7,480.00	35.76	42.32	-90.00	1,159.48	-1,831.94	1,445.08	1,372.12	72.97	19.805		
9,100.00	7,480.00	9,228.36	7,480.00	36.82	43.13	-90.00	1,259.21	-1,837.17	1,450.12	1,375.07	75.05	19.322		
9,200.00	7,480.00	9,328.23	7,480.00	37.91	44.00	-90.00	1,358.95	-1,842.40	1,455.15	1,377.94	77.21	18.846		
9,300.00	7,480.00	9,428.10	7,480.00	39.04	44.92	-90.00	1,458.69	-1,847.62	1,460.18	1,380.74	79.44	18.380		
9,400.00	7,480.00	9,589.10	7,480.00	40.20	46.47	-90.00	1,619.56	-1,853.56	1,463.99	1,382.10	81.89	17.877		
9,500.00	7,480.00	9,698.42	7,480.00	41.39	47.54	-90.00	1,728.88	-1,854.08	1,464.24	1,380.01	84.23	17.383		
9,600.00	7,480.00	9,798.42	7,480.00	42.60	48.55	-90.00	1,828.88	-1,854.51	1,464.47	1,377.86	86.61	16.909		
9,700.00	7,480.00	9,898.42	7,480.00	43.84	49.60	-90.00	1,928.88	-1,854.93	1,464.69	1,375.66	89.03	16.451		
9,800.00	7,480.00	9,998.42	7,480.00	45.10	50.68	-90.00	2,028.87	-1,855.36	1,464.91	1,373.41	91.50	16.009		
9,900.00	7,480.00	10,098.42	7,480.00	46.38	51.80	-90.00	2,128.87	-1,855.78	1,465.13	1,371.12	94.02	15.584		
10,000.00	7,480.00	10,198.42	7,480.00	47.68	52.94	-90.00	2,228.87	-1,856.21	1,465.36	1,368.79	96.57	15.174		
10,100.00	7,480.00	10,298.42	7,480.00	48.99	54.10	-90.00	2,328.87	-1,856.63	1,465.58	1,366.43	99.15	14.781		
10,200.00	7,480.00	10,398.42	7,480.00	50.32	55.29	-90.00	2,428.87	-1,857.06	1,465.80	1,364.03	101.77	14.402		
10,300.00	7,480.00	10,498.42	7,480.00	51.66	56.50	-90.00	2,528.87	-1,857.48	1,466.03	1,361.60	104.43	14.039		
10,400.00	7,480.00	10,598.42	7,480.00	53.02	57.73	-90.00	2,628.87	-1,857.91	1,466.25	1,359.15	107.10	13.690		
10,500.00	7,480.00	10,698.42	7,480.00	54.39	58.98	-90.00	2,728.87	-1,858.33	1,466.47	1,356.66	109.81	13.355		
10,600.00	7,480.00	10,798.42	7,480.00	55.77	60.24	-90.00	2,828.87	-1,858.76	1,466.70	1,354.16	112.54	13.033		
10,700.00	7,480.00	10,930.25	7,480.00	57.16	61.92	-90.00	2,960.69	-1,858.01	1,465.96	1,350.66	115.30	12.714		
10,800.00	7,480.00	11,030.23	7,480.00	58.56	63.19	-90.00	3,060.65	-1,856.27	1,464.01	1,345.95	118.06	12.401		
10,900.00	7,480.00	11,130.21	7,480.00	59.97	64.47	-90.00	3,160.62	-1,854.53	1,462.06	1,341.23	120.83	12.100		
11,000.00	7,480.00	11,230.19	7,480.00	61.39	65.77	-90.00	3,260.59	-1,852.78	1,460.12	1,336.49	123.62	11.811		
11,100.00	7,480.00	11,330.17	7,480.00	62.82	67.08	-90.00	3,360.55	-1,851.04	1,458.17	1,331.74	126.43	11.533		
11,200.00	7,480.00	11,430.15	7,480.00	64.25	68.40	-90.00	3,460.52	-1,849.29	1,456.22	1,326.97	129.26	11.266		
11,300.00	7,480.00	11,530.13	7,480.00	65.69	69.73	-90.00	3,560.48	-1,847.55	1,454.27	1,322.18	132.10	11.009		
11,400.00	7,480.00	11,630.11	7,480.00	67.14	71.07	-90.00	3,660.45	-1,845.80	1,452.33	1,317.38	134.95	10.762		
11,500.00	7,480.00	11,730.10	7,480.00	68.59	72.42	-90.00	3,760.41	-1,844.06	1,450.38	1,312.56	137.82	10.524		
11,600.00	7,480.00	11,830.08	7,480.00	70.05	73.78	-90.00	3,860.38	-1,842.31	1,448.43	1,307.74	140.70	10.295		
11,700.00	7,480.00	11,930.06	7,480.00	71.51	75.15	-90.00	3,960.35	-1,840.57	1,446.48	1,302.90	143.59	10.074		
11,800.00	7,480.00	12,030.04	7,480.00	72.98	76.53	-90.00	4,060.31	-1,838.82	1,444.54	1,298.05	146.49	9.861		
11,900.00	7,480.00	12,130.02	7,480.00	74.46	77.91	-90.00	4,160.28	-1,837.08	1,442.59	1,293.19	149.40	9.656		
12,000.00	7,480.00	12,230.00	7,480.00	75.93	79.30	-90.00	4,260.24	-1,835.33	1,440.64	1,288.32	152.32	9.458		
12,100.00	7,480.00	12,329.98	7,480.00	77.42	80.70	-90.00	4,360.21	-1,833.59	1,438.69	1,283.44	155.25	9.267		
12,200.00	7,480.00	12,429.96	7,480.00	78.90	82.10	-90.00	4,460.18	-1,831.84	1,436.75	1,278.55	158.19	9.082		
12,300.00	7,480.00	12,529.94	7,480.00	80.39	83.51	-90.00	4,560.14	-1,830.10	1,434.80	1,273.66	161.14	8.904		
12,400.00	7,480.00	12,629.93	7,480.00	81.89	84.93	-90.00	4,660.11	-1,828.35	1,432.85	1,268.76	164.09	8.732		
12,500.00	7,480.00	12,729.91	7,480.00	83.38	86.35	-90.00	4,760.07	-1,826.61	1,430.90	1,263.85	167.06	8.565		
12,600.00	7,480.00	12,829.89	7,480.00	84.88	87.78	-90.00	4,860.04	-1,824.86	1,428.95	1,258.93	170.03	8.404		
12,700.00	7,480.00	12,929.87	7,480.00	86.39	89.21	-90.00	4,960.00	-1,823.12	1,427.01	1,254.01	173.00	8.249		
12,800.00	7,480.00	13,029.85	7,480.00	87.89	90.64	-90.00	5,059.97	-1,821.37	1,425.06	1,249.08	175.98	8.098		
12,900.00	7,480.00	13,129.83	7,480.00	89.40	92.08	-90.00	5,159.94	-1,819.63	1,423.11	1,244.14	178.97	7.952		
13,000.00	7,480.00	13,229.81	7,480.00	90.91	93.53	-90.00	5,259.90	-1,817.88	1,421.16	1,239.20	181.96	7.810		
13,100.00	7,480.00	13,329.79	7,480.00	92.43	94.98	-90.00	5,359.87	-1,816.14	1,419.22	1,234.25	184.96	7.673		
13,200.00	7,480.00	13,429.77	7,480.00	93.94	96.43	-90.00	5,459.83	-1,814.39	1,417.27	1,229.30	187.97	7.540		
13,300.00	7,480.00	13,529.75	7,480.00	95.46	97.89	-90.00	5,559.80	-1,812.65	1,415.32	1,224.34	190.98	7.411		
13,400.00	7,480.00	13,629.74	7,480.00	96.98	99.35	-90.00	5,659.77	-1,810.90	1,413.37	1,219.38	193.99	7.286		
13,500.00	7,480.00	13,729.72	7,480.00	98.50	100.81	-90.00	5,759.73	-1,809.16	1,411.43	1,214.42	197.01	7.164		
13,600.00	7,480.00	13,829.70	7,480.00	100.03	102.27	-90.00	5,859.70	-1,807.41	1,409.48	1,209.45	200.03	7.046		
13,700.00	7,480.00	13,929.68	7,480.00	101.56	103.74	-90.00	5,959.66	-1,805.67	1,407.53	1,204.47	203.06	6.932		
13,800.00	7,480.00	14,029.66	7,480.00	103.08	105.22	-90.00	6,059.63	-1,803.92	1,405.58	1,199.50	206.09	6.820		
13,900.00	7,480.00	14,129.64	7,480.00	104.61	106.69	-90.00	6,159.59	-1,802.18	1,403.64	1,194.52	209.12	6.712		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													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		
14,000.00	7,480.00	14,229.62	7,480.00	106.14	108.17	-90.00	6,259.56	-1,800.43	1,401.69	1,189.53	212.16	6.607		
14,100.00	7,480.00	14,329.60	7,480.00	107.68	109.65	-90.00	6,359.53	-1,798.69	1,399.74	1,184.54	215.20	6.504		
14,200.00	7,480.00	14,429.58	7,480.00	109.21	111.13	-90.00	6,459.49	-1,796.94	1,397.79	1,179.55	218.24	6.405		
14,300.00	7,480.00	14,529.56	7,480.00	110.75	112.62	-90.00	6,559.46	-1,795.20	1,395.85	1,174.56	221.29	6.308		
14,400.00	7,480.00	14,629.55	7,480.00	112.28	114.10	-90.00	6,659.42	-1,793.45	1,393.90	1,169.56	224.34	6.213		
14,500.00	7,480.00	14,729.53	7,480.00	113.82	115.59	-90.00	6,759.39	-1,791.71	1,391.95	1,164.56	227.39	6.121		
14,514.90	7,480.00	14,744.43	7,480.00	114.05	115.82	-90.00	6,774.29	-1,791.45	1,391.66	1,163.81	227.85	6.108		
14,544.49	7,480.00	14,774.01	7,480.00	114.50	116.26	-90.00	6,803.87	-1,790.93	1,391.37	1,162.63	228.74	6.083		
14,600.00	7,480.00	14,829.51	7,480.00	115.34	117.08	-90.00	6,859.36	-1,789.96	1,392.39	1,161.96	230.43	6.043		
14,689.49	7,480.00	14,901.25	7,480.00	116.66	118.16	-90.00	6,931.09	-1,788.71	1,398.40	1,165.27	233.13	5.998		
14,703.04	7,480.00	14,901.25	7,480.00	116.84	118.16	-90.00	6,931.09	-1,788.71	1,399.92	1,166.42	233.51	5.995 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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft					
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft					
Reference													Semi Major Axis		Distance		Total Uncertainty Axis	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)									
0.00	0.00	0.00	0.00	0.00	0.00	-89.83	0.12	-40.00	40.00										
100.00	100.00	100.00	100.00	0.14	0.14	-89.83	0.12	-40.00	40.00	39.72	0.28	143.990							
200.00	200.00	200.00	200.00	0.50	0.50	-89.83	0.12	-40.00	40.00	39.01	0.99	40.213	CC						
203.07	203.07	203.07	203.07	0.51	0.51	90.18	0.12	-40.00	40.00	38.99	1.02	39.362							
300.00	299.98	299.98	299.98	0.84	0.85	92.67	0.12	-40.00	40.05	38.35	1.70	23.603							
400.00	399.84	399.84	399.84	1.19	1.21	100.04	0.12	-40.00	40.63	38.23	2.40	16.926							
500.00	499.51	499.51	499.51	1.55	1.57	92.31	0.12	-40.00	41.31	38.19	3.12	13.248	ES						
600.00	598.94	598.14	598.12	1.92	1.91	94.12	-0.51	-41.56	42.89	39.05	3.84	11.180							
700.52	698.51	697.45	697.29	2.32	2.26	99.05	-2.44	-46.30	46.87	42.31	4.56	10.273							
800.00	796.84	795.98	795.45	2.71	2.60	106.67	-5.63	-54.15	53.03	47.73	5.30	10.009							
900.00	895.67	895.21	893.96	3.12	2.97	109.46	-10.13	-65.22	60.58	54.52	6.06	9.999							
1,000.00	994.50	994.40	991.95	3.54	3.35	108.81	-15.91	-79.42	68.91	62.06	6.85	10.065							
1,100.00	1,093.34	1,093.29	1,089.06	3.95	3.75	105.84	-22.93	-96.71	78.09	70.42	7.66	10.189							
1,200.00	1,192.17	1,191.66	1,184.96	4.37	4.18	101.41	-31.17	-116.97	88.54	80.03	8.51	10.406							
1,300.00	1,291.01	1,290.72	1,281.14	4.79	4.63	96.99	-40.10	-138.93	100.11	90.74	9.37	10.684							
1,400.00	1,389.84	1,389.78	1,377.33	5.21	5.10	93.50	-49.03	-160.89	112.15	101.92	10.23	10.961							
1,500.00	1,488.68	1,488.85	1,473.52	5.63	5.58	90.69	-57.95	-182.85	124.52	113.43	11.09	11.225							
1,600.00	1,587.51	1,587.91	1,569.70	6.05	6.06	88.39	-66.88	-204.81	137.13	125.18	11.95	11.472							
1,700.00	1,686.35	1,686.98	1,665.89	6.48	6.55	86.48	-75.81	-226.77	149.93	137.11	12.81	11.701							
1,800.00	1,785.18	1,786.04	1,762.08	6.90	7.04	84.87	-84.74	-248.73	162.86	149.19	13.67	11.912							
1,900.00	1,884.02	1,885.11	1,858.26	7.33	7.54	83.50	-93.67	-270.68	175.90	161.37	14.53	12.106							
2,000.00	1,982.85	1,984.17	1,954.45	7.75	8.04	82.32	-102.59	-292.64	189.02	173.63	15.39	12.283							
2,100.00	2,081.69	2,083.24	2,050.64	8.17	8.54	81.29	-111.52	-314.60	202.21	185.97	16.25	12.447							
2,200.00	2,180.52	2,182.30	2,146.83	8.60	9.04	80.39	-120.45	-336.56	215.46	198.36	17.10	12.597							
2,300.00	2,279.36	2,281.37	2,243.01	9.03	9.55	79.59	-129.38	-358.52	228.76	210.80	17.96	12.736							
2,400.00	2,378.19	2,380.43	2,339.20	9.45	10.05	78.88	-138.30	-380.48	242.09	223.27	18.82	12.864							
2,500.00	2,477.02	2,479.50	2,435.39	9.88	10.56	78.25	-147.23	-402.44	255.46	235.78	19.68	12.982							
2,600.00	2,575.86	2,578.56	2,531.57	10.30	11.07	77.67	-156.16	-424.40	268.86	248.32	20.54	13.092							
2,700.00	2,674.69	2,677.63	2,627.76	10.73	11.58	77.15	-165.09	-446.35	282.27	260.88	21.39	13.194							
2,800.00	2,773.53	2,776.69	2,723.95	11.15	12.09	76.68	-174.01	-468.31	295.71	273.46	22.25	13.289							
2,900.00	2,872.36	2,875.76	2,820.13	11.58	12.60	76.25	-182.94	-490.27	309.17	286.06	23.11	13.378							
3,000.00	2,971.20	2,974.82	2,916.32	12.01	13.12	75.86	-191.87	-512.23	322.65	298.68	23.97	13.461							
3,100.00	3,070.03	3,073.89	3,012.51	12.43	13.63	75.50	-200.80	-534.19	336.13	311.31	24.83	13.539							
3,200.00	3,168.87	3,172.95	3,108.70	12.86	14.14	75.16	-209.72	-556.15	349.63	323.95	25.69	13.612							
3,300.00	3,267.70	3,272.02	3,204.88	13.28	14.66	74.85	-218.65	-578.11	363.14	336.60	26.54	13.681							
3,400.00	3,366.54	3,371.08	3,301.07	13.71	15.17	74.56	-227.58	-600.06	376.66	349.26	27.40	13.745							
3,500.00	3,465.37	3,470.14	3,397.26	14.14	15.69	74.30	-236.51	-622.02	390.19	361.93	28.26	13.806							
3,600.00	3,564.21	3,569.21	3,493.44	14.56	16.20	74.05	-245.43	-643.98	403.73	374.61	29.12	13.864							
3,700.00	3,663.04	3,668.27	3,589.63	14.99	16.72	73.81	-254.36	-665.94	417.27	387.29	29.98	13.918							
3,800.00	3,761.88	3,767.34	3,685.82	15.42	17.23	73.60	-263.29	-687.90	430.82	399.98	30.84	13.970							
3,900.00	3,860.71	3,866.40	3,782.00	15.84	17.75	73.39	-272.22	-709.86	444.37	412.68	31.70	14.019							
4,000.00	3,959.54	3,965.47	3,878.19	16.27	18.26	73.20	-281.15	-731.82	457.94	425.38	32.56	14.066							
4,100.00	4,058.38	4,064.53	3,974.38	16.70	18.78	73.01	-290.07	-753.78	471.50	438.08	33.42	14.110							
4,200.00	4,157.21	4,163.60	4,070.57	17.12	19.29	72.84	-299.00	-775.73	485.07	450.80	34.28	14.152							
4,300.00	4,256.05	4,262.66	4,166.75	17.55	19.81	72.68	-307.93	-797.69	498.65	463.51	35.14	14.192							
4,400.00	4,354.88	4,361.73	4,262.94	17.98	20.33	72.53	-316.86	-819.65	512.22	476.23	35.99	14.230							
4,500.00	4,453.72	4,460.79	4,359.13	18.40	20.84	72.38	-325.78	-841.61	525.80	488.95	36.85	14.267							
4,600.00	4,552.55	4,559.86	4,455.31	18.83	21.36	72.24	-334.71	-863.57	539.39	501.67	37.71	14.302							
4,611.50	4,563.92	4,571.25	4,466.38	18.88	21.42	72.23	-335.74	-866.09	540.95	503.14	37.81	14.306							
4,700.00	4,651.58	4,658.84	4,551.42	19.25	21.88	72.21	-343.63	-885.51	553.39	514.84	38.55	14.355							
4,800.00	4,751.03	4,757.52	4,647.24	19.64	22.39	71.91	-352.52	-907.38	568.48	529.15	39.33	14.454							
4,900.00	4,850.78	4,855.79	4,742.65	20.00	22.91	71.34	-361.38	-929.17	584.73	544.68	40.05	14.601							

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4D-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft	
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	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)	Between Centres (usft)	Between Ellipses (usft)			
5,000.00	4,950.72	4,953.53	4,837.55	20.34	23.42	70.53	-370.19	-950.83	602.27	561.56	40.71	14.795			
5,049.28	5,000.00	5,001.47	4,884.09	20.49	23.67	-73.70	-374.51	-961.46	611.43	570.43	41.00	14.912			
5,100.00	5,050.72	5,050.71	4,931.91	20.63	23.92	-74.39	-378.95	-972.37	621.09	579.80	41.29	15.041			
5,200.00	5,150.72	5,147.80	5,026.18	20.91	24.43	-75.69	-387.70	-993.89	640.38	598.51	41.87	15.296			
5,300.00	5,250.72	5,244.90	5,120.46	21.19	24.94	-76.91	-396.45	-1,015.41	659.97	617.53	42.45	15.549			
5,400.00	5,350.72	5,341.99	5,214.73	21.48	25.45	-78.06	-405.20	-1,036.94	679.85	636.82	43.03	15.800			
5,500.00	5,450.72	5,439.09	5,309.00	21.77	25.95	-79.15	-413.95	-1,058.46	699.97	656.35	43.62	16.048			
5,600.00	5,550.72	5,536.18	5,403.28	22.06	26.46	-80.18	-422.70	-1,079.98	720.33	676.12	44.21	16.292			
5,700.00	5,650.72	5,633.28	5,497.55	22.35	26.97	-81.15	-431.45	-1,101.50	740.90	696.09	44.81	16.533			
5,800.00	5,750.72	5,730.37	5,591.83	22.65	27.48	-82.07	-440.20	-1,123.03	761.67	716.25	45.42	16.770			
5,900.00	5,850.72	5,827.47	5,686.10	22.94	27.98	-82.94	-448.95	-1,144.55	782.62	736.59	46.03	17.003			
6,000.00	5,950.72	5,924.56	5,780.38	23.24	28.49	-83.77	-457.70	-1,166.07	803.73	757.09	46.64	17.232			
6,100.00	6,050.72	6,021.66	5,874.65	23.54	29.00	-84.55	-466.45	-1,187.59	825.00	777.74	47.26	17.456			
6,200.00	6,150.72	6,118.75	5,968.93	23.84	29.51	-85.30	-475.20	-1,209.11	846.41	798.53	47.88	17.676			
6,300.00	6,250.72	6,215.85	6,063.20	24.15	30.02	-86.00	-483.95	-1,230.64	867.95	819.44	48.51	17.891			
6,400.00	6,350.72	6,312.94	6,157.48	24.45	30.52	-86.68	-492.70	-1,252.16	889.62	840.47	49.15	18.102			
6,500.00	6,450.72	6,410.04	6,251.75	24.76	31.03	-87.32	-501.45	-1,273.68	911.39	861.61	49.78	18.308			
6,600.00	6,550.72	6,507.13	6,346.02	25.06	31.54	-87.94	-510.20	-1,295.20	933.28	882.86	50.42	18.510			
6,700.00	6,650.72	6,604.23	6,440.30	25.37	32.05	-88.52	-518.95	-1,316.72	955.26	904.19	51.06	18.707			
6,800.00	6,750.72	6,701.32	6,534.57	25.68	32.56	-89.08	-527.70	-1,338.25	977.33	925.62	51.71	18.900			
6,813.09	6,763.80	6,714.03	6,546.91	25.72	32.62	-89.15	-528.84	-1,341.06	980.22	928.43	51.80	18.925			
6,850.00	6,800.70	6,749.77	6,581.61	25.84	32.81	-88.62	-532.06	-1,348.98	988.38	936.36	52.03	18.998			
6,900.00	6,850.50	6,797.74	6,628.19	25.98	33.06	-88.22	-536.39	-1,359.62	999.41	947.10	52.31	19.107			
6,950.00	6,899.88	6,845.06	6,674.23	26.11	33.30	-87.92	-539.23	-1,370.14	1,010.44	957.88	52.56	19.226			
7,000.00	6,948.60	6,893.04	6,720.99	26.24	33.53	-87.63	-538.93	-1,380.85	1,021.45	968.67	52.79	19.350			
7,050.00	6,996.42	6,941.76	6,768.33	26.35	33.75	-87.35	-535.34	-1,391.73	1,032.41	979.40	53.01	19.476			
7,100.00	7,043.10	6,991.29	6,816.10	26.46	33.95	-87.09	-528.32	-1,402.74	1,043.25	990.03	53.22	19.603			
7,150.00	7,088.43	7,041.69	6,864.09	26.55	34.13	-86.84	-517.71	-1,413.83	1,053.92	1,000.50	53.42	19.728			
7,200.00	7,132.17	7,093.01	6,912.09	26.64	34.30	-86.61	-503.38	-1,424.95	1,064.37	1,010.75	53.62	19.850			
7,250.00	7,174.12	7,145.31	6,959.83	26.71	34.45	-86.41	-485.18	-1,436.04	1,074.55	1,020.73	53.81	19.968			
7,300.00	7,214.06	7,198.64	7,007.05	26.78	34.59	-86.22	-462.99	-1,447.06	1,084.39	1,030.38	54.01	20.078			
7,350.00	7,251.82	7,253.05	7,053.42	26.85	34.70	-86.05	-436.70	-1,457.91	1,093.84	1,039.64	54.20	20.181			
7,400.00	7,287.20	7,308.58	7,098.59	26.90	34.80	-85.91	-406.23	-1,468.52	1,102.85	1,048.45	54.40	20.273			
7,450.00	7,320.02	7,365.25	7,142.17	26.96	34.89	-85.78	-371.51	-1,478.81	1,111.35	1,056.75	54.60	20.354			
7,500.00	7,350.14	7,423.08	7,183.73	27.01	34.96	-85.68	-332.55	-1,488.67	1,119.29	1,064.48	54.81	20.420			
7,550.00	7,377.40	7,482.06	7,222.82	27.07	35.01	-85.60	-289.40	-1,498.00	1,126.62	1,071.58	55.04	20.471			
7,600.00	7,401.67	7,542.18	7,258.95	27.13	35.04	-85.54	-242.18	-1,506.69	1,133.27	1,078.00	55.27	20.504			
7,650.00	7,422.84	7,603.38	7,291.64	27.19	35.07	-85.50	-191.07	-1,514.63	1,139.20	1,083.68	55.52	20.518			
7,700.00	7,440.79	7,665.59	7,320.37	27.27	35.08	-85.48	-136.36	-1,521.69	1,144.36	1,088.56	55.80	20.509			
7,750.00	7,455.44	7,728.74	7,344.69	27.36	35.08	-85.47	-78.43	-1,527.77	1,148.69	1,092.60	56.09	20.478			
7,800.00	7,466.73	7,792.69	7,364.15	27.46	35.07	-85.47	-17.74	-1,532.75	1,152.17	1,095.76	56.41	20.424			
7,850.00	7,474.59	7,857.30	7,378.38	27.59	35.07	-85.48	45.15	-1,536.56	1,154.77	1,098.00	56.76	20.344			
7,900.00	7,478.99	7,922.42	7,387.06	27.73	35.06	-85.51	109.62	-1,539.11	1,156.44	1,099.30	57.14	20.239			
7,938.09	7,480.00	7,972.26	7,389.83	27.85	35.07	-85.53	159.36	-1,540.18	1,157.09	1,099.65	57.44	20.144			
8,000.00	7,480.00	8,037.95	7,390.00	28.08	35.08	-85.54	225.04	-1,540.79	1,157.53	1,099.60	57.93	19.982			
8,100.00	7,480.00	8,137.94	7,390.00	28.53	35.16	-85.54	325.03	-1,541.67	1,158.20	1,099.38	58.81	19.692			
8,200.00	7,480.00	8,237.94	7,390.00	29.06	35.29	-85.55	425.03	-1,542.54	1,158.86	1,099.01	59.86	19.361			
8,300.00	7,480.00	8,337.94	7,390.00	29.68	35.51	-85.55	525.02	-1,543.41	1,159.53	1,098.49	61.04	18.995			
8,400.00	7,480.00	8,437.94	7,390.00	30.37	35.81	-85.55	625.01	-1,544.28	1,160.20	1,097.83	62.37	18.602			
8,500.00	7,480.00	8,537.93	7,390.00	31.13	36.20	-85.55	725.01	-1,545.16	1,160.87	1,097.05	63.82	18.189			
8,600.00	7,480.00	8,637.93	7,390.00	31.95	36.69	-85.56	825.00	-1,546.03	1,161.54	1,096.14	65.40	17.761			
8,700.00	7,480.00	8,737.93	7,390.00	32.83	37.28	-85.56	925.00	-1,546.90	1,162.21	1,095.12	67.09	17.324			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4D-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
8,800.00	7,480.00	8,837.93	7,390.00	33.76	37.95	-85.56	1,024.99	-1,547.78	1,162.87	1,093.99	68.88	16.882		
8,900.00	7,480.00	8,937.93	7,390.00	34.74	38.70	-85.56	1,124.98	-1,548.65	1,163.54	1,092.77	70.77	16.441		
9,000.00	7,480.00	9,037.92	7,390.00	35.76	39.52	-85.57	1,224.98	-1,549.52	1,164.21	1,091.46	72.75	16.003		
9,100.00	7,480.00	9,137.92	7,390.00	36.82	40.40	-85.57	1,324.97	-1,550.39	1,164.88	1,090.07	74.81	15.572		
9,200.00	7,480.00	9,237.92	7,390.00	37.91	41.34	-85.57	1,424.97	-1,551.27	1,165.55	1,088.60	76.94	15.148		
9,300.00	7,480.00	9,337.92	7,390.00	39.04	42.33	-85.57	1,524.96	-1,552.14	1,166.21	1,087.07	79.15	14.735		
9,400.00	7,480.00	9,437.91	7,390.00	40.20	43.35	-85.58	1,624.95	-1,553.01	1,166.88	1,085.47	81.41	14.333		
9,500.00	7,480.00	9,537.91	7,390.00	41.39	44.42	-85.58	1,724.95	-1,553.88	1,167.55	1,083.81	83.74	13.943		
9,600.00	7,480.00	9,637.91	7,390.00	42.60	45.52	-85.58	1,824.94	-1,554.76	1,168.22	1,082.10	86.12	13.565		
9,700.00	7,480.00	9,737.91	7,390.00	43.84	46.65	-85.58	1,924.94	-1,555.63	1,168.89	1,080.34	88.55	13.201		
9,800.00	7,480.00	9,837.91	7,390.00	45.10	47.81	-85.59	2,024.93	-1,556.50	1,169.56	1,078.53	91.02	12.849		
9,900.00	7,480.00	9,937.90	7,390.00	46.38	49.00	-85.59	2,124.92	-1,557.37	1,170.22	1,076.69	93.54	12.511		
10,000.00	7,480.00	10,037.90	7,390.00	47.68	50.21	-85.59	2,224.92	-1,558.25	1,170.89	1,074.80	96.09	12.185		
10,100.00	7,480.00	10,137.90	7,390.00	48.99	51.44	-85.59	2,324.91	-1,559.12	1,171.56	1,072.88	98.68	11.872		
10,200.00	7,480.00	10,237.90	7,390.00	50.32	52.69	-85.60	2,424.91	-1,559.99	1,172.23	1,070.92	101.31	11.571		
10,300.00	7,480.00	10,337.89	7,390.00	51.66	53.96	-85.60	2,524.90	-1,560.86	1,172.90	1,068.94	103.96	11.282		
10,400.00	7,480.00	10,437.89	7,390.00	53.02	55.24	-85.60	2,624.89	-1,561.74	1,173.57	1,066.93	106.64	11.005		
10,500.00	7,480.00	10,537.89	7,390.00	54.39	56.54	-85.60	2,724.89	-1,562.61	1,174.23	1,064.89	109.35	10.739		
10,600.00	7,480.00	10,637.89	7,390.00	55.77	57.86	-85.61	2,824.88	-1,563.48	1,174.90	1,062.82	112.08	10.483		
10,700.00	7,480.00	10,737.89	7,390.00	57.16	59.19	-85.61	2,924.88	-1,564.36	1,175.57	1,060.74	114.83	10.237		
10,800.00	7,480.00	10,837.88	7,390.00	58.56	60.53	-85.61	3,024.87	-1,565.23	1,176.24	1,058.63	117.61	10.001		
10,900.00	7,480.00	10,937.88	7,390.00	59.97	61.89	-85.61	3,124.86	-1,566.10	1,176.91	1,056.51	120.40	9.775		
11,000.00	7,480.00	11,037.88	7,390.00	61.39	63.25	-85.62	3,224.86	-1,566.97	1,177.58	1,054.36	123.21	9.557		
11,100.00	7,480.00	11,137.88	7,390.00	62.82	64.63	-85.62	3,324.85	-1,567.85	1,178.24	1,052.20	126.04	9.348		
11,200.00	7,480.00	11,237.87	7,390.00	64.25	66.01	-85.62	3,424.85	-1,568.72	1,178.91	1,050.03	128.89	9.147		
11,300.00	7,480.00	11,337.87	7,390.00	65.69	67.40	-85.62	3,524.84	-1,569.59	1,179.58	1,047.84	131.75	8.953		
11,400.00	7,480.00	11,437.87	7,390.00	67.14	68.81	-85.63	3,624.83	-1,570.46	1,180.25	1,045.63	134.62	8.767		
11,500.00	7,480.00	11,537.87	7,390.00	68.59	70.22	-85.63	3,724.83	-1,571.34	1,180.92	1,043.41	137.50	8.588		
11,600.00	7,480.00	11,637.86	7,390.00	70.05	71.63	-85.63	3,824.82	-1,572.21	1,181.59	1,041.18	140.40	8.416		
11,700.00	7,480.00	11,737.86	7,390.00	71.51	73.06	-85.63	3,924.81	-1,573.08	1,182.25	1,038.94	143.31	8.249		
11,800.00	7,480.00	11,837.86	7,390.00	72.98	74.49	-85.64	4,024.81	-1,573.95	1,182.92	1,036.69	146.23	8.089		
11,900.00	7,480.00	11,937.86	7,390.00	74.46	75.93	-85.64	4,124.80	-1,574.83	1,183.59	1,034.43	149.16	7.935		
12,000.00	7,480.00	12,037.86	7,390.00	75.93	77.37	-85.64	4,224.80	-1,575.70	1,184.26	1,032.16	152.10	7.786		
12,100.00	7,480.00	12,161.49	7,390.00	77.42	79.14	-85.64	4,348.43	-1,574.88	1,183.27	1,028.23	155.04	7.632		
12,200.00	7,480.00	12,261.48	7,390.00	78.90	80.58	-85.63	4,448.41	-1,573.75	1,181.95	1,023.96	157.99	7.481		
12,300.00	7,480.00	12,361.47	7,390.00	80.39	82.02	-85.63	4,548.40	-1,572.63	1,180.62	1,019.68	160.93	7.336		
12,400.00	7,480.00	12,461.47	7,390.00	81.89	83.46	-85.62	4,648.38	-1,571.50	1,179.29	1,015.40	163.89	7.196		
12,500.00	7,480.00	12,561.46	7,390.00	83.38	84.91	-85.62	4,748.37	-1,570.37	1,177.96	1,011.11	166.86	7.060		
12,600.00	7,480.00	12,661.45	7,390.00	84.88	86.36	-85.61	4,848.35	-1,569.24	1,176.63	1,006.81	169.83	6.928		
12,700.00	7,480.00	12,761.44	7,390.00	86.39	87.82	-85.61	4,948.34	-1,568.11	1,175.31	1,002.50	172.81	6.801		
12,800.00	7,480.00	12,861.43	7,390.00	87.89	89.28	-85.60	5,048.32	-1,566.98	1,173.98	998.19	175.79	6.678		
12,900.00	7,480.00	12,961.42	7,390.00	89.40	90.74	-85.60	5,148.31	-1,565.85	1,172.65	993.87	178.78	6.559		
13,000.00	7,480.00	13,061.41	7,390.00	90.91	92.21	-85.59	5,248.29	-1,564.72	1,171.32	989.55	181.77	6.444		
13,100.00	7,480.00	13,161.40	7,390.00	92.43	93.68	-85.59	5,348.27	-1,563.59	1,169.99	985.22	184.77	6.332		
13,200.00	7,480.00	13,261.39	7,390.00	93.94	95.16	-85.58	5,448.26	-1,562.46	1,168.67	980.89	187.78	6.224		
13,300.00	7,480.00	13,361.39	7,390.00	95.46	96.64	-85.58	5,548.24	-1,561.33	1,167.34	976.55	190.79	6.118		
13,400.00	7,480.00	13,461.38	7,390.00	96.98	98.12	-85.57	5,648.23	-1,560.20	1,166.01	972.21	193.80	6.016		
13,500.00	7,480.00	13,561.37	7,390.00	98.50	99.60	-85.57	5,748.21	-1,559.07	1,164.68	967.86	196.82	5.917		
13,600.00	7,480.00	13,661.36	7,390.00	100.03	101.09	-85.56	5,848.20	-1,557.94	1,163.36	963.51	199.84	5.821		
13,700.00	7,480.00	13,761.35	7,390.00	101.56	102.58	-85.56	5,948.18	-1,556.81	1,162.03	959.16	202.87	5.728		
13,800.00	7,480.00	13,861.34	7,390.00	103.08	104.07	-85.55	6,048.17	-1,555.68	1,160.70	954.80	205.90	5.637		
13,900.00	7,480.00	13,961.33	7,390.00	104.61	105.56	-85.55	6,148.15	-1,554.55	1,159.37	950.44	208.93	5.549		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													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		
14,000.00	7,480.00	14,061.32	7,390.00	106.14	107.06	-85.54	6,248.14	-1,553.43	1,158.04	946.07	211.97	5.463		
14,100.00	7,480.00	14,161.31	7,390.00	107.68	108.56	-85.54	6,348.12	-1,552.30	1,156.72	941.70	215.01	5.380		
14,200.00	7,480.00	14,261.31	7,390.00	109.21	110.06	-85.53	6,448.11	-1,551.17	1,155.39	937.33	218.06	5.299		
14,300.00	7,480.00	14,361.30	7,390.00	110.75	111.56	-85.53	6,548.09	-1,550.04	1,154.06	932.96	221.10	5.220		
14,400.00	7,480.00	14,461.29	7,390.00	112.28	113.07	-85.52	6,648.08	-1,548.91	1,152.73	928.58	224.15	5.143		
14,500.00	7,480.00	14,561.28	7,390.00	113.82	114.58	-85.52	6,748.06	-1,547.78	1,151.40	924.20	227.20	5.068		
14,514.90	7,480.00	14,576.18	7,390.00	114.05	114.80	-85.52	6,762.96	-1,547.61	1,151.21	923.55	227.66	5.057		
14,535.14	7,480.00	14,596.41	7,390.00	114.36	115.11	-85.52	6,783.19	-1,547.38	1,151.07	922.80	228.27	5.043		
14,600.00	7,480.00	14,661.26	7,390.00	115.34	116.08	-85.52	6,848.03	-1,546.65	1,152.45	922.21	230.24	5.005		
14,689.49	7,480.00	14,745.41	7,390.00	116.66	117.35	-85.52	6,932.18	-1,545.70	1,158.90	925.97	232.92	4.975		
14,703.04	7,480.00	14,745.41	7,390.00	116.84	117.35	-85.52	6,932.18	-1,545.70	1,160.40	927.09	233.31	4.974 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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	-89.68	0.17	-29.93	29.93					
100.00	100.00	100.00	100.00	0.14	0.14	-89.68	0.17	-29.93	29.93	29.65	0.28	107.743		
200.00	200.00	200.00	200.00	0.50	0.50	-89.68	0.17	-29.93	29.93	28.94	0.99	30.091	CC	
201.33	201.33	201.33	201.33	0.50	0.50	90.32	0.17	-29.93	29.93	28.93	1.00	29.810		
300.00	299.98	299.98	299.98	0.84	0.85	93.65	0.17	-29.93	29.99	28.30	1.70	17.678	ES	
400.00	399.84	399.84	399.84	1.19	1.21	103.39	0.17	-29.93	30.77	28.37	2.40	12.820		
500.00	499.51	499.51	499.51	1.55	1.57	98.87	0.17	-29.93	32.15	29.03	3.12	10.311		
600.00	598.94	598.94	598.94	1.92	1.93	106.03	0.17	-29.93	34.35	30.51	3.84	8.940		
700.52	698.51	698.39	698.37	2.32	2.27	116.60	-0.44	-31.51	39.79	35.23	4.56	8.720		
800.00	796.84	797.23	797.08	2.71	2.61	126.75	-2.26	-36.27	47.92	42.64	5.28	9.082		
900.00	895.67	897.00	896.47	3.12	2.96	130.43	-5.32	-44.30	56.58	50.57	6.01	9.414		
1,000.00	994.50	996.95	995.68	3.54	3.33	130.09	-9.63	-55.58	64.86	58.09	6.77	9.586		
1,100.00	1,093.34	1,096.82	1,094.34	3.95	3.71	127.10	-15.17	-70.07	72.78	65.23	7.55	9.640		
1,200.00	1,192.17	1,196.39	1,192.20	4.37	4.11	122.66	-21.71	-87.18	80.81	72.45	8.36	9.662		
1,300.00	1,291.01	1,295.87	1,289.94	4.79	4.52	118.84	-28.35	-104.55	89.25	80.06	9.20	9.706		
1,400.00	1,389.84	1,395.36	1,387.67	5.21	4.94	115.70	-34.98	-121.92	98.02	87.98	10.04	9.766		
1,500.00	1,488.68	1,494.84	1,485.40	5.63	5.36	113.07	-41.62	-139.29	107.03	96.14	10.88	9.834		
1,600.00	1,587.51	1,594.32	1,583.13	6.05	5.79	110.86	-48.26	-156.65	116.23	104.49	11.74	9.904		
1,700.00	1,686.35	1,693.81	1,680.86	6.48	6.23	108.97	-54.89	-174.02	125.57	112.99	12.59	9.975		
1,800.00	1,785.18	1,793.29	1,778.59	6.90	6.67	107.35	-61.53	-191.39	135.04	121.59	13.45	10.043		
1,900.00	1,884.02	1,892.77	1,876.32	7.33	7.11	105.93	-68.17	-208.76	144.59	130.29	14.30	10.109		
2,000.00	1,982.85	1,992.26	1,974.05	7.75	7.55	104.70	-74.80	-226.13	154.23	139.07	15.16	10.172		
2,100.00	2,081.69	2,091.74	2,071.78	8.17	7.99	103.61	-81.44	-243.50	163.92	147.90	16.02	10.232		
2,200.00	2,180.52	2,191.22	2,169.51	8.60	8.44	102.64	-88.08	-260.87	173.67	156.79	16.88	10.288		
2,300.00	2,279.36	2,290.71	2,267.24	9.03	8.89	101.78	-94.72	-278.24	183.46	165.72	17.74	10.342		
2,400.00	2,378.19	2,390.19	2,364.97	9.45	9.34	101.00	-101.35	-295.61	193.29	174.69	18.60	10.392		
2,500.00	2,477.02	2,489.67	2,462.70	9.88	9.79	100.30	-107.99	-312.98	203.15	183.69	19.46	10.439		
2,600.00	2,575.86	2,589.16	2,560.43	10.30	10.24	99.66	-114.63	-330.35	213.04	192.72	20.32	10.483		
2,700.00	2,674.69	2,688.64	2,658.16	10.73	10.69	99.08	-121.26	-347.72	222.95	201.77	21.18	10.525		
2,800.00	2,773.53	2,788.12	2,755.89	11.15	11.14	98.55	-127.90	-365.08	232.89	210.84	22.04	10.565		
2,900.00	2,872.36	2,887.61	2,853.62	11.58	11.60	98.06	-134.54	-382.45	242.84	219.93	22.90	10.602		
3,000.00	2,971.20	2,987.09	2,951.35	12.01	12.05	97.61	-141.17	-399.82	252.80	229.04	23.77	10.637		
3,100.00	3,070.03	3,086.57	3,049.08	12.43	12.50	97.20	-147.81	-417.19	262.79	238.16	24.63	10.670		
3,200.00	3,168.87	3,186.06	3,146.81	12.86	12.96	96.81	-154.45	-434.56	272.78	247.29	25.49	10.702		
3,300.00	3,267.70	3,285.54	3,244.54	13.28	13.41	96.45	-161.09	-451.93	282.78	256.43	26.35	10.732		
3,400.00	3,366.54	3,385.02	3,342.27	13.71	13.87	96.12	-167.72	-469.30	292.80	265.59	27.21	10.760		
3,500.00	3,465.37	3,484.51	3,440.00	14.14	14.32	95.81	-174.36	-486.67	302.82	274.75	28.07	10.787		
3,600.00	3,564.21	3,583.99	3,537.73	14.56	14.78	95.52	-181.00	-504.04	312.86	283.92	28.93	10.813		
3,700.00	3,663.04	3,683.47	3,635.46	14.99	15.23	95.25	-187.63	-521.41	322.90	293.10	29.80	10.837		
3,800.00	3,761.88	3,782.96	3,733.19	15.42	15.69	94.99	-194.27	-538.78	332.94	302.29	30.66	10.860		
3,900.00	3,860.71	3,882.44	3,830.92	15.84	16.14	94.75	-200.91	-556.15	343.00	311.48	31.52	10.882		
4,000.00	3,959.54	3,981.92	3,928.65	16.27	16.60	94.52	-207.54	-573.51	353.06	320.68	32.38	10.903		
4,100.00	4,058.38	4,081.41	4,026.38	16.70	17.06	94.31	-214.18	-590.88	363.12	329.88	33.24	10.923		
4,200.00	4,157.21	4,180.89	4,124.11	17.12	17.51	94.10	-220.82	-608.25	373.19	339.09	34.10	10.943		
4,300.00	4,256.05	4,280.37	4,221.84	17.55	17.97	93.91	-227.46	-625.62	383.26	348.30	34.97	10.961		
4,400.00	4,354.88	4,379.86	4,319.57	17.98	18.43	93.73	-234.09	-642.99	393.34	357.51	35.83	10.979		
4,500.00	4,453.72	4,479.34	4,417.30	18.40	18.88	93.55	-240.73	-660.36	403.42	366.73	36.69	10.996		
4,600.00	4,552.55	4,578.82	4,515.03	18.83	19.34	93.39	-247.37	-677.73	413.51	375.96	37.55	11.012		
4,611.50	4,563.92	4,590.27	4,526.27	18.88	19.39	93.37	-248.13	-679.73	414.67	377.02	37.65	11.014		
4,700.00	4,651.58	4,678.28	4,612.74	19.25	19.80	93.22	-254.00	-695.09	423.52	385.12	38.40	11.030		
4,800.00	4,751.03	4,777.62	4,710.32	19.64	20.25	92.63	-260.63	-712.44	433.39	394.18	39.20	11.055		
4,900.00	4,850.78	4,876.70	4,807.66	20.00	20.71	91.63	-267.24	-729.74	443.23	403.27	39.96	11.092		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,000.00	4,950.72	4,975.42	4,904.64	20.34	21.16	90.26	-273.83	-746.97	453.24	412.57	40.67	11.144		
5,049.28	5,000.00	5,023.90	4,952.27	20.49	21.39	-54.31	-277.06	-755.44	458.31	417.32	40.99	11.180		
5,100.00	5,050.72	5,073.72	5,001.21	20.63	21.62	-55.27	-280.38	-764.14	463.66	422.35	41.31	11.224		
5,200.00	5,150.72	5,171.96	5,097.72	20.91	22.07	-57.12	-286.94	-781.29	474.58	432.66	41.93	11.319		
5,300.00	5,250.72	5,270.20	5,194.22	21.19	22.52	-58.87	-293.49	-798.44	485.98	443.44	42.54	11.424		
5,400.00	5,350.72	5,368.44	5,290.73	21.48	22.97	-60.55	-300.05	-815.59	497.82	454.67	43.15	11.536		
5,500.00	5,450.72	5,466.68	5,387.24	21.77	23.42	-62.15	-306.60	-832.74	510.07	466.31	43.76	11.655		
5,600.00	5,550.72	5,564.91	5,483.74	22.06	23.88	-63.68	-313.15	-849.90	522.70	478.33	44.37	11.780		
5,700.00	5,650.72	5,663.15	5,580.25	22.35	24.33	-65.13	-319.71	-867.05	535.69	490.71	44.98	11.909		
5,800.00	5,750.72	5,761.39	5,676.76	22.65	24.78	-66.52	-326.26	-884.20	549.00	503.41	45.59	12.042		
5,900.00	5,850.72	5,859.63	5,773.26	22.94	25.23	-67.84	-332.82	-901.35	562.62	516.42	46.20	12.178		
6,000.00	5,950.72	5,957.86	5,869.77	23.24	25.68	-69.10	-339.37	-918.50	576.53	529.72	46.81	12.316		
6,100.00	6,050.72	6,056.10	5,966.28	23.54	26.14	-70.30	-345.92	-935.65	590.70	543.27	47.42	12.455		
6,200.00	6,150.72	6,154.34	6,062.78	23.84	26.59	-71.44	-352.48	-952.81	605.11	557.07	48.04	12.596		
6,300.00	6,250.72	6,252.58	6,159.29	24.15	27.04	-72.53	-359.03	-969.96	619.76	571.10	48.66	12.737		
6,400.00	6,350.72	6,350.82	6,255.80	24.45	27.49	-73.58	-365.58	-987.11	634.61	585.33	49.28	12.878		
6,500.00	6,450.72	6,449.05	6,352.30	24.76	27.95	-74.57	-372.14	-1,004.26	649.67	599.76	49.90	13.019		
6,600.00	6,550.72	6,547.29	6,448.81	25.06	28.40	-75.52	-378.69	-1,021.41	664.90	614.38	50.53	13.159		
6,700.00	6,650.72	6,645.53	6,545.32	25.37	28.85	-76.43	-385.25	-1,038.56	680.31	629.16	51.16	13.299		
6,800.00	6,750.72	6,743.77	6,641.82	25.68	29.31	-77.29	-391.80	-1,055.72	695.89	644.10	51.79	13.437		
6,813.09	6,763.80	6,756.62	6,654.45	25.72	29.36	-77.40	-392.66	-1,057.96	697.93	646.06	51.87	13.456		
6,850.00	6,800.70	6,792.81	6,690.00	25.84	29.53	-77.23	-395.07	-1,064.28	703.52	651.43	52.09	13.505		
6,900.00	6,850.50	6,839.87	6,736.24	25.98	29.75	-77.38	-398.17	-1,072.50	710.52	658.17	52.35	13.572		
6,950.00	6,899.88	6,880.40	6,776.12	26.11	29.93	-77.55	-399.28	-1,079.59	717.27	664.76	52.52	13.658		
7,000.00	6,948.60	6,921.29	6,816.35	26.24	30.10	-77.76	-398.08	-1,086.76	723.96	671.30	52.66	13.748		
7,050.00	6,996.42	6,962.57	6,856.83	26.35	30.26	-78.01	-394.51	-1,093.99	730.57	677.78	52.79	13.840		
7,100.00	7,043.10	7,004.30	6,897.47	26.46	30.42	-78.30	-388.50	-1,101.26	737.09	684.19	52.90	13.934		
7,150.00	7,088.43	7,046.52	6,938.17	26.55	30.56	-78.63	-379.98	-1,108.56	743.51	690.50	53.00	14.028		
7,200.00	7,132.17	7,089.29	6,978.81	26.64	30.70	-79.00	-368.88	-1,115.86	749.81	696.71	53.11	14.119		
7,250.00	7,174.12	7,132.65	7,019.28	26.71	30.82	-79.40	-355.13	-1,123.14	755.99	702.78	53.21	14.207		
7,300.00	7,214.06	7,176.67	7,059.45	26.78	30.94	-79.84	-338.65	-1,130.38	762.03	708.70	53.33	14.289		
7,350.00	7,251.82	7,221.40	7,099.16	26.85	31.05	-80.32	-319.37	-1,137.56	767.92	714.46	53.46	14.365		
7,400.00	7,287.20	7,266.91	7,138.27	26.90	31.15	-80.83	-297.21	-1,144.64	773.64	720.03	53.60	14.433		
7,450.00	7,320.02	7,313.26	7,176.58	26.96	31.24	-81.38	-272.09	-1,151.60	779.16	725.40	53.76	14.493		
7,500.00	7,350.14	7,360.52	7,213.92	27.01	31.32	-81.97	-243.95	-1,158.40	784.48	730.55	53.94	14.544		
7,550.00	7,377.40	7,408.75	7,250.05	27.07	31.39	-82.58	-212.70	-1,165.01	789.58	735.44	54.14	14.585		
7,600.00	7,401.67	7,458.02	7,284.74	27.13	31.45	-83.24	-178.31	-1,171.37	794.42	740.07	54.35	14.617		
7,650.00	7,422.84	7,508.40	7,317.71	27.19	31.50	-83.92	-140.72	-1,177.45	798.98	744.40	54.58	14.640		
7,700.00	7,440.79	7,559.97	7,348.68	27.27	31.54	-84.64	-99.90	-1,183.18	803.24	748.42	54.82	14.653		
7,750.00	7,455.44	7,612.77	7,377.31	27.36	31.58	-85.39	-55.87	-1,188.52	807.16	752.08	55.07	14.656		
7,800.00	7,466.73	7,666.88	7,403.25	27.46	31.61	-86.17	-8.64	-1,193.39	810.70	755.36	55.34	14.649		
7,850.00	7,474.59	7,722.35	7,426.12	27.59	31.63	-86.97	41.69	-1,197.74	813.85	758.23	55.62	14.632		
7,900.00	7,478.99	7,779.22	7,445.51	27.73	31.66	-87.79	95.00	-1,201.48	816.54	760.64	55.91	14.605		
7,938.09	7,480.00	7,823.50	7,457.69	27.85	31.68	-88.44	137.50	-1,203.88	818.27	762.14	56.14	14.576		
8,000.00	7,480.00	7,897.84	7,472.25	28.08	31.72	-89.46	210.31	-1,206.87	820.46	763.92	56.55	14.510		
8,100.00	7,480.00	8,018.60	7,480.00	28.53	31.84	-90.00	330.66	-1,208.90	821.89	764.48	57.41	14.315		
8,200.00	7,480.00	8,118.60	7,480.00	29.06	32.03	-90.00	430.66	-1,209.44	822.23	763.82	58.41	14.077		
8,300.00	7,480.00	8,218.59	7,480.00	29.68	32.32	-90.00	530.66	-1,209.98	822.57	763.01	59.56	13.811		
8,400.00	7,480.00	8,318.59	7,480.00	30.37	32.73	-90.00	630.65	-1,210.52	822.91	762.06	60.85	13.523		
8,500.00	7,480.00	8,418.59	7,480.00	31.13	33.25	-90.00	730.65	-1,211.06	823.25	760.97	62.28	13.218		
8,600.00	7,480.00	8,518.59	7,480.00	31.95	33.87	-90.00	830.65	-1,211.61	823.59	759.75	63.84	12.902		
8,700.00	7,480.00	8,618.59	7,480.00	32.83	34.58	-90.00	930.65	-1,212.15	823.93	758.42	65.51	12.578		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
8,800.00	7,480.00	8,718.59	7,480.00	33.76	35.36	-90.00	1,030.65	-1,212.69	824.27	756.98	67.28	12.250		
8,900.00	7,480.00	8,818.59	7,480.00	34.74	36.21	-90.00	1,130.64	-1,213.23	824.61	755.44	69.16	11.923		
9,000.00	7,480.00	8,918.59	7,480.00	35.76	37.11	-90.00	1,230.64	-1,213.77	824.94	753.81	71.13	11.597		
9,100.00	7,480.00	9,018.59	7,480.00	36.82	38.06	-90.00	1,330.64	-1,214.31	825.28	752.10	73.19	11.276		
9,200.00	7,480.00	9,118.59	7,480.00	37.91	39.06	-90.00	1,430.64	-1,214.85	825.62	750.30	75.32	10.962		
9,300.00	7,480.00	9,218.59	7,480.00	39.04	40.09	-90.00	1,530.64	-1,215.40	825.96	748.44	77.52	10.654		
9,400.00	7,480.00	9,318.59	7,480.00	40.20	41.17	-90.00	1,630.63	-1,215.94	826.30	746.51	79.79	10.356		
9,500.00	7,480.00	9,418.59	7,480.00	41.39	42.27	-90.00	1,730.63	-1,216.48	826.64	744.52	82.12	10.066		
9,600.00	7,480.00	9,518.59	7,480.00	42.60	43.41	-90.00	1,830.63	-1,217.02	826.98	742.48	84.50	9.786		
9,700.00	7,480.00	9,618.59	7,480.00	43.84	44.57	-90.00	1,930.63	-1,217.56	827.32	740.38	86.94	9.516		
9,800.00	7,480.00	9,718.59	7,480.00	45.10	45.76	-90.00	2,030.63	-1,218.10	827.66	738.24	89.42	9.256		
9,900.00	7,480.00	9,818.59	7,480.00	46.38	46.98	-90.00	2,130.62	-1,218.64	828.00	736.06	91.94	9.006		
10,000.00	7,480.00	9,918.59	7,480.00	47.68	48.21	-90.00	2,230.62	-1,219.18	828.33	733.83	94.50	8.765		
10,100.00	7,480.00	10,018.58	7,480.00	48.99	49.47	-90.00	2,330.62	-1,219.73	828.67	731.57	97.10	8.534		
10,200.00	7,480.00	10,118.58	7,480.00	50.32	50.74	-90.00	2,430.62	-1,220.27	829.01	729.28	99.73	8.313		
10,300.00	7,480.00	10,218.58	7,480.00	51.66	52.03	-90.00	2,530.62	-1,220.81	829.35	726.96	102.39	8.100		
10,400.00	7,480.00	10,318.58	7,480.00	53.02	53.34	-90.00	2,630.61	-1,221.35	829.69	724.61	105.08	7.896		
10,500.00	7,480.00	10,418.58	7,480.00	54.39	54.66	-90.00	2,730.61	-1,221.89	830.03	722.23	107.80	7.700		
10,600.00	7,480.00	10,518.58	7,480.00	55.77	56.00	-90.00	2,830.61	-1,222.43	830.37	719.83	110.54	7.512		
10,700.00	7,480.00	10,618.58	7,480.00	57.16	57.34	-90.00	2,930.61	-1,222.97	830.71	717.40	113.30	7.332		
10,800.00	7,480.00	10,718.58	7,480.00	58.56	58.70	-90.00	3,030.61	-1,223.51	831.05	714.96	116.09	7.159		
10,900.00	7,480.00	10,818.58	7,480.00	59.97	60.07	-90.00	3,130.60	-1,224.06	831.38	712.49	118.89	6.993		
11,000.00	7,480.00	10,918.58	7,480.00	61.39	61.46	-90.00	3,230.60	-1,224.60	831.72	710.01	121.71	6.834		
11,100.00	7,480.00	11,018.58	7,480.00	62.82	62.85	-90.00	3,330.60	-1,225.14	832.06	707.51	124.55	6.681		
11,200.00	7,480.00	11,118.58	7,480.00	64.25	64.25	-90.00	3,430.60	-1,225.68	832.40	705.00	127.40	6.534		
11,300.00	7,480.00	11,218.58	7,480.00	65.69	65.65	-90.00	3,530.60	-1,226.22	832.74	702.47	130.27	6.392		
11,400.00	7,480.00	11,318.58	7,480.00	67.14	67.07	-90.00	3,630.59	-1,226.76	833.08	699.92	133.15	6.256		
11,500.00	7,480.00	11,418.58	7,480.00	68.59	68.49	-90.00	3,730.59	-1,227.30	833.42	697.37	136.05	6.126		
11,600.00	7,480.00	11,518.58	7,480.00	70.05	69.92	-90.00	3,830.59	-1,227.85	833.76	694.80	138.96	6.000		
11,700.00	7,480.00	11,618.58	7,480.00	71.51	71.36	-90.00	3,930.59	-1,228.39	834.10	692.22	141.88	5.879		
11,800.00	7,480.00	11,718.57	7,480.00	72.98	72.80	-90.00	4,030.58	-1,228.93	834.43	689.63	144.81	5.762		
11,900.00	7,480.00	11,818.57	7,480.00	74.46	74.25	-90.00	4,130.58	-1,229.47	834.77	687.03	147.75	5.650		
12,000.00	7,480.00	11,924.50	7,480.00	75.93	75.79	-90.00	4,236.51	-1,229.97	835.06	684.37	150.69	5.542		
12,100.00	7,480.00	12,026.01	7,480.00	77.42	77.27	-90.00	4,338.01	-1,229.62	834.51	680.88	153.64	5.432		
12,200.00	7,480.00	12,126.01	7,480.00	78.90	78.72	-90.00	4,438.01	-1,229.27	833.96	677.37	156.60	5.326		
12,300.00	7,480.00	12,226.00	7,480.00	80.39	80.18	-90.00	4,538.01	-1,228.92	833.41	673.85	159.56	5.223		
12,400.00	7,480.00	12,326.00	7,480.00	81.89	81.65	-90.00	4,638.01	-1,228.57	832.86	670.32	162.54	5.124		
12,500.00	7,480.00	12,426.00	7,480.00	83.38	83.12	-90.00	4,738.01	-1,228.22	832.31	666.79	165.52	5.028		
12,600.00	7,480.00	12,526.00	7,480.00	84.88	84.59	-90.00	4,838.00	-1,227.88	831.76	663.25	168.51	4.936		
12,700.00	7,480.00	12,626.00	7,480.00	86.39	86.07	-90.00	4,938.00	-1,227.53	831.20	659.70	171.50	4.847		
12,800.00	7,480.00	12,726.00	7,480.00	87.89	87.55	-90.00	5,038.00	-1,227.18	830.65	656.15	174.50	4.760		
12,900.00	7,480.00	12,826.00	7,480.00	89.40	89.03	-90.00	5,138.00	-1,226.83	830.10	652.59	177.51	4.676		
13,000.00	7,480.00	12,925.99	7,480.00	90.91	90.52	-90.00	5,237.99	-1,226.48	829.55	649.03	180.52	4.595		
13,100.00	7,480.00	13,025.99	7,480.00	92.43	92.01	-90.00	5,337.99	-1,226.13	829.00	645.46	183.54	4.517		
13,118.16	7,480.00	13,039.77	7,480.00	92.70	92.21	-90.00	5,351.77	-1,226.11	828.94	644.84	184.10	4.503		
13,200.00	7,480.00	13,110.01	7,480.00	93.94	93.27	-90.00	5,422.00	-1,227.03	829.80	643.21	186.58	4.447		
13,300.00	7,480.00	13,210.00	7,480.00	95.46	94.79	-90.00	5,521.98	-1,228.61	831.17	641.55	189.62	4.383		
13,400.00	7,480.00	13,309.99	7,480.00	96.98	96.30	-90.00	5,621.96	-1,230.19	832.55	639.88	192.67	4.321		
13,500.00	7,480.00	13,409.98	7,480.00	98.50	97.82	-90.00	5,721.94	-1,231.77	833.92	638.21	195.72	4.261		
13,600.00	7,480.00	13,509.97	7,480.00	100.03	99.34	-90.00	5,821.91	-1,233.34	835.30	636.53	198.77	4.202		
13,700.00	7,480.00	13,609.96	7,480.00	101.56	100.87	-90.00	5,921.89	-1,234.92	836.67	634.85	201.83	4.145		
13,800.00	7,480.00	13,709.95	7,480.00	103.08	102.39	-90.00	6,021.87	-1,236.50	838.05	633.16	204.89	4.090		

CC - Min centre to center distance or covergent 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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-26H-P268 - OH - PLAN #2													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		
13,900.00	7,480.00	13,809.94	7,480.00	104.61	103.92	-90.00	6,121.85	-1,238.08	839.43	631.47	207.96	4.037		
14,000.00	7,480.00	13,909.93	7,480.00	106.14	105.45	-90.00	6,221.83	-1,239.66	840.80	629.78	211.02	3.984		
14,100.00	7,480.00	14,009.92	7,480.00	107.68	106.98	-90.00	6,321.80	-1,241.23	842.18	628.08	214.10	3.934		
14,200.00	7,480.00	14,109.91	7,480.00	109.21	108.51	-90.00	6,421.78	-1,242.81	843.55	626.38	217.17	3.884		
14,300.00	7,480.00	14,209.90	7,480.00	110.75	110.05	-90.00	6,521.76	-1,244.39	844.93	624.68	220.25	3.836		
14,400.00	7,480.00	14,323.25	7,480.00	112.28	111.79	-90.00	6,635.10	-1,245.92	846.15	622.82	223.33	3.789		
14,500.00	7,480.00	14,423.25	7,480.00	113.82	113.31	-90.00	6,735.10	-1,245.92	845.95	619.55	226.40	3.737		
14,514.90	7,480.00	14,438.15	7,480.00	114.05	113.54	-90.00	6,750.00	-1,245.92	845.92	619.06	226.86	3.729		
14,517.98	7,480.00	14,441.23	7,480.00	114.10	113.59	-90.00	6,753.07	-1,245.92	845.92	618.96	226.95	3.727		
14,600.00	7,480.00	14,523.21	7,480.00	115.34	114.84	-90.00	6,835.06	-1,245.92	848.13	618.68	229.45	3.696		
14,689.49	7,480.00	14,612.38	7,480.00	116.66	116.20	-90.00	6,924.22	-1,245.92	855.59	623.45	232.14	3.686 SF		
14,703.04	7,480.00	14,622.60	7,480.00	116.84	116.37	-90.00	6,934.44	-1,245.92	857.12	624.59	232.53	3.686		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4F-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	-90.24	-0.08	-19.86	19.86					
100.00	100.00	100.00	100.00	0.14	0.14	-90.24	-0.08	-19.86	19.86	19.58	0.28	71.489		
200.00	200.00	200.00	200.00	0.50	0.50	-90.24	-0.08	-19.86	19.86	18.87	0.99	19.965	CC	
300.00	299.98	299.76	299.74	0.84	0.84	90.06	-1.71	-20.45	20.46	18.77	1.69	12.128	ES	
400.00	399.84	399.25	399.10	1.19	1.19	91.54	-6.32	-22.49	22.51	20.11	2.40	9.390		
500.00	499.51	498.38	497.92	1.55	1.54	76.60	-12.21	-27.52	26.21	23.05	3.15	8.315		
600.00	598.94	597.39	596.34	1.92	1.92	70.11	-19.10	-35.81	30.41	26.49	3.92	7.753		
700.52	698.51	697.06	695.02	2.32	2.31	67.99	-27.00	-47.31	35.11	30.41	4.70	7.472		
800.00	796.84	796.40	793.26	2.71	2.71	72.49	-35.14	-59.61	39.50	34.04	5.46	7.233		
900.00	895.67	896.26	892.02	3.12	3.12	76.10	-43.32	-71.98	44.11	37.85	6.25	7.055		
1,000.00	994.50	996.12	990.77	3.54	3.53	79.01	-51.50	-84.35	48.86	41.80	7.06	6.919		
1,100.00	1,093.34	1,095.98	1,089.52	3.95	3.94	81.41	-59.68	-96.72	53.71	45.83	7.88	6.816		
1,200.00	1,192.17	1,195.84	1,188.27	4.37	4.36	83.40	-67.86	-109.08	58.64	49.94	8.71	6.735		
1,300.00	1,291.01	1,295.70	1,287.02	4.79	4.78	85.08	-76.04	-121.45	63.64	54.10	9.54	6.671		
1,400.00	1,389.84	1,395.56	1,385.78	5.21	5.20	86.52	-84.23	-133.82	68.67	58.30	10.37	6.620		
1,500.00	1,488.68	1,495.42	1,484.53	5.63	5.62	87.76	-92.41	-146.19	73.75	62.54	11.21	6.578		
1,600.00	1,587.51	1,595.28	1,583.28	6.05	6.04	88.84	-100.59	-158.55	78.86	66.81	12.05	6.544		
1,700.00	1,686.35	1,695.14	1,682.03	6.48	6.46	89.79	-108.77	-170.92	83.99	71.09	12.89	6.515		
1,800.00	1,785.18	1,795.00	1,780.78	6.90	6.88	90.63	-116.95	-183.29	89.14	75.40	13.73	6.490		
1,900.00	1,884.02	1,894.85	1,879.54	7.33	7.30	91.37	-125.13	-195.66	94.30	79.73	14.58	6.470		
2,000.00	1,982.85	1,994.71	1,978.29	7.75	7.72	92.04	-133.31	-208.03	99.49	84.07	15.42	6.452		
2,100.00	2,081.69	2,094.57	2,077.04	8.17	8.14	92.65	-141.49	-220.39	104.68	88.42	16.26	6.436		
2,200.00	2,180.52	2,194.43	2,175.79	8.60	8.57	93.19	-149.67	-232.76	109.89	92.78	17.11	6.423		
2,300.00	2,279.36	2,294.29	2,274.54	9.03	8.99	93.69	-157.85	-245.13	115.10	97.15	17.95	6.411		
2,400.00	2,378.19	2,394.15	2,373.30	9.45	9.41	94.14	-166.03	-257.50	120.32	101.52	18.80	6.401		
2,500.00	2,477.02	2,494.01	2,472.05	9.88	9.83	94.56	-174.21	-269.87	125.55	105.91	19.64	6.391		
2,600.00	2,575.86	2,593.87	2,570.80	10.30	10.26	94.94	-182.39	-282.23	130.78	110.29	20.49	6.383		
2,700.00	2,674.69	2,693.73	2,669.55	10.73	10.68	95.29	-190.58	-294.60	136.02	114.69	21.33	6.376		
2,800.00	2,773.53	2,793.59	2,768.31	11.15	11.10	95.62	-198.76	-306.97	141.27	119.09	22.18	6.369		
2,900.00	2,872.36	2,893.45	2,867.06	11.58	11.52	95.92	-206.94	-319.34	146.52	123.49	23.03	6.363		
3,000.00	2,971.20	2,993.31	2,965.81	12.01	11.95	96.21	-215.12	-331.71	151.77	127.90	23.87	6.357		
3,100.00	3,070.03	3,093.17	3,064.56	12.43	12.37	96.47	-223.30	-344.07	157.03	132.31	24.72	6.352		
3,200.00	3,168.87	3,193.02	3,163.31	12.86	12.79	96.72	-231.48	-356.44	162.29	136.72	25.57	6.348		
3,300.00	3,267.70	3,292.88	3,262.07	13.28	13.22	96.95	-239.66	-368.81	167.55	141.14	26.41	6.344		
3,400.00	3,366.54	3,392.74	3,360.82	13.71	13.64	97.16	-247.84	-381.18	172.81	145.55	27.26	6.340		
3,500.00	3,465.37	3,492.60	3,459.57	14.14	14.06	97.37	-256.02	-393.54	178.08	149.97	28.10	6.336		
3,600.00	3,564.21	3,592.46	3,558.32	14.56	14.49	97.56	-264.20	-405.91	183.35	154.40	28.95	6.333		
3,700.00	3,663.04	3,692.32	3,657.07	14.99	14.91	97.74	-272.38	-418.28	188.62	158.82	29.80	6.330		
3,800.00	3,761.88	3,792.18	3,755.83	15.42	15.34	97.91	-280.56	-430.65	193.89	163.25	30.64	6.327		
3,900.00	3,860.71	3,892.04	3,854.58	15.84	15.76	98.08	-288.74	-443.02	199.17	167.68	31.49	6.325		
4,000.00	3,959.54	3,991.90	3,953.33	16.27	16.18	98.23	-296.93	-455.38	204.44	172.10	32.34	6.322		
4,100.00	4,058.38	4,091.76	4,052.08	16.70	16.61	98.38	-305.11	-467.75	209.72	176.54	33.18	6.320		
4,200.00	4,157.21	4,191.62	4,150.84	17.12	17.03	98.52	-313.29	-480.12	215.00	180.97	34.03	6.318		
4,300.00	4,256.05	4,291.48	4,249.59	17.55	17.45	98.65	-321.47	-492.49	220.28	185.40	34.88	6.316		
4,400.00	4,354.88	4,391.34	4,348.34	17.98	17.88	98.77	-329.65	-504.86	225.56	189.84	35.72	6.314		
4,500.00	4,453.72	4,491.19	4,447.09	18.40	18.30	98.90	-337.83	-517.22	230.84	194.27	36.57	6.312		
4,600.00	4,552.55	4,591.05	4,545.84	18.83	18.72	99.01	-346.01	-529.59	236.12	198.71	37.42	6.311		
4,611.50	4,563.92	4,602.54	4,557.20	18.88	18.77	99.02	-346.95	-531.01	236.73	199.22	37.51	6.310		
4,700.00	4,651.58	4,690.92	4,644.60	19.25	19.15	98.89	-354.19	-541.96	241.19	202.94	38.26	6.305		
4,800.00	4,751.03	4,790.72	4,743.29	19.64	19.57	99.78	-362.37	-554.32	245.77	206.70	39.07	6.291		
4,900.00	4,850.78	4,890.33	4,841.80	20.00	19.99	96.31	-370.53	-566.66	250.01	210.16	39.85	6.274		
5,000.00	4,950.72	4,989.64	4,940.01	20.34	20.42	93.93	-378.66	-578.96	254.23	213.64	40.59	6.263		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4F-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,049.28	5,000.00	5,038.44	4,988.26	20.49	20.62	-51.25	-382.66	-585.00	256.42	215.49	40.93	6.265		
5,100.00	5,050.72	5,088.59	5,037.86	20.63	20.84	-52.82	-386.77	-591.21	258.84	217.58	41.26	6.273		
5,200.00	5,150.72	5,187.48	5,135.66	20.91	21.26	-55.83	-394.87	-603.46	264.18	222.28	41.89	6.306		
5,300.00	5,250.72	5,286.37	5,233.45	21.19	21.68	-58.72	-402.97	-615.71	270.22	227.71	42.51	6.357		
5,400.00	5,350.72	5,385.26	5,331.25	21.48	22.10	-61.47	-411.07	-627.96	276.94	233.83	43.11	6.424		
5,500.00	5,450.72	5,484.15	5,429.04	21.77	22.51	-64.10	-419.18	-640.20	284.27	240.57	43.70	6.505		
5,600.00	5,550.72	5,583.05	5,528.84	22.06	22.93	-66.58	-427.28	-652.45	292.17	247.89	44.28	6.598		
5,700.00	5,650.72	5,681.94	5,624.63	22.35	23.35	-68.94	-435.38	-664.70	300.60	255.74	44.86	6.701		
5,800.00	5,750.72	5,780.83	5,722.43	22.65	23.77	-71.16	-443.48	-676.95	309.51	264.08	45.43	6.813		
5,900.00	5,850.72	5,879.72	5,820.22	22.94	24.19	-73.26	-451.58	-689.20	318.87	272.86	46.00	6.931		
6,000.00	5,950.72	5,978.61	5,918.02	23.24	24.61	-75.24	-459.68	-701.44	328.63	282.05	46.58	7.056		
6,100.00	6,050.72	6,077.50	6,015.81	23.54	25.03	-77.10	-467.78	-713.69	338.76	291.61	47.15	7.185		
6,200.00	6,150.72	6,176.39	6,113.61	23.84	25.45	-78.86	-475.89	-725.94	349.23	301.50	47.73	7.317		
6,300.00	6,250.72	6,275.28	6,211.40	24.15	25.87	-80.51	-483.99	-738.19	360.00	311.69	48.31	7.452		
6,400.00	6,350.72	6,374.18	6,309.20	24.45	26.29	-82.06	-492.09	-750.44	371.06	322.16	48.90	7.589		
6,500.00	6,450.72	6,473.07	6,406.99	24.76	26.71	-83.53	-500.19	-762.68	382.37	332.89	49.49	7.727		
6,600.00	6,550.72	6,571.96	6,504.79	25.06	27.13	-84.91	-508.29	-774.93	393.92	343.84	50.08	7.865		
6,700.00	6,650.72	6,670.85	6,602.58	25.37	27.55	-86.21	-516.39	-787.18	405.69	355.00	50.68	8.004		
6,800.00	6,750.72	6,769.74	6,700.38	25.68	27.97	-87.44	-524.50	-799.43	417.65	366.36	51.29	8.143		
6,813.09	6,763.80	6,782.68	6,713.17	25.72	28.03	-87.60	-525.56	-801.03	419.23	367.86	51.37	8.161		
6,850.00	6,800.70	6,819.09	6,749.18	25.84	28.18	-87.68	-528.54	-805.54	423.66	372.08	51.58	8.214		
6,900.00	6,850.50	6,867.99	6,797.54	25.98	28.39	-88.33	-532.54	-811.60	429.66	377.83	51.83	8.290		
6,950.00	6,899.88	6,916.19	6,845.20	26.11	28.59	-89.36	-536.49	-817.57	435.79	383.77	52.03	8.376		
7,000.00	6,948.60	6,964.36	6,892.94	26.24	28.79	-90.52	-538.66	-823.58	442.26	390.06	52.20	8.473		
7,050.00	6,996.42	7,013.43	6,941.59	26.35	28.97	-91.66	-537.54	-829.76	449.05	396.69	52.36	8.576		
7,100.00	7,043.10	7,063.45	6,990.99	26.46	29.13	-92.77	-532.94	-836.10	456.14	403.62	52.52	8.686		
7,150.00	7,088.43	7,114.50	7,040.94	26.55	29.29	-93.84	-524.68	-842.57	463.47	410.80	52.66	8.800		
7,200.00	7,132.17	7,166.64	7,091.21	26.64	29.42	-94.87	-512.56	-849.15	470.98	418.18	52.80	8.920		
7,250.00	7,174.12	7,219.93	7,141.53	26.71	29.55	-95.85	-496.40	-855.81	478.61	425.69	52.92	9.043		
7,300.00	7,214.06	7,274.42	7,191.61	26.78	29.66	-96.80	-476.02	-862.51	486.31	433.28	53.03	9.171		
7,350.00	7,251.82	7,330.17	7,241.10	26.85	29.75	-97.69	-451.26	-869.21	493.98	440.87	53.11	9.302		
7,400.00	7,287.20	7,387.23	7,289.59	26.90	29.84	-98.54	-421.97	-875.87	501.56	448.41	53.16	9.435		
7,450.00	7,320.02	7,445.63	7,336.66	26.96	29.90	-99.33	-388.07	-882.42	508.97	455.79	53.18	9.571		
7,500.00	7,350.14	7,505.38	7,381.82	27.01	29.95	-100.07	-349.48	-888.81	516.12	462.95	53.17	9.706		
7,550.00	7,377.40	7,566.50	7,424.53	27.07	29.98	-100.74	-306.24	-894.98	522.93	469.78	53.15	9.839		
7,600.00	7,401.67	7,628.94	7,464.22	27.13	30.00	-101.35	-258.41	-900.84	529.31	476.20	53.11	9.966		
7,650.00	7,422.84	7,692.68	7,500.30	27.19	29.99	-101.90	-206.19	-906.33	535.18	482.10	53.08	10.083		
7,700.00	7,440.79	7,757.62	7,532.18	27.27	29.98	-102.37	-149.85	-911.35	540.46	487.39	53.07	10.184		
7,750.00	7,455.44	7,823.67	7,559.27	27.36	29.94	-102.76	-89.80	-915.83	545.07	491.97	53.10	10.264		
7,800.00	7,466.73	7,890.69	7,581.02	27.46	29.90	-103.08	-26.56	-919.69	548.96	495.76	53.20	10.319		
7,850.00	7,474.59	7,958.51	7,596.96	27.59	29.85	-103.32	39.26	-922.86	552.05	498.67	53.38	10.342		
7,900.00	7,478.99	8,026.94	7,606.70	27.73	29.79	-103.46	106.93	-925.27	554.31	500.65	53.66	10.330		
7,938.09	7,480.00	8,079.35	7,609.81	27.85	29.75	-103.52	159.21	-926.58	555.45	501.51	53.94	10.298		
8,000.00	7,480.00	8,145.82	7,610.00	28.08	29.72	-103.51	225.67	-927.76	556.43	502.00	54.43	10.223		
8,100.00	7,480.00	8,245.80	7,610.00	28.53	29.94	-103.48	325.64	-929.51	557.93	502.63	55.30	10.089		
8,200.00	7,480.00	8,345.79	7,610.00	29.06	30.50	-103.44	425.61	-931.25	559.43	503.09	56.34	9.930		
8,300.00	7,480.00	8,445.78	7,610.00	29.68	31.15	-103.40	525.59	-933.00	560.93	503.41	57.52	9.751		
8,400.00	7,480.00	8,545.77	7,610.00	30.37	31.86	-103.37	625.56	-934.74	562.43	503.58	58.85	9.557		
8,500.00	7,480.00	8,645.76	7,610.00	31.13	32.63	-103.33	725.53	-936.49	563.93	503.62	60.31	9.350		
8,600.00	7,480.00	8,745.74	7,610.00	31.95	33.45	-103.29	825.50	-938.23	565.43	503.54	61.90	9.135		
8,700.00	7,480.00	8,845.73	7,610.00	32.83	34.33	-103.26	925.48	-939.98	566.94	503.34	63.60	8.915		
8,800.00	7,480.00	8,945.72	7,610.00	33.76	35.25	-103.22	1,025.45	-941.72	568.44	503.04	65.40	8.692		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4F-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
8,900.00	7,480.00	9,045.71	7,610.00	34.74	36.21	-103.19	1,125.42	-943.47	569.94	502.64	67.30	8.469		
9,000.00	7,480.00	9,145.70	7,610.00	35.76	37.22	-103.15	1,225.40	-945.21	571.44	502.15	69.29	8.247		
9,100.00	7,480.00	9,245.68	7,610.00	36.82	38.26	-103.12	1,325.37	-946.96	572.94	501.58	71.36	8.029		
9,200.00	7,480.00	9,345.67	7,610.00	37.91	39.34	-103.08	1,425.34	-948.70	574.45	500.94	73.51	7.815		
9,300.00	7,480.00	9,445.66	7,610.00	39.04	40.45	-103.05	1,525.31	-950.45	575.95	500.22	75.73	7.606		
9,400.00	7,480.00	9,545.65	7,610.00	40.20	41.59	-103.01	1,625.29	-952.19	577.45	499.45	78.00	7.403		
9,500.00	7,480.00	9,645.64	7,610.00	41.39	42.76	-102.98	1,725.26	-953.94	578.96	498.62	80.34	7.206		
9,600.00	7,480.00	9,745.62	7,610.00	42.60	43.96	-102.94	1,825.23	-955.68	580.46	497.73	82.73	7.016		
9,700.00	7,480.00	9,845.61	7,610.00	43.84	45.18	-102.91	1,925.21	-957.43	581.96	496.80	85.17	6.833		
9,800.00	7,480.00	9,945.60	7,610.00	45.10	46.42	-102.88	2,025.18	-959.17	583.47	495.82	87.65	6.657		
9,900.00	7,480.00	10,045.59	7,610.00	46.38	47.68	-102.84	2,125.15	-960.92	584.97	494.80	90.17	6.487		
10,000.00	7,480.00	10,145.58	7,610.00	47.68	48.96	-102.81	2,225.12	-962.66	586.48	493.75	92.73	6.325		
10,100.00	7,480.00	10,245.57	7,610.00	48.99	50.26	-102.77	2,325.10	-964.41	587.98	492.66	95.32	6.168		
10,200.00	7,480.00	10,345.55	7,610.00	50.32	51.58	-102.74	2,425.07	-966.15	589.49	491.53	97.95	6.018		
10,300.00	7,480.00	10,445.54	7,610.00	51.66	52.91	-102.71	2,525.04	-967.90	590.99	490.38	100.61	5.874		
10,400.00	7,480.00	10,545.53	7,610.00	53.02	54.25	-102.68	2,625.02	-969.64	592.50	489.21	103.29	5.736		
10,500.00	7,480.00	10,645.52	7,610.00	54.39	55.61	-102.64	2,724.99	-971.39	594.00	488.00	106.00	5.604		
10,600.00	7,480.00	10,745.51	7,610.00	55.77	56.98	-102.61	2,824.96	-973.13	595.51	486.78	108.73	5.477		
10,700.00	7,480.00	10,845.49	7,610.00	57.16	58.36	-102.58	2,924.93	-974.88	597.01	485.53	111.48	5.355		
10,800.00	7,480.00	10,945.48	7,610.00	58.56	59.75	-102.55	3,024.91	-976.62	598.52	484.26	114.26	5.238		
10,900.00	7,480.00	11,045.47	7,610.00	59.97	61.15	-102.51	3,124.88	-978.37	600.02	482.98	117.05	5.126		
11,000.00	7,480.00	11,145.46	7,610.00	61.39	62.56	-102.48	3,224.85	-980.11	601.53	481.67	119.86	5.019		
11,100.00	7,480.00	11,245.45	7,610.00	62.82	63.98	-102.45	3,324.83	-981.86	603.04	480.36	122.68	4.915		
11,200.00	7,480.00	11,345.43	7,610.00	64.25	65.41	-102.42	3,424.80	-983.60	604.54	479.02	125.52	4.816		
11,300.00	7,480.00	11,445.42	7,610.00	65.69	66.84	-102.39	3,524.77	-985.35	606.05	477.67	128.38	4.721		
11,400.00	7,480.00	11,545.41	7,610.00	67.14	68.28	-102.36	3,624.74	-987.09	607.56	476.31	131.25	4.629		
11,500.00	7,480.00	11,645.40	7,610.00	68.59	69.73	-102.33	3,724.72	-988.84	609.07	474.94	134.13	4.541		
11,600.00	7,480.00	11,745.39	7,610.00	70.05	71.18	-102.29	3,824.69	-990.58	610.57	473.55	137.02	4.456		
11,700.00	7,480.00	11,845.37	7,610.00	71.51	72.64	-102.26	3,924.66	-992.33	612.08	472.16	139.92	4.374		
11,800.00	7,480.00	11,945.36	7,610.00	72.98	74.11	-102.23	4,024.64	-994.07	613.59	470.75	142.84	4.296		
11,900.00	7,480.00	12,045.35	7,610.00	74.46	75.58	-102.20	4,124.61	-995.82	615.10	469.33	145.76	4.220		
12,000.00	7,480.00	12,145.34	7,610.00	75.93	77.05	-102.17	4,224.58	-997.56	616.60	467.91	148.69	4.147		
12,100.00	7,480.00	12,245.33	7,610.00	77.42	78.54	-102.14	4,324.55	-999.31	618.11	466.48	151.64	4.076		
12,200.00	7,480.00	12,345.32	7,610.00	78.90	80.02	-102.11	4,424.53	-1,001.05	619.62	465.03	154.59	4.008		
12,300.00	7,480.00	12,445.30	7,610.00	80.39	81.51	-102.08	4,524.50	-1,002.80	621.13	463.59	157.54	3.943		
12,400.00	7,480.00	12,545.29	7,610.00	81.89	83.00	-102.05	4,624.47	-1,004.54	622.64	462.13	160.51	3.879		
12,500.00	7,480.00	12,645.28	7,610.00	83.38	84.50	-102.02	4,724.45	-1,006.29	624.15	460.67	163.48	3.818		
12,600.00	7,480.00	12,745.27	7,610.00	84.88	86.00	-101.99	4,824.42	-1,008.03	625.66	459.20	166.46	3.759		
12,700.00	7,480.00	12,845.26	7,610.00	86.39	87.50	-101.96	4,924.39	-1,009.78	627.17	457.72	169.45	3.701		
12,800.00	7,480.00	12,945.24	7,610.00	87.89	89.01	-101.94	5,024.36	-1,011.52	628.68	456.24	172.44	3.646		
12,900.00	7,480.00	13,045.23	7,610.00	89.40	90.52	-101.91	5,124.34	-1,013.27	630.18	454.75	175.43	3.592		
13,000.00	7,480.00	13,145.22	7,610.00	90.91	92.03	-101.88	5,224.31	-1,015.01	631.69	453.26	178.44	3.540		
13,100.00	7,480.00	13,245.21	7,610.00	92.43	93.55	-101.85	5,324.28	-1,016.76	633.20	451.76	181.44	3.490		
13,200.00	7,480.00	13,345.20	7,610.00	93.94	95.06	-101.82	5,424.26	-1,018.50	634.71	450.26	184.46	3.441		
13,300.00	7,480.00	13,445.18	7,610.00	95.46	96.58	-101.79	5,524.23	-1,020.25	636.22	448.75	187.47	3.394		
13,400.00	7,480.00	13,545.17	7,610.00	96.98	98.11	-101.76	5,624.20	-1,021.99	637.74	447.24	190.50	3.348		
13,500.00	7,480.00	13,645.16	7,610.00	98.50	99.63	-101.74	5,724.17	-1,023.74	639.25	445.72	193.52	3.303		
13,600.00	7,480.00	13,745.15	7,610.00	100.03	101.16	-101.71	5,824.15	-1,025.48	640.76	444.20	196.55	3.260		
13,700.00	7,480.00	13,845.14	7,610.00	101.56	102.69	-101.68	5,924.12	-1,027.23	642.27	442.68	199.59	3.218		
13,800.00	7,480.00	13,945.12	7,610.00	103.08	104.22	-101.65	6,024.09	-1,028.97	643.78	441.15	202.62	3.177		
13,900.00	7,480.00	14,045.11	7,610.00	104.61	105.75	-101.62	6,124.06	-1,030.72	645.29	439.62	205.66	3.137		
14,000.00	7,480.00	14,145.10	7,610.00	106.14	107.28	-101.59	6,224.03	-1,032.47	646.80	438.09	208.70	3.098		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													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			
14,100.00	7,480.00	14,287.75	7,610.00	107.68	109.31	-101.87	6,366.41	-1,017.70	632.83	421.72	211.10	2.998			
14,200.00	7,480.00	14,387.61	7,610.00	109.21	110.79	-101.97	6,466.14	-1,012.65	627.68	413.67	214.01	2.933			
14,300.00	7,480.00	14,487.47	7,610.00	110.75	112.26	-102.07	6,565.88	-1,007.60	622.54	405.63	216.91	2.870			
14,400.00	7,480.00	14,587.33	7,610.00	112.28	113.74	-102.17	6,665.61	-1,002.55	617.40	397.58	219.82	2.809			
14,500.00	7,480.00	14,687.20	7,610.00	113.82	115.21	-102.28	6,765.34	-997.50	612.26	389.54	222.72	2.749			
14,514.90	7,480.00	14,702.08	7,610.00	114.05	115.43	-102.29	6,780.21	-996.75	611.49	388.34	223.15	2.740			
14,594.81	7,480.00	14,781.95	7,610.00	115.26	116.62	-102.32	6,859.98	-992.71	609.44	383.95	225.49	2.703			
14,600.00	7,480.00	14,787.14	7,610.00	115.34	116.70	-102.32	6,865.16	-992.45	609.45	383.80	225.64	2.701			
14,689.49	7,480.00	14,856.87	7,610.00	116.66	117.73	-102.31	6,934.80	-988.92	612.64	384.03	228.60	2.680 SF			
14,703.04	7,480.00	14,856.87	7,610.00	116.84	117.73	-102.31	6,934.80	-988.92	614.05	384.97	229.07	2.681			



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	-90.22	-0.04	-9.79	9.79	9.51	0.28	35.241		
100.00	100.00	100.00	100.00	0.14	0.14	-90.22	-0.04	-9.79	9.79	8.80	0.99	9.842		
200.00	200.00	200.00	200.00	0.50	0.50	-90.22	-0.04	-9.79	9.79	8.69	1.10	8.915	CC	
214.73	214.73	214.73	214.73	0.55	0.55	90.00	-0.04	-9.79	9.79	8.24	1.70	5.857	ES	
300.00	299.98	299.98	299.98	0.84	0.85	99.88	-0.04	-9.79	9.94	8.24	1.10	5.857	ES	
400.00	399.84	399.84	399.84	1.19	1.21	125.27	-0.04	-9.79	12.00	9.60	2.40	4.996		
500.00	499.51	499.51	499.51	1.55	1.57	131.71	-0.04	-9.79	16.97	13.85	3.12	5.442		
600.00	598.94	598.94	598.94	1.92	1.93	141.28	-0.04	-9.79	24.73	20.90	3.83	6.449		
700.52	698.51	698.51	698.51	2.32	2.28	149.42	-0.04	-9.79	36.09	31.53	4.56	7.919		
800.00	796.84	796.84	796.84	2.71	2.64	158.31	-0.04	-9.79	49.76	44.48	5.27	9.439		
900.00	895.67	897.51	897.50	3.12	2.98	162.64	-1.10	-11.07	62.77	56.78	5.99	10.483		
1,000.00	994.50	999.06	998.90	3.54	3.33	164.13	-4.46	-15.11	72.94	66.23	6.71	10.870		
1,100.00	1,093.34	1,101.18	1,100.62	3.95	3.68	164.00	-10.15	-21.95	80.06	72.61	7.45	10.750		
1,200.00	1,192.17	1,203.61	1,202.27	4.37	4.04	162.65	-18.19	-31.61	84.12	75.92	8.19	10.265		
1,300.00	1,291.01	1,303.94	1,301.54	4.79	4.41	160.63	-27.52	-42.84	86.28	77.35	8.92	9.667		
1,400.00	1,389.84	1,403.88	1,400.40	5.21	4.79	158.70	-36.85	-54.06	88.50	78.84	9.66	9.160		
1,500.00	1,488.68	1,503.81	1,499.26	5.63	5.17	156.87	-46.18	-65.27	90.82	80.41	10.41	8.726		
1,600.00	1,587.51	1,603.74	1,598.13	6.05	5.56	155.13	-55.50	-76.49	93.23	82.06	11.16	8.352		
1,700.00	1,686.35	1,703.67	1,696.99	6.48	5.96	153.47	-64.83	-87.70	95.72	83.79	11.93	8.026		
1,800.00	1,785.18	1,803.60	1,795.85	6.90	6.35	151.91	-74.16	-98.92	98.28	85.59	12.70	7.740		
1,900.00	1,884.02	1,903.53	1,894.71	7.33	6.76	150.42	-83.48	-110.14	100.92	87.44	13.47	7.489		
2,000.00	1,982.85	2,003.47	1,993.57	7.75	7.16	149.01	-92.81	-121.35	103.62	89.36	14.26	7.267		
2,100.00	2,081.69	2,103.40	2,092.43	8.17	7.56	147.67	-102.14	-132.57	106.38	91.33	15.05	7.069		
2,200.00	2,180.52	2,203.33	2,191.29	8.60	7.97	146.41	-111.47	-143.78	109.19	93.35	15.84	6.893		
2,300.00	2,279.36	2,303.26	2,290.16	9.03	8.38	145.20	-120.79	-155.00	112.05	95.41	16.64	6.734		
2,400.00	2,378.19	2,403.19	2,389.02	9.45	8.79	144.06	-130.12	-166.22	114.97	97.52	17.44	6.591		
2,500.00	2,477.02	2,503.13	2,487.88	9.88	9.20	142.97	-139.45	-177.43	117.92	99.67	18.25	6.462		
2,600.00	2,575.86	2,603.06	2,586.74	10.30	9.61	141.94	-148.77	-188.65	120.92	101.86	19.06	6.344		
2,700.00	2,674.69	2,702.99	2,685.60	10.73	10.03	140.95	-158.10	-199.86	123.95	104.08	19.87	6.237		
2,800.00	2,773.53	2,802.92	2,784.46	11.15	10.44	140.02	-167.43	-211.08	127.02	106.33	20.69	6.140		
2,900.00	2,872.36	2,902.85	2,883.33	11.58	10.85	139.12	-176.75	-222.29	130.12	108.61	21.51	6.050		
3,000.00	2,971.20	3,002.79	2,982.19	12.01	11.27	138.27	-186.08	-233.51	133.25	110.92	22.33	5.968		
3,100.00	3,070.03	3,102.72	3,081.05	12.43	11.68	137.46	-195.41	-244.73	136.41	113.26	23.15	5.892		
3,200.00	3,168.87	3,202.65	3,179.91	12.86	12.10	136.69	-204.73	-255.94	139.59	115.62	23.97	5.823		
3,300.00	3,267.70	3,302.58	3,278.77	13.28	12.52	135.95	-214.06	-267.16	142.80	118.00	24.80	5.758		
3,400.00	3,366.54	3,402.51	3,377.63	13.71	12.93	135.24	-223.39	-278.37	146.03	120.40	25.63	5.698		
3,500.00	3,465.37	3,502.45	3,476.49	14.14	13.35	134.57	-232.71	-289.59	149.28	122.83	26.46	5.643		
3,600.00	3,564.21	3,602.38	3,575.36	14.56	13.77	133.92	-242.04	-300.81	152.56	125.27	27.29	5.591		
3,700.00	3,663.04	3,702.31	3,674.22	14.99	14.18	133.30	-251.37	-312.02	155.85	127.73	28.12	5.543		
3,800.00	3,761.88	3,802.24	3,773.08	15.42	14.60	132.70	-260.70	-323.24	159.16	130.21	28.95	5.498		
3,900.00	3,860.71	3,902.17	3,871.94	15.84	15.02	132.13	-270.02	-334.45	162.48	132.70	29.78	5.455		
4,000.00	3,959.54	4,002.10	3,970.80	16.27	15.44	131.59	-279.35	-345.67	165.82	135.20	30.62	5.416		
4,100.00	4,058.38	4,102.04	4,069.66	16.70	15.86	131.06	-288.68	-356.88	169.18	137.72	31.45	5.379		
4,200.00	4,157.21	4,201.97	4,168.53	17.12	16.28	130.56	-298.00	-368.10	172.55	140.26	32.29	5.344		
4,300.00	4,256.05	4,301.90	4,267.39	17.55	16.69	130.07	-307.33	-379.32	175.93	142.80	33.13	5.311		
4,400.00	4,354.88	4,401.83	4,366.25	17.98	17.11	129.60	-316.66	-390.53	179.32	145.36	33.96	5.280		
4,500.00	4,453.72	4,501.76	4,465.11	18.40	17.53	129.15	-325.98	-401.75	182.73	147.93	34.80	5.251		
4,600.00	4,552.55	4,601.70	4,563.97	18.83	17.95	128.72	-335.31	-412.96	186.14	150.50	35.64	5.223		
4,611.50	4,563.92	4,613.19	4,575.34	18.88	18.00	128.67	-336.38	-414.25	186.54	150.80	35.73	5.220		
4,700.00	4,651.58	4,701.63	4,662.83	19.25	18.37	128.01	-344.64	-424.18	188.73	152.24	36.49	5.172		
4,800.00	4,751.03	4,801.49	4,761.62	19.64	18.79	126.46	-353.96	-435.39	189.26	151.89	37.36	5.065		
4,900.00	4,850.78	4,901.16	4,860.23	20.00	19.21	124.03	-363.26	-446.57	187.95	149.69	38.27	4.911		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4G-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,000.00	4,950.72	5,000.51	4,958.52	20.34	19.63	120.64	-372.53	-457.73	185.19	145.99	39.19	4.725		
5,049.28	5,000.00	5,049.33	5,006.81	20.49	19.83	-25.17	-377.09	-463.20	183.44	143.79	39.65	4.627		
5,100.00	5,050.72	5,099.50	5,056.44	20.63	20.04	-27.41	-381.77	-468.83	181.70	141.60	40.10	4.531		
5,200.00	5,150.72	5,198.43	5,154.31	20.91	20.46	-31.92	-391.01	-479.94	179.12	138.13	40.99	4.370		
5,300.00	5,250.72	5,297.36	5,252.18	21.19	20.87	-36.54	-400.24	-491.04	177.70	135.86	41.83	4.248		
5,368.77	5,319.49	5,365.39	5,319.49	21.39	21.16	-39.75	-406.59	-498.68	177.41	135.02	42.39	4.185		
5,400.00	5,350.72	5,396.29	5,350.05	21.48	21.29	-41.20	-409.47	-502.14	177.47	134.83	42.64	4.162		
5,500.00	5,450.72	5,495.22	5,447.92	21.77	21.71	-45.84	-418.71	-513.25	178.45	135.05	43.40	4.112		
5,600.00	5,550.72	5,594.14	5,545.79	22.06	22.12	-50.41	-427.94	-524.35	180.60	136.49	44.11	4.094		
5,700.00	5,650.72	5,693.07	5,643.66	22.35	22.54	-54.83	-437.17	-535.45	183.89	139.11	44.77	4.107		
5,800.00	5,750.72	5,792.00	5,741.53	22.65	22.95	-59.09	-446.41	-546.56	188.25	142.86	45.40	4.147		
5,900.00	5,850.72	5,890.93	5,839.40	22.94	23.37	-63.13	-455.64	-557.66	193.62	147.64	45.98	4.211		
6,000.00	5,950.72	5,989.86	5,937.27	23.24	23.79	-66.94	-464.87	-568.76	199.92	153.37	46.55	4.295		
6,100.00	6,050.72	6,088.79	6,035.14	23.54	24.20	-70.51	-474.11	-579.87	207.05	159.95	47.09	4.396		
6,200.00	6,150.72	6,187.72	6,133.01	23.84	24.62	-73.83	-483.34	-590.97	214.94	167.31	47.63	4.513		
6,300.00	6,250.72	6,286.65	6,230.87	24.15	25.04	-76.91	-492.57	-602.07	223.50	175.34	48.16	4.641		
6,400.00	6,350.72	6,385.58	6,328.74	24.45	25.45	-79.76	-501.81	-613.18	232.67	183.97	48.70	4.778		
6,500.00	6,450.72	6,484.50	6,426.61	24.76	25.87	-82.38	-511.04	-624.28	242.37	193.14	49.23	4.923		
6,600.00	6,550.72	6,583.43	6,524.48	25.06	26.29	-84.81	-520.27	-635.38	252.54	202.77	49.78	5.074		
6,700.00	6,650.72	6,682.18	6,622.18	25.37	26.70	-87.02	-529.41	-646.47	263.13	212.81	50.32	5.229		
6,800.00	6,750.72	6,780.02	6,719.31	25.68	27.07	-87.35	-530.39	-657.44	274.30	223.35	50.94	5.384		
6,813.09	6,763.80	6,792.78	6,731.97	25.72	27.11	-87.18	-529.54	-658.87	275.80	224.77	51.04	5.404		
6,850.00	6,800.70	6,828.69	6,767.47	25.84	27.22	-86.21	-525.91	-662.86	280.07	228.79	51.28	5.462		
6,900.00	6,850.50	6,877.13	6,814.98	25.98	27.36	-85.10	-518.20	-668.19	285.83	234.25	51.58	5.542		
6,950.00	6,899.88	6,925.35	6,861.66	26.11	27.49	-84.05	-507.33	-673.40	291.54	239.70	51.84	5.623		
7,000.00	6,948.60	6,973.37	6,907.32	26.24	27.60	-83.05	-493.38	-678.49	297.17	245.10	52.08	5.706		
7,050.00	6,996.42	7,021.20	6,951.78	26.35	27.70	-82.12	-476.47	-683.42	302.70	250.42	52.28	5.790		
7,100.00	7,043.10	7,068.87	6,994.87	26.46	27.79	-81.24	-456.68	-688.18	308.07	255.62	52.45	5.874		
7,150.00	7,088.43	7,116.37	7,036.42	26.55	27.86	-80.43	-434.13	-692.76	313.28	260.68	52.60	5.956		
7,200.00	7,132.17	7,163.74	7,076.28	26.64	27.92	-79.67	-408.93	-697.13	318.27	265.55	52.72	6.037		
7,250.00	7,174.12	7,210.97	7,114.30	26.71	27.98	-78.98	-381.23	-701.28	323.04	270.21	52.83	6.115		
7,300.00	7,214.06	7,258.09	7,150.34	26.78	28.02	-78.34	-351.14	-705.19	327.55	274.63	52.92	6.189		
7,350.00	7,251.82	7,305.11	7,184.26	26.85	28.05	-77.77	-318.80	-708.86	331.78	278.77	53.01	6.259		
7,400.00	7,287.20	7,352.04	7,215.95	26.90	28.07	-77.25	-284.37	-712.25	335.70	282.61	53.09	6.323		
7,450.00	7,320.02	7,400.00	7,245.95	26.96	28.08	-76.78	-247.09	-715.45	339.30	286.09	53.21	6.377		
7,500.00	7,350.14	7,445.67	7,272.15	27.01	28.09	-76.39	-209.80	-718.21	342.55	289.26	53.29	6.428		
7,550.00	7,377.40	7,492.40	7,296.46	27.07	28.08	-76.04	-169.98	-720.75	345.45	292.04	53.41	6.468		
7,600.00	7,401.67	7,539.08	7,318.12	27.13	28.08	-75.75	-128.69	-722.98	347.97	294.42	53.55	6.498		
7,650.00	7,422.84	7,585.74	7,337.05	27.19	28.06	-75.52	-86.11	-724.90	350.10	296.38	53.72	6.517		
7,700.00	7,440.79	7,632.37	7,353.18	27.27	28.05	-75.35	-42.39	-726.49	351.84	297.92	53.92	6.525		
7,750.00	7,455.44	7,678.99	7,366.45	27.36	28.03	-75.23	2.27	-727.75	353.17	299.02	54.15	6.522		
7,800.00	7,466.73	7,725.60	7,376.80	27.46	28.01	-75.17	47.70	-728.68	354.08	299.67	54.42	6.507		
7,850.00	7,474.59	7,772.22	7,384.20	27.59	28.00	-75.16	93.72	-729.28	354.59	299.87	54.72	6.480		
7,900.00	7,478.99	7,818.86	7,388.60	27.73	28.01	-75.21	140.14	-729.53	354.67	299.61	55.06	6.442		
7,938.09	7,480.00	7,854.40	7,389.94	27.85	28.05	-75.28	175.66	-729.50	354.45	299.11	55.34	6.405		
8,000.00	7,480.00	7,915.65	7,390.00	28.08	28.21	-75.27	236.90	-729.18	354.01	298.16	55.84	6.339		
8,100.00	7,480.00	8,015.64	7,390.00	28.53	28.67	-75.24	336.90	-728.66	353.30	296.52	56.78	6.222		
8,200.00	7,480.00	8,115.64	7,390.00	29.06	29.24	-75.21	436.89	-728.14	352.60	294.73	57.87	6.093		
8,300.00	7,480.00	8,215.64	7,390.00	29.68	29.88	-75.18	536.89	-727.61	351.90	292.80	59.10	5.954		
8,400.00	7,480.00	8,315.64	7,390.00	30.37	30.60	-75.15	636.89	-727.09	351.20	290.74	60.46	5.809		
8,500.00	7,480.00	8,415.63	7,390.00	31.13	31.37	-75.12	736.88	-726.57	350.50	288.55	61.95	5.658		
8,600.00	7,480.00	8,515.63	7,390.00	31.95	32.20	-75.09	836.88	-726.04	349.80	286.25	63.55	5.505		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4G-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
8,700.00	7,480.00	8,615.63	7,390.00	32.83	33.07	-75.06	936.87	-725.52	349.09	283.84	65.25	5.350		
8,800.00	7,480.00	8,715.63	7,390.00	33.76	34.00	-75.03	1,036.87	-725.00	348.39	281.34	67.06	5.196		
8,900.00	7,480.00	8,815.62	7,390.00	34.74	34.97	-75.00	1,136.87	-724.47	347.69	278.74	68.95	5.043		
9,000.00	7,480.00	8,915.62	7,390.00	35.76	35.99	-74.97	1,236.86	-723.95	346.99	276.06	70.93	4.892		
9,100.00	7,480.00	9,015.62	7,390.00	36.82	37.04	-74.94	1,336.86	-723.43	346.29	273.31	72.98	4.745		
9,200.00	7,480.00	9,115.62	7,390.00	37.91	38.12	-74.90	1,436.85	-722.90	345.59	270.49	75.10	4.602		
9,300.00	7,480.00	9,215.61	7,390.00	39.04	39.24	-74.87	1,536.85	-722.38	344.89	267.60	77.29	4.462		
9,400.00	7,480.00	9,315.61	7,390.00	40.20	40.39	-74.84	1,636.85	-721.85	344.19	264.65	79.53	4.328		
9,500.00	7,480.00	9,415.61	7,390.00	41.39	41.57	-74.81	1,736.84	-721.33	343.49	261.65	81.83	4.198		
9,600.00	7,480.00	9,515.61	7,390.00	42.60	42.77	-74.78	1,836.84	-720.81	342.78	258.61	84.18	4.072		
9,700.00	7,480.00	9,615.60	7,390.00	43.84	43.99	-74.75	1,936.83	-720.28	342.08	255.51	86.57	3.951		
9,800.00	7,480.00	9,715.60	7,390.00	45.10	45.24	-74.71	2,036.83	-719.76	341.38	252.38	89.00	3.836		
9,900.00	7,480.00	9,815.60	7,390.00	46.38	46.50	-74.68	2,136.83	-719.24	340.68	249.21	91.48	3.724		
10,000.00	7,480.00	9,915.59	7,390.00	47.68	47.79	-74.65	2,236.82	-718.71	339.98	246.00	93.98	3.617		
10,100.00	7,480.00	10,015.59	7,390.00	48.99	49.09	-74.62	2,336.82	-718.19	339.28	242.76	96.52	3.515		
10,200.00	7,480.00	10,115.59	7,390.00	50.32	50.40	-74.58	2,436.81	-717.67	338.58	239.49	99.09	3.417		
10,300.00	7,480.00	10,215.59	7,390.00	51.66	51.73	-74.55	2,536.81	-717.14	337.88	236.20	101.69	3.323		
10,400.00	7,480.00	10,315.58	7,390.00	53.02	53.08	-74.52	2,636.81	-716.62	337.18	232.88	104.31	3.233		
10,500.00	7,480.00	10,415.58	7,390.00	54.39	54.43	-74.49	2,736.80	-716.10	336.48	229.53	106.95	3.146		
10,600.00	7,480.00	10,515.58	7,390.00	55.77	55.80	-74.45	2,836.80	-715.57	335.79	226.17	109.62	3.063		
10,700.00	7,480.00	10,615.58	7,390.00	57.16	57.18	-74.42	2,936.79	-715.05	335.09	222.78	112.30	2.984		
10,800.00	7,480.00	10,715.57	7,390.00	58.56	58.57	-74.39	3,036.79	-714.52	334.39	219.38	115.00	2.908		
10,900.00	7,480.00	10,815.80	7,390.00	59.97	59.97	-74.35	3,137.02	-714.00	333.69	215.96	117.72	2.835		
11,000.00	7,480.00	10,921.55	7,390.00	61.39	61.45	-74.25	3,242.75	-711.93	331.58	211.23	120.35	2.755		
11,100.00	7,480.00	11,021.52	7,390.00	62.82	62.85	-74.12	3,342.68	-709.54	329.08	206.03	123.06	2.674		
11,200.00	7,480.00	11,121.49	7,390.00	64.25	64.25	-74.00	3,442.62	-707.14	326.59	200.81	125.77	2.597		
11,300.00	7,480.00	11,221.45	7,390.00	65.69	65.67	-73.87	3,542.56	-704.75	324.09	195.59	128.50	2.522		
11,400.00	7,480.00	11,321.42	7,390.00	67.14	67.09	-73.74	3,642.50	-702.35	321.60	190.36	131.23	2.451		
11,500.00	7,480.00	11,421.38	7,390.00	68.59	68.51	-73.61	3,742.43	-699.96	319.10	185.13	133.98	2.382		
11,600.00	7,480.00	11,521.35	7,390.00	70.05	69.95	-73.48	3,842.37	-697.57	316.61	179.89	136.72	2.316		
11,700.00	7,480.00	11,621.32	7,390.00	71.51	71.39	-73.35	3,942.31	-695.17	314.12	174.64	139.48	2.252		
11,800.00	7,480.00	11,721.28	7,390.00	72.98	72.83	-73.21	4,042.25	-692.78	311.64	169.40	142.24	2.191		
11,900.00	7,480.00	11,821.25	7,390.00	74.46	74.28	-73.07	4,142.18	-690.38	309.15	164.15	145.01	2.132		
12,000.00	7,480.00	11,921.22	7,390.00	75.93	75.73	-72.93	4,242.12	-687.99	306.67	158.89	147.77	2.075		
12,100.00	7,480.00	12,021.18	7,390.00	77.42	77.19	-72.78	4,342.06	-685.60	304.18	153.64	150.55	2.021		
12,200.00	7,480.00	12,121.15	7,390.00	78.90	78.65	-72.64	4,442.00	-683.20	301.71	148.38	153.32	1.968		
12,300.00	7,480.00	12,221.11	7,390.00	80.39	80.12	-72.49	4,541.94	-680.81	299.23	143.13	156.10	1.917		
12,400.00	7,480.00	12,321.08	7,390.00	81.89	81.59	-72.34	4,641.87	-678.41	296.75	137.87	158.88	1.868		
12,500.00	7,480.00	12,421.05	7,390.00	83.38	83.06	-72.19	4,741.81	-676.02	294.28	132.62	161.66	1.820		
12,600.00	7,480.00	12,521.01	7,390.00	84.88	84.53	-72.03	4,841.75	-673.62	291.81	127.37	164.43	1.775		
12,700.00	7,480.00	12,620.98	7,390.00	86.39	86.01	-71.87	4,941.69	-671.23	289.34	122.12	167.21	1.730		
12,800.00	7,480.00	12,720.95	7,390.00	87.89	87.50	-71.71	5,041.62	-668.84	286.87	116.88	169.99	1.688		
12,900.00	7,480.00	12,820.91	7,390.00	89.40	88.98	-71.55	5,141.56	-666.44	284.40	111.64	172.77	1.646		
13,000.00	7,480.00	12,920.88	7,390.00	90.91	90.47	-71.38	5,241.50	-664.05	281.94	106.40	175.54	1.606		
13,100.00	7,480.00	13,020.84	7,390.00	92.43	91.96	-71.21	5,341.44	-661.65	279.48	101.17	178.31	1.567		
13,200.00	7,480.00	13,120.81	7,390.00	93.94	93.45	-71.04	5,441.37	-659.26	277.02	95.94	181.08	1.530		
13,300.00	7,480.00	13,220.78	7,390.00	95.46	94.95	-70.86	5,541.31	-656.87	274.57	90.72	183.85	1.493 Level 3		
13,400.00	7,480.00	13,320.74	7,390.00	96.98	96.44	-70.68	5,641.25	-654.47	272.12	85.51	186.61	1.458 Level 3		
13,500.00	7,480.00	13,420.71	7,390.00	98.50	97.94	-70.50	5,741.19	-652.08	269.67	80.30	189.37	1.424 Level 3		
13,600.00	7,480.00	13,517.85	7,390.00	100.03	99.41	-70.33	5,838.30	-649.93	267.40	75.20	192.21	1.391 Level 3		
13,645.97	7,480.00	13,560.11	7,390.00	100.73	100.05	-70.31	5,880.56	-649.71	267.09	73.49	193.59	1.380 Level 3		
13,700.00	7,480.00	13,609.77	7,390.00	101.56	100.81	-70.34	5,930.22	-650.24	267.53	72.30	195.23	1.370 Level 3		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													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			
13,800.00	7,480.00	13,700.00	7,390.00	103.08	102.20	-70.55	6,020.39	-653.40	270.68	72.44	198.24	1.365	Level 3, SF		
13,900.00	7,480.00	13,793.12	7,390.00	104.61	103.66	-70.97	6,113.30	-659.65	276.84	75.52	201.32	1.375	Level 3		
14,000.00	7,480.00	13,890.32	7,390.00	106.14	105.21	-71.54	6,210.09	-668.51	285.28	80.63	204.65	1.394	Level 3		
14,100.00	7,480.00	13,989.91	7,390.00	107.68	106.79	-72.10	6,309.26	-677.71	293.86	85.80	208.07	1.412	Level 3		
14,200.00	7,480.00	14,089.50	7,390.00	109.21	108.37	-72.62	6,408.42	-686.91	302.48	91.01	211.47	1.430	Level 3		
14,300.00	7,480.00	14,189.10	7,390.00	110.75	109.96	-73.12	6,507.59	-696.11	311.12	96.27	214.85	1.448	Level 3		
14,400.00	7,480.00	14,288.69	7,390.00	112.28	111.55	-73.59	6,606.75	-705.30	319.78	101.56	218.21	1.465	Level 3		
14,500.00	7,480.00	14,388.28	7,390.00	113.82	113.14	-74.03	6,705.92	-714.50	328.46	106.89	221.57	1.482	Level 3		
14,514.90	7,480.00	14,403.12	7,390.00	114.05	113.38	-74.10	6,720.70	-715.87	329.75	107.69	222.06	1.485	Level 3		
14,600.00	7,480.00	14,487.61	7,390.00	115.34	114.73	-74.47	6,804.82	-723.68	339.44	114.48	224.96	1.509			
14,689.49	7,480.00	14,575.70	7,390.00	116.66	116.15	-74.99	6,892.54	-731.82	354.56	126.50	228.07	1.555			
14,703.04	7,480.00	14,588.97	7,390.00	116.84	116.36	-75.11	6,905.75	-733.04	357.24	128.71	228.53	1.563			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance			Total	Separation	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)	Uncertainty Axis	Factor		
0.00	0.00	0.00	0.00	0.00	0.00	89.72	0.05	10.07	10.07					
100.00	100.00	100.00	100.00	0.14	0.14	89.72	0.05	10.07	10.07	9.79	0.28	36.248		
200.00	200.00	200.00	200.00	0.50	0.50	89.72	0.05	10.07	10.07	9.08	0.99	10.123	CC	
200.35	200.35	200.35	200.35	0.50	0.50	-90.28	0.05	10.07	10.07	9.07	1.00	10.098		
300.00	299.98	299.98	299.98	0.84	0.85	-100.09	0.05	10.07	10.23	8.53	1.70	6.028	ES	
400.00	399.84	400.04	400.02	1.19	1.20	-117.60	-1.70	10.10	11.40	9.01	2.39	4.768		
500.00	499.51	500.21	500.05	1.55	1.54	-142.96	-6.94	10.20	14.12	11.02	3.11	4.544		
600.00	598.94	600.38	599.83	1.92	1.90	-147.95	-15.68	10.35	18.59	14.75	3.84	4.845		
700.52	698.51	700.76	699.50	2.32	2.27	-145.26	-27.57	10.57	25.53	20.95	4.58	5.576		
800.00	796.84	799.82	797.80	2.71	2.65	-140.14	-39.81	10.79	34.32	28.98	5.34	6.432		
900.00	895.67	899.39	896.61	3.12	3.03	-137.10	-52.11	11.01	43.31	37.20	6.11	7.088		
1,000.00	994.50	998.96	995.42	3.54	3.42	-135.11	-64.42	11.23	52.38	45.49	6.90	7.597		
1,100.00	1,093.34	1,098.54	1,094.23	3.95	3.82	-133.71	-76.72	11.45	61.50	53.81	7.69	8.001		
1,200.00	1,192.17	1,198.11	1,193.04	4.37	4.21	-132.68	-89.03	11.67	70.64	62.16	8.48	8.329		
1,300.00	1,291.01	1,297.69	1,291.85	4.79	4.61	-131.88	-101.33	11.89	79.81	70.52	9.28	8.599		
1,400.00	1,389.84	1,397.26	1,390.66	5.21	5.00	-131.24	-113.64	12.11	88.98	78.90	10.08	8.825		
1,500.00	1,488.68	1,496.83	1,489.47	5.63	5.40	-130.72	-125.94	12.34	98.16	87.28	10.89	9.018		
1,600.00	1,587.51	1,596.41	1,588.28	6.05	5.80	-130.30	-138.24	12.56	107.35	95.66	11.69	9.183		
1,700.00	1,686.35	1,695.98	1,687.09	6.48	6.20	-129.94	-150.55	12.78	116.54	104.05	12.50	9.327		
1,800.00	1,785.18	1,795.56	1,785.90	6.90	6.60	-129.63	-162.85	13.00	125.74	112.44	13.30	9.453		
1,900.00	1,884.02	1,895.13	1,884.72	7.33	7.00	-129.36	-175.16	13.22	134.94	120.83	14.11	9.564		
2,000.00	1,982.85	1,994.70	1,983.53	7.75	7.41	-129.13	-187.46	13.44	144.15	129.23	14.92	9.663		
2,100.00	2,081.69	2,094.28	2,082.34	8.17	7.81	-128.93	-199.76	13.66	153.35	137.63	15.73	9.752		
2,200.00	2,180.52	2,193.85	2,181.15	8.60	8.21	-128.75	-212.07	13.89	162.56	146.03	16.54	9.831		
2,300.00	2,279.36	2,293.43	2,279.96	9.03	8.61	-128.58	-224.37	14.11	171.77	154.43	17.34	9.903		
2,400.00	2,378.19	2,393.00	2,378.77	9.45	9.01	-128.44	-236.68	14.33	180.98	162.83	18.15	9.969		
2,500.00	2,477.02	2,492.57	2,477.58	9.88	9.41	-128.31	-248.98	14.55	190.19	171.23	18.96	10.029		
2,600.00	2,575.86	2,592.15	2,576.39	10.30	9.82	-128.19	-261.29	14.77	199.40	179.63	19.77	10.084		
2,700.00	2,674.69	2,691.72	2,675.20	10.73	10.22	-128.08	-273.59	14.99	208.62	188.03	20.59	10.134		
2,800.00	2,773.53	2,791.30	2,774.01	11.15	10.62	-127.98	-285.89	15.21	217.83	196.43	21.40	10.181		
2,900.00	2,872.36	2,890.87	2,872.82	11.58	11.02	-127.89	-298.20	15.43	227.04	204.84	22.21	10.224		
3,000.00	2,971.20	2,990.44	2,971.63	12.01	11.43	-127.81	-310.50	15.66	236.26	213.24	23.02	10.264		
3,100.00	3,070.03	3,090.02	3,070.44	12.43	11.83	-127.73	-322.81	15.88	245.47	221.64	23.83	10.301		
3,200.00	3,168.87	3,189.59	3,169.25	12.86	12.23	-127.66	-335.11	16.10	254.69	230.05	24.64	10.336		
3,300.00	3,267.70	3,289.17	3,268.06	13.28	12.64	-127.59	-347.41	16.32	263.90	238.45	25.45	10.368		
3,400.00	3,366.54	3,388.74	3,366.87	13.71	13.04	-127.53	-359.72	16.54	273.12	246.86	26.26	10.399		
3,500.00	3,465.37	3,488.31	3,465.68	14.14	13.44	-127.47	-372.02	16.76	282.34	255.26	27.08	10.427		
3,600.00	3,564.21	3,587.89	3,564.50	14.56	13.84	-127.41	-384.33	16.98	291.55	263.67	27.89	10.454		
3,700.00	3,663.04	3,687.46	3,663.31	14.99	14.25	-127.36	-396.63	17.20	300.77	272.07	28.70	10.480		
3,800.00	3,761.88	3,787.04	3,762.12	15.42	14.65	-127.31	-408.94	17.43	309.99	280.48	29.51	10.504		
3,900.00	3,860.71	3,886.61	3,860.93	15.84	15.05	-127.27	-421.24	17.65	319.21	288.88	30.32	10.526		
4,000.00	3,959.54	3,986.18	3,959.74	16.27	15.46	-127.22	-433.54	17.87	328.42	297.29	31.14	10.548		
4,100.00	4,058.38	4,085.76	4,058.55	16.70	15.86	-127.18	-445.85	18.09	337.64	305.69	31.95	10.568		
4,200.00	4,157.21	4,185.33	4,157.36	17.12	16.26	-127.15	-458.15	18.31	346.86	314.10	32.76	10.587		
4,300.00	4,256.05	4,284.91	4,256.17	17.55	16.67	-127.11	-470.46	18.53	356.08	322.50	33.57	10.606		
4,400.00	4,354.88	4,384.48	4,354.98	17.98	17.07	-127.07	-482.76	18.75	365.30	330.91	34.39	10.623		
4,500.00	4,453.72	4,484.05	4,453.79	18.40	17.47	-127.04	-495.06	18.97	374.51	339.32	35.20	10.640		
4,600.00	4,552.55	4,583.63	4,552.60	18.83	17.88	-127.01	-507.37	19.20	383.73	347.72	36.01	10.656		
4,611.50	4,563.92	4,595.08	4,563.97	18.88	17.92	-127.01	-508.78	19.22	384.79	348.69	36.10	10.658		
4,700.00	4,651.58	4,683.26	4,651.47	19.25	18.28	-126.94	-519.68	19.42	392.13	355.31	36.82	10.650		
4,800.00	4,751.03	4,783.11	4,750.77	19.64	18.67	-126.74	-530.09	19.60	398.46	360.86	37.60	10.596		
4,900.00	4,850.78	4,883.14	4,850.55	20.00	19.04	-126.60	-537.05	19.73	402.68	364.34	38.34	10.502		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft		
Reference: S26-T2N-R68W - SULLIVAN 4I-26H-P268 - OH - PLAN #2																
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			
5,000.00	4,950.72	4,983.28	4,950.63	20.34	19.39	-126.54	-540.53	19.79	404.79	365.75	39.04	10.369				
5,049.28	5,000.00	5,032.66	5,000.00	20.49	19.55	89.71	-540.95	19.80	405.05	365.70	39.35	10.294				
5,100.00	5,050.72	5,083.37	5,050.72	20.63	19.70	89.71	-540.95	19.80	405.05	365.40	39.64	10.218				
5,200.00	5,150.72	5,183.37	5,150.72	20.91	19.99	89.71	-540.95	19.80	405.05	364.82	40.22	10.070				
5,300.00	5,250.72	5,283.37	5,250.72	21.19	20.28	89.71	-540.95	19.80	405.05	364.24	40.81	9.926				
5,400.00	5,350.72	5,383.37	5,350.72	21.48	20.58	89.71	-540.95	19.80	405.05	363.65	41.40	9.785				
5,500.00	5,450.72	5,483.37	5,450.72	21.77	20.87	89.71	-540.95	19.80	405.05	363.06	41.99	9.647				
5,600.00	5,550.72	5,583.37	5,550.72	22.06	21.17	89.71	-540.95	19.80	405.05	362.46	42.59	9.511				
5,700.00	5,650.72	5,683.37	5,650.72	22.35	21.47	89.71	-540.95	19.80	405.05	361.86	43.19	9.379				
5,800.00	5,750.72	5,783.37	5,750.72	22.65	21.78	89.71	-540.95	19.80	405.05	361.26	43.79	9.250				
5,900.00	5,850.72	5,883.37	5,850.72	22.94	22.08	89.71	-540.95	19.80	405.05	360.65	44.40	9.123				
6,000.00	5,950.72	5,983.37	5,950.72	23.24	22.39	89.71	-540.95	19.80	405.05	360.04	45.01	9.000				
6,100.00	6,050.72	6,083.37	6,050.72	23.54	22.69	89.71	-540.95	19.80	405.05	359.42	45.62	8.879				
6,200.00	6,150.72	6,183.37	6,150.72	23.84	23.00	89.71	-540.95	19.80	405.05	358.81	46.24	8.760				
6,300.00	6,250.72	6,283.37	6,250.72	24.15	23.31	89.71	-540.95	19.80	405.05	358.19	46.86	8.644				
6,400.00	6,350.72	6,383.37	6,350.72	24.45	23.63	89.71	-540.95	19.80	405.05	357.57	47.48	8.531				
6,500.00	6,450.72	6,483.37	6,450.72	24.76	23.94	89.71	-540.95	19.80	405.05	356.94	48.10	8.420				
6,600.00	6,550.72	6,583.37	6,550.72	25.06	24.25	89.71	-540.95	19.80	405.05	356.32	48.73	8.312				
6,700.00	6,650.72	6,683.37	6,650.72	25.37	24.57	89.71	-540.95	19.80	405.05	355.69	49.36	8.206				
6,704.45	6,655.16	6,687.82	6,655.16	25.39	24.58	89.71	-540.95	19.80	405.05	355.66	49.39	8.201				
6,800.00	6,750.72	6,782.73	6,749.93	25.68	24.87	89.14	-536.89	19.81	405.10	355.14	49.96	8.109				
6,813.09	6,763.80	6,795.58	6,762.69	25.72	24.91	88.93	-535.41	19.82	405.13	355.10	50.03	8.098				
6,850.00	6,800.70	6,831.64	6,798.35	25.84	25.01	88.40	-530.04	19.83	405.26	355.04	50.22	8.070				
6,900.00	6,850.50	6,880.15	6,845.80	25.98	25.14	87.55	-519.99	19.87	405.53	355.07	50.46	8.037				
6,950.00	6,899.88	6,928.27	6,892.09	26.11	25.26	86.70	-506.88	19.91	405.91	355.23	50.67	8.010				
7,000.00	6,948.60	6,976.03	6,937.05	26.24	25.37	85.88	-490.82	19.96	406.37	355.51	50.86	7.989				
7,050.00	6,996.42	7,023.44	6,980.53	26.35	25.47	85.08	-471.94	20.02	406.93	355.90	51.03	7.974				
7,100.00	7,043.10	7,070.52	7,022.38	26.46	25.57	84.31	-450.40	20.09	407.56	356.38	51.18	7.964				
7,150.00	7,088.43	7,117.29	7,062.47	26.55	25.66	83.57	-426.32	20.17	408.25	356.95	51.30	7.958				
7,200.00	7,132.17	7,163.76	7,100.66	26.64	25.75	82.86	-399.85	20.25	408.99	357.59	51.41	7.956				
7,250.00	7,174.12	7,209.97	7,136.85	26.71	25.84	82.19	-371.13	20.34	409.78	358.28	51.50	7.957				
7,300.00	7,214.06	7,255.92	7,170.93	26.78	25.93	81.56	-340.32	20.44	410.59	359.02	51.58	7.961				
7,350.00	7,251.82	7,300.00	7,201.70	26.85	26.02	80.98	-308.76	20.54	411.42	359.79	51.63	7.969				
7,400.00	7,287.20	7,347.14	7,232.39	26.90	26.11	80.42	-272.99	20.65	412.25	360.53	51.71	7.972				
7,450.00	7,320.02	7,392.45	7,259.61	26.96	26.21	79.91	-236.78	20.77	413.07	361.28	51.79	7.976				
7,500.00	7,350.14	7,437.59	7,284.40	27.01	26.31	79.45	-199.07	20.89	413.87	362.00	51.87	7.979				
7,550.00	7,377.40	7,482.57	7,306.69	27.07	26.42	79.04	-160.01	21.01	414.63	362.67	51.97	7.979				
7,600.00	7,401.67	7,527.41	7,326.42	27.13	26.54	78.68	-119.76	21.14	415.36	363.27	52.08	7.975				
7,650.00	7,422.84	7,572.13	7,343.56	27.19	26.67	78.37	-78.45	21.27	416.03	363.80	52.23	7.966				
7,700.00	7,440.79	7,616.76	7,358.06	27.27	26.80	78.11	-36.26	21.41	416.64	364.24	52.40	7.951				
7,750.00	7,455.44	7,661.30	7,369.88	27.36	26.94	77.90	6.68	21.54	417.19	364.57	52.62	7.929				
7,800.00	7,466.73	7,705.79	7,379.00	27.46	27.10	77.74	50.22	21.68	417.66	364.80	52.86	7.901				
7,850.00	7,474.59	7,750.00	7,385.37	27.59	27.26	77.64	93.96	21.82	418.06	364.90	53.15	7.865				
7,900.00	7,478.99	7,794.65	7,389.05	27.73	27.43	77.59	138.45	21.96	418.37	364.88	53.49	7.822				
7,938.09	7,480.00	7,828.48	7,389.99	27.85	27.57	77.58	172.27	22.07	418.55	364.79	53.77	7.785				
8,000.00	7,480.00	7,890.02	7,390.00	28.08	27.84	77.59	233.81	22.27	418.87	364.59	54.28	7.717				
8,100.00	7,480.00	7,990.02	7,390.00	28.53	28.35	77.61	333.80	22.59	419.38	364.14	55.23	7.593				
8,200.00	7,480.00	8,090.02	7,390.00	29.06	28.93	77.62	433.80	22.91	419.89	363.54	56.34	7.452				
8,300.00	7,480.00	8,190.02	7,390.00	29.68	29.58	77.64	533.80	23.22	420.39	362.79	57.60	7.298				
8,400.00	7,480.00	8,290.02	7,390.00	30.37	30.30	77.65	633.80	23.54	420.90	361.91	59.00	7.134				
8,500.00	7,480.00	8,390.02	7,390.00	31.13	31.09	77.67	733.80	23.86	421.41	360.89	60.52	6.963				
8,600.00	7,480.00	8,490.01	7,390.00	31.95	31.94	77.68	833.80	24.18	421.92	359.76	62.16	6.788				

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4I-26H-P268 - OH - PLAN #2													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		
8,700.00	7,480.00	8,590.01	7,390.00	32.83	32.84	77.70	933.79	24.50	422.43	358.52	63.91	6.609		
8,800.00	7,480.00	8,690.01	7,390.00	33.76	33.79	77.71	1,033.79	24.82	422.94	357.17	65.77	6.431		
8,900.00	7,480.00	8,790.01	7,390.00	34.74	34.78	77.73	1,133.79	25.13	423.45	355.74	67.71	6.254		
9,000.00	7,480.00	8,890.01	7,390.00	35.76	35.82	77.74	1,233.79	25.45	423.96	354.22	69.74	6.079		
9,100.00	7,480.00	8,990.01	7,390.00	36.82	36.90	77.76	1,333.79	25.77	424.47	352.62	71.85	5.908		
9,200.00	7,480.00	9,090.01	7,390.00	37.91	38.01	77.77	1,433.78	26.09	424.98	350.95	74.03	5.741		
9,300.00	7,480.00	9,190.00	7,390.00	39.04	39.15	77.79	1,533.78	26.41	425.48	349.21	76.27	5.579		
9,400.00	7,480.00	9,290.00	7,390.00	40.20	40.33	77.80	1,633.78	26.73	425.99	347.42	78.58	5.421		
9,500.00	7,480.00	9,390.00	7,390.00	41.39	41.53	77.82	1,733.78	27.05	426.50	345.57	80.93	5.270		
9,600.00	7,480.00	9,490.00	7,390.00	42.60	42.75	77.83	1,833.78	27.36	427.01	343.67	83.34	5.124		
9,700.00	7,480.00	9,590.00	7,390.00	43.84	44.00	77.85	1,933.77	27.68	427.52	341.72	85.80	4.983		
9,800.00	7,480.00	9,690.00	7,390.00	45.10	45.27	77.86	2,033.77	28.00	428.03	339.74	88.29	4.848		
9,900.00	7,480.00	9,790.00	7,390.00	46.38	46.56	77.88	2,133.77	28.32	428.54	337.71	90.83	4.718		
10,000.00	7,480.00	9,890.00	7,390.00	47.68	47.86	77.89	2,233.77	28.64	429.05	335.65	93.40	4.594		
10,100.00	7,480.00	9,989.99	7,390.00	48.99	49.19	77.91	2,333.77	28.96	429.56	333.56	96.00	4.475		
10,200.00	7,480.00	10,089.99	7,390.00	50.32	50.52	77.92	2,433.77	29.28	430.07	331.44	98.63	4.360		
10,300.00	7,480.00	10,189.99	7,390.00	51.66	51.87	77.93	2,533.76	29.59	430.58	329.29	101.29	4.251		
10,400.00	7,480.00	10,289.99	7,390.00	53.02	53.24	77.95	2,633.76	29.91	431.09	327.11	103.98	4.146		
10,500.00	7,480.00	10,396.41	7,390.00	54.39	54.70	77.95	2,740.17	29.71	431.12	324.33	106.79	4.037		
10,600.00	7,480.00	10,496.40	7,390.00	55.77	56.10	77.92	2,840.16	28.51	430.14	320.63	109.51	3.928		
10,700.00	7,480.00	10,596.40	7,390.00	57.16	57.51	77.89	2,940.15	27.31	429.16	316.90	112.26	3.823		
10,800.00	7,480.00	10,696.39	7,390.00	58.56	58.92	77.87	3,040.14	26.11	428.18	313.16	115.03	3.722		
10,900.00	7,480.00	10,796.39	7,390.00	59.97	60.35	77.84	3,140.13	24.90	427.21	309.40	117.81	3.626		
11,000.00	7,480.00	10,896.38	7,390.00	61.39	61.78	77.81	3,240.11	23.70	426.23	305.62	120.61	3.534		
11,100.00	7,480.00	10,996.38	7,390.00	62.82	63.22	77.78	3,340.10	22.50	425.25	301.83	123.42	3.446		
11,200.00	7,480.00	11,096.37	7,390.00	64.25	64.67	77.75	3,440.09	21.30	424.27	298.03	126.25	3.361		
11,300.00	7,480.00	11,196.37	7,390.00	65.69	66.12	77.72	3,540.08	20.09	423.30	294.21	129.09	3.279		
11,400.00	7,480.00	11,296.36	7,390.00	67.14	67.58	77.69	3,640.06	18.89	422.32	290.38	131.94	3.201		
11,500.00	7,480.00	11,396.36	7,390.00	68.59	69.05	77.67	3,740.05	17.69	421.34	286.54	134.80	3.126		
11,600.00	7,480.00	11,496.35	7,390.00	70.05	70.52	77.64	3,840.04	16.49	420.36	282.69	137.67	3.053		
11,700.00	7,480.00	11,596.35	7,390.00	71.51	72.00	77.61	3,940.03	15.28	419.39	278.83	140.55	2.984		
11,800.00	7,480.00	11,696.34	7,390.00	72.98	73.48	77.58	4,040.02	14.08	418.41	274.96	143.45	2.917		
11,900.00	7,480.00	11,796.34	7,390.00	74.46	74.97	77.55	4,140.00	12.88	417.43	271.09	146.35	2.852		
12,000.00	7,480.00	11,896.33	7,390.00	75.93	76.46	77.52	4,239.99	11.68	416.46	267.20	149.25	2.790		
12,100.00	7,480.00	11,996.33	7,390.00	77.42	77.95	77.49	4,339.98	10.47	415.48	263.31	152.17	2.730		
12,200.00	7,480.00	12,096.32	7,390.00	78.90	79.45	77.46	4,439.97	9.27	414.50	259.41	155.09	2.673		
12,300.00	7,480.00	12,196.32	7,390.00	80.39	80.95	77.43	4,539.95	8.07	413.53	255.51	158.02	2.617		
12,400.00	7,480.00	12,296.31	7,390.00	81.89	82.46	77.40	4,639.94	6.87	412.55	251.60	160.95	2.563		
12,500.00	7,480.00	12,396.31	7,390.00	83.38	83.97	77.37	4,739.93	5.66	411.57	247.68	163.89	2.511		
12,600.00	7,480.00	12,496.30	7,390.00	84.88	85.48	77.34	4,839.92	4.46	410.60	243.76	166.84	2.461		
12,700.00	7,480.00	12,596.30	7,390.00	86.39	87.00	77.31	4,939.91	3.26	409.62	239.83	169.79	2.413		
12,800.00	7,480.00	12,696.29	7,390.00	87.89	88.51	77.28	5,039.89	2.05	408.65	235.90	172.74	2.366		
12,900.00	7,480.00	12,796.29	7,390.00	89.40	90.03	77.25	5,139.88	0.85	407.67	231.97	175.70	2.320		
13,000.00	7,480.00	12,896.28	7,390.00	90.91	91.56	77.21	5,239.87	-0.35	406.70	228.03	178.67	2.274		
13,100.00	7,480.00	12,996.28	7,390.00	92.43	93.08	77.18	5,339.86	-1.55	405.72	224.09	181.63	2.236		
13,200.00	7,480.00	13,096.27	7,390.00	93.94	94.61	77.15	5,439.84	-2.76	404.75	220.14	184.61	2.192		
13,300.00	7,480.00	13,196.27	7,390.00	95.46	96.14	77.12	5,539.83	-3.96	403.77	216.19	187.58	2.153		
13,400.00	7,480.00	13,296.26	7,390.00	96.98	97.67	77.09	5,639.82	-5.16	402.79	212.24	190.56	2.114		
13,500.00	7,480.00	13,396.26	7,390.00	98.50	99.20	77.06	5,739.81	-6.36	401.82	208.28	193.54	2.076		
13,600.00	7,480.00	13,496.25	7,390.00	100.03	100.74	77.02	5,839.80	-7.57	400.85	204.32	196.53	2.040		
13,700.00	7,480.00	13,596.25	7,390.00	101.56	102.27	76.99	5,939.78	-8.77	399.87	200.36	199.51	2.004		
13,800.00	7,480.00	13,696.24	7,390.00	103.08	103.81	76.96	6,039.77	-9.97	398.90	196.39	202.50	1.970		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - SULLIVAN 4I-26H-P268 - OH - PLAN #2													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM														
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	
13,900.00	7,480.00	13,796.24	7,390.00	104.61	105.35	76.93	6,139.76	-11.17	397.92	192.43	205.49	1.936		
14,000.00	7,480.00	13,896.23	7,390.00	106.14	106.89	76.89	6,239.75	-12.38	396.95	188.46	208.49	1.904		
14,100.00	7,480.00	13,996.23	7,390.00	107.68	108.44	76.86	6,339.73	-13.58	395.97	184.49	211.49	1.872		
14,200.00	7,480.00	14,096.22	7,390.00	109.21	109.98	76.83	6,439.72	-14.78	395.00	180.51	214.48	1.842		
14,300.00	7,480.00	14,196.22	7,390.00	110.75	111.53	76.80	6,539.71	-15.98	394.03	176.54	217.49	1.812		
14,400.00	7,480.00	14,296.21	7,390.00	112.28	113.07	76.76	6,639.70	-17.19	393.05	172.56	220.49	1.783		
14,500.00	7,480.00	14,396.21	7,390.00	113.82	114.62	76.73	6,739.69	-18.39	392.08	168.59	223.49	1.754		
14,514.90	7,480.00	14,411.11	7,390.00	114.05	114.85	76.72	6,754.59	-18.57	391.93	167.99	223.94	1.750		
14,600.00	7,480.00	14,496.13	7,390.00	115.34	116.17	76.59	6,839.61	-19.59	388.79	162.37	226.42	1.717		
14,689.49	7,480.00	14,585.20	7,390.00	116.66	117.55	76.21	6,928.67	-20.66	380.49	151.65	228.84	1.663		
14,703.04	7,480.00	14,595.72	7,390.00	116.84	117.71	76.17	6,939.19	-20.79	378.86	149.73	229.13	1.653 SF		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4J-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	89.74	0.09	20.14	20.14					
100.00	100.00	100.00	100.00	0.14	0.14	89.74	0.09	20.14	20.14	19.86	0.28	72.495		
200.00	200.00	200.00	200.00	0.50	0.50	89.74	0.09	20.14	20.14	19.15	0.99	20.246	CC	
204.07	204.07	204.07	204.07	0.51	0.51	-90.27	0.09	20.14	20.14	19.12	1.02	19.682		
300.00	299.98	299.98	299.98	0.84	0.85	-95.21	0.09	20.14	20.22	18.53	1.70	11.919	ES	
400.00	399.84	399.81	399.81	1.19	1.20	-108.14	-0.31	20.31	21.38	18.99	2.39	8.935		
500.00	499.51	499.65	499.58	1.55	1.54	-134.88	-3.50	21.67	25.80	22.71	3.09	8.352		
600.00	598.94	599.39	599.07	1.92	1.89	-145.15	-9.89	24.38	33.70	29.90	3.81	8.852		
700.52	698.51	699.22	698.36	2.32	2.25	-147.33	-19.47	28.46	45.10	40.55	4.55	9.909		
800.00	796.84	797.66	795.92	2.71	2.62	-142.33	-31.54	33.59	58.49	53.18	5.31	11.017		
900.00	895.67	896.63	893.96	3.12	3.01	-138.93	-43.98	38.88	72.28	66.20	6.08	11.885		
1,000.00	994.50	995.60	992.00	3.54	3.40	-136.62	-56.42	44.17	86.24	79.38	6.86	12.566		
1,100.00	1,093.34	1,094.57	1,090.05	3.95	3.79	-134.96	-68.86	49.45	100.30	92.65	7.65	13.110		
1,200.00	1,192.17	1,193.54	1,188.09	4.37	4.19	-133.71	-81.29	54.74	114.42	105.98	8.44	13.552		
1,300.00	1,291.01	1,292.51	1,286.14	4.79	4.59	-132.73	-93.73	60.03	128.58	119.34	9.24	13.918		
1,400.00	1,389.84	1,391.49	1,384.18	5.21	4.99	-131.94	-106.17	65.32	142.77	132.74	10.04	14.225		
1,500.00	1,488.68	1,490.46	1,482.22	5.63	5.40	-131.30	-118.60	70.61	156.99	146.15	10.84	14.486		
1,600.00	1,587.51	1,589.43	1,580.27	6.05	5.80	-130.77	-131.04	75.89	171.22	159.58	11.64	14.710		
1,700.00	1,686.35	1,688.40	1,678.31	6.48	6.21	-130.31	-143.48	81.18	185.46	173.02	12.44	14.905		
1,800.00	1,785.18	1,787.37	1,776.35	6.90	6.61	-129.93	-155.91	86.47	199.71	186.46	13.25	15.075		
1,900.00	1,884.02	1,886.34	1,874.40	7.33	7.02	-129.59	-168.35	91.76	213.97	199.92	14.05	15.226		
2,000.00	1,982.85	1,985.31	1,972.44	7.75	7.43	-129.30	-180.79	97.04	228.24	213.38	14.86	15.360		
2,100.00	2,081.69	2,084.28	2,070.49	8.17	7.83	-129.04	-193.22	102.33	242.51	226.84	15.67	15.480		
2,200.00	2,180.52	2,183.25	2,168.53	8.60	8.24	-128.80	-205.66	107.62	256.78	240.31	16.47	15.587		
2,300.00	2,279.36	2,282.22	2,266.57	9.03	8.65	-128.60	-218.10	112.91	271.06	253.78	17.28	15.685		
2,400.00	2,378.19	2,381.19	2,364.62	9.45	9.06	-128.41	-230.54	118.20	285.34	267.25	18.09	15.773		
2,500.00	2,477.02	2,480.16	2,462.66	9.88	9.46	-128.24	-242.97	123.48	299.63	280.73	18.90	15.854		
2,600.00	2,575.86	2,579.13	2,560.71	10.30	9.87	-128.09	-255.41	128.77	313.92	294.21	19.71	15.928		
2,700.00	2,674.69	2,678.11	2,658.75	10.73	10.28	-127.95	-267.85	134.06	328.20	307.69	20.52	15.996		
2,800.00	2,773.53	2,777.08	2,756.79	11.15	10.69	-127.82	-280.28	139.35	342.50	321.17	21.33	16.059		
2,900.00	2,872.36	2,876.05	2,854.84	11.58	11.10	-127.70	-292.72	144.63	356.79	334.65	22.14	16.117		
3,000.00	2,971.20	2,975.02	2,952.88	12.01	11.51	-127.60	-305.16	149.92	371.08	348.13	22.95	16.171		
3,100.00	3,070.03	3,073.99	3,050.92	12.43	11.92	-127.50	-317.59	155.21	385.38	361.62	23.76	16.221		
3,200.00	3,168.87	3,172.96	3,148.97	12.86	12.33	-127.40	-330.03	160.50	399.67	375.10	24.57	16.268		
3,300.00	3,267.70	3,271.93	3,247.01	13.28	12.74	-127.32	-342.47	165.79	413.97	388.59	25.38	16.312		
3,400.00	3,366.54	3,370.90	3,345.06	13.71	13.15	-127.23	-354.90	171.07	428.27	402.08	26.19	16.353		
3,500.00	3,465.37	3,469.87	3,443.10	14.14	13.56	-127.16	-367.34	176.36	442.57	415.57	27.00	16.391		
3,600.00	3,564.21	3,568.84	3,541.14	14.56	13.97	-127.09	-379.78	181.65	456.86	429.05	27.81	16.427		
3,700.00	3,663.04	3,667.81	3,639.19	14.99	14.38	-127.02	-392.21	186.94	471.16	442.54	28.62	16.461		
3,800.00	3,761.88	3,766.78	3,737.23	15.42	14.78	-126.96	-404.65	192.22	485.47	456.03	29.43	16.494		
3,900.00	3,860.71	3,865.76	3,835.27	15.84	15.19	-126.90	-417.09	197.51	499.77	469.52	30.25	16.524		
4,000.00	3,959.54	3,964.73	3,933.32	16.27	15.60	-126.84	-429.53	202.80	514.07	483.01	31.06	16.553		
4,100.00	4,058.38	4,063.70	4,031.36	16.70	16.01	-126.79	-441.96	208.09	528.37	496.50	31.87	16.580		
4,200.00	4,157.21	4,162.67	4,129.41	17.12	16.42	-126.74	-454.40	213.38	542.67	509.99	32.68	16.606		
4,300.00	4,256.05	4,261.64	4,227.45	17.55	16.83	-126.69	-466.84	218.66	556.98	523.48	33.49	16.631		
4,400.00	4,354.88	4,360.61	4,325.49	17.98	17.24	-126.65	-479.27	223.95	571.28	536.98	34.30	16.654		
4,500.00	4,453.72	4,459.58	4,423.54	18.40	17.65	-126.60	-491.71	229.24	585.58	550.47	35.11	16.676		
4,600.00	4,552.55	4,558.55	4,521.58	18.83	18.06	-126.56	-504.15	234.53	599.89	563.96	35.93	16.698		
4,611.50	4,563.92	4,569.94	4,532.86	18.88	18.11	-126.56	-505.58	235.13	601.53	565.51	36.02	16.700		
4,700.00	4,651.58	4,658.60	4,620.69	19.25	18.48	-126.61	-516.70	239.86	613.38	576.64	36.74	16.695		
4,800.00	4,751.03	4,766.95	4,728.34	19.64	18.91	-126.57	-528.03	244.68	623.95	586.37	37.58	16.603		
4,900.00	4,850.78	4,875.87	4,836.93	20.00	19.31	-126.54	-535.63	247.91	631.02	592.65	38.37	16.445		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4J-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,000.00	4,950.72	4,985.12	4,946.10	20.34	19.69	-126.52	-539.44	249.53	634.55	595.43	39.11	16.224		
5,049.28	5,000.00	5,039.02	5,000.00	20.49	19.86	89.72	-539.91	249.73	634.98	595.54	39.44	16.099		
5,100.00	5,050.72	5,089.74	5,050.72	20.63	20.01	89.72	-539.91	249.73	634.98	595.24	39.73	15.981		
5,200.00	5,150.72	5,189.74	5,150.72	20.91	20.30	89.72	-539.91	249.73	634.98	594.66	40.31	15.750		
5,300.00	5,250.72	5,289.74	5,250.72	21.19	20.59	89.72	-539.91	249.73	634.98	594.08	40.90	15.525		
5,400.00	5,350.72	5,389.74	5,350.72	21.48	20.88	89.72	-539.91	249.73	634.98	593.49	41.49	15.305		
5,500.00	5,450.72	5,489.74	5,450.72	21.77	21.18	89.72	-539.91	249.73	634.98	592.90	42.08	15.089		
5,600.00	5,550.72	5,589.74	5,550.72	22.06	21.48	89.72	-539.91	249.73	634.98	592.30	42.68	14.878		
5,700.00	5,650.72	5,689.74	5,650.72	22.35	21.78	89.72	-539.91	249.73	634.98	591.70	43.28	14.672		
5,800.00	5,750.72	5,789.74	5,750.72	22.65	22.08	89.72	-539.91	249.73	634.98	591.09	43.88	14.470		
5,900.00	5,850.72	5,889.74	5,850.72	22.94	22.38	89.72	-539.91	249.73	634.98	590.49	44.49	14.272		
6,000.00	5,950.72	5,989.74	5,950.72	23.24	22.69	89.72	-539.91	249.73	634.98	589.88	45.10	14.079		
6,100.00	6,050.72	6,089.74	6,050.72	23.54	22.99	89.72	-539.91	249.73	634.98	589.26	45.71	13.890		
6,200.00	6,150.72	6,189.74	6,150.72	23.84	23.30	89.72	-539.91	249.73	634.98	588.65	46.33	13.705		
6,300.00	6,250.72	6,289.74	6,250.72	24.15	23.61	89.72	-539.91	249.73	634.98	588.03	46.95	13.524		
6,400.00	6,350.72	6,389.74	6,350.72	24.45	23.92	89.72	-539.91	249.73	634.98	587.40	47.57	13.348		
6,500.00	6,450.72	6,489.74	6,450.72	24.76	24.23	89.72	-539.91	249.73	634.98	586.78	48.20	13.174		
6,600.00	6,550.72	6,589.74	6,550.72	25.06	24.54	89.72	-539.91	249.73	634.98	586.15	48.82	13.005		
6,700.00	6,650.72	6,689.74	6,650.72	25.37	24.86	89.72	-539.91	249.73	634.98	585.52	49.45	12.840		
6,800.00	6,750.72	6,789.74	6,750.72	25.68	25.17	89.72	-539.91	249.73	634.98	584.89	50.09	12.678		
6,813.09	6,763.80	6,802.82	6,763.80	25.72	25.21	89.72	-539.91	249.73	634.98	584.81	50.17	12.657		
6,850.00	6,800.70	6,839.76	6,800.72	25.84	25.33	89.84	-538.96	249.72	634.97	584.58	50.40	12.599		
6,900.00	6,850.50	6,889.78	6,850.55	25.98	25.47	89.84	-534.63	249.70	634.96	584.27	50.69	12.526		
6,950.00	6,899.88	6,939.81	6,899.95	26.11	25.61	89.84	-526.85	249.66	634.93	583.97	50.97	12.458		
7,000.00	6,948.60	6,989.83	6,948.69	26.24	25.74	89.84	-515.63	249.60	634.89	583.67	51.22	12.395		
7,050.00	6,996.42	7,039.85	6,996.53	26.35	25.86	89.85	-501.04	249.52	634.85	583.39	51.46	12.337		
7,100.00	7,043.10	7,089.88	7,043.23	26.46	25.97	89.85	-483.15	249.42	634.78	583.10	51.68	12.282		
7,150.00	7,088.43	7,139.90	7,088.57	26.55	26.08	89.85	-462.04	249.31	634.71	582.82	51.89	12.232		
7,200.00	7,132.17	7,189.92	7,132.33	26.64	26.18	89.86	-437.82	249.18	634.63	582.54	52.09	12.184		
7,250.00	7,174.12	7,239.94	7,174.28	26.71	26.27	89.87	-410.61	249.03	634.54	582.26	52.27	12.139		
7,300.00	7,214.06	7,289.96	7,214.24	26.78	26.36	89.87	-380.53	248.86	634.43	581.98	52.46	12.095		
7,350.00	7,251.82	7,339.98	7,252.00	26.85	26.45	89.88	-347.74	248.69	634.32	581.69	52.63	12.051		
7,400.00	7,287.20	7,390.00	7,287.37	26.90	26.53	89.89	-312.40	248.49	634.20	581.39	52.82	12.008		
7,450.00	7,320.02	7,440.01	7,320.20	26.96	26.62	89.89	-274.67	248.29	634.07	581.07	53.00	11.963		
7,500.00	7,350.14	7,490.03	7,350.31	27.01	26.72	89.91	-234.75	248.07	633.94	580.74	53.20	11.916		
7,550.00	7,377.40	7,540.04	7,377.56	27.07	26.82	89.92	-192.82	247.84	633.79	580.39	53.41	11.867		
7,600.00	7,401.67	7,590.05	7,401.82	27.13	26.92	89.93	-149.10	247.61	633.65	580.01	53.63	11.814		
7,650.00	7,422.84	7,640.06	7,422.96	27.19	27.04	89.94	-103.80	247.36	633.49	579.61	53.88	11.758		
7,700.00	7,440.79	7,690.07	7,440.90	27.27	27.17	89.95	-57.12	247.11	633.33	579.19	54.14	11.697		
7,750.00	7,455.44	7,740.08	7,455.53	27.36	27.31	89.96	-9.32	246.85	633.17	578.74	54.43	11.632		
7,800.00	7,466.73	7,790.09	7,466.80	27.46	27.47	89.97	39.39	246.58	633.00	578.26	54.75	11.562		
7,850.00	7,474.59	7,840.09	7,474.63	27.59	27.63	89.98	88.77	246.31	632.83	577.75	55.08	11.488		
7,900.00	7,478.99	7,890.09	7,479.01	27.73	27.82	89.99	138.56	246.04	632.66	577.22	55.45	11.410		
7,938.09	7,480.00	7,928.18	7,480.00	27.85	27.96	90.00	176.63	245.84	632.54	576.80	55.74	11.349		
8,000.00	7,480.00	7,990.09	7,480.00	28.08	28.22	90.00	238.55	245.50	632.32	576.07	56.25	11.240		
8,100.00	7,480.00	8,090.09	7,480.00	28.53	28.72	90.00	338.54	244.96	631.98	574.76	57.22	11.045		
8,200.00	7,480.00	8,190.09	7,480.00	29.06	29.29	90.00	438.54	244.41	631.64	573.30	58.34	10.826		
8,300.00	7,480.00	8,290.09	7,480.00	29.68	29.93	90.00	538.54	243.87	631.30	571.69	59.61	10.590		
8,400.00	7,480.00	8,390.09	7,480.00	30.37	30.65	90.00	638.54	243.33	630.96	569.94	61.02	10.340		
8,500.00	7,480.00	8,490.09	7,480.00	31.13	31.43	90.00	738.54	242.78	630.62	568.06	62.56	10.080		
8,600.00	7,480.00	8,590.09	7,480.00	31.95	32.27	90.00	838.53	242.24	630.28	566.06	64.22	9.815		
8,700.00	7,480.00	8,690.09	7,480.00	32.83	33.17	90.00	938.53	241.70	629.94	563.95	65.99	9.547		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft	
Reference: S26-T2N-R68W - SULLIVAN 4J-26H-P268 - OH - PLAN #2															
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		
8,800.00	7,480.00	8,790.09	7,480.00	33.76	34.11	90.00	1,038.53	241.15	629.60	561.74	67.86	9.278			
8,900.00	7,480.00	8,890.09	7,480.00	34.74	35.10	90.00	1,138.53	240.61	629.25	559.43	69.82	9.012			
9,000.00	7,480.00	8,990.09	7,480.00	35.76	36.14	90.00	1,238.53	240.07	628.91	557.04	71.87	8.750			
9,100.00	7,480.00	9,090.08	7,480.00	36.82	37.21	90.00	1,338.52	239.52	628.57	554.57	74.00	8.494			
9,200.00	7,480.00	9,190.08	7,480.00	37.91	38.32	90.00	1,438.52	238.98	628.23	552.03	76.21	8.244			
9,300.00	7,480.00	9,290.08	7,480.00	39.04	39.47	90.00	1,538.52	238.44	627.89	549.42	78.47	8.001			
9,400.00	7,480.00	9,390.08	7,480.00	40.20	40.64	90.00	1,638.52	237.89	627.55	546.74	80.80	7.766			
9,500.00	7,480.00	9,490.08	7,480.00	41.39	41.84	90.00	1,738.51	237.35	627.21	544.02	83.19	7.539			
9,600.00	7,480.00	9,590.08	7,480.00	42.60	43.06	90.00	1,838.51	236.81	626.87	541.24	85.63	7.321			
9,700.00	7,480.00	9,690.08	7,480.00	43.84	44.31	90.00	1,938.51	236.26	626.53	538.42	88.11	7.111			
9,800.00	7,480.00	9,790.08	7,480.00	45.10	45.58	90.00	2,038.51	235.72	626.19	535.55	90.64	6.909			
9,900.00	7,480.00	9,890.08	7,480.00	46.38	46.87	90.00	2,138.51	235.17	625.84	532.64	93.20	6.715			
10,000.00	7,480.00	9,990.08	7,480.00	47.68	48.17	90.00	2,238.50	234.63	625.50	529.70	95.81	6.529			
10,100.00	7,480.00	10,090.08	7,480.00	48.99	49.50	90.00	2,338.50	234.09	625.16	526.72	98.44	6.351			
10,200.00	7,480.00	10,190.08	7,480.00	50.32	50.83	90.00	2,438.50	233.54	624.82	523.71	101.11	6.180			
10,300.00	7,480.00	10,290.08	7,480.00	51.66	52.18	90.00	2,538.50	233.00	624.48	520.68	103.80	6.016			
10,400.00	7,480.00	10,390.08	7,480.00	53.02	53.55	90.00	2,638.50	232.46	624.14	517.61	106.52	5.859			
10,500.00	7,480.00	10,490.08	7,480.00	54.39	54.93	90.00	2,738.49	231.91	623.80	514.53	109.27	5.709			
10,600.00	7,480.00	10,590.08	7,480.00	55.77	56.31	90.00	2,838.49	231.37	623.46	511.42	112.04	5.565			
10,700.00	7,480.00	10,690.08	7,480.00	57.16	57.71	90.00	2,938.49	230.83	623.12	508.29	114.83	5.427			
10,800.00	7,480.00	10,790.07	7,480.00	58.56	59.12	90.00	3,038.49	230.28	622.77	505.14	117.64	5.294			
10,900.00	7,480.00	10,890.07	7,480.00	59.97	60.53	90.00	3,138.49	229.74	622.43	501.97	120.46	5.167			
11,000.00	7,480.00	10,990.07	7,480.00	61.39	61.96	90.00	3,238.48	229.20	622.09	498.79	123.31	5.045			
11,100.00	7,480.00	11,090.07	7,480.00	62.82	63.39	90.00	3,338.48	228.65	621.75	495.59	126.16	4.928			
11,200.00	7,480.00	11,190.07	7,480.00	64.25	64.83	90.00	3,438.48	228.11	621.41	492.37	129.04	4.816			
11,300.00	7,480.00	11,290.07	7,480.00	65.69	66.28	90.00	3,538.48	227.57	621.07	489.14	131.93	4.708			
11,400.00	7,480.00	11,390.07	7,480.00	67.14	67.73	90.00	3,638.48	227.02	620.73	485.90	134.83	4.604			
11,500.00	7,480.00	11,490.07	7,480.00	68.59	69.19	90.00	3,738.47	226.48	620.39	482.65	137.74	4.504			
11,600.00	7,480.00	11,590.07	7,480.00	70.05	70.65	90.00	3,838.47	225.94	620.05	479.39	140.66	4.408			
11,700.00	7,480.00	11,690.07	7,480.00	71.51	72.12	90.00	3,938.47	225.39	619.71	476.11	143.59	4.316			
11,800.00	7,480.00	11,790.07	7,480.00	72.98	73.60	90.00	4,038.47	224.85	619.36	472.83	146.54	4.227			
11,900.00	7,480.00	11,890.07	7,480.00	74.46	75.07	90.00	4,138.47	224.31	619.02	469.53	149.49	4.141			
12,000.00	7,480.00	11,990.07	7,480.00	75.93	76.56	90.00	4,238.46	223.76	618.68	466.23	152.45	4.058			
12,100.00	7,480.00	12,090.07	7,480.00	77.42	78.05	90.00	4,338.46	223.22	618.34	462.92	155.42	3.978			
12,200.00	7,480.00	12,190.07	7,480.00	78.90	79.54	90.00	4,438.46	222.68	618.00	459.60	158.40	3.901			
12,300.00	7,480.00	12,290.07	7,480.00	80.39	81.03	90.00	4,538.46	222.13	617.66	456.27	161.39	3.827			
12,400.00	7,480.00	12,390.07	7,480.00	81.89	82.53	90.00	4,638.46	221.59	617.32	452.94	164.38	3.755			
12,500.00	7,480.00	12,490.06	7,480.00	83.38	84.03	90.00	4,738.45	221.05	616.98	449.60	167.38	3.686			
12,600.00	7,480.00	12,590.06	7,480.00	84.88	85.54	90.00	4,838.45	220.50	616.64	446.25	170.38	3.619			
12,700.00	7,480.00	12,690.06	7,480.00	86.39	87.04	90.00	4,938.45	219.96	616.29	442.90	173.39	3.554			
12,800.00	7,480.00	12,790.06	7,480.00	87.89	88.55	90.00	5,038.45	219.42	615.95	439.54	176.41	3.492			
12,900.00	7,480.00	12,890.06	7,480.00	89.40	90.07	90.00	5,138.44	218.87	615.61	436.18	179.43	3.431			
13,000.00	7,480.00	12,990.06	7,480.00	90.91	91.58	90.00	5,238.44	218.33	615.27	432.81	182.46	3.372			
13,100.00	7,480.00	13,090.06	7,480.00	92.43	93.10	90.00	5,338.44	217.79	614.93	429.44	185.49	3.315			
13,200.00	7,480.00	13,190.06	7,480.00	93.94	94.62	90.00	5,438.44	217.24	614.59	426.06	188.53	3.260			
13,300.00	7,480.00	13,290.06	7,480.00	95.46	96.14	90.00	5,538.44	216.70	614.25	422.68	191.57	3.206			
13,400.00	7,480.00	13,390.06	7,480.00	96.98	97.67	90.00	5,638.43	216.15	613.91	419.29	194.62	3.154			
13,500.00	7,480.00	13,490.06	7,480.00	98.50	99.19	90.00	5,738.43	215.61	613.57	415.90	197.67	3.104			
13,600.00	7,480.00	13,590.06	7,480.00	100.03	100.72	90.00	5,838.43	215.07	613.23	412.51	200.72	3.055			
13,700.00	7,480.00	13,690.06	7,480.00	101.56	102.25	90.00	5,938.43	214.52	612.88	409.11	203.78	3.008			
13,800.00	7,480.00	13,790.06	7,480.00	103.08	103.78	90.00	6,038.43	213.98	612.54	405.71	206.84	2.961			
13,900.00	7,480.00	13,890.06	7,480.00	104.61	105.32	90.00	6,138.42	213.44	612.20	402.30	209.90	2.917			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - SULLIVAN 4J-26H-P268 - OH - PLAN #2														
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		
14,000.00	7,480.00	13,990.06	7,480.00	106.14	106.85	90.00	6,238.42	212.89	611.86	398.90	212.97	2.873		
14,100.00	7,480.00	14,090.06	7,480.00	107.68	108.39	90.00	6,338.42	212.35	611.52	395.48	216.04	2.831		
14,200.00	7,480.00	14,190.06	7,480.00	109.21	109.93	90.00	6,438.42	211.81	611.18	392.07	219.11	2.789		
14,300.00	7,480.00	14,290.05	7,480.00	110.75	111.47	90.00	6,538.42	211.26	610.84	388.65	222.18	2.749		
14,400.00	7,480.00	14,390.05	7,480.00	112.28	113.01	90.00	6,638.41	210.72	610.50	385.24	225.26	2.710		
14,500.00	7,480.00	14,490.05	7,480.00	113.82	114.55	90.00	6,738.41	210.18	610.16	381.81	228.34	2.672		
14,514.90	7,480.00	14,504.96	7,480.00	114.05	114.78	90.00	6,753.32	210.10	610.11	381.30	228.80	2.667		
14,600.00	7,480.00	14,590.00	7,480.00	115.34	116.09	90.00	6,838.36	209.63	607.43	376.03	231.41	2.625		
14,689.49	7,480.00	14,679.12	7,480.00	116.66	117.47	90.00	6,927.48	209.15	599.49	365.39	234.10	2.561		
14,703.04	7,480.00	14,691.86	7,480.00	116.84	117.66	90.00	6,940.22	209.08	597.89	363.42	234.47	2.550 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
0.00	0.00	0.00	0.00	0.00	0.00	89.75	0.13	30.21	30.21	29.93	0.28	108.743		
100.00	100.00	100.00	100.00	0.14	0.14	89.75	0.13	30.21	30.21	29.22	0.99	30.370 CC		
200.00	200.00	200.00	200.00	0.50	0.50	89.75	0.13	30.21	30.21	29.20	1.01	29.819		
202.62	202.62	202.62	202.62	0.51	0.51	-90.25	0.13	30.21	30.21	28.57	1.70	17.840 ES		
300.00	299.98	299.98	299.98	0.84	0.85	-93.55	0.13	30.21	30.27	28.57	1.70	17.840 ES		
400.00	399.84	399.84	399.84	1.19	1.21	-103.21	0.13	30.21	31.04	28.64	2.40	12.929		
500.00	499.51	499.51	499.51	1.55	1.57	-134.08	0.13	30.21	35.07	31.95	3.12	11.241		
600.00	598.94	598.94	598.94	1.92	1.93	-153.72	0.13	30.21	43.78	39.93	3.84	11.386		
700.52	698.51	698.84	698.82	2.32	2.27	-163.88	-1.36	31.03	56.40	51.84	4.56	12.373		
800.00	796.84	797.70	797.55	2.71	2.60	-163.16	-5.85	33.48	70.16	64.90	5.26	13.348		
900.00	895.67	897.05	896.52	3.12	2.94	-160.32	-13.37	37.59	83.58	77.61	5.97	14.001		
1,000.00	994.50	996.13	994.87	3.54	3.30	-156.25	-23.85	43.31	97.00	90.29	6.70	14.469		
1,100.00	1,093.34	1,094.93	1,092.77	3.95	3.66	-152.44	-35.55	49.70	110.82	103.37	7.46	14.864		
1,200.00	1,192.17	1,193.74	1,190.67	4.37	4.04	-149.48	-47.24	56.09	125.03	116.81	8.22	15.210		
1,300.00	1,291.01	1,292.54	1,288.57	4.79	4.42	-147.12	-58.94	62.48	139.49	130.50	8.99	15.513		
1,400.00	1,389.84	1,391.34	1,386.47	5.21	4.80	-145.21	-70.63	68.87	154.14	144.37	9.77	15.776		
1,500.00	1,488.68	1,490.14	1,484.37	5.63	5.19	-143.64	-82.33	75.26	168.93	158.37	10.55	16.007		
1,600.00	1,587.51	1,588.95	1,582.27	6.05	5.58	-142.31	-94.03	81.65	183.82	172.48	11.34	16.211		
1,700.00	1,686.35	1,687.75	1,680.17	6.48	5.97	-141.19	-105.72	88.04	198.80	186.67	12.13	16.390		
1,800.00	1,785.18	1,786.55	1,778.07	6.90	6.37	-140.22	-117.42	94.43	213.84	200.91	12.92	16.550		
1,900.00	1,884.02	1,885.35	1,875.97	7.33	6.77	-139.38	-129.11	100.82	228.93	215.21	13.71	16.693		
2,000.00	1,982.85	1,984.16	1,973.87	7.75	7.17	-138.65	-140.81	107.21	244.06	229.55	14.51	16.821		
2,100.00	2,081.69	2,082.96	2,071.77	8.17	7.56	-138.00	-152.50	113.60	259.23	243.92	15.31	16.937		
2,200.00	2,180.52	2,181.76	2,169.67	8.60	7.97	-137.42	-164.20	119.99	274.43	258.32	16.10	17.042		
2,300.00	2,279.36	2,280.56	2,267.57	9.03	8.37	-136.90	-175.89	126.38	289.65	272.75	16.90	17.138		
2,400.00	2,378.19	2,379.37	2,365.47	9.45	8.77	-136.44	-187.59	132.77	304.89	287.19	17.70	17.225		
2,500.00	2,477.02	2,478.17	2,463.37	9.88	9.17	-136.02	-199.29	139.16	320.15	301.65	18.50	17.305		
2,600.00	2,575.86	2,576.97	2,561.27	10.30	9.57	-135.63	-210.98	145.55	335.43	316.13	19.30	17.379		
2,700.00	2,674.69	2,675.78	2,659.17	10.73	9.98	-135.28	-222.68	151.94	350.72	330.61	20.10	17.447		
2,800.00	2,773.53	2,774.58	2,757.07	11.15	10.38	-134.96	-234.37	158.33	366.02	345.11	20.90	17.510		
2,900.00	2,872.36	2,873.38	2,854.97	11.58	10.79	-134.67	-246.07	164.72	381.33	359.62	21.70	17.569		
3,000.00	2,971.20	2,972.18	2,952.86	12.01	11.19	-134.40	-257.76	171.11	396.65	374.14	22.51	17.623		
3,100.00	3,070.03	3,070.99	3,050.76	12.43	11.60	-134.14	-269.46	177.50	411.98	388.67	23.31	17.674		
3,200.00	3,168.87	3,169.79	3,148.66	12.86	12.00	-133.91	-281.15	183.88	427.31	403.20	24.11	17.722		
3,300.00	3,267.70	3,268.59	3,246.56	13.28	12.41	-133.69	-292.85	190.27	442.65	417.74	24.92	17.766		
3,400.00	3,366.54	3,367.39	3,344.46	13.71	12.81	-133.49	-304.55	196.66	458.00	432.28	25.72	17.808		
3,500.00	3,465.37	3,466.20	3,442.36	14.14	13.22	-133.30	-316.24	203.05	473.35	446.83	26.52	17.847		
3,600.00	3,564.21	3,565.00	3,540.26	14.56	13.62	-133.12	-327.94	209.44	488.71	461.38	27.33	17.884		
3,700.00	3,663.04	3,663.80	3,638.16	14.99	14.03	-132.96	-339.63	215.83	504.07	475.94	28.13	17.919		
3,800.00	3,761.88	3,762.60	3,736.06	15.42	14.44	-132.80	-351.33	222.22	519.44	490.50	28.93	17.952		
3,900.00	3,860.71	3,861.41	3,833.96	15.84	14.84	-132.65	-363.02	228.61	534.81	505.07	29.74	17.984		
4,000.00	3,959.54	3,960.21	3,931.86	16.27	15.25	-132.51	-374.72	235.00	550.18	519.64	30.54	18.013		
4,100.00	4,058.38	4,059.01	4,029.76	16.70	15.66	-132.38	-386.41	241.39	565.56	534.21	31.35	18.041		
4,200.00	4,157.21	4,157.82	4,127.66	17.12	16.06	-132.25	-398.11	247.78	580.94	548.78	32.15	18.068		
4,300.00	4,256.05	4,256.62	4,225.56	17.55	16.47	-132.13	-409.80	254.17	596.32	563.36	32.96	18.094		
4,400.00	4,354.88	4,355.42	4,323.46	17.98	16.88	-132.02	-421.50	260.56	611.70	577.94	33.76	18.118		
4,500.00	4,453.72	4,454.22	4,421.36	18.40	17.28	-131.91	-433.20	266.95	627.09	592.52	34.57	18.141		
4,600.00	4,552.55	4,553.03	4,519.26	18.83	17.69	-131.81	-444.89	273.34	642.47	607.10	35.37	18.163		
4,611.50	4,563.92	4,564.39	4,530.52	18.88	17.74	-131.80	-446.24	274.07	644.24	608.78	35.46	18.166		
4,700.00	4,651.58	4,651.94	4,617.27	19.25	18.10	-131.82	-456.60	279.74	656.96	620.79	36.17	18.162		
4,800.00	4,751.03	4,751.08	4,715.51	19.64	18.51	-131.60	-468.34	286.15	669.18	632.22	36.96	18.106		
4,900.00	4,850.78	4,850.32	4,813.84	20.00	18.92	-131.14	-480.08	292.56	679.15	641.42	37.73	17.999		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4K-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,000.00	4,950.72	4,949.54	4,912.15	20.34	19.33	-130.45	-491.83	298.98	686.94	648.45	38.49	17.847		
5,049.28	5,000.00	4,998.40	4,960.56	20.49	19.53	86.22	-497.61	302.14	690.01	651.16	38.85	17.762		
5,100.00	5,050.72	5,048.65	5,010.35	20.63	19.73	86.73	-503.56	305.39	692.93	653.73	39.21	17.675		
5,200.00	5,150.72	5,147.73	5,108.53	20.91	20.14	87.72	-515.29	311.80	698.86	658.95	39.91	17.511		
5,300.00	5,250.72	5,258.85	5,218.88	21.19	20.59	88.67	-526.73	318.05	704.20	663.51	40.69	17.306		
5,400.00	5,350.72	5,371.46	5,331.13	21.48	21.01	89.31	-534.50	322.29	707.85	666.41	41.45	17.079		
5,500.00	5,450.72	5,484.59	5,444.16	21.77	21.40	89.63	-538.39	324.42	709.70	667.54	42.16	16.833		
5,600.00	5,550.72	5,591.15	5,550.72	22.06	21.73	89.67	-538.87	324.68	709.93	667.13	42.80	16.588		
5,700.00	5,650.72	5,691.15	5,650.72	22.35	22.03	89.67	-538.87	324.68	709.93	666.54	43.40	16.360		
5,800.00	5,750.72	5,791.15	5,750.72	22.65	22.33	89.67	-538.87	324.68	709.93	665.93	44.00	16.136		
5,900.00	5,850.72	5,891.15	5,850.72	22.94	22.63	89.67	-538.87	324.68	709.93	665.33	44.60	15.917		
6,000.00	5,950.72	5,991.15	5,950.72	23.24	22.93	89.67	-538.87	324.68	709.93	664.72	45.21	15.703		
6,100.00	6,050.72	6,091.15	6,050.72	23.54	23.23	89.67	-538.87	324.68	709.93	664.11	45.82	15.493		
6,200.00	6,150.72	6,191.15	6,150.72	23.84	23.53	89.67	-538.87	324.68	709.93	663.50	46.44	15.288		
6,300.00	6,250.72	6,291.15	6,250.72	24.15	23.84	89.67	-538.87	324.68	709.93	662.88	47.05	15.087		
6,400.00	6,350.72	6,391.15	6,350.72	24.45	24.15	89.67	-538.87	324.68	709.93	662.26	47.67	14.891		
6,500.00	6,450.72	6,491.15	6,450.72	24.76	24.46	89.67	-538.87	324.68	709.93	661.63	48.30	14.699		
6,600.00	6,550.72	6,591.15	6,550.72	25.06	24.77	89.67	-538.87	324.68	709.93	661.01	48.92	14.511		
6,700.00	6,650.72	6,691.15	6,650.72	25.37	25.08	89.67	-538.87	324.68	709.93	660.38	49.55	14.327		
6,800.00	6,750.72	6,791.15	6,750.72	25.68	25.39	89.67	-538.87	324.68	709.93	659.75	50.18	14.147		
6,813.09	6,763.80	6,804.23	6,763.80	25.72	25.43	89.67	-538.87	324.68	709.93	659.67	50.26	14.124		
6,850.00	6,800.70	6,841.13	6,800.70	25.84	25.55	89.86	-538.87	324.68	709.93	659.43	50.50	14.059		
6,875.25	6,825.89	6,866.32	6,825.89	25.91	25.63	90.00	-538.87	324.68	709.93	659.28	50.65	14.016		
6,900.00	6,850.50	6,890.93	6,850.50	25.98	25.70	90.21	-538.87	324.68	709.93	659.13	50.80	13.975		
6,950.00	6,899.88	6,940.33	6,899.90	26.11	25.86	90.82	-538.84	324.68	710.00	658.90	51.10	13.895		
7,000.00	6,948.60	6,989.92	6,949.44	26.24	26.01	91.53	-536.70	324.70	710.22	658.84	51.38	13.823		
7,050.00	6,996.42	7,040.16	6,999.34	26.35	26.15	92.24	-531.05	324.76	710.59	658.95	51.64	13.759		
7,100.00	7,043.10	7,091.06	7,049.38	26.46	26.29	92.94	-521.77	324.86	711.12	659.23	51.89	13.704		
7,150.00	7,088.43	7,142.65	7,099.29	26.55	26.42	93.63	-508.76	324.99	711.80	659.68	52.12	13.657		
7,200.00	7,132.17	7,194.95	7,148.80	26.64	26.54	94.30	-491.94	325.16	712.62	660.29	52.33	13.618		
7,250.00	7,174.12	7,247.98	7,197.61	26.71	26.65	94.96	-471.24	325.37	713.58	661.05	52.52	13.586		
7,300.00	7,214.06	7,301.74	7,245.39	26.78	26.76	95.60	-446.63	325.62	714.65	661.95	52.70	13.561		
7,350.00	7,251.82	7,356.23	7,291.81	26.85	26.86	96.21	-418.10	325.92	715.82	662.96	52.86	13.542		
7,400.00	7,287.20	7,411.47	7,336.50	26.90	26.95	96.79	-385.67	326.25	717.08	664.07	53.01	13.528		
7,450.00	7,320.02	7,467.44	7,379.10	26.96	27.05	97.34	-349.39	326.62	718.40	665.25	53.15	13.517		
7,500.00	7,350.14	7,524.13	7,419.23	27.01	27.14	97.85	-309.37	327.03	719.76	666.48	53.28	13.508		
7,550.00	7,377.40	7,581.52	7,456.50	27.07	27.23	98.33	-265.76	327.47	721.15	667.73	53.42	13.500		
7,600.00	7,401.67	7,639.56	7,490.52	27.13	27.32	98.75	-218.75	327.95	722.54	668.97	53.57	13.488		
7,650.00	7,422.84	7,698.23	7,520.93	27.19	27.43	99.13	-168.60	328.47	723.90	670.17	53.73	13.473		
7,700.00	7,440.79	7,757.46	7,547.36	27.27	27.55	99.46	-115.61	329.01	725.22	671.30	53.92	13.450		
7,750.00	7,455.44	7,817.21	7,569.49	27.36	27.68	99.74	-60.14	329.58	726.47	672.33	54.14	13.418		
7,800.00	7,466.73	7,877.39	7,587.04	27.46	27.83	99.95	-2.59	330.17	727.63	673.23	54.40	13.376		
7,850.00	7,474.59	7,937.95	7,599.75	27.59	28.00	100.11	56.59	330.77	728.69	673.99	54.70	13.321		
7,900.00	7,478.99	7,998.78	7,607.45	27.73	28.20	100.21	116.91	331.39	729.63	674.58	55.05	13.254		
7,938.09	7,480.00	8,045.25	7,609.86	27.85	28.36	100.24	163.31	331.86	730.26	674.91	55.35	13.194		
8,000.00	7,480.00	8,109.69	7,610.00	28.08	28.61	100.24	227.75	332.52	731.03	675.17	55.86	13.087		
8,100.00	7,480.00	8,209.69	7,610.00	28.53	29.06	100.23	327.74	333.54	732.23	675.44	56.79	12.893		
8,200.00	7,480.00	8,309.68	7,610.00	29.06	29.60	100.21	427.73	334.57	733.44	675.56	57.88	12.672		
8,300.00	7,480.00	8,409.67	7,610.00	29.68	30.21	100.19	527.71	335.59	734.64	675.53	59.11	12.429		
8,400.00	7,480.00	8,509.66	7,610.00	30.37	30.90	100.18	627.70	336.61	735.85	675.37	60.48	12.167		
8,500.00	7,480.00	8,609.66	7,610.00	31.13	31.65	100.16	727.69	337.64	737.06	675.08	61.97	11.893		
8,600.00	7,480.00	8,709.65	7,610.00	31.95	32.46	100.14	827.67	338.66	738.26	674.68	63.59	11.610		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft	
Reference: S26-T2N-R68W - SULLIVAN 4K-26H-P268 - OH - PLAN #2															
Reference				Offset				Semi Major Axis			Distance		Total Uncertainty Axis	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)					
8,700.00	7,480.00	8,809.64	7,610.00	32.83	33.32	100.13	927.66	339.68	739.47	674.16	65.31	11.323			
8,800.00	7,480.00	8,909.63	7,610.00	33.76	34.24	100.11	1,027.65	340.70	740.67	673.54	67.13	11.033			
8,900.00	7,480.00	9,009.63	7,610.00	34.74	35.20	100.09	1,127.64	341.73	741.88	672.83	69.05	10.744			
9,000.00	7,480.00	9,109.62	7,610.00	35.76	36.21	100.08	1,227.62	342.75	743.09	672.03	71.06	10.458			
9,100.00	7,480.00	9,209.61	7,610.00	36.82	37.25	100.06	1,327.61	343.77	744.29	671.15	73.14	10.176			
9,200.00	7,480.00	9,309.60	7,610.00	37.91	38.33	100.04	1,427.60	344.80	745.50	670.21	75.29	9.901			
9,300.00	7,480.00	9,409.60	7,610.00	39.04	39.45	100.03	1,527.59	345.82	746.71	669.19	77.52	9.633			
9,400.00	7,480.00	9,509.59	7,610.00	40.20	40.59	100.01	1,627.57	346.84	747.91	668.12	79.80	9.373			
9,500.00	7,480.00	9,609.58	7,610.00	41.39	41.77	99.99	1,727.56	347.86	749.12	666.98	82.13	9.121			
9,600.00	7,480.00	9,709.57	7,610.00	42.60	42.97	99.98	1,827.55	348.89	750.33	665.80	84.52	8.877			
9,700.00	7,480.00	9,809.57	7,610.00	43.84	44.19	99.96	1,927.53	349.91	751.53	664.57	86.96	8.642			
9,800.00	7,480.00	9,909.56	7,610.00	45.10	45.43	99.95	2,027.52	350.93	752.74	663.30	89.44	8.416			
9,900.00	7,480.00	10,009.55	7,610.00	46.38	46.70	99.93	2,127.51	351.95	753.95	661.99	91.96	8.199			
10,000.00	7,480.00	10,109.54	7,610.00	47.68	47.98	99.91	2,227.50	352.98	755.15	660.64	94.51	7.990			
10,100.00	7,480.00	10,209.54	7,610.00	48.99	49.28	99.90	2,327.48	354.00	756.36	659.26	97.10	7.789			
10,200.00	7,480.00	10,309.53	7,610.00	50.32	50.60	99.88	2,427.47	355.02	757.57	657.85	99.72	7.597			
10,300.00	7,480.00	10,409.52	7,610.00	51.66	51.93	99.87	2,527.46	356.05	758.77	656.41	102.37	7.412			
10,400.00	7,480.00	10,509.51	7,610.00	53.02	53.27	99.85	2,627.45	357.07	759.98	654.94	105.04	7.235			
10,500.00	7,480.00	10,609.51	7,610.00	54.39	54.62	99.83	2,727.43	358.09	761.19	653.45	107.74	7.065			
10,600.00	7,480.00	10,709.50	7,610.00	55.77	55.99	99.82	2,827.42	359.11	762.40	651.93	110.47	6.902			
10,700.00	7,480.00	10,809.49	7,610.00	57.16	57.37	99.80	2,927.41	360.14	763.60	650.39	113.21	6.745			
10,800.00	7,480.00	10,909.48	7,610.00	58.56	58.76	99.79	3,027.39	361.16	764.81	648.84	115.97	6.595			
10,900.00	7,480.00	11,009.48	7,610.00	59.97	60.15	99.77	3,127.38	362.18	766.02	647.26	118.75	6.451			
11,000.00	7,480.00	11,109.47	7,610.00	61.39	61.56	99.76	3,227.37	363.21	767.22	645.67	121.55	6.312			
11,100.00	7,480.00	11,209.46	7,610.00	62.82	62.97	99.74	3,327.36	364.23	768.43	644.07	124.37	6.179			
11,200.00	7,480.00	11,309.45	7,610.00	64.25	64.39	99.73	3,427.34	365.25	769.64	642.45	127.19	6.051			
11,300.00	7,480.00	11,409.45	7,610.00	65.69	65.82	99.71	3,527.33	366.27	770.85	640.81	130.04	5.928			
11,400.00	7,480.00	11,509.44	7,610.00	67.14	67.26	99.69	3,627.32	367.30	772.06	639.16	132.89	5.810			
11,500.00	7,480.00	11,609.43	7,610.00	68.59	68.70	99.68	3,727.31	368.32	773.26	637.50	135.76	5.696			
11,600.00	7,480.00	11,709.42	7,610.00	70.05	70.14	99.66	3,827.29	369.34	774.47	635.83	138.64	5.586			
11,700.00	7,480.00	11,809.41	7,610.00	71.51	71.60	99.65	3,927.28	370.36	775.68	634.15	141.53	5.481			
11,800.00	7,480.00	11,909.41	7,610.00	72.98	73.05	99.63	4,027.27	371.39	776.89	632.45	144.43	5.379			
11,900.00	7,480.00	12,009.40	7,610.00	74.46	74.52	99.62	4,127.25	372.41	778.09	630.75	147.34	5.281			
12,000.00	7,480.00	12,109.39	7,610.00	75.93	75.98	99.60	4,227.24	373.43	779.30	629.04	150.26	5.186			
12,100.00	7,480.00	12,209.38	7,610.00	77.42	77.45	99.59	4,327.23	374.46	780.51	627.32	153.19	5.095			
12,200.00	7,480.00	12,309.38	7,610.00	78.90	78.93	99.57	4,427.22	375.48	781.72	625.59	156.13	5.007			
12,300.00	7,480.00	12,409.37	7,610.00	80.39	80.41	99.56	4,527.20	376.50	782.93	623.86	159.07	4.922			
12,400.00	7,480.00	12,509.36	7,610.00	81.89	81.89	99.54	4,627.19	377.52	784.14	622.11	162.02	4.840			
12,500.00	7,480.00	12,609.35	7,610.00	83.38	83.38	99.53	4,727.18	378.55	785.34	620.36	164.98	4.760			
12,600.00	7,480.00	12,709.35	7,610.00	84.88	84.86	99.51	4,827.17	379.57	786.55	618.61	167.94	4.683			
12,700.00	7,480.00	12,809.34	7,610.00	86.39	86.36	99.50	4,927.15	380.59	787.76	616.85	170.91	4.609			
12,800.00	7,480.00	12,909.33	7,610.00	87.89	87.85	99.48	5,027.14	381.62	788.97	615.08	173.89	4.537			
12,900.00	7,480.00	13,009.32	7,610.00	89.40	89.35	99.47	5,127.13	382.64	790.18	613.30	176.87	4.467			
13,000.00	7,480.00	13,109.32	7,610.00	90.91	90.85	99.46	5,227.11	383.66	791.39	611.53	179.86	4.400			
13,100.00	7,480.00	13,209.31	7,610.00	92.43	92.35	99.44	5,327.10	384.68	792.59	609.74	182.85	4.335			
13,200.00	7,480.00	13,309.30	7,610.00	93.94	93.86	99.43	5,427.09	385.71	793.80	607.95	185.85	4.271			
13,300.00	7,480.00	13,409.29	7,610.00	95.46	95.37	99.41	5,527.08	386.73	795.01	606.16	188.85	4.210			
13,400.00	7,480.00	13,509.29	7,610.00	96.98	96.88	99.40	5,627.06	387.75	796.22	604.36	191.86	4.150			
13,500.00	7,480.00	13,609.28	7,610.00	98.50	98.39	99.38	5,727.05	388.77	797.43	602.56	194.87	4.092			
13,600.00	7,480.00	13,709.27	7,610.00	100.03	99.90	99.37	5,827.04	389.80	798.64	600.76	197.88	4.036			
13,700.00	7,480.00	13,809.26	7,610.00	101.56	101.42	99.35	5,927.03	390.82	799.85	598.95	200.90	3.981			
13,800.00	7,480.00	13,909.26	7,610.00	103.08	102.93	99.34	6,027.01	391.84	801.06	597.14	203.92	3.928			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4K-26H-P268 - OH - PLAN #2													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		
13,900.00	7,480.00	14,009.25	7,610.00	104.61	104.45	99.33	6,127.00	392.87	802.27	595.32	206.94	3.877		
14,000.00	7,480.00	14,109.24	7,610.00	106.14	105.97	99.31	6,226.99	393.89	803.47	593.50	209.97	3.827		
14,100.00	7,480.00	14,209.23	7,610.00	107.68	107.50	99.30	6,326.97	394.91	804.68	591.68	213.00	3.778		
14,200.00	7,480.00	14,309.23	7,610.00	109.21	109.02	99.28	6,426.96	395.93	805.89	589.85	216.04	3.730		
14,300.00	7,480.00	14,409.22	7,610.00	110.75	110.55	99.27	6,526.95	396.96	807.10	588.03	219.08	3.684		
14,400.00	7,480.00	14,509.21	7,610.00	112.28	112.07	99.26	6,626.94	397.98	808.31	586.19	222.12	3.639		
14,500.00	7,480.00	14,609.20	7,610.00	113.82	113.60	99.24	6,726.92	399.00	809.52	584.36	225.16	3.595		
14,514.90	7,480.00	14,624.11	7,610.00	114.05	113.83	99.24	6,741.83	399.15	809.70	584.09	225.61	3.589		
14,600.00	7,480.00	14,709.18	7,610.00	115.34	115.13	99.26	6,826.90	400.02	808.38	580.20	228.18	3.543		
14,689.49	7,480.00	14,798.42	7,610.00	116.66	116.50	99.38	6,916.13	400.94	801.92	571.12	230.80	3.475		
14,703.04	7,480.00	14,811.90	7,610.00	116.84	116.70	99.39	6,929.61	401.08	800.55	569.38	231.16	3.463 SF		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD+HDGM													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance			Total		Separation	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)	Uncertainty Axis	Factor			
0.00	0.00	0.00	0.00	0.00	0.00	90.12	-0.08	40.00	40.00						
100.00	100.00	100.00	100.00	0.14	0.14	90.12	-0.08	40.00	40.00	39.72	0.28	143.989			
200.00	200.00	200.00	200.00	0.50	0.50	90.12	-0.08	40.00	40.00	39.01	0.99	40.213	CC, ES		
300.00	299.98	298.98	298.96	0.84	0.84	-90.61	-1.27	41.24	41.25	39.55	1.70	24.220			
400.00	399.84	397.86	397.70	1.19	1.19	-92.56	-4.81	44.93	45.03	42.61	2.43	18.566			
500.00	499.51	496.40	495.87	1.55	1.54	-113.01	-10.69	51.05	52.84	49.67	3.17	16.652			
600.00	598.94	594.18	592.93	1.92	1.92	-123.89	-18.83	59.53	66.05	62.10	3.94	16.750			
700.52	698.51	692.01	689.63	2.32	2.31	-129.87	-29.09	70.22	84.50	79.79	4.71	17.927			
800.00	796.84	789.42	785.83	2.71	2.71	-129.84	-39.71	81.28	104.69	99.24	5.46	19.181			
900.00	895.67	887.33	882.52	3.12	3.12	-129.83	-50.39	92.41	124.99	118.78	6.21	20.114			
1,000.00	994.50	985.25	979.22	3.54	3.53	-129.81	-61.07	103.53	145.29	138.31	6.98	20.812			
1,100.00	1,093.34	1,083.17	1,075.92	3.95	3.94	-129.80	-71.75	114.66	165.60	157.84	7.75	21.353			
1,200.00	1,192.17	1,181.09	1,172.61	4.37	4.36	-129.80	-82.43	125.78	185.90	177.36	8.53	21.783			
1,300.00	1,291.01	1,279.00	1,269.31	4.79	4.78	-129.79	-93.11	136.91	206.20	196.88	9.32	22.132			
1,400.00	1,389.84	1,376.92	1,366.00	5.21	5.20	-129.79	-103.79	148.03	226.50	216.39	10.10	22.419			
1,500.00	1,488.68	1,474.84	1,462.70	5.63	5.62	-129.78	-114.47	159.16	246.80	235.91	10.89	22.661			
1,600.00	1,587.51	1,572.76	1,559.39	6.05	6.03	-129.78	-125.15	170.28	267.10	255.42	11.68	22.866			
1,700.00	1,686.35	1,670.68	1,656.09	6.48	6.46	-129.77	-135.83	181.41	287.40	274.93	12.47	23.042			
1,800.00	1,785.18	1,768.59	1,752.79	6.90	6.88	-129.77	-146.51	192.53	307.70	294.43	13.27	23.195			
1,900.00	1,884.02	1,866.51	1,849.48	7.33	7.30	-129.77	-157.19	203.66	328.00	313.94	14.06	23.330			
2,000.00	1,982.85	1,964.43	1,946.18	7.75	7.72	-129.77	-167.87	214.78	348.30	333.45	14.85	23.448			
2,100.00	2,081.69	2,062.35	2,042.87	8.17	8.14	-129.77	-178.55	225.91	368.60	352.95	15.65	23.553			
2,200.00	2,180.52	2,160.26	2,139.57	8.60	8.56	-129.76	-189.23	237.03	388.90	372.45	16.45	23.648			
2,300.00	2,279.36	2,258.18	2,236.26	9.03	8.98	-129.76	-199.91	248.15	409.20	391.96	17.24	23.732			
2,400.00	2,378.19	2,356.10	2,332.96	9.45	9.41	-129.76	-210.59	259.28	429.50	411.46	18.04	23.809			
2,500.00	2,477.02	2,454.02	2,429.66	9.88	9.83	-129.76	-221.27	270.40	449.80	430.96	18.84	23.879			
2,600.00	2,575.86	2,551.94	2,526.35	10.30	10.25	-129.76	-231.95	281.53	470.10	450.47	19.63	23.942			
2,700.00	2,674.69	2,649.85	2,623.05	10.73	10.67	-129.76	-242.63	292.65	490.40	469.97	20.43	24.001			
2,800.00	2,773.53	2,747.77	2,719.74	11.15	11.10	-129.76	-253.31	303.78	510.70	489.47	21.23	24.054			
2,900.00	2,872.36	2,845.69	2,816.44	11.58	11.52	-129.76	-263.99	314.90	531.00	508.97	22.03	24.104			
3,000.00	2,971.20	2,943.61	2,913.13	12.01	11.94	-129.76	-274.67	326.03	551.30	528.47	22.83	24.149			
3,100.00	3,070.03	3,041.52	3,009.83	12.43	12.36	-129.75	-285.35	337.15	571.60	547.98	23.63	24.192			
3,200.00	3,168.87	3,139.44	3,106.53	12.86	12.79	-129.75	-296.03	348.28	591.90	567.48	24.43	24.231			
3,300.00	3,267.70	3,237.36	3,203.22	13.28	13.21	-129.75	-306.71	359.40	612.21	586.98	25.23	24.268			
3,400.00	3,366.54	3,335.28	3,299.92	13.71	13.63	-129.75	-317.39	370.53	632.51	606.48	26.03	24.302			
3,500.00	3,465.37	3,433.20	3,396.61	14.14	14.06	-129.75	-328.07	381.65	652.81	625.98	26.83	24.335			
3,600.00	3,564.21	3,531.11	3,493.31	14.56	14.48	-129.75	-338.75	392.78	673.11	645.48	27.63	24.365			
3,700.00	3,663.04	3,629.03	3,590.01	14.99	14.90	-129.75	-349.43	403.90	693.41	664.98	28.43	24.393			
3,800.00	3,761.88	3,726.95	3,686.70	15.42	15.33	-129.75	-360.11	415.03	713.71	684.48	29.23	24.420			
3,900.00	3,860.71	3,824.87	3,783.40	15.84	15.75	-129.75	-370.79	426.15	734.01	703.98	30.03	24.445			
4,000.00	3,959.54	3,922.78	3,880.09	16.27	16.17	-129.75	-381.47	437.28	754.31	723.48	30.83	24.469			
4,100.00	4,058.38	4,020.70	3,976.79	16.70	16.59	-129.75	-392.15	448.40	774.61	742.98	31.63	24.492			
4,200.00	4,157.21	4,118.62	4,073.48	17.12	17.02	-129.75	-402.83	459.52	794.91	762.48	32.43	24.513			
4,300.00	4,256.05	4,216.54	4,170.18	17.55	17.44	-129.75	-413.51	470.65	815.21	781.98	33.23	24.534			
4,400.00	4,354.88	4,314.46	4,266.88	17.98	17.86	-129.75	-424.19	481.77	835.51	801.48	34.03	24.553			
4,500.00	4,453.72	4,412.37	4,363.57	18.40	18.29	-129.75	-434.87	492.90	855.81	820.98	34.83	24.572			
4,600.00	4,552.55	4,510.29	4,460.27	18.83	18.71	-129.75	-445.54	504.02	876.11	840.48	35.63	24.589			
4,611.50	4,563.92	4,521.56	4,471.39	18.88	18.76	-129.75	-446.77	505.30	878.45	842.72	35.72	24.591			
4,700.00	4,651.58	4,610.60	4,559.33	19.25	19.14	-129.94	-456.47	515.41	895.54	859.10	36.44	24.575			
4,800.00	4,751.03	4,735.84	4,683.46	19.64	19.66	-130.04	-467.94	527.35	911.11	873.71	37.40	24.361			
4,900.00	4,850.78	4,862.51	4,809.62	20.00	20.13	-130.10	-475.70	535.43	921.53	883.25	38.29	24.068			
5,000.00	4,950.72	4,990.04	4,937.01	20.34	20.57	-130.13	-479.60	539.50	926.74	887.64	39.10	23.702			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4L-26H-P268 - OH - PLAN #2													Offset Site Error:	0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	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)				
5,049.28	5,000.00	5,053.03	5,000.00	20.49	20.76	86.11	-480.08	540.00	927.38	887.93	39.45	23.506		
5,100.00	5,050.72	5,103.75	5,050.72	20.63	20.90	86.11	-480.08	540.00	927.38	887.63	39.75	23.332		
5,200.00	5,150.72	5,203.75	5,150.72	20.91	21.19	86.11	-480.08	540.00	927.38	887.05	40.33	22.994		
5,300.00	5,250.72	5,303.75	5,250.72	21.19	21.47	86.11	-480.08	540.00	927.38	886.46	40.92	22.664		
5,400.00	5,350.72	5,403.75	5,350.72	21.48	21.76	86.11	-480.08	540.00	927.38	885.87	41.51	22.341		
5,500.00	5,450.72	5,503.75	5,450.72	21.77	22.05	86.11	-480.08	540.00	927.38	885.27	42.11	22.025		
5,600.00	5,550.72	5,603.75	5,550.72	22.06	22.34	86.11	-480.08	540.00	927.38	884.67	42.71	21.716		
5,700.00	5,650.72	5,703.75	5,650.72	22.35	22.63	86.11	-480.08	540.00	927.38	884.07	43.31	21.413		
5,800.00	5,750.72	5,803.75	5,750.72	22.65	22.93	86.11	-480.08	540.00	927.38	883.46	43.91	21.118		
5,900.00	5,850.72	5,903.75	5,850.72	22.94	23.23	86.11	-480.08	540.00	927.38	882.85	44.52	20.829		
6,000.00	5,950.72	6,003.75	5,950.72	23.24	23.53	86.11	-480.08	540.00	927.38	882.24	45.14	20.546		
6,100.00	6,050.72	6,103.75	6,050.72	23.54	23.83	86.11	-480.08	540.00	927.38	881.63	45.75	20.269		
6,200.00	6,150.72	6,203.75	6,150.72	23.84	24.13	86.11	-480.08	540.00	927.38	881.01	46.37	19.999		
6,300.00	6,250.72	6,303.75	6,250.72	24.15	24.43	86.11	-480.08	540.00	927.38	880.39	46.99	19.734		
6,400.00	6,350.72	6,403.75	6,350.72	24.45	24.74	86.11	-480.08	540.00	927.38	879.76	47.62	19.476		
6,500.00	6,450.72	6,503.75	6,450.72	24.76	25.04	86.11	-480.08	540.00	927.38	879.13	48.24	19.223		
6,600.00	6,550.72	6,603.75	6,550.72	25.06	25.35	86.11	-480.08	540.00	927.38	878.51	48.87	18.975		
6,700.00	6,650.72	6,703.75	6,650.72	25.37	25.66	86.11	-480.08	540.00	927.38	877.87	49.51	18.733		
6,800.00	6,750.72	6,803.75	6,750.72	25.68	25.97	86.11	-480.08	540.00	927.38	877.24	50.14	18.496		
6,813.09	6,763.80	6,816.83	6,763.80	25.72	26.01	86.11	-480.08	540.00	927.38	877.16	50.22	18.466		
6,850.00	6,800.70	6,850.00	6,796.96	25.84	26.11	86.23	-479.32	539.99	927.37	876.92	50.44	18.385		
6,862.95	6,813.62	6,863.46	6,810.39	25.87	26.15	86.23	-478.57	539.98	927.35	876.83	50.52	18.357		
6,900.00	6,850.50	6,898.11	6,844.91	25.98	26.25	86.25	-475.48	539.94	927.30	876.57	50.73	18.279		
6,950.00	6,899.88	6,944.90	6,891.19	26.11	26.38	86.29	-468.67	539.84	927.17	876.18	51.00	18.181		
7,000.00	6,948.60	6,991.72	6,936.96	26.24	26.50	86.35	-458.84	539.70	927.00	875.75	51.25	18.089		
7,050.00	6,996.42	7,038.59	6,982.04	26.35	26.62	86.42	-446.03	539.52	926.77	875.29	51.48	18.003		
7,100.00	7,043.10	7,085.52	7,026.24	26.46	26.72	86.51	-430.28	539.29	926.50	874.80	51.70	17.922		
7,150.00	7,088.43	7,132.53	7,069.37	26.55	26.82	86.61	-411.63	539.03	926.17	874.27	51.90	17.845		
7,200.00	7,132.17	7,179.62	7,111.27	26.64	26.91	86.73	-390.16	538.72	925.80	873.71	52.09	17.772		
7,250.00	7,174.12	7,226.80	7,151.75	26.71	26.99	86.87	-365.93	538.37	925.39	873.11	52.28	17.702		
7,300.00	7,214.06	7,274.10	7,190.63	26.78	27.07	87.02	-339.02	537.99	924.93	872.48	52.46	17.633		
7,350.00	7,251.82	7,321.52	7,227.75	26.85	27.13	87.19	-309.52	537.57	924.44	871.81	52.63	17.564		
7,400.00	7,287.20	7,369.07	7,262.92	26.90	27.20	87.36	-277.54	537.11	923.92	871.11	52.81	17.495		
7,450.00	7,320.02	7,416.77	7,296.00	26.96	27.26	87.55	-243.19	536.62	923.37	870.38	52.99	17.424		
7,500.00	7,350.14	7,464.62	7,326.81	27.01	27.31	87.76	-206.59	536.10	922.79	869.61	53.19	17.350		
7,550.00	7,377.40	7,512.65	7,355.21	27.07	27.36	87.97	-167.87	535.55	922.19	868.81	53.39	17.273		
7,600.00	7,401.67	7,560.85	7,381.03	27.13	27.41	88.19	-127.19	534.97	921.58	867.97	53.61	17.191		
7,650.00	7,422.84	7,609.23	7,404.15	27.19	27.47	88.43	-84.70	534.37	920.95	867.11	53.84	17.104		
7,700.00	7,440.79	7,657.82	7,424.42	27.27	27.52	88.67	-40.56	533.74	920.31	866.21	54.10	17.011		
7,750.00	7,455.44	7,706.61	7,441.72	27.36	27.59	88.92	5.05	533.09	919.67	865.29	54.38	16.912		
7,800.00	7,466.73	7,755.62	7,455.93	27.46	27.67	89.17	51.94	532.42	919.03	864.35	54.68	16.806		
7,850.00	7,474.59	7,804.85	7,466.94	27.59	27.77	89.43	99.90	531.73	918.39	863.38	55.01	16.695		
7,900.00	7,478.99	7,854.31	7,474.66	27.73	27.89	89.69	148.74	531.04	917.76	862.40	55.36	16.578		
7,938.09	7,480.00	7,892.14	7,478.28	27.85	27.99	89.89	186.39	530.50	917.29	861.64	55.65	16.485		
8,000.00	7,480.00	7,953.97	7,480.00	28.08	28.19	90.00	248.18	529.62	916.53	860.38	56.14	16.325		
8,100.00	7,480.00	8,053.96	7,480.00	28.53	28.61	90.00	348.16	528.19	915.30	858.22	57.08	16.035		
8,200.00	7,480.00	8,153.95	7,480.00	29.06	29.12	90.00	448.14	526.77	914.08	855.91	58.17	15.714		
8,300.00	7,480.00	8,253.95	7,480.00	29.68	29.73	90.00	548.12	525.34	912.86	853.45	59.41	15.365		
8,400.00	7,480.00	8,353.94	7,480.00	30.37	30.42	90.00	648.10	523.92	911.63	850.84	60.79	14.996		
8,500.00	7,480.00	8,453.93	7,480.00	31.13	31.18	90.00	748.09	522.49	910.41	848.11	62.30	14.613		
8,600.00	7,480.00	8,553.92	7,480.00	31.95	32.00	90.00	848.07	521.07	909.19	845.25	63.94	14.220		
8,700.00	7,480.00	8,653.92	7,480.00	32.83	32.88	90.00	948.05	519.64	907.96	842.28	65.68	13.823		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4L-26H-P268 - OH - PLAN #2													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		
8,800.00	7,480.00	8,753.91	7,480.00	33.76	33.81	90.00	1,048.03	518.22	906.74	839.21	67.54	13.426		
8,900.00	7,480.00	8,853.90	7,480.00	34.74	34.79	90.00	1,148.02	516.79	905.52	836.03	69.48	13.032		
9,000.00	7,480.00	8,953.89	7,480.00	35.76	35.81	90.00	1,248.00	515.36	904.30	832.77	71.52	12.644		
9,100.00	7,480.00	9,053.89	7,480.00	36.82	36.87	90.00	1,347.98	513.94	903.07	829.43	73.64	12.264		
9,200.00	7,480.00	9,153.88	7,480.00	37.91	37.98	90.00	1,447.96	512.51	901.85	826.02	75.83	11.893		
9,300.00	7,480.00	9,253.87	7,480.00	39.04	39.11	90.00	1,547.95	511.09	900.63	822.54	78.09	11.533		
9,400.00	7,480.00	9,353.86	7,480.00	40.20	40.28	90.00	1,647.93	509.66	899.40	818.99	80.41	11.185		
9,500.00	7,480.00	9,453.86	7,480.00	41.39	41.47	90.00	1,747.91	508.24	898.18	815.39	82.79	10.849		
9,600.00	7,480.00	9,553.85	7,480.00	42.60	42.69	90.00	1,847.89	506.81	896.96	811.73	85.22	10.525		
9,700.00	7,480.00	9,653.84	7,480.00	43.84	43.93	90.00	1,947.88	505.39	895.73	808.03	87.70	10.214		
9,800.00	7,480.00	9,753.83	7,480.00	45.10	45.20	90.00	2,047.86	503.96	894.51	804.29	90.22	9.914		
9,900.00	7,480.00	9,853.83	7,480.00	46.38	46.48	90.00	2,147.84	502.54	893.29	800.50	92.79	9.627		
10,000.00	7,480.00	9,953.82	7,480.00	47.68	47.79	90.00	2,247.82	501.11	892.06	796.68	95.39	9.352		
10,100.00	7,480.00	10,053.81	7,480.00	48.99	49.11	90.00	2,347.80	499.68	890.84	792.82	98.02	9.088		
10,200.00	7,480.00	10,153.80	7,480.00	50.32	50.45	90.00	2,447.79	498.26	889.62	788.93	100.69	8.836		
10,300.00	7,480.00	10,253.80	7,480.00	51.66	51.80	90.00	2,547.77	496.83	888.39	785.01	103.38	8.593		
10,400.00	7,480.00	10,353.79	7,480.00	53.02	53.16	90.00	2,647.75	495.41	887.17	781.07	106.10	8.361		
10,500.00	7,480.00	10,453.78	7,480.00	54.39	54.54	90.00	2,747.73	493.98	885.95	777.10	108.85	8.139		
10,600.00	7,480.00	10,553.77	7,480.00	55.77	55.93	90.00	2,847.72	492.56	884.72	773.11	111.62	7.926		
10,700.00	7,480.00	10,653.77	7,480.00	57.16	57.33	90.00	2,947.70	491.13	883.50	769.09	114.41	7.722		
10,800.00	7,480.00	10,753.76	7,480.00	58.56	58.74	90.00	3,047.68	489.71	882.28	765.06	117.22	7.527		
10,900.00	7,480.00	10,853.75	7,480.00	59.97	60.15	90.00	3,147.66	488.28	881.05	761.01	120.05	7.339		
11,000.00	7,480.00	10,953.74	7,480.00	61.39	61.58	90.00	3,247.65	486.86	879.83	756.94	122.89	7.159		
11,100.00	7,480.00	11,053.74	7,480.00	62.82	63.02	90.00	3,347.63	485.43	878.61	752.85	125.76	6.987		
11,200.00	7,480.00	11,153.73	7,480.00	64.25	64.46	90.00	3,447.61	484.00	877.38	748.75	128.63	6.821		
11,300.00	7,480.00	11,253.72	7,480.00	65.69	65.91	90.00	3,547.59	482.58	876.16	744.64	131.52	6.662		
11,400.00	7,480.00	11,353.71	7,480.00	67.14	67.36	90.00	3,647.58	481.15	874.94	740.51	134.43	6.509		
11,500.00	7,480.00	11,453.71	7,480.00	68.59	68.82	90.00	3,747.56	479.73	873.72	736.37	137.34	6.362		
11,600.00	7,480.00	11,553.70	7,480.00	70.05	70.29	90.00	3,847.54	478.30	872.49	732.22	140.27	6.220		
11,700.00	7,480.00	11,653.69	7,480.00	71.51	71.77	90.00	3,947.52	476.88	871.27	728.06	143.21	6.084		
11,800.00	7,480.00	11,753.68	7,480.00	72.98	73.24	90.00	4,047.50	475.45	870.05	723.89	146.16	5.953		
11,900.00	7,480.00	11,853.68	7,480.00	74.46	74.73	90.00	4,147.49	474.03	868.82	719.71	149.11	5.827		
12,000.00	7,480.00	11,953.67	7,480.00	75.93	76.21	90.00	4,247.47	472.60	867.60	715.52	152.08	5.705		
12,100.00	7,480.00	12,053.66	7,480.00	77.42	77.70	90.00	4,347.45	471.18	866.38	711.32	155.05	5.588		
12,200.00	7,480.00	12,153.65	7,480.00	78.90	79.20	90.00	4,447.43	469.75	865.15	707.12	158.04	5.474		
12,300.00	7,480.00	12,253.65	7,480.00	80.39	80.70	90.00	4,547.42	468.32	863.93	702.90	161.03	5.365		
12,400.00	7,480.00	12,353.64	7,480.00	81.89	82.20	90.00	4,647.40	466.90	862.71	698.68	164.02	5.260		
12,500.00	7,480.00	12,453.63	7,480.00	83.38	83.71	90.00	4,747.38	465.47	861.48	694.45	167.03	5.158		
12,600.00	7,480.00	12,553.62	7,480.00	84.88	85.22	90.00	4,847.36	464.05	860.26	690.22	170.04	5.059		
12,700.00	7,480.00	12,653.62	7,480.00	86.39	86.73	90.00	4,947.35	462.62	859.04	685.98	173.06	4.964		
12,800.00	7,480.00	12,753.61	7,480.00	87.89	88.25	90.00	5,047.33	461.20	857.81	681.74	176.08	4.872		
12,900.00	7,480.00	12,853.60	7,480.00	89.40	89.76	90.00	5,147.31	459.77	856.59	677.49	179.11	4.783		
13,000.00	7,480.00	12,953.59	7,480.00	90.91	91.28	90.00	5,247.29	458.35	855.37	673.23	182.14	4.696		
13,100.00	7,480.00	13,053.59	7,480.00	92.43	92.81	90.00	5,347.28	456.92	854.14	668.97	185.18	4.613		
13,200.00	7,480.00	13,153.58	7,480.00	93.94	94.33	90.00	5,447.26	455.50	852.92	664.70	188.22	4.532		
13,300.00	7,480.00	13,253.57	7,480.00	95.46	95.86	90.00	5,547.24	454.07	851.70	660.43	191.26	4.453		
13,400.00	7,480.00	13,353.56	7,480.00	96.98	97.39	90.00	5,647.22	452.64	850.47	656.16	194.32	4.377		
13,500.00	7,480.00	13,453.56	7,480.00	98.50	98.92	90.00	5,747.20	451.22	849.25	651.88	197.37	4.303		
13,600.00	7,480.00	13,553.55	7,480.00	100.03	100.45	90.00	5,847.19	449.79	848.03	647.60	200.43	4.231		
13,700.00	7,480.00	13,653.54	7,480.00	101.56	101.99	90.00	5,947.17	448.37	846.81	643.31	203.49	4.161		
13,800.00	7,480.00	13,753.53	7,480.00	103.08	103.53	90.00	6,047.15	446.94	845.58	639.02	206.56	4.094		
13,900.00	7,480.00	13,853.53	7,480.00	104.61	105.07	90.00	6,147.13	445.52	844.36	634.73	209.63	4.028		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4L-26H-P268 - OH - PLAN #2													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		
14,000.00	7,480.00	13,953.52	7,480.00	106.14	106.61	90.00	6,247.12	444.09	843.14	630.44	212.70	3.964		
14,100.00	7,480.00	14,053.51	7,480.00	107.68	108.15	90.00	6,347.10	442.67	841.91	626.14	215.78	3.902		
14,200.00	7,480.00	14,153.50	7,480.00	109.21	109.69	90.00	6,447.08	441.24	840.69	621.84	218.85	3.841		
14,300.00	7,480.00	14,253.50	7,480.00	110.75	111.24	90.00	6,547.06	439.82	839.47	617.53	221.94	3.782		
14,400.00	7,480.00	14,353.49	7,480.00	112.28	112.78	90.00	6,647.05	438.39	838.24	613.22	225.02	3.725		
14,500.00	7,480.00	14,453.48	7,480.00	113.82	114.33	90.00	6,747.03	436.96	837.02	608.91	228.11	3.669		
14,514.90	7,480.00	14,468.38	7,480.00	114.05	114.56	90.00	6,761.93	436.75	836.84	608.27	228.57	3.661		
14,600.00	7,480.00	14,553.40	7,480.00	115.34	115.88	90.00	6,846.94	435.54	833.41	602.24	231.18	3.605		
14,689.49	7,480.00	14,642.45	7,480.00	116.66	117.26	90.00	6,935.98	434.27	824.69	590.81	233.87	3.526		
14,703.04	7,480.00	14,647.70	7,480.00	116.84	117.34	90.00	6,941.22	434.20	823.01	588.87	234.14	3.515 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 165-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			
1,400.00	1,389.84	1,717.86	1,677.62	5.21	6.67	54.41	-152.96	-1,542.10	1,499.91	1,490.74	9.17	163.511			
1,500.00	1,488.68	1,820.18	1,776.71	5.63	7.17	54.35	-166.91	-1,520.72	1,470.33	1,460.46	9.87	148.981			
1,600.00	1,587.51	1,936.94	1,888.98	6.05	7.78	54.18	-184.92	-1,494.24	1,438.90	1,428.28	10.62	135.498			
1,700.00	1,686.35	2,031.04	1,979.50	6.48	8.26	54.08	-198.60	-1,472.46	1,407.08	1,395.79	11.29	124.618			
1,800.00	1,785.18	2,136.41	2,081.11	6.90	8.79	54.08	-211.18	-1,447.57	1,374.79	1,362.85	11.95	115.088			
1,900.00	1,884.02	2,226.63	2,168.00	7.33	9.25	54.04	-222.88	-1,426.32	1,342.58	1,329.97	12.61	106.475			
2,000.00	1,982.85	2,326.97	2,264.50	7.75	9.77	53.98	-236.23	-1,402.27	1,309.96	1,296.68	13.28	98.624			
2,100.00	2,081.69	2,416.06	2,350.37	8.17	10.22	53.96	-247.17	-1,381.19	1,277.64	1,263.72	13.92	91.782			
2,200.00	2,180.52	2,512.93	2,443.93	8.60	10.70	54.02	-257.52	-1,358.34	1,245.40	1,230.85	14.55	85.590			
2,300.00	2,279.36	2,605.37	2,533.18	9.03	11.15	54.08	-267.44	-1,336.39	1,213.01	1,197.83	15.18	79.917			
2,400.00	2,378.19	2,689.67	2,614.66	9.45	11.57	54.12	-276.71	-1,316.84	1,181.17	1,165.35	15.82	74.656			
2,500.00	2,477.02	2,786.98	2,708.56	9.88	12.06	54.05	-289.82	-1,294.96	1,150.01	1,133.50	16.51	69.657			
2,600.00	2,575.86	2,885.31	2,803.24	10.30	12.56	53.95	-303.41	-1,272.17	1,118.17	1,100.97	17.19	65.034			
2,700.00	2,674.69	2,978.41	2,892.97	10.73	13.03	53.88	-315.71	-1,250.65	1,086.39	1,068.52	17.87	60.781			
2,800.00	2,773.53	3,068.44	2,979.87	11.15	13.47	53.84	-327.16	-1,230.10	1,054.89	1,036.36	18.53	56.926			
2,900.00	2,872.36	3,174.76	3,082.51	11.58	14.01	53.82	-340.10	-1,205.53	1,023.13	1,003.93	19.20	53.297			
3,000.00	2,971.20	3,264.89	3,169.48	12.01	14.46	53.83	-350.59	-1,184.35	990.98	971.13	19.84	49.941			
3,100.00	3,070.03	3,350.89	3,252.57	12.43	14.88	53.81	-361.20	-1,164.89	959.66	939.14	20.52	46.765			
3,200.00	3,168.87	3,464.74	3,362.60	12.86	15.44	53.89	-373.46	-1,138.36	927.69	906.58	21.11	43.944			
3,300.00	3,267.70	3,573.85	3,467.66	13.28	16.01	54.05	-384.04	-1,110.91	893.90	872.22	21.69	41.216			
3,400.00	3,366.54	3,673.03	3,562.83	13.71	16.54	54.17	-394.13	-1,084.86	859.05	836.77	22.28	38.553			
3,500.00	3,465.37	3,742.84	3,629.96	14.14	16.89	54.25	-401.30	-1,067.09	825.09	802.11	22.98	35.905			
3,600.00	3,564.21	3,817.05	3,701.74	14.56	17.24	54.24	-410.44	-1,050.71	794.25	770.55	23.70	33.514			
3,700.00	3,663.04	3,897.71	3,779.91	14.99	17.60	54.13	-421.66	-1,034.27	765.15	740.73	24.42	31.334			
3,800.00	3,761.88	3,975.44	3,855.81	15.42	17.90	54.15	-430.88	-1,020.27	738.35	713.26	25.09	29.423			
3,900.00	3,860.71	4,057.15	3,936.16	15.84	18.18	54.37	-438.22	-1,007.38	713.75	688.05	25.70	27.771			
4,000.00	3,959.54	4,141.50	4,019.45	16.27	18.44	54.72	-444.49	-995.67	691.03	664.76	26.27	26.306			
4,100.00	4,058.38	4,225.09	4,102.27	16.70	18.66	55.17	-449.83	-985.69	670.27	643.46	26.81	25.004			
4,200.00	4,157.21	4,309.06	4,185.69	17.12	18.86	55.68	-454.63	-977.39	651.60	624.28	27.32	23.850			
4,300.00	4,256.05	4,391.90	4,268.18	17.55	19.02	56.25	-459.02	-971.13	635.31	607.49	27.82	22.839			
4,400.00	4,354.88	4,488.56	4,364.53	17.98	19.20	56.98	-463.64	-964.97	620.31	592.03	28.28	21.936			
4,500.00	4,453.72	4,577.62	4,453.40	18.40	19.34	57.79	-466.79	-960.15	606.44	577.73	28.71	21.124			
4,600.00	4,552.55	4,667.86	4,543.54	18.83	19.46	58.76	-468.66	-956.59	594.26	565.16	29.10	20.420			
4,611.50	4,563.92	4,678.74	4,554.42	18.88	19.47	58.88	-468.82	-956.23	592.95	563.81	29.15	20.345			
4,700.00	4,651.58	4,763.05	4,638.68	19.25	19.57	59.61	-469.93	-953.70	583.95	554.47	29.49	19.804			
4,800.00	4,751.03	4,860.29	4,735.89	19.64	19.68	60.29	-470.72	-951.18	576.05	546.17	29.88	19.276			
4,900.00	4,850.78	4,960.55	4,836.12	20.00	19.79	60.83	-470.70	-948.67	570.13	539.85	30.28	18.827			
5,000.00	4,950.72	5,062.81	4,938.33	20.34	19.91	61.17	-470.02	-945.66	565.62	534.93	30.69	18.431			
5,049.28	5,000.00	5,109.79	4,985.29	20.49	19.95	62.51	-469.54	-944.18	563.94	533.05	30.89	18.255			
5,100.00	5,050.72	5,155.15	5,030.63	20.63	19.99	62.46	-469.15	-943.14	562.85	531.74	31.10	18.097			
5,190.41	5,141.13	5,236.05	5,111.52	20.88	20.04	62.41	-468.76	-942.40	562.08	530.61	31.47	17.858 CC			
5,200.00	5,150.72	5,244.62	5,120.10	20.91	20.05	62.41	-468.74	-942.40	562.09	530.57	31.51	17.836			
5,300.00	5,250.72	5,342.63	5,218.10	21.19	20.12	62.39	-468.46	-942.86	562.58	530.65	31.94	17.616			
5,400.00	5,350.72	5,442.50	5,317.97	21.48	20.19	62.32	-467.71	-943.30	563.13	530.78	32.35	17.406			
5,500.00	5,450.72	5,541.99	5,417.45	21.77	20.25	62.22	-466.66	-943.76	563.73	530.96	32.77	17.204			
5,600.00	5,550.72	5,644.34	5,519.80	22.06	20.33	62.10	-465.44	-944.23	564.34	531.15	33.19	17.003			
5,700.00	5,650.72	5,752.90	5,628.35	22.35	20.45	62.05	-464.99	-943.59	563.82	530.18	33.64	16.760			
5,800.00	5,750.72	5,849.20	5,724.64	22.65	20.53	62.05	-465.16	-942.36	562.54	528.46	34.08	16.507			
5,840.00	5,790.72	5,885.67	5,761.11	22.77	20.55	62.03	-465.01	-942.22	562.41	528.16	34.25	16.421 ES			
5,900.00	5,850.72	5,940.37	5,815.80	22.94	20.59	62.01	-464.52	-942.41	562.70	528.20	34.50	16.310			
6,000.00	5,950.72	6,035.65	5,911.07	23.24	20.64	62.01	-463.12	-943.60	564.13	529.22	34.92	16.157			
6,100.00	6,050.72	6,133.99	6,009.37	23.54	20.68	62.01	-461.32	-945.44	566.24	530.91	35.33	16.025			

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Sullivan 6-8-26 - CPR - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 165-Geolink MWD														
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	
6,200.00	6,150.72	6,230.59	6,105.93	23.84	20.72	-81.52	-459.19	-947.62	568.79	533.05	35.74	15.913		
6,300.00	6,250.72	6,329.33	6,204.61	24.15	20.76	-81.31	-456.64	-950.01	571.57	535.41	36.16	15.808		
6,400.00	6,350.72	6,428.37	6,303.58	24.45	20.80	-81.08	-453.97	-952.57	574.54	537.96	36.58	15.708		
6,500.00	6,450.72	6,528.45	6,403.59	24.76	20.85	-80.86	-451.28	-955.28	577.63	540.63	37.00	15.611		
6,600.00	6,550.72	6,629.82	6,504.89	25.06	20.89	-80.62	-448.47	-957.81	580.55	543.11	37.43	15.510		
6,700.00	6,650.72	6,731.62	6,606.62	25.37	20.95	-80.38	-445.56	-960.05	583.19	545.33	37.86	15.402		
6,800.00	6,750.72	6,833.61	6,708.54	25.68	21.01	-80.13	-442.65	-961.95	585.51	547.21	38.30	15.287		
6,813.09	6,763.80	6,847.13	6,722.06	25.72	21.02	-80.10	-442.26	-962.17	585.79	547.43	38.36	15.271		
6,850.00	6,800.70	6,885.28	6,760.19	25.84	21.05	-79.94	-441.20	-962.75	586.35	547.82	38.53	15.218		
6,900.00	6,850.50	6,936.87	6,811.76	25.98	21.09	-80.23	-439.81	-963.40	586.46	547.68	38.78	15.124		
6,950.00	6,899.88	6,988.11	6,862.98	26.11	21.13	-80.93	-438.48	-963.91	585.88	546.83	39.04	15.005		
7,000.00	6,948.60	7,037.82	6,912.67	26.24	21.16	-81.98	-437.24	-964.30	584.75	545.42	39.33	14.867		
7,050.00	6,996.42	7,086.16	6,960.99	26.35	21.20	-83.36	-436.05	-964.65	583.35	543.71	39.65	14.714		
7,100.00	7,043.10	7,133.43	7,008.25	26.46	21.24	-85.03	-434.91	-964.98	581.93	541.94	39.99	14.554		
7,150.00	7,088.43	7,179.39	7,054.20	26.55	21.28	-86.93	-433.82	-965.30	580.77	540.41	40.36	14.391		
7,200.00	7,132.17	7,223.77	7,098.57	26.64	21.31	-89.00	-432.79	-965.59	580.21	539.45	40.77	14.233		
7,205.98	7,137.29	7,228.97	7,103.76	26.64	21.32	-89.26	-432.67	-965.62	580.21	539.39	40.82	14.215		
7,250.00	7,174.12	7,266.37	7,141.16	26.71	21.35	-91.17	-431.84	-965.87	580.65	539.44	41.21	14.090		
7,300.00	7,214.06	7,306.99	7,181.77	26.78	21.38	-93.36	-430.97	-966.13	582.49	540.79	41.70	13.970		
7,350.00	7,251.82	7,345.42	7,220.19	26.85	21.41	-95.48	-430.18	-966.37	586.12	543.90	42.21	13.884		
7,400.00	7,287.20	7,382.43	7,257.18	26.90	21.45	-97.51	-429.47	-966.57	591.91	549.14	42.77	13.840 SF		
7,450.00	7,320.02	7,417.01	7,291.77	26.96	21.49	-99.32	-428.91	-966.67	600.18	556.84	43.34	13.848		
7,500.00	7,350.14	7,448.61	7,323.36	27.01	21.53	-100.81	-428.49	-966.68	611.24	567.32	43.92	13.916		
7,550.00	7,377.40	7,477.07	7,351.82	27.07	21.56	-101.90	-428.19	-966.62	625.32	580.82	44.50	14.052		
7,600.00	7,401.67	7,502.28	7,377.02	27.13	21.59	-102.53	-427.98	-966.51	642.56	597.51	45.06	14.261		
7,650.00	7,422.84	7,524.14	7,398.88	27.19	21.61	-102.64	-427.84	-966.38	662.99	617.40	45.59	14.544		
7,700.00	7,440.79	7,542.38	7,417.12	27.27	21.63	-102.15	-427.76	-966.25	686.53	640.46	46.08	14.900		
7,750.00	7,455.44	7,557.15	7,431.89	27.36	21.65	-101.04	-427.70	-966.14	713.04	666.52	46.52	15.328		
7,800.00	7,466.73	7,568.52	7,443.27	27.46	21.66	-99.26	-427.66	-966.05	742.27	695.36	46.91	15.823		
7,850.00	7,474.59	7,576.47	7,451.21	27.59	21.67	-96.78	-427.63	-965.98	773.92	726.67	47.25	16.378		
7,900.00	7,478.99	7,580.96	7,455.70	27.73	21.68	-93.57	-427.62	-965.95	807.68	760.13	47.55	16.986		
7,938.09	7,480.00	7,582.06	7,456.81	27.85	21.68	-90.63	-427.62	-965.94	834.59	786.85	47.74	17.481		
8,000.00	7,480.00	7,582.23	7,456.97	28.08	21.68	-90.65	-427.62	-965.94	880.13	832.11	48.02	18.330		
8,100.00	7,480.00	7,582.50	7,457.24	28.53	21.68	-90.68	-427.61	-965.93	957.57	909.20	48.37	19.798		
8,200.00	7,480.00	7,582.77	7,457.51	29.06	21.68	-90.70	-427.61	-965.93	1,038.87	990.24	48.63	21.361		
8,300.00	7,480.00	7,583.03	7,457.77	29.68	21.68	-90.73	-427.61	-965.93	1,123.19	1,074.36	48.84	22.999		
8,400.00	7,480.00	7,583.29	7,458.04	30.37	21.68	-90.75	-427.61	-965.93	1,209.90	1,160.91	48.99	24.697		
8,500.00	7,480.00	7,583.56	7,458.30	31.13	21.68	-90.78	-427.61	-965.93	1,298.53	1,249.42	49.11	26.442		
8,600.00	7,480.00	7,583.81	7,458.56	31.95	21.68	-90.81	-427.61	-965.92	1,388.70	1,339.50	49.20	28.225		
8,700.00	7,480.00	7,584.07	7,458.82	32.83	21.68	-90.83	-427.61	-965.92	1,480.13	1,430.86	49.27	30.038		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
S26-T2N-R68W - Sullivan 8-6-26 - CPR WELL - SURVEYS													Offset Well Error:	0.00 usft
Survey Program: 966-MWD														
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	
7,200.00	7,132.17	7,236.89	7,148.42	26.64	39.94	38.64	786.73	445.53	1,482.61	1,418.37	64.25	23.076		
7,250.00	7,174.12	7,276.15	7,187.66	26.71	40.08	40.59	785.83	446.09	1,459.76	1,395.20	64.55	22.613		
7,300.00	7,214.06	7,313.29	7,224.79	26.78	40.22	42.83	785.09	446.55	1,434.84	1,369.99	64.85	22.125		
7,350.00	7,251.82	7,348.50	7,259.99	26.85	40.34	45.39	784.50	446.92	1,408.04	1,342.90	65.14	21.616		
7,400.00	7,287.20	7,381.52	7,293.00	26.90	40.46	48.28	784.04	447.22	1,379.56	1,314.14	65.42	21.088		
7,450.00	7,320.02	7,411.97	7,323.46	26.96	40.56	51.51	783.68	447.48	1,349.62	1,283.93	65.68	20.548		
7,500.00	7,350.14	7,439.98	7,351.46	27.01	40.65	55.07	783.40	447.73	1,318.44	1,252.50	65.94	19.994		
7,550.00	7,377.40	7,465.39	7,376.87	27.07	40.73	58.92	783.18	447.95	1,286.28	1,220.08	66.19	19.432		
7,600.00	7,401.67	7,488.07	7,399.55	27.13	40.81	63.02	783.02	448.14	1,253.39	1,186.95	66.44	18.864		
7,650.00	7,422.84	7,508.35	7,419.83	27.19	40.87	67.31	782.89	448.32	1,220.06	1,153.36	66.69	18.294		
7,700.00	7,440.79	7,526.24	7,437.72	27.27	40.93	71.70	782.78	448.48	1,186.55	1,119.61	66.94	17.727		
7,750.00	7,455.44	7,540.76	7,452.23	27.36	40.98	76.02	782.69	448.60	1,153.17	1,085.99	67.17	17.167		
7,800.00	7,466.73	7,551.83	7,463.31	27.46	41.01	80.16	782.62	448.70	1,120.23	1,052.82	67.41	16.619		
7,850.00	7,474.59	7,559.43	7,470.91	27.59	41.04	84.00	782.57	448.77	1,088.04	1,020.41	67.63	16.088		
7,900.00	7,478.99	7,563.52	7,475.00	27.73	41.05	87.45	782.54	448.81	1,056.92	989.07	67.84	15.579		
7,938.09	7,480.00	7,564.28	7,475.75	27.85	41.05	89.78	782.53	448.81	1,034.10	966.11	68.00	15.208		
8,000.00	7,480.00	7,563.84	7,475.32	28.08	41.05	89.75	782.54	448.81	998.98	930.74	68.24	14.640		
8,100.00	7,480.00	7,563.15	7,474.62	28.53	41.05	89.70	782.54	448.80	948.06	879.46	68.60	13.820		
8,200.00	7,480.00	7,562.45	7,473.93	29.06	41.04	89.65	782.55	448.80	905.35	836.45	68.90	13.140		
8,300.00	7,480.00	7,561.76	7,473.23	29.68	41.04	89.61	782.55	448.79	872.07	802.99	69.08	12.624		
8,400.00	7,480.00	7,561.07	7,472.54	30.37	41.04	89.56	782.56	448.79	849.33	780.24	69.09	12.293		
8,500.00	7,480.00	7,560.38	7,471.85	31.13	41.04	89.51	782.56	448.78	837.98	769.09	68.89	12.164 SF		
8,545.76	7,480.00	7,560.07	7,471.54	31.51	41.04	89.49	782.56	448.78	836.73	768.00	68.73	12.174 CC, ES		
8,600.00	7,480.00	7,559.69	7,471.17	31.95	41.04	89.46	782.57	448.77	838.49	770.01	68.47	12.245		
8,700.00	7,480.00	7,559.01	7,470.49	32.83	41.03	89.42	782.57	448.77	850.83	782.95	67.88	12.535		
8,800.00	7,480.00	7,558.33	7,469.81	33.76	41.03	89.37	782.57	448.76	874.50	807.34	67.16	13.020		
8,900.00	7,480.00	7,557.65	7,469.13	34.74	41.03	89.32	782.58	448.76	908.62	842.21	66.42	13.681		
9,000.00	7,480.00	7,556.98	7,468.45	35.76	41.03	89.28	782.58	448.75	952.07	886.37	65.70	14.492		
9,100.00	7,480.00	7,556.30	7,467.78	36.82	41.03	89.23	782.59	448.74	1,003.64	938.58	65.06	15.427		
9,200.00	7,480.00	7,555.63	7,467.11	37.91	41.02	89.19	782.59	448.74	1,062.13	997.62	64.51	16.464		
9,300.00	7,480.00	7,554.96	7,466.44	39.04	41.02	89.14	782.60	448.73	1,126.49	1,062.42	64.07	17.583		
9,400.00	7,480.00	7,554.30	7,465.77	40.20	41.02	89.09	782.60	448.73	1,195.75	1,132.03	63.71	18.767		
9,500.00	7,480.00	7,553.63	7,465.11	41.39	41.02	89.05	782.61	448.72	1,269.11	1,205.67	63.44	20.005		
9,600.00	7,480.00	7,552.97	7,464.45	42.60	41.01	89.00	782.61	448.71	1,345.91	1,282.68	63.23	21.285		
9,700.00	7,480.00	7,552.31	7,463.79	43.84	41.01	88.96	782.62	448.71	1,425.60	1,362.52	63.08	22.601		

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 SULLIVAN 4H-26H-P268
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4987.00usft
<b>Reference Site:</b>	S26-T2N-R68W	<b>MD Reference:</b>	23' KB @ 4987.00usft
<b>Site Error:</b>	0.00usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 1240-ISCWSA 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			
14,200.00	7,480.00	7,628.46	7,623.22	109.21	14.95	96.84	6,914.17	993.95	1,482.83	1,363.78	119.06	12.455			
14,300.00	7,480.00	7,638.00	7,632.63	110.75	14.97	97.23	6,914.92	992.57	1,453.79	1,331.58	122.21	11.895			
14,400.00	7,480.00	7,640.80	7,635.39	112.28	14.98	97.34	6,915.14	992.17	1,431.12	1,306.03	125.08	11.441			
14,500.00	7,480.00	7,645.81	7,640.34	113.82	14.99	97.54	6,915.52	991.46	1,415.13	1,287.61	127.53	11.097			
14,514.90	7,480.00	7,646.55	7,641.07	114.05	14.99	97.57	6,915.58	991.35	1,413.34	1,285.49	127.86	11.054			
14,600.00	7,480.00	7,652.00	7,646.45	115.34	15.01	97.85	6,915.99	990.60	1,403.72	1,274.25	129.47	10.842			
14,689.49	7,480.00	7,655.15	7,649.56	116.66	15.01	98.03	6,916.23	990.16	1,394.02	1,263.28	130.74	10.663			
14,703.04	7,480.00	7,655.94	7,650.34	116.84	15.02	98.06	6,916.29	990.05	1,392.65	1,261.79	130.86	10.642	CC, ES, SF		

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

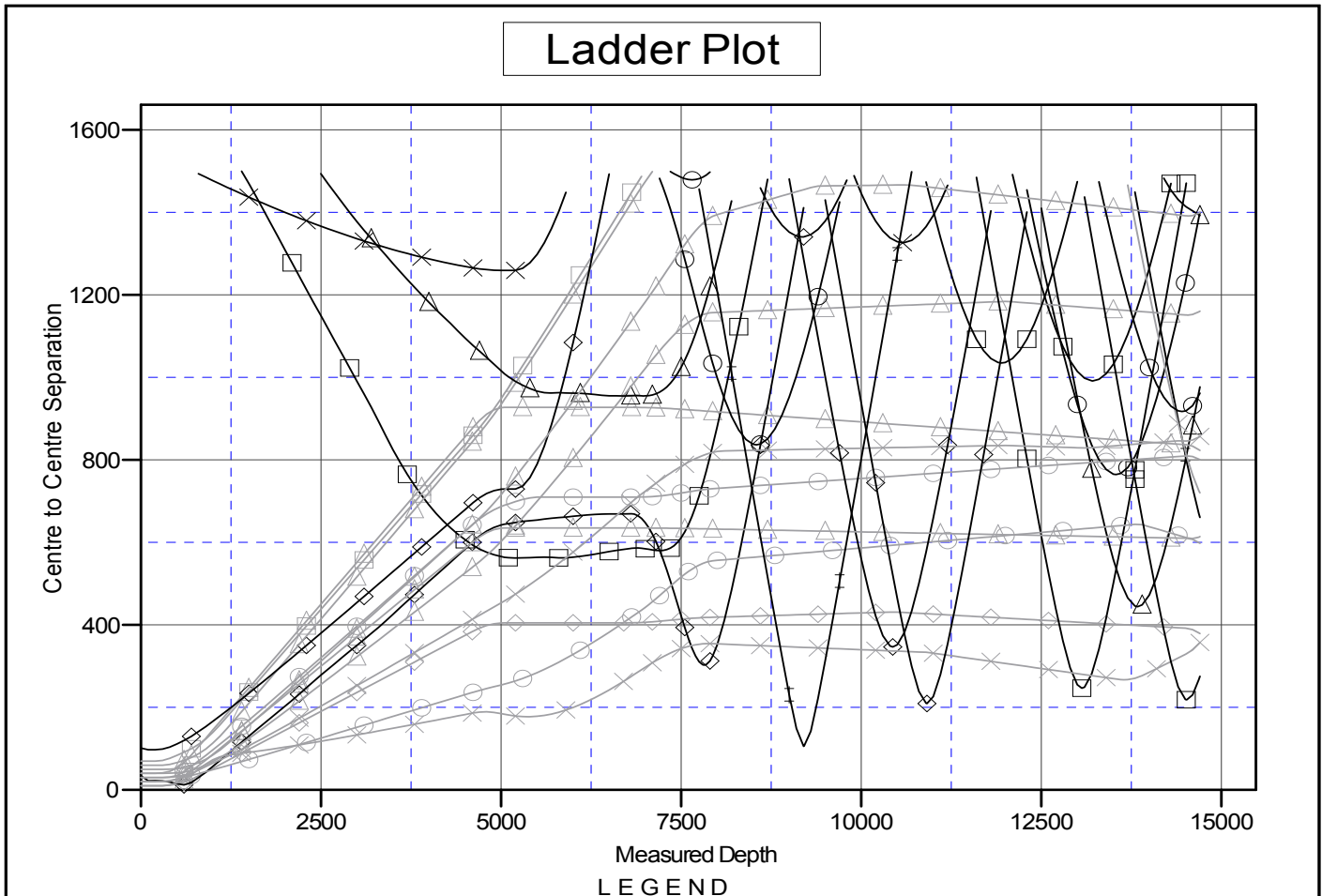
# Cathedral Energy Services

## Anticollision Report

<b>Company:</b> Crestone Peak Resources	<b>Local Co-ordinate Reference:</b> Well SULLIVAN 4H-26H-P268
<b>Project:</b> DJ BASIN	<b>TVD Reference:</b> 23' KB @ 4987.00usft
<b>Reference Site:</b> S26-T2N-R68W	<b>MD Reference:</b> 23' KB @ 4987.00usft
<b>Site Error:</b> 0.00usft	<b>North Reference:</b> Grid
<b>Reference Well:</b> SULLIVAN 4H-26H-P268	<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 #2	<b>Offset TVD Reference:</b> Offset Datum

Reference Depths are relative to 23' KB @ 4987.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: SULLIVAN 4H-26H-P268  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.35°



N4-26H-P268, OH, PLAN #2 V0 os23-54, EXTRACTION, SURVEYS V0 3-8-26, CPR, SURVEYS V0 34-26, CPR WELL, SURVEYS V0 1-24, CPRWELL, SURVEYS V0 others 34-23C, EXTRACTION, GYRO V0 N4B-26H-P268, OH, PLAN#4 V0 os23-2AE, EXTRACTION, SURVEYS V0 os3-23, CPR WELL, SURVEYS V0 14-26, CPRWELL, GYRO V0	GrantBrothers44-23C, EXTRACTION, GYRO V0 SULLIVAN4L-26H-P268, OH, PLAN#2 V0 SULLIVAN4K-26H-P268, OH, PLAN#2 V0 SULLIVAN4A-26H-P268, OH, PLAN#4 V0 SULLIVAN4F-26H-P268, OH, PLAN#2 V0 Sullivan 33-26, CPR WELL, SURVEYS V0 SULLIVAN4E-26H-P268, OH, PLAN#2 V0 GrantBros42-26, CPRWELL, SURVEYS V0 SULLIVAN4I-26H-P268, OH, PLAN#2 V0 SULLIVAN4J-26H-P268, OH, PLAN#2 V0	SULLIVAN4G-26H-P268, OH, PLAN#2 V0 Johnson 1, KPK, NO SURVEYS V0 GrantBrothers33-23C, EXTRACTION, NO : Sullivan 8-6-26, CPR WELL, SURVEYS V0 GrantBrothers2-26, CPR, NO SURVEYS V Duke State 30-36, KMG WELL, SURVEYS V Meredith 1, KPK WELL, NO SURVEYS V0 GrantBros32-26, CPR, GYRO V0 Bybee 5, Wellbore #1, PLAN#1 V0 SULLIVAN4C-26H-P268, OH, PLAN#3 V0 Sullivan 1, CPR, NO SURVEYS V0
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation