



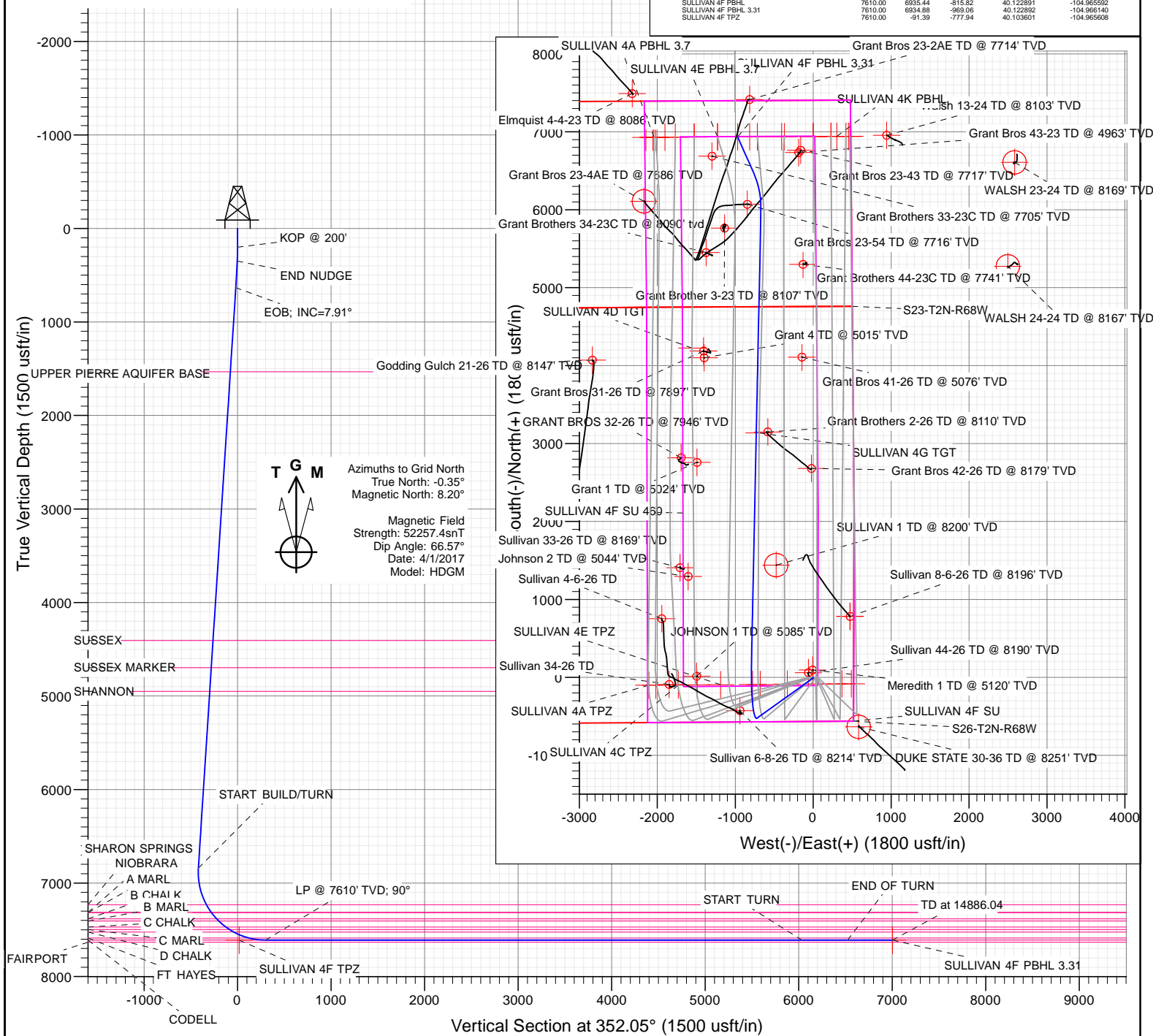
Project: DJ BASIN  
Site: S26-T2N-R68W  
Well: SULLIVAN 4F-26H-P268  
Wellbore: OH  
Design: PLAN #3

## 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	350.00	3.00	200.00	349.93	-3.69	-1.34	2.00	200.00	-3.47	
4	634.55	7.91	234.40	633.17	-22.10	-19.82	2.00	51.62	-19.14	
5	6900.51	7.91	234.40	6839.51	-524.12	-720.93	0.00	0.00	-419.31	
6	8084.63	90.00	1.20	7610.00	191.27	-791.68	8.00	126.54	299.00	
7	13894.63	90.00	1.20	7610.00	6000.00	-670.00	0.00	0.00	6034.99	
8	14385.81	90.00	336.06	7610.00	6477.69	-766.07	5.12	-90.00	6521.38	
9	14886.04	90.00	336.06	7610.00	6934.88	-969.06	0.00	0.00	7002.26	SULLIVAN 4F PBHL 3.31

PLAN #3  
SULLIVAN 4F-26H-P268  
16XXX; LR  
23' KB @ 4987.00usft  
Ground Level @ 4964.00  
North American Datum 1983  
Well SULLIVAN 4F-26H-P268, Grid North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
TD	No Target (Freehand)	352.05				0.00	0.00	
Name		TVD	+N/-S		+E/-W		Latitude	Longitude
SULLIVAN 4F PBHL		7610.00	6935.44		-815.82		40.122891	-104.965592
SULLIVAN 4F PBHL 3.31		7610.00	6935.88		-815.86		40.122892	-104.966140
SULLIVAN 4F TPZ		7610.00	-91.39		-777.94		40.103601	-104.963801



WELL DETAILS: SULLIVAN 4F-26H-P268

+N/-S	+E/-W	Northing	Ground Level:	4964.00	Latitude	Longitude
0.00	0.00	1281128.00	Easting		40.103839	-104.962825



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

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

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

Well	SULLIVAN 4F-26H-P268					
Well Position	+N/-S	0.00 usft	Northing:	1,281,128.00 usft	Latitude:	40.103839
	+E/-W	0.00 usft	Easting:	3,150,261.44 usft	Longitude:	-104.962825
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,964.00 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 (nT)</b>
	HDGM	4/1/2017	8.55	66.57	52,257

<b>Design</b>	PLAN #3			
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	352.05

<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	
350.00	3.00	200.00	349.93	-3.69	-1.34	2.00	2.00	0.00	200.00	
634.55	7.91	234.40	633.17	-22.10	-19.82	2.00	1.73	12.09	51.62	
6,900.51	7.91	234.40	6,839.51	-524.12	-720.93	0.00	0.00	0.00	0.00	
8,084.63	90.00	1.20	7,610.00	191.27	-791.68	8.00	6.93	10.71	126.54	
13,894.63	90.00	1.20	7,610.00	6,000.00	-670.00	0.00	0.00	0.00	0.00	
14,385.81	90.00	336.06	7,610.00	6,477.69	-766.07	5.12	0.00	-5.12	-90.00	
14,886.04	90.00	336.06	7,610.00	6,934.88	-969.06	0.00	0.00	0.00	0.00	SULLIVAN 4F PBHL 3

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

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	200.00	299.98	-1.64	-0.60	-1.54	2.00	2.00	
350.00	3.00	200.00	349.93	-3.69	-1.34	-3.47	2.00	2.00	END NUDGE
400.00	3.70	212.23	399.85	-6.29	-2.65	-5.86	2.00	1.41	
500.00	5.40	225.84	499.53	-12.30	-7.75	-11.11	2.00	1.70	
600.00	7.25	232.76	598.92	-19.40	-16.15	-16.97	2.00	1.85	
634.55	7.91	234.40	633.17	-22.10	-19.82	-19.14	2.00	1.90	EOB; INC=7.91°
700.00	7.91	234.40	697.99	-27.34	-27.15	-23.32	0.00	0.00	
800.00	7.91	234.40	797.04	-35.36	-38.34	-29.71	0.00	0.00	
900.00	7.91	234.40	896.09	-43.37	-49.53	-36.10	0.00	0.00	
1,000.00	7.91	234.40	995.14	-51.38	-60.71	-42.48	0.00	0.00	
1,100.00	7.91	234.40	1,094.19	-59.39	-71.90	-48.87	0.00	0.00	
1,200.00	7.91	234.40	1,193.24	-67.40	-83.09	-55.26	0.00	0.00	
1,300.00	7.91	234.40	1,292.28	-75.42	-94.28	-61.64	0.00	0.00	
1,400.00	7.91	234.40	1,391.33	-83.43	-105.47	-68.03	0.00	0.00	
1,500.00	7.91	234.40	1,490.38	-91.44	-116.66	-74.41	0.00	0.00	
1,543.03	7.91	234.40	1,533.00	-94.89	-121.47	-77.16	0.00	0.00	UPPER PIERRE AQUIFER BASE
1,600.00	7.91	234.40	1,589.43	-99.45	-127.85	-80.80	0.00	0.00	
1,700.00	7.91	234.40	1,688.48	-107.46	-139.04	-87.19	0.00	0.00	
1,800.00	7.91	234.40	1,787.53	-115.48	-150.23	-93.57	0.00	0.00	
1,900.00	7.91	234.40	1,886.58	-123.49	-161.42	-99.96	0.00	0.00	
2,000.00	7.91	234.40	1,985.62	-131.50	-172.61	-106.35	0.00	0.00	
2,100.00	7.91	234.40	2,084.67	-139.51	-183.79	-112.73	0.00	0.00	
2,200.00	7.91	234.40	2,183.72	-147.52	-194.98	-119.12	0.00	0.00	
2,300.00	7.91	234.40	2,282.77	-155.53	-206.17	-125.51	0.00	0.00	
2,400.00	7.91	234.40	2,381.82	-163.55	-217.36	-131.89	0.00	0.00	
2,500.00	7.91	234.40	2,480.87	-171.56	-228.55	-138.28	0.00	0.00	
2,600.00	7.91	234.40	2,579.92	-179.57	-239.74	-144.66	0.00	0.00	
2,700.00	7.91	234.40	2,678.96	-187.58	-250.93	-151.05	0.00	0.00	
2,800.00	7.91	234.40	2,778.01	-195.59	-262.12	-157.44	0.00	0.00	
2,900.00	7.91	234.40	2,877.06	-203.61	-273.31	-163.82	0.00	0.00	
3,000.00	7.91	234.40	2,976.11	-211.62	-284.50	-170.21	0.00	0.00	
3,100.00	7.91	234.40	3,075.16	-219.63	-295.69	-176.60	0.00	0.00	
3,200.00	7.91	234.40	3,174.21	-227.64	-306.87	-182.98	0.00	0.00	
3,300.00	7.91	234.40	3,273.26	-235.65	-318.06	-189.37	0.00	0.00	
3,400.00	7.91	234.40	3,372.30	-243.67	-329.25	-195.75	0.00	0.00	
3,500.00	7.91	234.40	3,471.35	-251.68	-340.44	-202.14	0.00	0.00	
3,600.00	7.91	234.40	3,570.40	-259.69	-351.63	-208.53	0.00	0.00	
3,700.00	7.91	234.40	3,669.45	-267.70	-362.82	-214.91	0.00	0.00	
3,800.00	7.91	234.40	3,768.50	-275.71	-374.01	-221.30	0.00	0.00	
3,900.00	7.91	234.40	3,867.55	-283.73	-385.20	-227.69	0.00	0.00	
4,000.00	7.91	234.40	3,966.59	-291.74	-396.39	-234.07	0.00	0.00	
4,100.00	7.91	234.40	4,065.64	-299.75	-407.58	-240.46	0.00	0.00	
4,200.00	7.91	234.40	4,164.69	-307.76	-418.76	-246.85	0.00	0.00	
4,300.00	7.91	234.40	4,263.74	-315.77	-429.95	-253.23	0.00	0.00	
4,400.00	7.91	234.40	4,362.79	-323.78	-441.14	-259.62	0.00	0.00	
4,443.63	7.91	234.40	4,406.00	-327.28	-446.02	-262.40	0.00	0.00	SUSSEX
4,500.00	7.91	234.40	4,461.84	-331.80	-452.33	-266.00	0.00	0.00	
4,600.00	7.91	234.40	4,560.89	-339.81	-463.52	-272.39	0.00	0.00	
4,700.00	7.91	234.40	4,659.93	-347.82	-474.71	-278.78	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 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
4,736.41	7.91	234.40	4,696.00	-350.74	-478.78	-281.10	0.00	0.00	SUSSEX MARKER
4,800.00	7.91	234.40	4,758.98	-355.83	-485.90	-285.16	0.00	0.00	
4,900.00	7.91	234.40	4,858.03	-363.84	-497.09	-291.55	0.00	0.00	
4,992.85	7.91	234.40	4,950.00	-371.28	-507.48	-297.48	0.00	0.00	SHANNON
5,000.00	7.91	234.40	4,957.08	-371.86	-508.28	-297.94	0.00	0.00	
5,100.00	7.91	234.40	5,056.13	-379.87	-519.47	-304.32	0.00	0.00	
5,200.00	7.91	234.40	5,155.18	-387.88	-530.66	-310.71	0.00	0.00	
5,300.00	7.91	234.40	5,254.23	-395.89	-541.84	-317.09	0.00	0.00	
5,400.00	7.91	234.40	5,353.27	-403.90	-553.03	-323.48	0.00	0.00	
5,500.00	7.91	234.40	5,452.32	-411.92	-564.22	-329.87	0.00	0.00	
5,600.00	7.91	234.40	5,551.37	-419.93	-575.41	-336.25	0.00	0.00	
5,700.00	7.91	234.40	5,650.42	-427.94	-586.60	-342.64	0.00	0.00	
5,800.00	7.91	234.40	5,749.47	-435.95	-597.79	-349.03	0.00	0.00	
5,900.00	7.91	234.40	5,848.52	-443.96	-608.98	-355.41	0.00	0.00	
6,000.00	7.91	234.40	5,947.57	-451.98	-620.17	-361.80	0.00	0.00	
6,100.00	7.91	234.40	6,046.61	-459.99	-631.36	-368.19	0.00	0.00	
6,200.00	7.91	234.40	6,145.66	-468.00	-642.55	-374.57	0.00	0.00	
6,300.00	7.91	234.40	6,244.71	-476.01	-653.74	-380.96	0.00	0.00	
6,400.00	7.91	234.40	6,343.76	-484.02	-664.92	-387.34	0.00	0.00	
6,500.00	7.91	234.40	6,442.81	-492.03	-676.11	-393.73	0.00	0.00	
6,600.00	7.91	234.40	6,541.86	-500.05	-687.30	-400.12	0.00	0.00	
6,700.00	7.91	234.40	6,640.91	-508.06	-698.49	-406.50	0.00	0.00	
6,800.00	7.91	234.40	6,739.95	-516.07	-709.68	-412.89	0.00	0.00	
6,900.00	7.91	234.40	6,839.00	-524.08	-720.87	-419.28	0.00	0.00	
6,900.51	7.91	234.40	6,839.51	-524.12	-720.93	-419.31	0.00	0.00	START BUILD/TURN
7,000.00	7.12	298.24	6,938.30	-525.19	-731.94	-418.84	8.00	-0.79	
7,100.00	12.88	332.09	7,036.82	-512.39	-742.64	-404.69	8.00	5.76	
7,200.00	20.21	343.61	7,132.63	-485.93	-752.74	-377.08	8.00	7.33	
7,300.00	27.90	349.07	7,223.89	-446.31	-762.07	-336.55	8.00	7.69	
7,308.07	28.53	349.39	7,231.00	-442.56	-762.78	-332.74	8.00	7.78	SHARON SPRINGS
7,400.00	35.72	352.30	7,308.81	-394.32	-770.43	-283.90	8.00	7.82	
7,405.18	36.13	352.43	7,313.00	-391.31	-770.83	-280.87	8.00	7.86	NIOBRARA
7,410.14	36.52	352.56	7,317.00	-388.39	-771.22	-277.92	8.00	7.86	A MARL
7,496.24	43.31	354.42	7,383.00	-333.54	-777.41	-222.74	8.00	7.88	B CHALK
7,500.00	43.60	354.49	7,385.73	-330.96	-777.66	-220.16	8.00	7.90	
7,528.53	45.86	355.00	7,406.00	-310.97	-779.50	-200.10	8.00	7.90	B MARL
7,600.00	51.51	356.13	7,453.16	-257.47	-783.62	-146.55	8.00	7.91	
7,627.73	53.71	356.51	7,470.00	-235.49	-785.04	-124.58	8.00	7.92	C CHALK
7,675.53	57.50	357.14	7,497.00	-196.11	-787.22	-85.28	8.00	7.93	C MARL
7,700.00	59.44	357.43	7,509.80	-175.28	-788.20	-64.51	8.00	7.93	
7,726.82	61.57	357.75	7,523.00	-151.96	-789.18	-41.28	8.00	7.94	D CHALK
7,800.00	67.38	358.54	7,554.53	-85.99	-791.31	24.35	8.00	7.94	
7,900.00	75.32	359.53	7,586.48	8.67	-792.88	118.32	8.00	7.95	
7,906.10	75.81	359.59	7,588.00	14.58	-792.93	124.17	8.00	7.95	FT HAYES
8,000.00	83.27	0.45	7,605.04	106.85	-792.89	215.56	8.00	7.95	
8,084.63	90.00	1.20	7,610.00	191.27	-791.68	299.00	8.00	7.95	LP @ 7610' TVD; 90°
8,100.00	90.00	1.20	7,610.00	206.65	-791.35	314.17	0.00	0.00	
8,200.00	90.00	1.20	7,610.00	306.62	-789.26	412.90	0.00	0.00	
8,300.00	90.00	1.20	7,610.00	406.60	-787.16	511.63	0.00	0.00	
8,400.00	90.00	1.20	7,610.00	506.58	-785.07	610.35	0.00	0.00	
8,500.00	90.00	1.20	7,610.00	606.56	-782.98	709.08	0.00	0.00	
8,600.00	90.00	1.20	7,610.00	706.54	-780.88	807.81	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 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
8,700.00	90.00	1.20	7,610.00	806.51	-778.79	906.53	0.00	0.00	
8,800.00	90.00	1.20	7,610.00	906.49	-776.69	1,005.26	0.00	0.00	
8,900.00	90.00	1.20	7,610.00	1,006.47	-774.60	1,103.98	0.00	0.00	
9,000.00	90.00	1.20	7,610.00	1,106.45	-772.51	1,202.71	0.00	0.00	
9,100.00	90.00	1.20	7,610.00	1,206.43	-770.41	1,301.44	0.00	0.00	
9,200.00	90.00	1.20	7,610.00	1,306.40	-768.32	1,400.16	0.00	0.00	
9,300.00	90.00	1.20	7,610.00	1,406.38	-766.22	1,498.89	0.00	0.00	
9,400.00	90.00	1.20	7,610.00	1,506.36	-764.13	1,597.62	0.00	0.00	
9,500.00	90.00	1.20	7,610.00	1,606.34	-762.03	1,696.34	0.00	0.00	
9,600.00	90.00	1.20	7,610.00	1,706.32	-759.94	1,795.07	0.00	0.00	
9,700.00	90.00	1.20	7,610.00	1,806.29	-757.85	1,893.79	0.00	0.00	
9,800.00	90.00	1.20	7,610.00	1,906.27	-755.75	1,992.52	0.00	0.00	
9,900.00	90.00	1.20	7,610.00	2,006.25	-753.66	2,091.25	0.00	0.00	
10,000.00	90.00	1.20	7,610.00	2,106.23	-751.56	2,189.97	0.00	0.00	
10,100.00	90.00	1.20	7,610.00	2,206.21	-749.47	2,288.70	0.00	0.00	
10,200.00	90.00	1.20	7,610.00	2,306.19	-747.37	2,387.42	0.00	0.00	
10,300.00	90.00	1.20	7,610.00	2,406.16	-745.28	2,486.15	0.00	0.00	
10,400.00	90.00	1.20	7,610.00	2,506.14	-743.19	2,584.88	0.00	0.00	
10,500.00	90.00	1.20	7,610.00	2,606.12	-741.09	2,683.60	0.00	0.00	
10,600.00	90.00	1.20	7,610.00	2,706.10	-739.00	2,782.33	0.00	0.00	
10,700.00	90.00	1.20	7,610.00	2,806.08	-736.90	2,881.06	0.00	0.00	
10,800.00	90.00	1.20	7,610.00	2,906.05	-734.81	2,979.78	0.00	0.00	
10,900.00	90.00	1.20	7,610.00	3,006.03	-732.71	3,078.51	0.00	0.00	
11,000.00	90.00	1.20	7,610.00	3,106.01	-730.62	3,177.23	0.00	0.00	
11,100.00	90.00	1.20	7,610.00	3,205.99	-728.53	3,275.96	0.00	0.00	
11,200.00	90.00	1.20	7,610.00	3,305.97	-726.43	3,374.69	0.00	0.00	
11,300.00	90.00	1.20	7,610.00	3,405.94	-724.34	3,473.41	0.00	0.00	
11,400.00	90.00	1.20	7,610.00	3,505.92	-722.24	3,572.14	0.00	0.00	
11,500.00	90.00	1.20	7,610.00	3,605.90	-720.15	3,670.87	0.00	0.00	
11,600.00	90.00	1.20	7,610.00	3,705.88	-718.06	3,769.59	0.00	0.00	
11,700.00	90.00	1.20	7,610.00	3,805.86	-715.96	3,868.32	0.00	0.00	
11,800.00	90.00	1.20	7,610.00	3,905.83	-713.87	3,967.04	0.00	0.00	
11,900.00	90.00	1.20	7,610.00	4,005.81	-711.77	4,065.77	0.00	0.00	
12,000.00	90.00	1.20	7,610.00	4,105.79	-709.68	4,164.50	0.00	0.00	
12,100.00	90.00	1.20	7,610.00	4,205.77	-707.58	4,263.22	0.00	0.00	
12,200.00	90.00	1.20	7,610.00	4,305.75	-705.49	4,361.95	0.00	0.00	
12,300.00	90.00	1.20	7,610.00	4,405.72	-703.40	4,460.67	0.00	0.00	
12,400.00	90.00	1.20	7,610.00	4,505.70	-701.30	4,559.40	0.00	0.00	
12,500.00	90.00	1.20	7,610.00	4,605.68	-699.21	4,658.13	0.00	0.00	
12,600.00	90.00	1.20	7,610.00	4,705.66	-697.11	4,756.85	0.00	0.00	
12,700.00	90.00	1.20	7,610.00	4,805.64	-695.02	4,855.58	0.00	0.00	
12,800.00	90.00	1.20	7,610.00	4,905.61	-692.92	4,954.31	0.00	0.00	
12,900.00	90.00	1.20	7,610.00	5,005.59	-690.83	5,053.03	0.00	0.00	
13,000.00	90.00	1.20	7,610.00	5,105.57	-688.74	5,151.76	0.00	0.00	
13,100.00	90.00	1.20	7,610.00	5,205.55	-686.64	5,250.48	0.00	0.00	
13,200.00	90.00	1.20	7,610.00	5,305.53	-684.55	5,349.21	0.00	0.00	
13,300.00	90.00	1.20	7,610.00	5,405.51	-682.45	5,447.94	0.00	0.00	
13,400.00	90.00	1.20	7,610.00	5,505.48	-680.36	5,546.66	0.00	0.00	
13,500.00	90.00	1.20	7,610.00	5,605.46	-678.26	5,645.39	0.00	0.00	
13,600.00	90.00	1.20	7,610.00	5,705.44	-676.17	5,744.12	0.00	0.00	
13,700.00	90.00	1.20	7,610.00	5,805.42	-674.08	5,842.84	0.00	0.00	
13,800.00	90.00	1.20	7,610.00	5,905.40	-671.98	5,941.57	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 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
13,894.63	90.00	1.20	7,610.00	6,000.00	-670.00	6,034.99	0.00	0.00	START TURN
13,900.00	90.00	0.92	7,610.00	6,005.37	-669.90	6,040.30	5.12	0.00	
14,000.00	90.00	355.81	7,610.00	6,105.30	-672.75	6,139.66	5.12	0.00	
14,100.00	90.00	350.69	7,610.00	6,204.57	-684.51	6,239.60	5.12	0.00	
14,200.00	90.00	345.57	7,610.00	6,302.40	-705.07	6,339.33	5.12	0.00	
14,300.00	90.00	340.45	7,610.00	6,398.01	-734.28	6,438.06	5.12	0.00	
14,385.81	90.00	336.06	7,610.00	6,477.69	-766.07	6,521.38	5.12	0.00	END OF TURN
14,400.00	90.00	336.06	7,610.00	6,490.66	-771.82	6,535.02	0.00	0.00	
14,500.00	90.00	336.06	7,610.00	6,582.05	-812.40	6,631.15	0.00	0.00	
14,600.00	90.00	336.06	7,610.00	6,673.45	-852.98	6,727.28	0.00	0.00	
14,700.00	90.00	336.06	7,610.00	6,764.85	-893.57	6,823.41	0.00	0.00	
14,800.00	90.00	336.06	7,610.00	6,856.24	-934.15	6,919.55	0.00	0.00	
14,886.04	90.00	336.06	7,610.00	6,934.88	-969.06	7,002.26	0.00	0.00	TD at 14886.04

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SULLIVAN 4F PBHL 3.3 - plan hits target center - Point	0.00	0.00	7,610.00	6,934.88	-969.06	1,288,062.88	3,149,292.38	40.122892	-104.966140
SULLIVAN 4F PBHL - plan misses target center by 142.39usft at 14800.00usft MD (7610.00 TVD, 6856.24 N, -934.15 E) - Point	0.00	0.00	7,610.00	6,935.44	-815.82	1,288,063.44	3,149,445.63	40.122891	-104.965592
SULLIVAN 4F TPZ - plan misses target center by 55.25usft at 7812.42usft MD (7559.20 TVD, -74.49 N, -791.59 E) - Point	0.00	0.00	7,610.00	-91.39	-777.94	1,281,036.61	3,149,483.50	40.103601	-104.965608

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,543.03	1,533.00	UPPER PIERRE AQUIFER BASE			
4,443.63	4,406.00	SUSSEX			
4,736.41	4,696.00	SUSSEX MARKER			
4,992.85	4,950.00	SHANNON			
7,308.07	7,231.00	SHARON SPRINGS			
7,405.18	7,313.00	NIOBRARA			
7,410.14	7,317.00	A MARL			
7,496.24	7,383.00	B CHALK			
7,528.53	7,406.00	B MARL			
7,627.73	7,470.00	C CHALK			
7,675.53	7,497.00	C MARL			
7,726.82	7,523.00	D CHALK			
7,906.10	7,588.00	FT HAYES			

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-26H-P268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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'
350.00	349.93	-3.69	-1.34	END NUDGE
634.55	633.17	-22.10	-19.82	EOB; INC=7.91°
6,900.51	6,839.51	-524.12	-720.93	START BUILD/TURN
8,084.63	7,610.00	191.27	-791.68	LP @ 7610' TVD; 90°
13,894.63	7,610.00	6,000.00	-670.00	START TURN
14,385.81	7,610.00	6,477.69	-766.07	END OF TURN
14,886.04	7,610.00	6,934.88	-969.06	TD at 14886.04

# **Crestone Peak Resources**

**DJ BASIN**

**S26-T2N-R68W**

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

**OH**

**PLAN #3**

## **Anticollision Report**

**05 April, 2017**



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #3		
<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>	4/5/2017		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	14,886.04	PLAN #3 (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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
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	14,886.04	12,639.47	412.21	332.37	5.163	CC, ES, SF
Duke State 30-36 - KMG WELL - SURVEYS	5,284.83	5,417.48	1,177.84	1,131.11	25.207	CC
Duke State 30-36 - KMG WELL - SURVEYS	5,300.00	5,430.60	1,177.85	1,130.99	25.134	ES
Duke State 30-36 - KMG WELL - SURVEYS	7,050.00	7,087.27	1,324.30	1,264.97	22.323	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	14,886.04	7,737.88	1,460.38	1,317.39	10.213	CC, ES, SF
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	14,886.04	7,954.48	499.73	425.54	6.736	CC, ES, SF
Grant Bros 23-43 - EXTRACTION - SURVEYS	14,397.55	7,853.47	666.71	539.55	5.243	CC
Grant Bros 23-43 - EXTRACTION - SURVEYS	14,500.00	7,855.25	674.53	538.78	4.969	ES
Grant Bros 23-43 - EXTRACTION - SURVEYS	14,600.00	7,856.98	696.76	554.95	4.913	SF
Grant Bros 23-4AE - EXTRACTION - SURVEYS	14,600.00	7,661.14	1,433.61	1,302.78	10.958	SF
Grant Bros 23-4AE - EXTRACTION - SURVEYS	14,620.23	7,661.27	1,433.47	1,302.71	10.963	CC, ES
Grant Bros 23-54 - EXTRACTION - SURVEYS	13,975.17	7,672.22	150.84	26.95	1.218	Level 2, CC, ES, SF
Grant Bros 31-26 - CPR WELL - GYRO	12,063.64	7,559.92	700.31	612.85	8.007	CC, ES
Grant Bros 31-26 - CPR WELL - GYRO	12,100.00	7,560.41	701.25	613.05	7.950	SF
Grant Bros 32-26 - CPR - GYRO	10,684.98	7,571.44	959.74	891.63	14.092	CC
Grant Bros 32-26 - CPR - GYRO	10,700.00	7,571.74	959.85	891.47	14.037	ES
Grant Bros 32-26 - CPR - GYRO	10,800.00	7,573.70	966.60	896.64	13.817	SF
Grant Bros 3-23 - CPR WELL - SURVEYS	13,653.99	7,563.13	467.16	362.67	4.471	CC, ES
Grant Bros 3-23 - CPR WELL - SURVEYS	13,700.00	7,562.43	469.42	364.05	4.455	SF
Grant Bros 41-26 - SUNDANCE WELL - NO SURVEYS						Out of range
Grant Bros 42-26 - CPR WELL - SURVEYS	10,585.09	7,633.40	714.72	643.39	10.020	CC, ES, SF
Grant Bros 43-23 - SUNDANCE WELL - NO SURVEYS						Out of range
Grant Brothers 2-26 - CPR - NO SURVEYS	11,046.43	7,567.99	147.29	74.17	2.014	CC, ES, SF
Grant Brothers 33-23C - EXTRACTION - NO SURVEYS	14,700.00	7,533.99	411.37	283.97	3.229	SF
Grant Brothers 33-23C - EXTRACTION - NO SURVEYS	14,793.12	7,533.99	400.69	277.00	3.239	CC, ES
Grant Brothers 34-23C - EXTRACTION - GYRO	13,328.12	7,547.62	688.34	582.97	6.532	CC, ES
Grant Brothers 34-23C - EXTRACTION - GYRO	13,400.00	7,547.90	692.08	585.46	6.491	SF
Grant Brothers 44-23C - EXTRACTION - GYRO	13,205.81	7,580.65	553.86	450.20	5.343	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	5,255.81	5,085.00	1,043.36	1,013.55	35.000	CC, ES
Johnson 1 - KPK - NO SURVEYS	5,300.00	5,085.00	1,044.30	1,014.36	34.888	SF
Johnson 2 - KPK WELL - NO SURVEYS						Out of range
Meredith 1 - KPK WELL - NO SURVEYS	200.00	171.99	93.57	92.77	117.420	CC, ES
Meredith 1 - KPK WELL - NO SURVEYS	5,100.00	5,028.12	696.40	669.20	25.600	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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
S26-T2N-R68W						
Puritan 6-4-34 - CPR WELL - SURVEYS						Out of range
Sullivan 1 - CPR - NO SURVEYS	9,339.77	7,594.00	290.44	243.47	6.183	CC, ES, SF
Sullivan 33-26 - CPR WELL - SURVEYS	9,283.17	7,565.96	942.86	897.74	20.893	CC
Sullivan 33-26 - CPR WELL - SURVEYS	9,300.00	7,565.94	943.01	897.67	20.798	ES
Sullivan 33-26 - CPR WELL - SURVEYS	9,500.00	7,565.60	967.47	919.96	20.361	SF
Sullivan 34-26 - CPR WELL - SURVEYS	7,810.37	7,515.60	1,054.61	1,013.11	25.411	CC, ES
Sullivan 34-26 - CPR WELL - SURVEYS	7,850.00	7,530.63	1,055.39	1,013.81	25.387	SF
Sullivan 44-26 - CPR WELL - GYRO	452.80	426.49	11.40	9.27	5.365	CC, ES
Sullivan 44-26 - CPR WELL - GYRO	500.00	473.49	12.32	9.94	5.181	SF
Sullivan 4-6-26 - CPR WELL - SURVEYS	8,613.99	7,650.43	1,161.86	1,111.42	23.035	CC, ES
Sullivan 4-6-26 - CPR WELL - SURVEYS	8,900.00	7,654.56	1,196.54	1,143.42	22.526	SF
SULLIVAN 4A-26H-P268 - OH - PLAN #4	200.00	200.00	50.07	49.08	50.427	CC, ES
SULLIVAN 4A-26H-P268 - OH - PLAN #4	14,886.04	15,141.36	1,074.95	841.06	4.596	SF
SULLIVAN 4B-26H-P268 - OH - PLAN #4	339.18	338.63	39.24	37.27	19.923	CC
SULLIVAN 4B-26H-P268 - OH - PLAN #4	400.00	398.61	39.48	37.07	16.388	ES
SULLIVAN 4B-26H-P268 - OH - PLAN #4	14,886.04	14,724.02	1,071.17	838.54	4.605	SF
SULLIVAN 4C-26H-P268 - OH - PLAN #3	552.59	551.10	26.39	22.89	7.546	CC
SULLIVAN 4C-26H-P268 - OH - PLAN #3	600.00	598.17	26.55	22.71	6.915	ES
SULLIVAN 4C-26H-P268 - OH - PLAN #3	14,886.04	14,901.25	810.29	576.34	3.463	SF
SULLIVAN 4D-26H-P268 - OH - PLAN #2	502.13	501.65	17.60	14.47	5.615	CC, ES
SULLIVAN 4D-26H-P268 - OH - PLAN #2	14,886.04	14,745.41	598.67	372.91	2.652	SF
SULLIVAN 4E-26H-P268 - OH - PLAN #3	335.65	335.60	9.55	7.60	4.910	CC
SULLIVAN 4E-26H-P268 - OH - PLAN #3	400.00	399.85	9.89	7.49	4.119	ES
SULLIVAN 4E-26H-P268 - OH - PLAN #3	14,886.04	14,528.90	279.37	64.77	1.302	Level 3, SF
SULLIVAN 4G-26H-P268 - OH - PLAN #2	200.00	200.00	10.07	9.08	10.142	CC, ES
SULLIVAN 4G-26H-P268 - OH - PLAN #2	6,854.19	6,863.22	69.38	17.29	1.332	Level 3, SF
SULLIVAN 4H-26H-P268 - OH - PLAN #2	200.00	200.00	19.86	18.87	19.965	CC
SULLIVAN 4H-26H-P268 - OH - PLAN #2	300.00	300.00	20.46	18.77	12.159	ES
SULLIVAN 4H-26H-P268 - OH - PLAN #2	14,000.00	13,870.72	321.38	129.27	1.673	SF
SULLIVAN 4I-26H-P268 - OH - PLAN #2	200.00	200.00	29.93	28.94	30.143	CC
SULLIVAN 4I-26H-P268 - OH - PLAN #2	300.00	299.98	30.58	28.88	18.034	ES
SULLIVAN 4I-26H-P268 - OH - PLAN #2	14,100.00	13,874.73	731.65	528.60	3.603	SF
SULLIVAN 4J-26H-P268 - OH - PLAN #2	200.00	200.00	40.00	39.01	40.284	CC
SULLIVAN 4J-26H-P268 - OH - PLAN #2	300.00	299.98	40.64	38.94	23.967	ES
SULLIVAN 4J-26H-P268 - OH - PLAN #2	14,100.00	13,961.11	926.60	717.29	4.427	SF
SULLIVAN 4K-26H-P268 - OH - PLAN #2	200.00	200.00	50.07	49.08	50.426	CC
SULLIVAN 4K-26H-P268 - OH - PLAN #2	300.00	299.98	50.70	49.01	29.902	ES
SULLIVAN 4K-26H-P268 - OH - PLAN #2	14,100.00	14,075.51	1,097.97	887.77	5.223	SF
SULLIVAN 4L-26H-P268 - OH - PLAN #2	200.00	200.00	59.86	58.87	60.287	CC, ES
SULLIVAN 4L-26H-P268 - OH - PLAN #2	14,100.00	13,834.61	1,184.95	977.13	5.702	SF
Sullivan 6-8-26 - CPR - SURVEYS	7,382.83	7,390.18	179.45	136.20	4.150	CC
Sullivan 6-8-26 - CPR - SURVEYS	7,400.00	7,404.56	179.74	136.10	4.119	ES
Sullivan 6-8-26 - CPR - SURVEYS	7,450.00	7,444.91	184.27	139.37	4.104	SF
Sullivan 8-6-26 - CPR WELL - SURVEYS	8,700.00	7,684.91	1,248.90	1,178.99	17.866	ES, SF
Sullivan 8-6-26 - CPR WELL - SURVEYS	8,701.35	7,684.90	1,248.89	1,178.99	17.867	CC
Walsh 13-24 - CPR WELL - SURVEYS						Out of range
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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Bybee 5 - Wellbore #1 - PLAN #1												Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+HDGM												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
13,800.00	7,610.00	12,639.47	7,272.00	100.31	87.87	-54.48	7,256.24	-1,002.36	1,414.03	1,343.19	70.84	19.961	
13,894.63	7,610.00	12,639.47	7,272.00	101.73	87.87	-54.48	7,256.24	-1,002.36	1,324.44	1,251.30	73.14	18.109	
13,900.00	7,610.00	12,639.47	7,272.00	101.81	87.87	-54.02	7,256.24	-1,002.36	1,319.37	1,246.09	73.28	18.004	
14,000.00	7,610.00	12,639.47	7,272.00	103.35	87.87	-43.69	7,256.24	-1,002.36	1,224.27	1,148.50	75.78	16.156	
14,100.00	7,610.00	12,639.47	7,272.00	104.93	87.87	-29.27	7,256.24	-1,002.36	1,128.09	1,050.23	77.85	14.490	
14,200.00	7,610.00	12,639.47	7,272.00	106.56	87.87	-11.09	7,256.24	-1,002.36	1,031.37	952.07	79.30	13.006	
14,300.00	7,610.00	12,639.47	7,272.00	108.20	87.87	7.69	7,256.24	-1,002.36	934.87	854.99	79.87	11.704	
14,385.81	7,610.00	12,639.47	7,272.00	109.62	87.87	21.33	7,256.24	-1,002.36	852.94	773.46	79.48	10.732	
14,400.00	7,610.00	12,639.47	7,272.00	109.86	87.87	21.33	7,256.24	-1,002.36	839.53	760.19	79.34	10.582	
14,500.00	7,610.00	12,639.47	7,272.00	111.52	87.87	21.33	7,256.24	-1,002.36	745.75	667.43	78.32	9.521	
14,600.00	7,610.00	12,639.47	7,272.00	113.20	87.87	21.33	7,256.24	-1,002.36	653.83	576.44	77.39	8.448	
14,700.00	7,610.00	12,639.47	7,272.00	114.90	87.87	21.33	7,256.24	-1,002.36	564.66	487.82	76.85	7.348	
14,800.00	7,610.00	12,639.47	7,272.00	116.61	87.87	21.33	7,256.24	-1,002.36	479.78	402.39	77.39	6.200	
14,886.04	7,610.00	12,639.47	7,272.00	118.09	87.87	21.33	7,256.24	-1,002.36	412.21	332.37	79.84	5.163	CC, ES, SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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						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	
3,000.00	2,976.11	3,339.63	3,305.60	11.79	16.16	-114.22	-978.18	955.34	1,499.69	1,474.61	25.08	59.786	
3,100.00	3,075.16	3,421.04	3,384.76	12.21	16.77	-114.75	-965.63	941.06	1,482.12	1,456.20	25.91	57.195	
3,200.00	3,174.21	3,527.88	3,488.80	12.62	17.57	-115.46	-949.68	922.68	1,465.30	1,438.50	26.80	54.667	
3,300.00	3,273.26	3,624.57	3,582.70	13.04	18.33	-116.16	-933.83	905.96	1,447.83	1,420.14	27.69	52.282	
3,400.00	3,372.30	3,728.54	3,683.67	13.45	19.15	-116.95	-916.42	888.28	1,430.66	1,402.05	28.61	50.008	
3,500.00	3,471.35	3,827.76	3,779.98	13.87	19.94	-117.67	-900.74	870.35	1,413.25	1,383.74	29.51	47.896	
3,600.00	3,570.40	3,917.03	3,866.71	14.28	20.64	-118.32	-887.14	854.13	1,396.25	1,365.86	30.39	45.950	
3,700.00	3,669.45	4,021.85	3,968.44	14.70	21.49	-119.17	-869.56	836.02	1,379.54	1,348.21	31.33	44.036	
3,800.00	3,768.50	4,116.97	4,060.62	15.11	22.27	-120.00	-852.58	819.78	1,362.80	1,330.53	32.27	42.233	
3,900.00	3,867.55	4,214.44	4,155.10	15.53	23.08	-120.87	-835.39	803.15	1,346.46	1,313.24	33.22	40.526	
4,000.00	3,966.59	4,320.00	4,257.27	15.95	23.98	-121.85	-816.07	784.94	1,329.98	1,295.76	34.22	38.866	
4,100.00	4,065.64	4,409.40	4,343.70	16.36	24.74	-122.74	-799.07	769.72	1,313.77	1,278.57	35.20	37.324	
4,200.00	4,164.69	4,502.65	4,434.13	16.78	25.52	-123.62	-782.78	753.82	1,298.51	1,262.33	36.18	35.890	
4,300.00	4,263.74	4,632.44	4,559.66	17.19	26.63	-124.79	-761.12	729.00	1,281.88	1,244.66	37.22	34.441	
4,400.00	4,362.79	4,726.87	4,650.75	17.61	27.47	-125.70	-744.43	710.50	1,264.88	1,226.66	38.23	33.089	
4,500.00	4,461.84	4,816.70	4,737.44	18.02	28.25	-126.58	-728.88	692.83	1,248.29	1,209.06	39.23	31.817	
4,600.00	4,560.89	4,895.11	4,813.40	18.44	28.92	-127.33	-716.11	678.17	1,233.28	1,193.06	40.22	30.662	
4,700.00	4,659.93	4,987.40	4,902.95	18.85	29.69	-128.25	-701.07	661.69	1,219.41	1,178.16	41.25	29.561	
4,800.00	4,758.98	5,076.36	4,989.31	19.27	30.44	-129.18	-686.14	646.38	1,206.37	1,164.07	42.30	28.521	
4,900.00	4,858.03	5,155.02	5,065.88	19.69	31.08	-130.00	-673.63	633.52	1,194.80	1,151.48	43.32	27.584	
5,000.00	4,957.08	5,213.40	5,123.07	20.10	31.51	-130.57	-665.51	625.01	1,185.87	1,141.63	44.24	26.806	
5,100.00	5,056.13	5,272.84	5,181.70	20.52	31.90	-131.12	-658.58	618.13	1,180.62	1,135.52	45.11	26.174	
5,200.00	5,155.18	5,346.00	5,254.21	20.93	32.33	-131.73	-651.75	611.21	1,178.29	1,132.32	45.98	25.628	
5,284.83	5,239.20	5,417.48	5,325.24	21.29	32.72	-132.28	-646.34	605.31	1,177.84	1,131.11	46.73	25.207 CC	
5,300.00	5,254.23	5,430.60	5,338.28	21.35	32.79	-132.38	-645.39	604.29	1,177.85	1,130.99	46.86	25.134 ES	
5,400.00	5,353.27	5,510.88	5,418.19	21.76	33.20	-132.96	-640.20	598.56	1,178.87	1,131.17	47.70	24.713	
5,500.00	5,452.32	5,581.34	5,488.46	22.18	33.52	-133.43	-636.83	594.65	1,181.97	1,133.53	48.44	24.398	
5,600.00	5,551.37	5,640.00	5,547.05	22.60	33.75	-133.79	-634.85	592.87	1,188.03	1,138.97	49.06	24.215	
5,700.00	5,650.42	5,720.00	5,627.04	23.01	33.96	-134.23	-633.52	592.45	1,196.84	1,147.14	49.70	24.080	
5,800.00	5,749.47	5,813.70	5,720.73	23.43	34.14	-134.67	-633.67	593.15	1,207.25	1,156.90	50.36	23.974	
5,900.00	5,848.52	5,933.75	5,840.78	23.84	34.35	-135.19	-634.21	592.45	1,216.50	1,165.38	51.11	23.800	
6,000.00	5,947.57	6,018.53	5,925.56	24.26	34.55	-135.59	-634.02	591.94	1,225.70	1,173.95	51.75	23.687	
6,100.00	6,046.61	6,120.89	6,027.91	24.67	34.78	-136.08	-633.15	591.97	1,235.53	1,183.04	52.48	23.542	
6,200.00	6,145.66	6,237.86	6,144.86	25.09	35.06	-136.61	-632.81	590.45	1,244.16	1,190.87	53.29	23.349	
6,300.00	6,244.71	6,336.57	6,243.56	25.50	35.32	-137.04	-632.40	588.93	1,252.66	1,198.64	54.01	23.191	
6,400.00	6,343.76	6,440.00	6,346.97	25.92	35.62	-137.50	-631.75	586.73	1,260.62	1,205.83	54.79	23.010	
6,500.00	6,442.81	6,520.00	6,426.96	26.34	35.89	-137.88	-630.78	585.97	1,269.70	1,214.24	55.47	22.891	
6,600.00	6,541.86	6,612.08	6,519.04	26.75	36.12	-138.30	-629.91	585.90	1,279.81	1,223.66	56.15	22.792	
6,700.00	6,640.91	6,711.79	6,618.74	27.17	36.37	-138.76	-628.68	585.83	1,289.97	1,233.09	56.88	22.678	
6,800.00	6,739.95	6,803.31	6,710.25	27.58	36.50	-139.15	-628.18	586.19	1,300.72	1,243.28	57.44	22.644	
6,900.51	6,839.51	6,928.68	6,835.62	28.00	36.79	-139.71	-626.72	586.08	1,311.16	1,252.87	58.30	22.492	
6,950.00	6,888.63	6,991.94	6,898.84	28.20	37.03	-169.93	-625.17	584.83	1,315.41	1,256.62	58.79	22.375	
7,000.00	6,938.30	7,041.23	6,948.11	28.38	37.19	155.99	-624.57	583.62	1,319.72	1,260.60	59.12	22.323	
7,050.00	6,987.78	7,087.27	6,994.14	28.54	37.28	134.14	-624.75	582.51	1,324.30	1,264.97	59.33	22.323 SF	
7,100.00	7,036.82	7,130.15	7,037.01	28.68	37.33	122.31	-625.21	581.62	1,329.26	1,269.80	59.46	22.356	
7,150.00	7,085.18	7,172.07	7,078.91	28.81	37.38	115.52	-625.77	580.94	1,334.68	1,275.12	59.56	22.409	
7,200.00	7,132.63	7,212.40	7,119.24	28.92	37.43	111.28	-626.34	580.48	1,340.63	1,281.00	59.63	22.481	
7,250.00	7,178.95	7,251.99	7,158.83	29.02	37.49	108.46	-626.89	580.24	1,347.19	1,287.49	59.70	22.567	
7,300.00	7,223.89	7,291.55	7,198.38	29.11	37.57	106.53	-627.50	580.16	1,354.40	1,294.64	59.76	22.662	
7,350.00	7,267.25	7,330.39	7,237.21	29.19	37.65	105.15	-628.22	580.19	1,362.32	1,302.49	59.83	22.771	
7,400.00	7,308.81	7,368.49	7,275.31	29.25	37.74	104.15	-629.03	580.32	1,371.02	1,311.14	59.88	22.895	
7,450.00	7,348.36	7,407.28	7,314.08	29.30	37.84	103.44	-629.84	580.48	1,380.56	1,320.62	59.94	23.032	

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 4F-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 4F-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 #3	<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						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		
7,500.00	7,385.73	7,443.85	7,350.65	29.33	37.93	102.86	-630.56	580.64	1,391.00	1,331.02	59.98	23.190		
7,550.00	7,420.72	7,478.05	7,384.84	29.36	38.02	102.33	-631.19	580.81	1,402.47	1,342.46	60.01	23.370		
7,600.00	7,453.16	7,509.80	7,416.59	29.38	38.11	101.80	-631.75	580.97	1,415.06	1,355.03	60.03	23.574		
7,650.00	7,482.91	7,539.15	7,445.93	29.38	38.19	101.23	-632.24	581.13	1,428.85	1,368.81	60.04	23.800		
7,700.00	7,509.80	7,566.00	7,472.78	29.38	38.26	100.57	-632.67	581.26	1,443.90	1,383.86	60.04	24.051		
7,750.00	7,533.71	7,590.52	7,497.29	29.36	38.33	99.80	-633.03	581.38	1,460.26	1,400.22	60.03	24.324		
7,800.00	7,554.53	7,611.84	7,518.62	29.35	38.39	98.87	-633.32	581.48	1,477.93	1,417.91	60.02	24.624		
7,850.00	7,572.14	7,629.87	7,536.64	29.32	38.44	97.75	-633.55	581.55	1,496.94	1,436.94	60.00	24.948		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												S26-T2N-R68W - Elmquist 4-4-23 - CPR WELL - SURVEYS		Offset Site Error:		0.00 usft	
Survey Program: 102-MWD														Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning				
14,886.04	7,610.00	7,737.88	7,553.88	118.09	50.58	-89.99	7,489.86	-2,319.88	1,460.38	1,317.39	142.99	10.213 CC, ES, SF					

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## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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		
13,894.63	7,610.00	7,969.97	7,570.87	101.73	41.28	-94.06	7,412.47	-821.69	1,420.65	1,364.45	56.20	25.277		
13,900.00	7,610.00	7,969.95	7,570.85	101.81	41.28	-94.21	7,412.47	-821.69	1,415.32	1,359.09	56.23	25.172		
14,000.00	7,610.00	7,969.41	7,570.31	103.35	41.28	-103.08	7,412.47	-821.71	1,315.69	1,259.16	56.53	23.273		
14,100.00	7,610.00	7,968.57	7,569.47	104.93	41.28	100.82	7,412.48	-821.74	1,215.73	1,159.16	56.57	21.490		
14,200.00	7,610.00	7,967.43	7,568.33	106.56	41.28	93.61	7,412.48	-821.78	1,116.25	1,059.97	56.28	19.835		
14,300.00	7,610.00	7,965.98	7,566.87	108.20	41.28	91.98	7,412.49	-821.84	1,018.29	962.61	55.68	18.287		
14,385.81	7,610.00	7,964.48	7,565.38	109.62	41.28	91.29	7,412.50	-821.89	936.50	881.38	55.12	16.990		
14,400.00	7,610.00	7,964.21	7,565.11	109.86	41.28	91.24	7,412.50	-821.90	923.23	868.18	55.05	16.772		
14,500.00	7,610.00	7,962.31	7,563.21	111.52	41.28	90.91	7,412.51	-821.97	830.53	775.52	55.01	15.098		
14,600.00	7,610.00	7,960.35	7,561.26	113.20	41.28	90.57	7,412.52	-822.05	739.73	683.53	56.20	13.163		
14,700.00	7,610.00	7,958.35	7,559.25	114.90	41.27	90.22	7,412.54	-822.13	651.62	592.24	59.38	10.974		
14,800.00	7,610.00	7,956.29	7,557.20	116.61	41.27	89.86	7,412.55	-822.21	567.46	501.91	65.54	8.658		
14,886.04	7,610.00	7,954.48	7,555.39	118.09	41.27	89.54	7,412.56	-822.28	499.73	425.54	74.19	6.736	CC, ES, SF	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 23-43 - EXTRACTION - SURVEYS												Offset Site Error:	0.00 usft
Survey Program: 177-ISCWSA MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
13,300.00	7,610.00	7,832.31	7,529.49	92.83	37.80	86.69	6,758.53	-161.57	1,450.10	1,379.68	70.42	20.592	
13,400.00	7,610.00	7,834.25	7,531.44	94.32	37.80	86.91	6,758.57	-161.57	1,356.49	1,284.44	72.05	18.827	
13,500.00	7,610.00	7,836.20	7,533.38	95.81	37.80	87.14	6,758.61	-161.56	1,263.86	1,189.89	73.97	17.087	
13,600.00	7,610.00	7,838.16	7,535.34	97.31	37.81	87.37	6,758.65	-161.56	1,172.43	1,096.19	76.24	15.379	
13,700.00	7,610.00	7,840.12	7,537.31	98.81	37.81	87.59	6,758.69	-161.56	1,082.51	1,003.56	78.95	13.712	
13,800.00	7,610.00	7,842.10	7,539.28	100.31	37.81	87.82	6,758.73	-161.55	994.52	912.29	82.23	12.095	
13,894.63	7,610.00	7,843.97	7,541.16	101.73	37.81	88.04	6,758.77	-161.55	913.53	827.49	86.04	10.617	
13,900.00	7,610.00	7,844.08	7,541.26	101.81	37.81	88.07	6,758.77	-161.55	909.02	822.73	86.28	10.535	
14,000.00	7,610.00	7,846.06	7,543.24	103.35	37.82	88.48	6,758.81	-161.54	829.84	738.25	91.59	9.060	
14,100.00	7,610.00	7,848.01	7,545.19	104.93	37.82	88.79	6,758.85	-161.54	762.16	663.50	98.66	7.725	
14,200.00	7,610.00	7,849.91	7,547.09	106.56	37.82	89.02	6,758.89	-161.53	709.88	602.40	107.49	6.604	
14,300.00	7,610.00	7,851.76	7,548.94	108.20	37.82	89.21	6,758.93	-161.53	677.05	559.56	117.49	5.763	
14,385.81	7,610.00	7,853.27	7,550.45	109.62	37.82	89.35	6,758.96	-161.52	666.81	540.76	126.05	5.290	
14,397.55	7,610.00	7,853.47	7,550.65	109.82	37.82	89.37	6,758.96	-161.52	666.71	539.55	127.16	5.243 CC	
14,400.00	7,610.00	7,853.52	7,550.70	109.86	37.82	89.37	6,758.96	-161.52	666.72	539.33	127.39	5.234	
14,500.00	7,610.00	7,855.25	7,552.43	111.52	37.83	89.52	6,759.00	-161.52	674.53	538.78	135.75	4.969 ES	
14,600.00	7,610.00	7,856.98	7,554.16	113.20	37.83	89.67	6,759.04	-161.51	696.76	554.95	141.82	4.913 SF	
14,700.00	7,610.00	7,858.71	7,555.89	114.90	37.83	89.82	6,759.07	-161.51	732.09	586.62	145.47	5.033	
14,800.00	7,610.00	7,860.44	7,557.62	116.61	37.83	89.97	6,759.11	-161.50	778.73	631.69	147.04	5.296	
14,886.04	7,610.00	7,861.93	7,559.11	118.09	37.83	90.10	6,759.14	-161.50	826.47	679.35	147.12	5.618	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 23-4AE - EXTRACTION - SURVEYS													Offset Site Error: 0.00 usft
Survey Program: 117-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	
14,000.00	7,610.00	7,657.71	7,545.93	103.35	23.84	-89.54	6,110.23	-2,171.27	1,498.58	1,374.18	124.40	12.046	
14,100.00	7,610.00	7,658.15	7,546.37	104.93	23.84	-89.55	6,110.23	-2,171.28	1,489.81	1,363.29	126.52	11.775	
14,200.00	7,610.00	7,658.65	7,546.88	106.56	23.84	-89.57	6,110.23	-2,171.28	1,478.79	1,350.54	128.25	11.531	
14,300.00	7,610.00	7,659.22	7,547.45	108.20	23.84	-89.58	6,110.24	-2,171.29	1,465.57	1,336.00	129.57	11.311	
14,385.81	7,610.00	7,659.75	7,547.98	109.62	23.84	-89.60	6,110.24	-2,171.29	1,452.51	1,322.14	130.36	11.142	
14,400.00	7,610.00	7,659.84	7,548.07	109.86	23.84	-89.60	6,110.24	-2,171.29	1,450.28	1,319.82	130.46	11.116	
14,500.00	7,610.00	7,660.49	7,548.71	111.52	23.84	-89.63	6,110.24	-2,171.30	1,438.50	1,307.60	130.90	10.990	
14,600.00	7,610.00	7,661.14	7,549.36	113.20	23.84	-89.65	6,110.24	-2,171.30	1,433.61	1,302.78	130.83	10.958 SF	
14,620.23	7,610.00	7,661.27	7,549.49	113.55	23.84	-89.66	6,110.24	-2,171.30	1,433.47	1,302.71	130.75	10.963 CC, ES	
14,700.00	7,610.00	7,661.79	7,550.01	114.90	23.84	-89.68	6,110.25	-2,171.31	1,435.68	1,305.43	130.25	11.022	
14,800.00	7,610.00	7,662.44	7,550.67	116.61	23.85	-89.71	6,110.25	-2,171.31	1,444.69	1,315.52	129.17	11.184	
14,886.04	7,610.00	7,663.01	7,551.23	118.09	23.85	-89.73	6,110.25	-2,171.32	1,457.90	1,330.03	127.87	11.401	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 23-54 - 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	
12,500.00	7,610.00	7,673.62	7,561.51	80.99	23.31	-90.94	6,072.83	-821.84	1,472.27	1,421.70	50.57	29.114	
12,600.00	7,610.00	7,673.52	7,561.42	82.46	23.31	-90.90	6,072.83	-821.84	1,372.85	1,322.15	50.70	27.076	
12,700.00	7,610.00	7,673.42	7,561.32	83.93	23.31	-90.87	6,072.83	-821.84	1,273.52	1,222.65	50.88	25.032	
12,800.00	7,610.00	7,673.33	7,561.23	85.41	23.31	-90.83	6,072.83	-821.84	1,174.31	1,123.21	51.10	22.980	
12,900.00	7,610.00	7,673.23	7,561.13	86.88	23.31	-90.80	6,072.83	-821.84	1,075.25	1,023.84	51.40	20.918	
13,000.00	7,610.00	7,673.14	7,561.04	88.37	23.31	-90.76	6,072.83	-821.84	976.37	924.56	51.82	18.842	
13,100.00	7,610.00	7,673.05	7,560.94	89.85	23.31	-90.73	6,072.83	-821.85	877.76	825.35	52.40	16.750	
13,200.00	7,610.00	7,672.95	7,560.85	91.34	23.31	-90.69	6,072.83	-821.85	779.49	726.24	53.25	14.639	
13,300.00	7,610.00	7,672.86	7,560.76	92.83	23.30	-90.66	6,072.83	-821.85	681.73	627.21	54.52	12.505	
13,400.00	7,610.00	7,672.77	7,560.66	94.32	23.30	-90.62	6,072.83	-821.85	584.72	528.24	56.48	10.352	
13,500.00	7,610.00	7,672.68	7,560.57	95.81	23.30	-90.59	6,072.83	-821.85	488.93	429.26	59.67	8.194	
13,600.00	7,610.00	7,672.58	7,560.48	97.31	23.30	-90.55	6,072.83	-821.85	395.22	330.17	65.05	6.075	
13,700.00	7,610.00	7,672.49	7,560.39	98.81	23.30	-90.52	6,072.83	-821.85	305.53	231.00	74.53	4.099	
13,800.00	7,610.00	7,672.40	7,560.30	100.31	23.30	-90.49	6,072.83	-821.85	224.71	133.38	91.33	2.460	
13,894.63	7,610.00	7,672.32	7,560.21	101.73	23.30	-90.45	6,072.83	-821.85	168.42	54.21	114.20	1.475 Level 3	
13,900.00	7,610.00	7,672.31	7,560.21	101.81	23.30	-90.45	6,072.83	-821.85	166.25	50.83	115.43	1.440 Level 3	
13,975.17	7,610.00	7,672.22	7,560.12	102.97	23.30	-90.43	6,072.83	-821.85	150.84	26.95	123.89	1.218 Level 2, CC, ES, SF	
14,000.00	7,610.00	7,672.19	7,560.08	103.35	23.30	-90.41	6,072.83	-821.85	152.60	30.73	121.87	1.252 Level 3	
14,100.00	7,610.00	7,671.99	7,559.89	104.93	23.30	-90.33	6,072.83	-821.85	190.32	91.43	98.89	1.925	
14,200.00	7,610.00	7,671.74	7,559.64	106.56	23.30	-90.21	6,072.83	-821.86	257.57	180.70	76.87	3.351	
14,300.00	7,610.00	7,671.42	7,559.32	108.20	23.30	-90.10	6,072.83	-821.86	336.76	273.70	63.06	5.341	
14,385.81	7,610.00	7,671.11	7,559.00	109.62	23.30	-90.00	6,072.83	-821.86	408.69	352.65	56.04	7.293	
14,400.00	7,610.00	7,671.05	7,558.95	109.86	23.30	-89.99	6,072.83	-821.86	420.81	365.59	55.23	7.620	
14,500.00	7,610.00	7,670.66	7,558.55	111.52	23.30	-89.88	6,072.83	-821.86	509.31	457.43	51.88	9.818	
14,600.00	7,610.00	7,670.26	7,558.16	113.20	23.30	-89.78	6,072.83	-821.87	601.43	550.29	51.14	11.761	
14,700.00	7,610.00	7,669.87	7,557.77	114.90	23.30	-89.67	6,072.83	-821.87	695.72	644.15	51.57	13.490	
14,800.00	7,610.00	7,669.48	7,557.38	116.61	23.30	-89.57	6,072.83	-821.87	791.42	738.95	52.46	15.085	
14,886.04	7,610.00	7,669.15	7,557.05	118.09	23.30	-89.48	6,072.83	-821.87	874.53	821.20	53.33	16.398	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 31-26 - CPR WELL - GYRO												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)			
10,800.00	7,610.00	7,543.23	7,540.69	56.86	13.14	-89.40	4,183.87	-1,408.66	1,444.63	1,397.44	47.19	30.612	
10,900.00	7,610.00	7,544.53	7,541.98	58.22	13.14	-89.51	4,183.89	-1,408.64	1,358.04	1,309.48	48.55	27.970	
11,000.00	7,610.00	7,545.83	7,543.28	59.59	13.14	-89.61	4,183.90	-1,408.63	1,273.41	1,223.20	50.21	25.364	
11,100.00	7,610.00	7,547.13	7,544.59	60.97	13.14	-89.72	4,183.92	-1,408.61	1,191.17	1,138.97	52.20	22.819	
11,200.00	7,610.00	7,548.44	7,545.89	62.35	13.15	-89.83	4,183.94	-1,408.59	1,111.84	1,057.25	54.59	20.366	
11,300.00	7,610.00	7,549.75	7,547.21	63.75	13.15	-89.94	4,183.95	-1,408.58	1,036.09	978.66	57.43	18.041	
11,400.00	7,610.00	7,551.07	7,548.52	65.15	13.15	-90.04	4,183.97	-1,408.56	964.77	904.02	60.75	15.882	
11,500.00	7,610.00	7,552.39	7,549.84	66.57	13.15	-90.15	4,183.99	-1,408.54	898.93	834.38	64.55	13.926	
11,600.00	7,610.00	7,553.71	7,551.17	67.98	13.15	-90.26	4,184.00	-1,408.52	839.86	771.07	68.79	12.209	
11,700.00	7,610.00	7,555.05	7,552.50	69.41	13.16	-90.37	4,184.02	-1,408.51	789.08	715.75	73.34	10.760	
11,800.00	7,610.00	7,556.38	7,553.84	70.84	13.16	-90.48	4,184.04	-1,408.49	748.29	670.36	77.93	9.602	
11,900.00	7,610.00	7,557.72	7,555.18	72.27	13.16	-90.59	4,184.05	-1,408.47	719.17	636.96	82.21	8.748	
12,000.00	7,610.00	7,559.06	7,556.52	73.72	13.16	-90.70	4,184.07	-1,408.45	703.20	617.44	85.76	8.199	
12,063.64	7,610.00	7,559.92	7,557.38	74.64	13.17	-90.77	4,184.08	-1,408.44	700.31	612.85	87.46	8.007 CC, ES	
12,100.00	7,610.00	7,560.41	7,557.87	75.16	13.17	-90.81	4,184.09	-1,408.43	701.25	613.05	88.21	7.950 SF	
12,200.00	7,610.00	7,561.77	7,559.22	76.61	13.17	-90.92	4,184.11	-1,408.42	713.46	624.10	89.37	7.984	
12,300.00	7,610.00	7,563.13	7,560.58	78.07	13.17	-91.03	4,184.12	-1,408.40	739.12	649.83	89.28	8.278	
12,400.00	7,610.00	7,564.49	7,561.94	79.53	13.17	-91.14	4,184.14	-1,408.38	776.89	688.68	88.20	8.808	
12,500.00	7,610.00	7,565.86	7,563.31	80.99	13.18	-91.25	4,184.16	-1,408.36	825.11	738.68	86.44	9.546	
12,600.00	7,610.00	7,567.23	7,564.68	82.46	13.18	-91.36	4,184.18	-1,408.34	882.08	797.79	84.29	10.465	
12,700.00	7,610.00	7,568.61	7,566.06	83.93	13.18	-91.48	4,184.19	-1,408.32	946.21	864.23	81.98	11.542	
12,800.00	7,610.00	7,569.99	7,567.44	85.41	13.18	-91.59	4,184.21	-1,408.30	1,016.15	936.47	79.68	12.752	
12,900.00	7,610.00	7,571.38	7,568.83	86.88	13.19	-91.70	4,184.23	-1,408.28	1,090.78	1,013.30	77.48	14.078	
13,000.00	7,610.00	7,572.77	7,570.22	88.37	13.19	-91.82	4,184.25	-1,408.26	1,169.21	1,093.78	75.43	15.501	
13,100.00	7,610.00	7,574.17	7,571.62	89.85	13.19	-91.93	4,184.26	-1,408.24	1,250.71	1,177.17	73.54	17.007	
13,200.00	7,610.00	7,575.57	7,573.02	91.34	13.19	-92.05	4,184.28	-1,408.22	1,334.74	1,262.91	71.82	18.584	
13,300.00	7,610.00	7,576.98	7,574.43	92.83	13.19	-92.16	4,184.30	-1,408.20	1,420.83	1,350.56	70.27	20.221	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 32-26 - CPR - GYRO													Offset Site Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,600.00	7,610.00	7,549.35	7,546.36	41.66	13.19	-89.54	2,810.71	-1,696.98	1,448.37	1,402.49	45.89	31.563		
9,700.00	7,610.00	7,551.45	7,548.46	42.82	13.19	-89.67	2,810.75	-1,696.95	1,375.09	1,328.05	47.04	29.229		
9,800.00	7,610.00	7,553.54	7,550.55	44.00	13.20	-89.79	2,810.80	-1,696.91	1,305.36	1,256.92	48.44	26.950		
9,900.00	7,610.00	7,555.61	7,552.62	45.21	13.20	-89.92	2,810.84	-1,696.88	1,239.77	1,189.69	50.08	24.756		
10,000.00	7,610.00	7,557.67	7,554.68	46.44	13.21	-90.04	2,810.88	-1,696.85	1,179.02	1,127.04	51.98	22.681		
10,100.00	7,610.00	7,559.72	7,556.73	47.69	13.21	-90.16	2,810.92	-1,696.82	1,123.90	1,069.77	54.13	20.762		
10,200.00	7,610.00	7,561.75	7,558.77	48.95	13.21	-90.28	2,810.96	-1,696.79	1,075.27	1,018.77	56.50	19.032		
10,300.00	7,610.00	7,563.78	7,560.79	50.23	13.22	-90.41	2,811.00	-1,696.75	1,034.04	975.03	59.01	17.523		
10,400.00	7,610.00	7,565.79	7,562.80	51.53	13.22	-90.53	2,811.04	-1,696.72	1,001.14	939.56	61.58	16.258		
10,500.00	7,610.00	7,567.78	7,564.79	52.84	13.22	-90.64	2,811.08	-1,696.69	977.39	913.31	64.08	15.252		
10,600.00	7,610.00	7,569.77	7,566.77	54.17	13.23	-90.76	2,811.12	-1,696.66	963.49	897.10	66.39	14.512		
10,684.98	7,610.00	7,571.44	7,568.45	55.31	13.23	-90.86	2,811.15	-1,696.64	959.74	891.63	68.11	14.092 CC		
10,700.00	7,610.00	7,571.74	7,568.75	55.51	13.23	-90.88	2,811.16	-1,696.63	959.85	891.47	68.38	14.037 ES		
10,800.00	7,610.00	7,573.70	7,570.70	56.86	13.23	-91.00	2,811.20	-1,696.60	966.60	896.64	69.96	13.817 SF		
10,900.00	7,610.00	7,575.64	7,572.65	58.22	13.24	-91.11	2,811.23	-1,696.57	983.52	912.44	71.08	13.837		
11,000.00	7,610.00	7,577.58	7,574.58	59.59	13.24	-91.23	2,811.27	-1,696.54	1,010.10	938.35	71.75	14.078		
11,100.00	7,610.00	7,579.50	7,576.50	60.97	13.24	-91.34	2,811.31	-1,696.51	1,045.60	973.59	72.00	14.521		
11,200.00	7,610.00	7,581.41	7,578.41	62.35	13.25	-91.46	2,811.35	-1,696.48	1,089.15	1,017.23	71.92	15.144		
11,300.00	7,610.00	7,583.31	7,580.31	63.75	13.25	-91.57	2,811.38	-1,696.45	1,139.83	1,068.26	71.57	15.927		
11,400.00	7,610.00	7,585.19	7,582.20	65.15	13.25	-91.68	2,811.42	-1,696.42	1,196.73	1,125.70	71.03	16.849		
11,500.00	7,610.00	7,587.07	7,584.07	66.57	13.26	-91.80	2,811.45	-1,696.40	1,259.01	1,188.65	70.36	17.895		
11,600.00	7,610.00	7,588.93	7,585.94	67.98	13.26	-91.91	2,811.49	-1,696.37	1,325.91	1,256.30	69.61	19.047		
11,700.00	7,610.00	7,590.79	7,587.79	69.41	13.26	-92.02	2,811.52	-1,696.34	1,396.77	1,327.94	68.84	20.291		
11,800.00	7,610.00	7,592.63	7,589.63	70.84	13.27	-92.13	2,811.56	-1,696.31	1,471.02	1,402.97	68.05	21.617		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 3-23 - CPR WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 100-Gyro													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		
12,300.00	7,610.00	7,582.98	7,580.62	78.07	6.63	-92.77	5,768.90	-1,141.96	1,432.17	1,391.52	40.65	35.232		
12,400.00	7,610.00	7,581.58	7,579.21	79.53	6.62	-92.60	5,768.92	-1,141.97	1,338.05	1,296.17	41.88	31.952		
12,500.00	7,610.00	7,580.16	7,577.80	80.99	6.62	-92.43	5,768.95	-1,141.98	1,244.84	1,201.44	43.40	28.685		
12,600.00	7,610.00	7,578.74	7,576.38	82.46	6.62	-92.25	5,768.97	-1,141.99	1,152.77	1,107.49	45.28	25.458		
12,700.00	7,610.00	7,577.31	7,574.95	83.93	6.62	-92.08	5,768.99	-1,142.00	1,062.13	1,014.50	47.63	22.301		
12,800.00	7,610.00	7,575.87	7,573.50	85.41	6.62	-91.90	5,769.01	-1,142.01	973.33	922.78	50.55	19.255		
12,900.00	7,610.00	7,574.41	7,572.05	86.88	6.62	-91.72	5,769.03	-1,142.02	886.91	832.72	54.19	16.368		
13,000.00	7,610.00	7,572.95	7,570.59	88.37	6.62	-91.55	5,769.05	-1,142.03	803.64	744.94	58.70	13.690		
13,100.00	7,610.00	7,571.48	7,569.12	89.85	6.62	-91.36	5,769.07	-1,142.04	724.62	660.35	64.27	11.275		
13,200.00	7,610.00	7,570.00	7,567.64	91.34	6.61	-91.18	5,769.09	-1,142.05	651.38	580.37	71.01	9.173		
13,300.00	7,610.00	7,568.50	7,566.14	92.83	6.61	-91.00	5,769.12	-1,142.05	586.10	507.21	78.89	7.430		
13,400.00	7,610.00	7,567.00	7,564.64	94.32	6.61	-90.82	5,769.14	-1,142.06	531.72	444.20	87.52	6.076		
13,500.00	7,610.00	7,565.49	7,563.13	95.81	6.61	-90.63	5,769.16	-1,142.07	491.88	395.99	95.89	5.130		
13,600.00	7,610.00	7,563.96	7,561.60	97.31	6.61	-90.44	5,769.18	-1,142.08	470.26	367.90	102.37	4.594		
13,653.99	7,610.00	7,563.13	7,560.77	98.12	6.61	-90.34	5,769.20	-1,142.09	467.16	362.67	104.48	4.471 CC, ES		
13,700.00	7,610.00	7,562.43	7,560.07	98.81	6.61	-90.25	5,769.21	-1,142.09	469.42	364.05	105.36	4.455 SF		
13,800.00	7,610.00	7,560.88	7,558.52	100.31	6.61	-90.07	5,769.23	-1,142.10	489.44	385.02	104.42	4.687		
13,894.63	7,610.00	7,559.41	7,557.05	101.73	6.61	-89.88	5,769.25	-1,142.11	525.48	424.72	100.76	5.215		
13,900.00	7,610.00	7,559.32	7,556.96	101.81	6.61	-89.87	5,769.25	-1,142.11	527.95	427.46	100.50	5.253		
14,000.00	7,610.00	7,557.73	7,555.37	103.35	6.60	-89.70	5,769.28	-1,142.11	577.25	482.36	94.89	6.083		
14,100.00	7,610.00	7,556.08	7,553.73	104.93	6.60	-89.53	5,769.30	-1,142.12	631.58	543.14	88.44	7.142		
14,200.00	7,610.00	7,554.41	7,552.05	106.56	6.60	-89.39	5,769.33	-1,142.13	689.36	607.69	81.68	8.440		
14,300.00	7,610.00	7,552.71	7,550.36	108.20	6.60	-89.26	5,769.36	-1,142.14	749.40	674.47	74.94	10.000		
14,385.81	7,610.00	7,551.26	7,548.90	109.62	6.60	-89.17	5,769.38	-1,142.15	802.02	732.69	69.33	11.569		
14,400.00	7,610.00	7,551.02	7,548.66	109.86	6.60	-89.15	5,769.38	-1,142.15	810.84	742.42	68.42	11.850		
14,500.00	7,610.00	7,549.33	7,546.97	111.52	6.60	-89.00	5,769.41	-1,142.16	877.07	814.53	62.54	14.024		
14,600.00	7,610.00	7,547.63	7,545.27	113.20	6.60	-88.85	5,769.43	-1,142.17	949.23	891.72	57.51	16.505		
14,700.00	7,610.00	7,545.93	7,543.58	114.90	6.59	-88.69	5,769.46	-1,142.17	1,026.06	972.74	53.32	19.244		
14,800.00	7,610.00	7,544.24	7,541.88	116.61	6.59	-88.54	5,769.49	-1,142.18	1,106.60	1,056.71	49.89	22.181		
14,886.04	7,610.00	7,542.77	7,540.41	118.09	6.59	-88.40	5,769.51	-1,142.19	1,178.29	1,130.81	47.48	24.817		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Bros 42-26 - CPR WELL - SURVEYS												Offset Site Error: 0.00 usft	
Survey Program: 951-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	
9,300.00	7,610.00	7,629.01	7,563.89	38.35	20.00	89.43	2,676.21	-24.77	1,470.46	1,416.87	53.59	27.440	
9,400.00	7,610.00	7,629.36	7,564.23	39.42	20.00	89.46	2,676.21	-24.77	1,383.92	1,329.48	54.45	25.418	
9,500.00	7,610.00	7,629.70	7,564.57	40.53	20.00	89.48	2,676.21	-24.77	1,299.32	1,243.88	55.44	23.437	
9,600.00	7,610.00	7,630.04	7,564.92	41.66	20.00	89.51	2,676.21	-24.77	1,217.05	1,160.46	56.59	21.508	
9,700.00	7,610.00	7,630.38	7,565.26	42.82	20.00	89.54	2,676.21	-24.77	1,137.63	1,079.72	57.90	19.647	
9,800.00	7,610.00	7,630.73	7,565.60	44.00	20.00	89.57	2,676.21	-24.77	1,061.69	1,002.28	59.41	17.872	
9,900.00	7,610.00	7,631.07	7,565.94	45.21	20.00	89.59	2,676.21	-24.76	990.03	928.94	61.09	16.205	
10,000.00	7,610.00	7,631.41	7,566.29	46.44	20.00	89.62	2,676.22	-24.76	923.66	860.71	62.95	14.673	
10,100.00	7,610.00	7,631.75	7,566.63	47.69	20.00	89.65	2,676.22	-24.76	863.79	798.87	64.91	13.307	
10,200.00	7,610.00	7,632.09	7,566.97	48.95	20.00	89.68	2,676.22	-24.76	811.86	744.97	66.89	12.138	
10,300.00	7,610.00	7,632.43	7,567.31	50.23	20.00	89.70	2,676.22	-24.76	769.48	700.76	68.71	11.198	
10,400.00	7,610.00	7,632.77	7,567.65	51.53	20.00	89.73	2,676.22	-24.76	738.29	668.10	70.19	10.519	
10,500.00	7,610.00	7,633.11	7,567.99	52.84	20.00	89.76	2,676.22	-24.76	719.76	648.66	71.10	10.123	
10,585.09	7,610.00	7,633.40	7,568.27	53.97	20.00	89.78	2,676.22	-24.76	714.72	643.39	71.33	10.020	CC, ES, SF
10,600.00	7,610.00	7,633.45	7,568.33	54.17	20.01	89.79	2,676.22	-24.76	714.87	643.56	71.31	10.024	
10,700.00	7,610.00	7,633.79	7,568.66	55.51	20.01	89.81	2,676.22	-24.75	723.89	653.09	70.80	10.224	
10,800.00	7,610.00	7,634.13	7,569.00	56.86	20.01	89.84	2,676.22	-24.75	746.33	676.65	69.68	10.711	
10,900.00	7,610.00	7,634.46	7,569.34	58.22	20.01	89.87	2,676.23	-24.75	781.02	712.79	68.22	11.448	
11,000.00	7,610.00	7,634.80	7,569.68	59.59	20.01	89.89	2,676.23	-24.75	826.42	759.87	66.55	12.418	
11,100.00	7,610.00	7,635.14	7,570.01	60.97	20.01	89.92	2,676.23	-24.75	880.88	816.06	64.82	13.589	
11,200.00	7,610.00	7,635.47	7,570.35	62.35	20.01	89.95	2,676.23	-24.75	942.83	879.67	63.16	14.928	
11,300.00	7,610.00	7,635.81	7,570.68	63.75	20.01	89.97	2,676.23	-24.75	1,010.90	949.28	61.62	16.406	
11,400.00	7,610.00	7,636.14	7,571.02	65.15	20.01	90.00	2,676.23	-24.75	1,083.92	1,023.70	60.23	17.998	
11,500.00	7,610.00	7,636.48	7,571.35	66.57	20.01	90.03	2,676.23	-24.74	1,160.98	1,101.99	58.99	19.681	
11,600.00	7,610.00	7,636.81	7,571.69	67.98	20.01	90.06	2,676.23	-24.74	1,241.31	1,183.41	57.90	21.438	
11,700.00	7,610.00	7,637.15	7,572.02	69.41	20.01	90.08	2,676.24	-24.74	1,324.32	1,267.37	56.95	23.254	
11,800.00	7,610.00	7,637.48	7,572.36	70.84	20.01	90.11	2,676.24	-24.74	1,409.54	1,353.42	56.12	25.117	
11,900.00	7,610.00	7,637.81	7,572.69	72.27	20.01	90.14	2,676.24	-24.74	1,496.59	1,441.20	55.39	27.018	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Brothers 2-26 - CPR - NO SURVEYS													Offset Site Error: 0.00 usft	
Survey Program: 8110-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		
9,600.00	7,610.00	7,567.99	7,567.99	41.66	13.21	90.00	3,149.34	-582.39	1,453.91	1,410.90	43.01	33.800		
9,700.00	7,610.00	7,567.99	7,567.99	42.82	13.21	90.00	3,149.34	-582.39	1,354.46	1,311.31	43.15	31.388		
9,800.00	7,610.00	7,567.99	7,567.99	44.00	13.21	90.00	3,149.34	-582.39	1,255.10	1,211.79	43.32	28.975		
9,900.00	7,610.00	7,567.99	7,567.99	45.21	13.21	90.00	3,149.34	-582.39	1,155.85	1,112.34	43.51	26.564		
10,000.00	7,610.00	7,567.99	7,567.99	46.44	13.21	90.00	3,149.34	-582.39	1,056.75	1,012.99	43.75	24.153		
10,100.00	7,610.00	7,567.99	7,567.99	47.69	13.21	90.00	3,149.34	-582.39	957.82	913.77	44.05	21.743		
10,200.00	7,610.00	7,567.99	7,567.99	48.95	13.21	90.00	3,149.34	-582.39	859.15	814.71	44.44	19.334		
10,300.00	7,610.00	7,567.99	7,567.99	50.23	13.21	90.00	3,149.34	-582.39	760.82	715.88	44.94	16.928		
10,400.00	7,610.00	7,567.99	7,567.99	51.53	13.21	90.00	3,149.34	-582.39	663.00	617.36	45.64	14.526		
10,500.00	7,610.00	7,567.99	7,567.99	52.84	13.21	90.00	3,149.34	-582.39	565.93	519.29	46.64	12.134		
10,600.00	7,610.00	7,567.99	7,567.99	54.17	13.21	90.00	3,149.34	-582.39	470.10	421.94	48.16	9.762		
10,700.00	7,610.00	7,567.99	7,567.99	55.51	13.21	90.00	3,149.34	-582.39	376.44	325.83	50.61	7.438		
10,800.00	7,610.00	7,567.99	7,567.99	56.86	13.21	90.00	3,149.34	-582.39	287.09	232.22	54.87	5.232		
10,900.00	7,610.00	7,567.99	7,567.99	58.22	13.21	90.00	3,149.34	-582.39	207.69	145.29	62.41	3.328		
11,000.00	7,610.00	7,567.99	7,567.99	59.59	13.21	90.00	3,149.34	-582.39	154.44	82.45	71.99	2.145		
11,046.43	7,610.00	7,567.99	7,567.99	60.23	13.21	90.00	3,149.34	-582.39	147.29	74.17	73.12	2.014	CC, ES, SF	
11,100.00	7,610.00	7,567.99	7,567.99	60.97	13.21	90.00	3,149.34	-582.39	156.73	87.48	69.25	2.263		
11,200.00	7,610.00	7,567.99	7,567.99	62.35	13.21	90.00	3,149.34	-582.39	212.79	155.30	57.49	3.702		
11,300.00	7,610.00	7,567.99	7,567.99	63.75	13.21	90.00	3,149.34	-582.39	293.25	243.10	50.15	5.847		
11,400.00	7,610.00	7,567.99	7,567.99	65.15	13.21	90.00	3,149.34	-582.39	383.02	336.48	46.54	8.230		
11,500.00	7,610.00	7,567.99	7,567.99	66.57	13.21	90.00	3,149.34	-582.39	476.89	432.16	44.72	10.663		
11,600.00	7,610.00	7,567.99	7,567.99	67.98	13.21	90.00	3,149.34	-582.39	572.83	529.08	43.75	13.093		
11,700.00	7,610.00	7,567.99	7,567.99	69.41	13.21	90.00	3,149.34	-582.39	669.96	626.76	43.20	15.508		
11,800.00	7,610.00	7,567.99	7,567.99	70.84	13.21	90.00	3,149.34	-582.39	767.83	724.95	42.88	17.906		
11,900.00	7,610.00	7,567.99	7,567.99	72.27	13.21	90.00	3,149.34	-582.39	866.19	823.49	42.69	20.290		
12,000.00	7,610.00	7,567.99	7,567.99	73.72	13.21	90.00	3,149.34	-582.39	964.88	922.30	42.58	22.660		
12,100.00	7,610.00	7,567.99	7,567.99	75.16	13.21	90.00	3,149.34	-582.39	1,063.82	1,021.30	42.52	25.020		
12,200.00	7,610.00	7,567.99	7,567.99	76.61	13.21	90.00	3,149.34	-582.39	1,162.94	1,120.45	42.49	27.369		
12,300.00	7,610.00	7,567.99	7,567.99	78.07	13.21	90.00	3,149.34	-582.39	1,262.19	1,219.71	42.48	29.710		
12,400.00	7,610.00	7,567.99	7,567.99	79.53	13.21	90.00	3,149.34	-582.39	1,361.56	1,319.07	42.49	32.043		
12,500.00	7,610.00	7,567.99	7,567.99	80.99	13.21	90.00	3,149.34	-582.39	1,461.01	1,418.50	42.51	34.367		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Brothers 33-23C - EXTRACTION - NO SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 8100-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		
13,300.00	7,610.00	7,533.99	7,533.99	92.83	13.15	-90.00	6,687.35	-1,297.57	1,421.80	1,363.73	58.07	24.486		
13,400.00	7,610.00	7,533.99	7,533.99	94.32	13.15	-90.00	6,687.35	-1,297.57	1,333.33	1,272.57	60.76	21.944		
13,500.00	7,610.00	7,533.99	7,533.99	95.81	13.15	-90.00	6,687.35	-1,297.57	1,246.61	1,182.70	63.91	19.507		
13,600.00	7,610.00	7,533.99	7,533.99	97.31	13.15	-90.00	6,687.35	-1,297.57	1,162.02	1,094.45	67.57	17.197		
13,700.00	7,610.00	7,533.99	7,533.99	98.81	13.15	-90.00	6,687.35	-1,297.57	1,080.07	1,008.24	71.83	15.036		
13,800.00	7,610.00	7,533.99	7,533.99	100.31	13.15	-90.00	6,687.35	-1,297.57	1,001.41	924.65	76.76	13.046		
13,894.63	7,610.00	7,533.99	7,533.99	101.73	13.15	-90.00	6,687.35	-1,297.57	930.75	848.66	82.09	11.338		
13,900.00	7,610.00	7,533.99	7,533.99	101.81	13.15	-90.00	6,687.35	-1,297.57	926.86	844.45	82.41	11.247		
14,000.00	7,610.00	7,533.99	7,533.99	103.35	13.15	-90.00	6,687.35	-1,297.57	853.92	765.42	88.50	9.649		
14,100.00	7,610.00	7,533.99	7,533.99	104.93	13.15	-90.00	6,687.35	-1,297.57	780.33	685.55	94.79	8.233		
14,200.00	7,610.00	7,533.99	7,533.99	106.56	13.15	-90.00	6,687.35	-1,297.57	706.57	605.34	101.23	6.980		
14,300.00	7,610.00	7,533.99	7,533.99	108.20	13.15	-90.00	6,687.35	-1,297.57	633.26	525.49	107.76	5.876		
14,385.81	7,610.00	7,533.99	7,533.99	109.62	13.15	-90.00	6,687.35	-1,297.57	571.36	458.01	113.35	5.041		
14,400.00	7,610.00	7,533.99	7,533.99	109.86	13.15	-90.00	6,687.35	-1,297.57	561.33	447.07	114.26	4.913		
14,500.00	7,610.00	7,533.99	7,533.99	111.52	13.15	-90.00	6,687.35	-1,297.57	496.46	375.83	120.63	4.115		
14,600.00	7,610.00	7,533.99	7,533.99	113.20	13.15	-90.00	6,687.35	-1,297.57	444.80	319.02	125.78	3.536		
14,700.00	7,610.00	7,533.99	7,533.99	114.90	13.15	-90.00	6,687.35	-1,297.57	411.37	283.97	127.40	3.229 SF		
14,793.12	7,610.00	7,533.99	7,533.99	116.49	13.15	-90.00	6,687.35	-1,297.57	400.69	277.00	123.69	3.239 CC, ES		
14,800.00	7,610.00	7,533.99	7,533.99	116.61	13.15	-90.00	6,687.35	-1,297.57	400.75	277.55	123.20	3.253		
14,886.04	7,610.00	7,533.99	7,533.99	118.09	13.15	-90.00	6,687.35	-1,297.57	411.32	296.54	114.78	3.584		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Brothers 34-23C - EXTRACTION - GYRO													Offset Site Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX, 8090-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
12,000.00	7,610.00	7,542.55	7,541.80	73.72	12.35	-89.15	5,448.02	-1,370.00	1,495.89	1,444.96	50.94	29.367		
12,100.00	7,610.00	7,542.94	7,542.18	75.16	12.36	-89.18	5,448.02	-1,370.00	1,407.86	1,355.01	52.86	26.636		
12,200.00	7,610.00	7,543.32	7,542.56	76.61	12.36	-89.21	5,448.02	-1,370.00	1,321.54	1,266.42	55.11	23.978		
12,300.00	7,610.00	7,543.70	7,542.94	78.07	12.36	-89.25	5,448.02	-1,370.01	1,237.27	1,179.50	57.77	21.417		
12,400.00	7,610.00	7,544.08	7,543.32	79.53	12.36	-89.28	5,448.02	-1,370.01	1,155.52	1,094.64	60.88	18.981		
12,500.00	7,610.00	7,544.46	7,543.71	80.99	12.36	-89.31	5,448.03	-1,370.01	1,076.84	1,012.35	64.50	16.696		
12,600.00	7,610.00	7,544.84	7,544.09	82.46	12.36	-89.34	5,448.03	-1,370.02	1,001.98	933.31	68.67	14.591		
12,700.00	7,610.00	7,545.23	7,544.47	83.93	12.36	-89.37	5,448.03	-1,370.02	931.85	858.43	73.42	12.692		
12,800.00	7,610.00	7,545.61	7,544.85	85.41	12.36	-89.40	5,448.03	-1,370.02	867.60	788.88	78.71	11.022		
12,900.00	7,610.00	7,545.99	7,545.23	86.88	12.36	-89.44	5,448.03	-1,370.02	810.62	726.18	84.44	9.600		
13,000.00	7,610.00	7,546.37	7,545.61	88.37	12.36	-89.47	5,448.03	-1,370.03	762.55	672.21	90.34	8.441		
13,100.00	7,610.00	7,546.75	7,546.00	89.85	12.36	-89.50	5,448.03	-1,370.03	725.16	629.13	96.03	7.551		
13,200.00	7,610.00	7,547.13	7,546.38	91.34	12.36	-89.53	5,448.04	-1,370.03	700.16	599.19	100.98	6.934		
13,300.00	7,610.00	7,547.52	7,546.76	92.83	12.36	-89.56	5,448.04	-1,370.04	688.92	584.28	104.64	6.584		
13,328.12	7,610.00	7,547.62	7,546.87	93.25	12.36	-89.57	5,448.04	-1,370.04	688.34	582.97	105.37	6.532 CC, ES		
13,400.00	7,610.00	7,547.90	7,547.14	94.32	12.36	-89.60	5,448.04	-1,370.04	692.08	585.46	106.62	6.491 SF		
13,500.00	7,610.00	7,548.28	7,547.52	95.81	12.36	-89.63	5,448.04	-1,370.04	709.48	602.62	106.85	6.640		
13,600.00	7,610.00	7,548.66	7,547.90	97.31	12.36	-89.66	5,448.04	-1,370.04	740.09	634.54	105.55	7.012		
13,700.00	7,610.00	7,549.04	7,548.29	98.81	12.36	-89.69	5,448.04	-1,370.05	782.37	679.24	103.13	7.586		
13,800.00	7,610.00	7,549.42	7,548.67	100.31	12.36	-89.72	5,448.04	-1,370.05	834.55	734.51	100.04	8.342		
13,894.63	7,610.00	7,549.79	7,549.03	101.73	12.36	-89.75	5,448.05	-1,370.05	891.48	794.64	96.84	9.206		
13,900.00	7,610.00	7,549.81	7,549.05	101.81	12.36	-89.76	5,448.05	-1,370.05	894.89	798.24	96.65	9.259		
14,000.00	7,610.00	7,550.22	7,549.47	103.35	12.36	-89.80	5,448.05	-1,370.06	958.24	865.15	93.09	10.294		
14,100.00	7,610.00	7,550.70	7,549.95	104.93	12.36	-89.85	5,448.05	-1,370.06	1,020.94	931.58	89.36	11.425		
14,200.00	7,610.00	7,551.24	7,550.49	106.56	12.36	-89.90	5,448.05	-1,370.06	1,082.65	997.13	85.52	12.660		
14,300.00	7,610.00	7,551.84	7,551.08	108.20	12.37	-89.94	5,448.05	-1,370.07	1,143.08	1,061.47	81.61	14.007		
14,385.81	7,610.00	7,552.39	7,551.63	109.62	12.37	-89.98	5,448.06	-1,370.07	1,193.72	1,115.48	78.24	15.257		
14,400.00	7,610.00	7,552.48	7,551.73	109.86	12.37	-89.98	5,448.06	-1,370.07	1,202.05	1,124.36	77.68	15.473		
14,500.00	7,610.00	7,553.15	7,552.39	111.52	12.37	-90.02	5,448.06	-1,370.08	1,263.70	1,189.77	73.93	17.094		
14,600.00	7,610.00	7,553.81	7,553.05	113.20	12.37	-90.06	5,448.06	-1,370.08	1,330.02	1,259.56	70.46	18.876		
14,700.00	7,610.00	7,554.47	7,553.71	114.90	12.37	-90.10	5,448.07	-1,370.09	1,400.35	1,333.04	67.31	20.805		
14,800.00	7,610.00	7,555.13	7,554.38	116.61	12.37	-90.14	5,448.07	-1,370.09	1,474.11	1,409.64	64.47	22.864		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Grant Brothers 44-23C - EXTRACTION - GYRO												Offset Site Error:	0.00 usft
Survey Program: 100-VESSI_GYROFLEX, 7741-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
11,900.00	7,610.00	7,585.21	7,584.61	72.27	12.49	90.48	5,299.72	-130.69	1,418.41	1,363.07	55.34	25.632	
12,000.00	7,610.00	7,584.86	7,584.26	73.72	12.49	90.44	5,299.73	-130.69	1,326.92	1,269.79	57.13	23.225	
12,100.00	7,610.00	7,584.51	7,583.91	75.16	12.49	90.40	5,299.73	-130.69	1,236.76	1,177.53	59.22	20.884	
12,200.00	7,610.00	7,584.16	7,583.56	76.61	12.49	90.37	5,299.73	-130.69	1,148.22	1,086.56	61.66	18.622	
12,300.00	7,610.00	7,583.81	7,583.22	78.07	12.49	90.33	5,299.73	-130.69	1,061.72	997.21	64.51	16.459	
12,400.00	7,610.00	7,583.46	7,582.87	79.53	12.49	90.30	5,299.73	-130.69	977.80	909.96	67.84	14.413	
12,500.00	7,610.00	7,583.11	7,582.52	80.99	12.49	90.26	5,299.73	-130.69	897.17	825.45	71.72	12.509	
12,600.00	7,610.00	7,582.76	7,582.17	82.46	12.49	90.22	5,299.73	-130.69	820.83	744.63	76.20	10.771	
12,700.00	7,610.00	7,582.41	7,581.82	83.93	12.49	90.19	5,299.73	-130.69	750.07	668.78	81.29	9.228	
12,800.00	7,610.00	7,582.07	7,581.47	85.41	12.49	90.15	5,299.74	-130.69	686.61	599.77	86.85	7.906	
12,900.00	7,610.00	7,581.72	7,581.12	86.88	12.49	90.12	5,299.74	-130.69	632.67	540.10	92.57	6.834	
13,000.00	7,610.00	7,581.37	7,580.77	88.37	12.49	90.08	5,299.74	-130.69	590.86	493.00	97.86	6.038	
13,100.00	7,610.00	7,581.02	7,580.42	89.85	12.49	90.04	5,299.74	-130.69	563.87	462.04	101.83	5.537	
13,200.00	7,610.00	7,580.67	7,580.08	91.34	12.49	90.01	5,299.74	-130.69	553.89	450.25	103.63	5.345	
13,205.81	7,610.00	7,580.65	7,580.06	91.42	12.49	90.01	5,299.74	-130.69	553.86	450.20	103.66	5.343 CC, ES, SF	
13,300.00	7,610.00	7,580.32	7,579.73	92.83	12.49	89.97	5,299.74	-130.69	561.81	458.97	102.84	5.463	
13,400.00	7,610.00	7,579.97	7,579.38	94.32	12.48	89.94	5,299.74	-130.69	586.91	487.19	99.72	5.885	
13,500.00	7,610.00	7,579.62	7,579.03	95.81	12.48	89.90	5,299.74	-130.69	627.14	532.04	95.09	6.595	
13,600.00	7,610.00	7,579.27	7,578.68	97.31	12.48	89.86	5,299.75	-130.69	679.81	589.98	89.83	7.568	
13,700.00	7,610.00	7,578.93	7,578.33	98.81	12.48	89.83	5,299.75	-130.69	742.28	657.71	84.57	8.778	
13,800.00	7,610.00	7,578.58	7,577.98	100.31	12.48	89.79	5,299.75	-130.69	812.29	732.60	79.68	10.194	
13,894.63	7,610.00	7,578.25	7,577.65	101.73	12.48	89.76	5,299.75	-130.69	883.86	808.32	75.55	11.700	
13,900.00	7,610.00	7,578.23	7,577.63	101.81	12.48	89.75	5,299.75	-130.69	888.06	812.74	75.33	11.789	
14,000.00	7,610.00	7,577.88	7,577.29	103.35	12.48	89.68	5,299.75	-130.69	970.95	899.15	71.80	13.523	
14,100.00	7,610.00	7,577.54	7,576.94	104.93	12.48	89.56	5,299.75	-130.69	1,060.86	991.61	69.25	15.319	
14,200.00	7,610.00	7,577.20	7,576.60	106.56	12.48	89.36	5,299.75	-130.69	1,155.52	1,087.99	67.54	17.110	
14,300.00	7,610.00	7,576.87	7,576.28	108.20	12.48	88.94	5,299.75	-130.69	1,253.19	1,186.69	66.51	18.843	
14,385.81	7,610.00	7,576.60	7,576.00	109.62	12.48	87.77	5,299.75	-130.69	1,338.38	1,272.32	66.06	20.259	
14,400.00	7,610.00	7,576.55	7,575.96	109.86	12.48	87.75	5,299.75	-130.69	1,352.52	1,286.50	66.02	20.487	
14,500.00	7,610.00	7,576.24	7,575.65	111.52	12.48	87.57	5,299.76	-130.69	1,452.25	1,386.52	65.74	22.092	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Johnson 1 - KPK - NO SURVEYS												Offset Site Error:	0.00 usft
Survey Program: 5085-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.49	13.21	-1,495.25	1,496.14				
100.00	100.00	50.00	50.00	0.14	0.09	-89.49	13.21	-1,495.25	1,495.31	1,495.08	0.23	6,563.319	
200.00	200.00	150.00	150.00	0.50	0.27	-89.49	13.21	-1,495.25	1,495.31	1,494.54	0.77	1,953.292	
300.00	299.98	249.98	249.98	0.84	0.45	70.58	13.21	-1,495.25	1,494.72	1,493.43	1.29	1,159.680	
350.00	349.93	299.93	299.93	1.02	0.54	70.67	13.21	-1,495.25	1,494.00	1,492.45	1.55	964.016	
400.00	399.85	349.85	349.85	1.19	0.63	58.58	13.21	-1,495.25	1,492.72	1,490.91	1.82	822.283	
500.00	499.53	449.53	449.53	1.55	0.81	45.27	13.21	-1,495.25	1,487.71	1,485.36	2.36	631.376	
600.00	598.92	548.92	548.92	1.93	0.98	38.72	13.21	-1,495.25	1,479.45	1,476.54	2.91	508.775	
634.55	633.17	583.17	583.17	2.06	1.05	37.24	13.21	-1,495.25	1,475.85	1,472.74	3.10	475.607	
700.00	697.99	647.99	647.99	2.32	1.16	37.45	13.21	-1,495.25	1,468.66	1,465.20	3.46	423.902	
800.00	797.04	747.04	747.04	2.72	1.34	37.78	13.21	-1,495.25	1,457.72	1,453.70	4.02	362.731	
900.00	896.09	846.09	846.09	3.12	1.52	38.11	13.21	-1,495.25	1,446.83	1,442.25	4.58	316.149	
1,000.00	995.14	945.14	945.14	3.53	1.69	38.45	13.21	-1,495.25	1,435.99	1,430.85	5.14	279.556	
1,100.00	1,094.19	1,044.19	1,044.19	3.93	1.87	38.79	13.21	-1,495.25	1,425.19	1,419.50	5.70	250.082	
1,200.00	1,193.24	1,143.24	1,143.24	4.34	2.05	39.14	13.21	-1,495.25	1,414.45	1,408.19	6.26	225.851	
1,300.00	1,292.28	1,242.28	1,242.28	4.75	2.23	39.49	13.21	-1,495.25	1,403.77	1,396.94	6.83	205.590	
1,400.00	1,391.33	1,341.33	1,341.33	5.17	2.40	39.85	13.21	-1,495.25	1,393.13	1,385.74	7.39	188.403	
1,500.00	1,490.38	1,440.38	1,440.38	5.58	2.58	40.22	13.21	-1,495.25	1,382.55	1,374.59	7.96	173.645	
1,600.00	1,589.43	1,539.43	1,539.43	5.99	2.76	40.58	13.21	-1,495.25	1,372.03	1,363.50	8.53	160.839	
1,700.00	1,688.48	1,638.48	1,638.48	6.40	2.94	40.96	13.21	-1,495.25	1,361.57	1,352.47	9.10	149.623	
1,800.00	1,787.53	1,737.53	1,737.53	6.82	3.11	41.34	13.21	-1,495.25	1,351.16	1,341.49	9.67	139.722	
1,900.00	1,886.58	1,836.58	1,836.58	7.23	3.29	41.73	13.21	-1,495.25	1,340.82	1,330.58	10.24	130.917	
2,000.00	1,985.62	1,935.62	1,935.62	7.65	3.47	42.12	13.21	-1,495.25	1,330.53	1,319.72	10.81	123.039	
2,100.00	2,084.67	2,034.67	2,034.67	8.06	3.65	42.52	13.21	-1,495.25	1,320.31	1,308.93	11.39	115.950	
2,200.00	2,183.72	2,133.72	2,133.72	8.47	3.82	42.92	13.21	-1,495.25	1,310.16	1,298.20	11.96	109.538	
2,300.00	2,282.77	2,232.77	2,232.77	8.89	4.00	43.34	13.21	-1,495.25	1,300.07	1,287.54	12.54	103.710	
2,400.00	2,381.82	2,331.82	2,331.82	9.30	4.18	43.75	13.21	-1,495.25	1,290.05	1,276.94	13.11	98.393	
2,500.00	2,480.87	2,430.87	2,430.87	9.72	4.36	44.18	13.21	-1,495.25	1,280.10	1,266.41	13.69	93.522	
2,600.00	2,579.92	2,529.92	2,529.92	10.13	4.53	44.61	13.21	-1,495.25	1,270.22	1,255.96	14.27	89.044	
2,700.00	2,678.96	2,628.96	2,628.96	10.55	4.71	45.04	13.21	-1,495.25	1,260.41	1,245.57	14.84	84.915	
2,800.00	2,778.01	2,728.01	2,728.01	10.96	4.89	45.49	13.21	-1,495.25	1,250.68	1,235.26	15.42	81.096	
2,900.00	2,877.06	2,827.06	2,827.06	11.38	5.07	45.94	13.21	-1,495.25	1,241.03	1,225.02	16.00	77.553	
3,000.00	2,976.11	2,926.11	2,926.11	11.79	5.24	46.40	13.21	-1,495.25	1,231.45	1,214.87	16.58	74.259	
3,100.00	3,075.16	3,025.16	3,025.16	12.21	5.42	46.86	13.21	-1,495.25	1,221.95	1,204.79	17.16	71.189	
3,200.00	3,174.21	3,124.21	3,124.21	12.62	5.60	47.33	13.21	-1,495.25	1,212.53	1,194.79	17.75	68.321	
3,300.00	3,273.26	3,223.26	3,223.26	13.04	5.78	47.81	13.21	-1,495.25	1,203.20	1,184.87	18.33	65.637	
3,400.00	3,372.30	3,322.30	3,322.30	13.45	5.95	48.30	13.21	-1,495.25	1,193.95	1,175.04	18.92	63.120	
3,500.00	3,471.35	3,421.35	3,421.35	13.87	6.13	48.79	13.21	-1,495.25	1,184.80	1,165.29	19.50	60.755	
3,600.00	3,570.40	3,520.40	3,520.40	14.28	6.31	49.30	13.21	-1,495.25	1,175.73	1,155.64	20.09	58.530	
3,700.00	3,669.45	3,619.45	3,619.45	14.70	6.49	49.81	13.21	-1,495.25	1,166.75	1,146.07	20.67	56.433	
3,800.00	3,768.50	3,718.50	3,718.50	15.11	6.66	50.32	13.21	-1,495.25	1,157.86	1,136.60	21.26	54.454	
3,900.00	3,867.55	3,817.55	3,817.55	15.53	6.84	50.85	13.21	-1,495.25	1,149.08	1,127.22	21.85	52.583	
4,000.00	3,966.59	3,916.59	3,916.59	15.95	7.02	51.38	13.21	-1,495.25	1,140.39	1,117.95	22.44	50.813	
4,100.00	4,065.64	4,015.64	4,015.64	16.36	7.20	51.92	13.21	-1,495.25	1,131.80	1,108.77	23.03	49.136	
4,200.00	4,164.69	4,114.69	4,114.69	16.78	7.38	52.47	13.21	-1,495.25	1,123.31	1,099.69	23.63	47.546	
4,300.00	4,263.74	4,213.74	4,213.74	17.19	7.55	53.03	13.21	-1,495.25	1,114.93	1,090.71	24.22	46.035	
4,400.00	4,362.79	4,312.79	4,312.79	17.61	7.73	53.60	13.21	-1,495.25	1,106.66	1,081.85	24.81	44.599	
4,500.00	4,461.84	4,411.84	4,411.84	18.02	7.91	54.17	13.21	-1,495.25	1,098.50	1,073.09	25.41	43.234	
4,600.00	4,560.89	4,510.89	4,510.89	18.44	8.09	54.75	13.21	-1,495.25	1,090.45	1,064.44	26.00	41.933	
4,700.00	4,659.93	4,609.93	4,609.93	18.85	8.26	55.34	13.21	-1,495.25	1,082.51	1,055.91	26.60	40.694	
4,800.00	4,758.98	4,708.98	4,708.98	19.27	8.44	55.94	13.21	-1,495.25	1,074.70	1,047.50	27.20	39.512	
4,900.00	4,858.03	4,808.03	4,808.03	19.69	8.62	56.55	13.21	-1,495.25	1,067.00	1,039.20	27.80	38.384	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Johnson 1 - KPK - NO SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 5085-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		
5,000.00	4,957.08	4,907.08	4,907.08	20.10	8.80	57.17	13.21	-1,495.25	1,059.43	1,031.03	28.40	37.306		
5,100.00	5,056.13	5,006.13	5,006.13	20.52	8.97	57.79	13.21	-1,495.25	1,051.98	1,022.98	29.00	36.277		
5,200.00	5,155.18	5,085.00	5,085.00	20.93	9.11	58.30	13.21	-1,495.25	1,044.85	1,015.27	29.58	35.321		
5,255.81	5,210.46	5,085.00	5,085.00	21.16	9.11	58.30	13.21	-1,495.25	1,043.36	1,013.55	29.81	35.000 CC, ES		
5,300.00	5,254.23	5,085.00	5,085.00	21.35	9.11	58.30	13.21	-1,495.25	1,044.30	1,014.36	29.93	34.888 SF		
5,400.00	5,353.27	5,085.00	5,085.00	21.76	9.11	58.30	13.21	-1,495.25	1,053.28	1,023.26	30.02	35.087		
5,500.00	5,452.32	5,085.00	5,085.00	22.18	9.11	58.30	13.21	-1,495.25	1,071.55	1,041.70	29.85	35.897		
5,600.00	5,551.37	5,085.00	5,085.00	22.60	9.11	58.30	13.21	-1,495.25	1,098.67	1,069.21	29.46	37.295		
5,700.00	5,650.42	5,085.00	5,085.00	23.01	9.11	58.30	13.21	-1,495.25	1,133.98	1,105.09	28.88	39.260		
5,800.00	5,749.47	5,085.00	5,085.00	23.43	9.11	58.30	13.21	-1,495.25	1,176.75	1,148.58	28.17	41.769		
5,900.00	5,848.52	5,085.00	5,085.00	23.84	9.11	58.30	13.21	-1,495.25	1,226.21	1,198.84	27.37	44.799		
6,000.00	5,947.57	5,085.00	5,085.00	24.26	9.11	58.30	13.21	-1,495.25	1,281.57	1,255.05	26.52	48.328		
6,100.00	6,046.61	5,085.00	5,085.00	24.67	9.11	58.30	13.21	-1,495.25	1,342.11	1,316.46	25.65	52.333		
6,200.00	6,145.66	5,085.00	5,085.00	25.09	9.11	58.30	13.21	-1,495.25	1,407.16	1,382.38	24.78	56.790		
6,300.00	6,244.71	5,085.00	5,085.00	25.50	9.11	58.30	13.21	-1,495.25	1,476.12	1,452.19	23.93	61.675		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Meredith 1 - KPK WELL - NO SURVEYS												Offset Site Error:	0.00 usft
Survey Program: 5120-Geolink MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-5.15	93.19	-8.40	97.67				
100.00	100.00	71.99	71.99	0.14	0.13	-5.15	93.19	-8.40	93.57	93.30	0.26	354.614	
200.00	200.00	171.99	171.99	0.50	0.30	-5.15	93.19	-8.40	93.57	92.77	0.80	117.420 CC, ES	
300.00	299.98	271.97	271.97	0.84	0.47	155.28	93.19	-8.40	95.15	93.83	1.32	72.243	
350.00	349.93	321.92	321.92	1.02	0.56	155.81	93.19	-8.40	97.14	95.56	1.58	61.517	
400.00	399.85	371.84	371.84	1.19	0.65	144.41	93.19	-8.40	99.64	97.80	1.84	54.119	
500.00	499.53	471.52	471.52	1.55	0.82	133.68	93.19	-8.40	105.49	103.12	2.37	44.503	
600.00	598.92	570.91	570.91	1.93	1.00	130.95	93.19	-8.40	112.85	109.94	2.91	38.790	
634.55	633.17	605.16	605.16	2.06	1.06	130.99	93.19	-8.40	115.85	112.76	3.10	37.391	
700.00	697.99	669.98	669.98	2.32	1.17	134.17	93.19	-8.40	121.98	118.53	3.45	35.310	
800.00	797.04	769.03	769.03	2.72	1.34	138.44	93.19	-8.40	131.99	127.99	4.00	33.012	
900.00	896.09	868.08	868.08	3.12	1.52	142.10	93.19	-8.40	142.62	138.08	4.54	31.409	
1,000.00	995.14	967.13	967.13	3.53	1.69	145.24	93.19	-8.40	153.74	148.66	5.08	30.252	
1,100.00	1,094.19	1,066.18	1,066.18	3.93	1.86	147.96	93.19	-8.40	165.27	159.65	5.62	29.393	
1,200.00	1,193.24	1,165.23	1,165.23	4.34	2.03	150.31	93.19	-8.40	177.11	170.95	6.16	28.741	
1,300.00	1,292.28	1,264.27	1,264.27	4.75	2.21	152.37	93.19	-8.40	189.22	182.52	6.70	28.235	
1,400.00	1,391.33	1,363.32	1,363.32	5.17	2.38	154.18	93.19	-8.40	201.54	194.30	7.24	27.835	
1,500.00	1,490.38	1,462.37	1,462.37	5.58	2.55	155.79	93.19	-8.40	214.03	206.25	7.78	27.513	
1,600.00	1,589.43	1,561.42	1,561.42	5.99	2.73	157.21	93.19	-8.40	226.67	218.35	8.32	27.252	
1,700.00	1,688.48	1,660.47	1,660.47	6.40	2.90	158.49	93.19	-8.40	239.43	230.58	8.86	27.036	
1,800.00	1,787.53	1,759.52	1,759.52	6.82	3.07	159.63	93.19	-8.40	252.30	242.91	9.39	26.856	
1,900.00	1,886.58	1,858.57	1,858.57	7.23	3.24	160.66	93.19	-8.40	265.26	255.33	9.93	26.705	
2,000.00	1,985.62	1,957.61	1,957.61	7.65	3.42	161.60	93.19	-8.40	278.30	267.83	10.47	26.576	
2,100.00	2,084.67	2,056.66	2,056.66	8.06	3.59	162.45	93.19	-8.40	291.40	280.39	11.01	26.466	
2,200.00	2,183.72	2,155.71	2,155.71	8.47	3.76	163.23	93.19	-8.40	304.56	293.01	11.55	26.371	
2,300.00	2,282.77	2,254.76	2,254.76	8.89	3.94	163.95	93.19	-8.40	317.77	305.68	12.09	26.288	
2,400.00	2,381.82	2,353.81	2,353.81	9.30	4.11	164.61	93.19	-8.40	331.03	318.40	12.63	26.216	
2,500.00	2,480.87	2,452.86	2,452.86	9.72	4.28	165.22	93.19	-8.40	344.32	331.16	13.17	26.153	
2,600.00	2,579.92	2,551.91	2,551.91	10.13	4.45	165.78	93.19	-8.40	357.66	343.95	13.70	26.097	
2,700.00	2,678.96	2,650.95	2,650.95	10.55	4.63	166.30	93.19	-8.40	371.02	356.77	14.24	26.047	
2,800.00	2,778.01	2,750.00	2,750.00	10.96	4.80	166.79	93.19	-8.40	384.41	369.63	14.78	26.003	
2,900.00	2,877.06	2,849.05	2,849.05	11.38	4.97	167.24	93.19	-8.40	397.83	382.50	15.32	25.963	
3,000.00	2,976.11	2,948.10	2,948.10	11.79	5.15	167.66	93.19	-8.40	411.26	395.40	15.86	25.927	
3,100.00	3,075.16	3,047.15	3,047.15	12.21	5.32	168.06	93.19	-8.40	424.72	408.32	16.40	25.895	
3,200.00	3,174.21	3,146.20	3,146.20	12.62	5.49	168.43	93.19	-8.40	438.20	421.26	16.94	25.866	
3,300.00	3,273.26	3,245.25	3,245.25	13.04	5.66	168.78	93.19	-8.40	451.70	434.22	17.48	25.839	
3,400.00	3,372.30	3,344.29	3,344.29	13.45	5.84	169.11	93.19	-8.40	465.21	447.19	18.02	25.815	
3,500.00	3,471.35	3,443.34	3,443.34	13.87	6.01	169.42	93.19	-8.40	478.73	460.17	18.56	25.793	
3,600.00	3,570.40	3,542.39	3,542.39	14.28	6.18	169.71	93.19	-8.40	492.27	473.17	19.10	25.773	
3,700.00	3,669.45	3,641.44	3,641.44	14.70	6.36	169.99	93.19	-8.40	505.82	486.18	19.64	25.754	
3,800.00	3,768.50	3,740.49	3,740.49	15.11	6.53	170.26	93.19	-8.40	519.39	499.21	20.18	25.737	
3,900.00	3,867.55	3,839.54	3,839.54	15.53	6.70	170.51	93.19	-8.40	532.96	512.24	20.72	25.722	
4,000.00	3,966.59	3,938.58	3,938.58	15.95	6.87	170.74	93.19	-8.40	546.54	525.28	21.26	25.707	
4,100.00	4,065.64	4,037.63	4,037.63	16.36	7.05	170.97	93.19	-8.40	560.13	538.33	21.80	25.694	
4,200.00	4,164.69	4,136.68	4,136.68	16.78	7.22	171.19	93.19	-8.40	573.73	551.39	22.34	25.681	
4,300.00	4,263.74	4,235.73	4,235.73	17.19	7.39	171.39	93.19	-8.40	587.33	564.45	22.88	25.669	
4,400.00	4,362.79	4,334.78	4,334.78	17.61	7.57	171.59	93.19	-8.40	600.95	577.53	23.42	25.658	
4,500.00	4,461.84	4,433.83	4,433.83	18.02	7.74	171.78	93.19	-8.40	614.57	590.60	23.96	25.648	
4,600.00	4,560.89	4,532.88	4,532.88	18.44	7.91	171.96	93.19	-8.40	628.19	603.69	24.50	25.639	
4,700.00	4,659.93	4,631.92	4,631.92	18.85	8.08	172.13	93.19	-8.40	641.82	616.78	25.04	25.630	
4,800.00	4,758.98	4,730.97	4,730.97	19.27	8.26	172.29	93.19	-8.40	655.46	629.88	25.58	25.622	
4,900.00	4,858.03	4,830.02	4,830.02	19.69	8.43	172.45	93.19	-8.40	669.10	642.98	26.12	25.614	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Meredith 1 - KPK WELL - NO SURVEYS													Offset Site Error: 0.00 usft
Survey Program: 5120-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	4,957.08	4,929.07	4,929.07	20.10	8.60	172.60	93.19	-8.40	682.75	656.09	26.66	25.607	
5,100.00	5,056.13	5,028.12	5,028.12	20.52	8.78	172.75	93.19	-8.40	696.40	669.20	27.20	25.600 SF	
5,200.00	5,155.18	5,119.99	5,119.99	20.93	8.94	172.88	93.19	-8.40	710.09	682.39	27.71	25.629	
5,300.00	5,254.23	5,119.99	5,119.99	21.35	8.94	172.88	93.19	-8.40	731.47	703.99	27.48	26.614	
5,400.00	5,353.27	5,119.99	5,119.99	21.76	8.94	172.88	93.19	-8.40	765.42	738.54	26.88	28.472	
5,500.00	5,452.32	5,119.99	5,119.99	22.18	8.94	172.88	93.19	-8.40	810.36	784.34	26.02	31.138	
5,600.00	5,551.37	5,119.99	5,119.99	22.60	8.94	172.88	93.19	-8.40	864.58	839.55	25.03	34.544	
5,700.00	5,650.42	5,119.99	5,119.99	23.01	8.94	172.88	93.19	-8.40	926.46	902.47	23.99	38.622	
5,800.00	5,749.47	5,119.99	5,119.99	23.43	8.94	172.88	93.19	-8.40	994.55	971.59	22.97	43.307	
5,900.00	5,848.52	5,119.99	5,119.99	23.84	8.94	172.88	93.19	-8.40	1,067.69	1,045.69	22.00	48.535	
6,000.00	5,947.57	5,119.99	5,119.99	24.26	8.94	172.88	93.19	-8.40	1,144.89	1,123.79	21.10	54.248	
6,100.00	6,046.61	5,119.99	5,119.99	24.67	8.94	172.88	93.19	-8.40	1,225.39	1,205.10	20.29	60.388	
6,200.00	6,145.66	5,119.99	5,119.99	25.09	8.94	172.88	93.19	-8.40	1,308.59	1,289.03	19.56	66.903	
6,300.00	6,244.71	5,119.99	5,119.99	25.50	8.94	172.88	93.19	-8.40	1,394.00	1,375.09	18.90	73.744	
6,400.00	6,343.76	5,119.99	5,119.99	25.92	8.94	172.88	93.19	-8.40	1,481.23	1,462.91	18.32	80.864	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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							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		
7,900.00	7,586.48	7,570.48	7,570.48	29.29	8.49	42.32	1,440.06	-475.01	1,466.26	1,429.07	37.19	39.431		
7,950.00	7,597.46	7,581.46	7,581.46	29.26	8.51	51.10	1,440.06	-475.01	1,418.73	1,381.49	37.24	38.094		
8,000.00	7,605.04	7,589.04	7,589.04	29.22	8.52	63.02	1,440.06	-475.01	1,370.58	1,333.28	37.30	36.748		
8,050.00	7,609.17	7,593.17	7,593.17	29.19	8.52	78.24	1,440.06	-475.01	1,322.03	1,284.69	37.35	35.398		
8,084.63	7,610.00	7,594.00	7,594.00	29.18	8.52	90.00	1,440.06	-475.01	1,288.31	1,250.93	37.38	34.462		
8,100.00	7,610.00	7,594.00	7,594.00	29.18	8.52	90.00	1,440.06	-475.01	1,273.34	1,235.94	37.40	34.047		
8,200.00	7,610.00	7,594.00	7,594.00	29.43	8.52	90.00	1,440.06	-475.01	1,176.19	1,138.68	37.51	31.353		
8,300.00	7,610.00	7,594.00	7,594.00	29.94	8.52	90.00	1,440.06	-475.01	1,079.57	1,041.91	37.66	28.666		
8,400.00	7,610.00	7,594.00	7,594.00	30.54	8.52	90.00	1,440.06	-475.01	983.63	945.78	37.85	25.989		
8,500.00	7,610.00	7,594.00	7,594.00	31.21	8.52	90.00	1,440.06	-475.01	888.58	850.49	38.09	23.328		
8,600.00	7,610.00	7,594.00	7,594.00	31.93	8.52	90.00	1,440.06	-475.01	794.74	756.33	38.41	20.688		
8,700.00	7,610.00	7,594.00	7,594.00	32.71	8.52	90.00	1,440.06	-475.01	702.61	663.75	38.86	18.082		
8,800.00	7,610.00	7,594.00	7,594.00	33.54	8.52	90.00	1,440.06	-475.01	612.95	573.48	39.47	15.528		
8,900.00	7,610.00	7,594.00	7,594.00	34.42	8.52	90.00	1,440.06	-475.01	527.02	486.67	40.35	13.060		
9,000.00	7,610.00	7,594.00	7,594.00	35.34	8.52	90.00	1,440.06	-475.01	446.99	405.38	41.61	10.742		
9,100.00	7,610.00	7,594.00	7,594.00	36.31	8.52	90.00	1,440.06	-475.01	376.62	333.28	43.34	8.689		
9,200.00	7,610.00	7,594.00	7,594.00	37.31	8.52	90.00	1,440.06	-475.01	322.32	276.95	45.38	7.103		
9,300.00	7,610.00	7,594.00	7,594.00	38.35	8.52	90.00	1,440.06	-475.01	293.15	246.31	46.84	6.259		
9,339.77	7,610.00	7,594.00	7,594.00	38.78	8.52	90.00	1,440.06	-475.01	290.44	243.47	46.97	6.183	CC, ES, SF	
9,400.00	7,610.00	7,594.00	7,594.00	39.42	8.52	90.00	1,440.06	-475.01	296.62	250.07	46.55	6.372		
9,500.00	7,610.00	7,594.00	7,594.00	40.53	8.52	90.00	1,440.06	-475.01	331.71	286.97	44.74	7.414		
9,600.00	7,610.00	7,594.00	7,594.00	41.66	8.52	90.00	1,440.06	-475.01	389.97	347.28	42.69	9.135		
9,700.00	7,610.00	7,594.00	7,594.00	42.82	8.52	90.00	1,440.06	-475.01	462.74	421.66	41.08	11.265		
9,800.00	7,610.00	7,594.00	7,594.00	44.00	8.52	90.00	1,440.06	-475.01	544.22	504.26	39.95	13.622		
9,900.00	7,610.00	7,594.00	7,594.00	45.21	8.52	90.00	1,440.06	-475.01	631.04	591.86	39.19	16.103		
10,000.00	7,610.00	7,594.00	7,594.00	46.44	8.52	90.00	1,440.06	-475.01	721.29	682.62	38.67	18.653		
10,100.00	7,610.00	7,594.00	7,594.00	47.69	8.52	90.00	1,440.06	-475.01	813.82	775.51	38.31	21.243		
10,200.00	7,610.00	7,594.00	7,594.00	48.95	8.52	90.00	1,440.06	-475.01	907.94	869.88	38.06	23.857		
10,300.00	7,610.00	7,594.00	7,594.00	50.23	8.52	90.00	1,440.06	-475.01	1,003.20	965.32	37.88	26.486		
10,400.00	7,610.00	7,594.00	7,594.00	51.53	8.52	90.00	1,440.06	-475.01	1,099.29	1,061.55	37.75	29.123		
10,500.00	7,610.00	7,594.00	7,594.00	52.84	8.52	90.00	1,440.06	-475.01	1,196.03	1,158.38	37.65	31.764		
10,600.00	7,610.00	7,594.00	7,594.00	54.17	8.52	90.00	1,440.06	-475.01	1,293.27	1,255.68	37.59	34.408		
10,700.00	7,610.00	7,594.00	7,594.00	55.51	8.52	90.00	1,440.06	-475.01	1,390.89	1,353.36	37.54	37.052		
10,800.00	7,610.00	7,594.00	7,594.00	56.86	8.52	90.00	1,440.06	-475.01	1,488.84	1,451.33	37.51	39.695		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 33-26 - CPR WELL - SURVEYS													Offset Site Error: 0.00 usft	
Survey Program: 100- GyroFlex													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
8,200.00	7,610.00	7,567.79	7,567.05	29.43	7.39	-90.31	1,409.30	-1,709.22	1,436.05	1,400.17	35.88	40.025		
8,300.00	7,610.00	7,567.62	7,566.88	29.94	7.39	-90.30	1,409.30	-1,709.22	1,362.21	1,326.18	36.03	37.807		
8,400.00	7,610.00	7,567.45	7,566.72	30.54	7.39	-90.29	1,409.30	-1,709.22	1,291.89	1,255.60	36.29	35.604		
8,500.00	7,610.00	7,567.28	7,566.55	31.21	7.39	-90.28	1,409.30	-1,709.22	1,225.70	1,189.03	36.67	33.425		
8,600.00	7,610.00	7,567.11	7,566.38	31.93	7.39	-90.27	1,409.30	-1,709.22	1,164.35	1,127.14	37.21	31.290		
8,700.00	7,610.00	7,566.94	7,566.21	32.71	7.39	-90.26	1,409.30	-1,709.22	1,108.64	1,070.70	37.93	29.225		
8,800.00	7,610.00	7,566.77	7,566.04	33.54	7.39	-90.25	1,409.30	-1,709.22	1,059.45	1,020.60	38.85	27.269		
8,900.00	7,610.00	7,566.61	7,565.87	34.42	7.39	-90.24	1,409.30	-1,709.22	1,017.75	977.79	39.96	25.469		
9,000.00	7,610.00	7,566.44	7,565.70	35.34	7.39	-90.23	1,409.30	-1,709.22	984.47	943.24	41.23	23.878		
9,100.00	7,610.00	7,566.27	7,565.54	36.31	7.39	-90.22	1,409.30	-1,709.22	960.49	917.89	42.60	22.544		
9,200.00	7,610.00	7,566.10	7,565.37	37.31	7.39	-90.21	1,409.30	-1,709.23	946.52	902.52	44.01	21.509		
9,283.17	7,610.00	7,565.96	7,565.23	38.17	7.39	-90.20	1,409.30	-1,709.23	942.86	897.74	45.13	20.893 CC		
9,300.00	7,610.00	7,565.94	7,565.20	38.35	7.39	-90.20	1,409.30	-1,709.23	943.01	897.67	45.34	20.798 ES		
9,400.00	7,610.00	7,565.77	7,565.03	39.42	7.39	-90.18	1,409.30	-1,709.23	950.07	903.54	46.53	20.418		
9,500.00	7,610.00	7,565.60	7,564.87	40.53	7.39	-90.17	1,409.30	-1,709.23	967.47	919.96	47.52	20.361 SF		
9,600.00	7,610.00	7,565.44	7,564.70	41.66	7.39	-90.16	1,409.30	-1,709.23	994.67	946.40	48.27	20.607		
9,700.00	7,610.00	7,565.27	7,564.53	42.82	7.39	-90.15	1,409.30	-1,709.23	1,030.89	982.10	48.79	21.129		
9,800.00	7,610.00	7,565.10	7,564.37	44.00	7.39	-90.14	1,409.30	-1,709.23	1,075.22	1,026.12	49.11	21.896		
9,900.00	7,610.00	7,564.94	7,564.20	45.21	7.39	-90.13	1,409.31	-1,709.23	1,126.71	1,077.46	49.25	22.878		
10,000.00	7,610.00	7,564.77	7,564.04	46.44	7.39	-90.12	1,409.31	-1,709.23	1,184.41	1,135.15	49.26	24.044		
10,100.00	7,610.00	7,564.61	7,563.87	47.69	7.39	-90.11	1,409.31	-1,709.23	1,247.48	1,198.30	49.17	25.369		
10,200.00	7,610.00	7,564.44	7,563.71	48.95	7.39	-90.10	1,409.31	-1,709.23	1,315.13	1,266.11	49.02	26.829		
10,300.00	7,610.00	7,564.28	7,563.54	50.23	7.39	-90.09	1,409.31	-1,709.23	1,386.70	1,337.88	48.82	28.404		
10,400.00	7,610.00	7,564.11	7,563.38	51.53	7.39	-90.08	1,409.31	-1,709.23	1,461.61	1,413.01	48.60	30.077		

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 4F-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 4F-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 #3	<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		
3,100.00	3,075.16	2,998.99	2,992.58	12.21	5.98	39.79	-114.67	-1,784.20	1,492.59	1,475.03	17.56	85.007		
3,200.00	3,174.21	3,092.65	3,086.20	12.62	6.13	40.07	-115.68	-1,786.56	1,484.43	1,466.32	18.11	81.966		
3,300.00	3,273.26	3,188.54	3,182.06	13.04	6.28	40.36	-116.51	-1,789.27	1,476.63	1,457.97	18.66	79.126		
3,400.00	3,372.30	3,290.48	3,283.95	13.45	6.44	40.69	-117.00	-1,792.17	1,468.92	1,449.69	19.22	76.419		
3,500.00	3,471.35	3,384.99	3,378.42	13.87	6.59	40.99	-117.44	-1,794.88	1,461.28	1,441.50	19.77	73.898		
3,600.00	3,570.40	3,482.43	3,475.81	14.28	6.74	41.31	-117.85	-1,797.94	1,453.96	1,433.63	20.33	71.511		
3,700.00	3,669.45	3,581.65	3,574.98	14.70	6.90	41.64	-118.34	-1,801.13	1,446.76	1,425.86	20.89	69.242		
3,800.00	3,768.50	3,687.13	3,680.41	15.11	7.07	41.98	-119.04	-1,804.35	1,439.42	1,417.96	21.47	67.053		
3,900.00	3,867.55	3,796.46	3,789.70	15.53	7.25	42.34	-119.99	-1,807.07	1,431.56	1,409.51	22.04	64.940		
4,000.00	3,966.59	3,893.00	3,886.22	15.95	7.40	42.67	-120.56	-1,809.17	1,423.46	1,400.85	22.60	62.971		
4,100.00	4,065.64	3,990.85	3,984.05	16.36	7.56	43.02	-120.74	-1,811.42	1,415.58	1,392.42	23.17	61.103		
4,200.00	4,164.69	4,083.14	4,076.31	16.78	7.71	43.36	-120.68	-1,813.76	1,408.04	1,384.31	23.72	59.352		
4,300.00	4,263.74	4,177.98	4,171.10	17.19	7.86	43.73	-120.36	-1,816.57	1,400.99	1,376.71	24.28	57.696		
4,400.00	4,362.79	4,277.38	4,270.45	17.61	8.02	44.12	-119.96	-1,819.67	1,394.18	1,369.33	24.85	56.105		
4,500.00	4,461.84	4,376.64	4,369.67	18.02	8.18	44.50	-119.69	-1,822.74	1,387.39	1,361.97	25.42	54.580		
4,600.00	4,560.89	4,478.76	4,471.74	18.44	8.34	44.90	-119.48	-1,825.84	1,380.61	1,354.61	25.99	53.120		
4,700.00	4,659.93	4,577.49	4,570.42	18.85	8.50	45.31	-118.93	-1,828.65	1,373.75	1,347.19	26.56	51.721		
4,800.00	4,758.98	4,674.55	4,667.44	19.27	8.66	45.70	-118.58	-1,831.57	1,367.08	1,339.95	27.13	50.390		
4,900.00	4,858.03	4,795.11	4,787.96	19.69	8.86	46.20	-118.10	-1,834.57	1,360.03	1,332.30	27.72	49.056		
5,000.00	4,957.08	4,911.53	4,904.38	20.10	9.05	46.70	-117.88	-1,835.55	1,351.36	1,323.05	28.31	47.735		
5,100.00	5,056.13	5,016.98	5,009.82	20.52	9.23	47.15	-117.91	-1,835.55	1,341.90	1,313.01	28.89	46.451		
5,200.00	5,155.18	5,114.32	5,107.16	20.93	9.39	47.57	-118.00	-1,835.42	1,332.38	1,302.91	29.46	45.221		
5,300.00	5,254.23	5,210.86	5,203.70	21.35	9.55	47.98	-118.31	-1,835.55	1,323.15	1,293.10	30.04	44.044		
5,400.00	5,353.27	5,318.39	5,311.22	21.76	9.74	48.40	-119.68	-1,835.58	1,313.68	1,283.05	30.63	42.888		
5,500.00	5,452.32	5,418.26	5,411.08	22.18	9.91	48.80	-121.06	-1,835.24	1,303.89	1,272.68	31.21	41.776		
5,600.00	5,551.37	5,508.58	5,501.40	22.60	10.06	49.21	-121.33	-1,835.07	1,294.57	1,262.78	31.79	40.727		
5,700.00	5,650.42	5,603.32	5,596.14	23.01	10.22	49.64	-121.54	-1,835.37	1,285.82	1,253.45	32.37	39.725		
5,800.00	5,749.47	5,706.77	5,699.59	23.43	10.40	50.09	-122.25	-1,835.83	1,277.16	1,244.21	32.95	38.755		
5,900.00	5,848.52	5,815.78	5,808.60	23.84	10.58	50.59	-122.76	-1,835.46	1,267.88	1,234.34	33.54	37.801		
6,000.00	5,947.57	5,899.99	5,892.80	24.26	10.73	50.99	-123.14	-1,835.21	1,258.77	1,224.65	34.12	36.891		
6,100.00	6,046.61	5,990.25	5,983.06	24.67	10.88	51.41	-123.50	-1,835.81	1,250.66	1,215.96	34.70	36.039		
6,200.00	6,145.66	6,091.87	6,084.67	25.09	11.05	51.89	-123.74	-1,837.09	1,243.22	1,207.92	35.29	35.227		
6,300.00	6,244.71	6,186.42	6,179.21	25.50	11.21	52.36	-123.60	-1,838.15	1,235.84	1,199.96	35.87	34.449		
6,400.00	6,343.76	6,281.19	6,273.97	25.92	11.36	52.87	-122.49	-1,839.31	1,228.95	1,192.50	36.46	33.711		
6,500.00	6,442.81	6,382.36	6,375.12	26.34	11.52	53.46	-120.59	-1,840.48	1,222.32	1,185.27	37.04	32.998		
6,600.00	6,541.86	6,483.59	6,476.32	26.75	11.69	54.07	-118.57	-1,841.34	1,215.57	1,177.94	37.63	32.303		
6,700.00	6,640.91	6,585.26	6,577.96	27.17	11.85	54.70	-116.38	-1,841.96	1,208.77	1,170.55	38.22	31.627		
6,800.00	6,739.95	6,688.14	6,680.82	27.58	12.01	55.34	-114.15	-1,842.28	1,201.84	1,163.03	38.81	30.966		
6,900.51	6,839.51	6,789.41	6,782.08	28.00	12.18	55.97	-112.39	-1,842.46	1,194.75	1,155.35	39.41	30.318		
6,950.00	6,888.63	6,837.37	6,830.03	28.20	12.26	56.23	-111.73	-1,842.60	1,190.73	1,151.04	39.69	30.004		
7,000.00	6,938.30	6,885.40	6,878.05	28.38	12.34	56.48	-111.05	-1,842.79	1,185.59	1,145.65	39.94	29.685		
7,050.00	6,987.78	6,935.64	6,928.29	28.54	12.42	56.73	-110.32	-1,843.03	1,179.37	1,139.20	40.17	29.363		
7,100.00	7,036.82	6,986.49	6,979.13	28.68	12.50	56.98	-109.56	-1,843.19	1,171.99	1,131.63	40.37	29.034		
7,150.00	7,085.18	7,032.96	7,025.60	28.81	12.58	57.23	-108.84	-1,843.31	1,163.61	1,123.06	40.54	28.700		
7,200.00	7,132.63	7,077.30	7,069.94	28.92	12.65	57.48	-108.11	-1,843.55	1,154.47	1,113.77	40.70	28.367		
7,250.00	7,178.95	7,122.24	7,114.86	29.02	12.73	57.73	-107.34	-1,843.90	1,144.70	1,103.87	40.83	28.035		
7,300.00	7,223.89	7,167.51	7,160.13	29.11	12.80	57.98	-106.65	-1,844.30	1,134.38	1,093.43	40.95	27.705		
7,350.00	7,267.25	7,212.06	7,204.67	29.19	12.88	58.23	-106.06	-1,844.72	1,123.70	1,082.66	41.04	27.382		
7,400.00	7,308.81	7,257.41	7,250.01	29.25	12.95	58.48	-105.38	-1,845.02	1,112.80	1,071.69	41.11	27.067		
7,450.00	7,348.36	7,299.99	7,292.58	29.30	13.02	58.73	-104.60	-1,845.13	1,101.93	1,060.76	41.17	26.765		
7,500.00	7,385.73	7,336.90	7,329.49	29.33	13.08	58.98	-103.87	-1,845.20	1,091.45	1,050.23	41.22	26.481		
7,550.00	7,420.72	7,370.88	7,363.47	29.36	13.14	59.23	-103.20	-1,845.31	1,081.75	1,040.49	41.26	26.221		

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 4F-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 4F-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 #3	<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		
7,600.00	7,453.16	7,402.73	7,395.30	29.38	13.19	-81.98	-102.58	-1,845.47	1,073.12	1,031.83	41.29	25.990		
7,650.00	7,482.91	7,434.57	7,427.14	29.38	13.24	-84.34	-101.99	-1,845.63	1,065.82	1,024.49	41.32	25.791		
7,700.00	7,509.80	7,463.33	7,455.89	29.38	13.29	-86.43	-101.51	-1,845.74	1,060.12	1,018.75	41.37	25.628		
7,750.00	7,533.71	7,488.89	7,481.45	29.36	13.33	-88.21	-101.11	-1,845.82	1,056.32	1,014.90	41.42	25.504		
7,800.00	7,554.53	7,511.32	7,503.88	29.35	13.37	-89.67	-100.79	-1,845.87	1,054.67	1,013.18	41.49	25.423		
7,810.37	7,558.45	7,515.60	7,508.16	29.34	13.38	-89.93	-100.73	-1,845.88	1,054.61	1,013.11	41.50	25.411	CC, ES	
7,850.00	7,572.14	7,530.63	7,523.19	29.32	13.40	-90.76	-100.50	-1,845.90	1,055.39	1,013.81	41.57	25.387	SF	
7,900.00	7,586.48	7,546.57	7,539.12	29.29	13.43	-91.47	-100.25	-1,845.90	1,058.64	1,016.96	41.68	25.399		
7,950.00	7,597.46	7,559.04	7,551.59	29.26	13.45	-91.76	-100.04	-1,845.90	1,064.54	1,022.73	41.81	25.461		
8,000.00	7,605.04	7,567.96	7,560.51	29.22	13.46	-91.61	-99.89	-1,845.90	1,073.12	1,031.16	41.96	25.574		
8,050.00	7,609.17	7,573.26	7,565.82	29.19	13.47	-91.02	-99.80	-1,845.89	1,084.36	1,042.23	42.13	25.738		
8,084.63	7,610.00	7,574.79	7,567.35	29.18	13.48	-90.35	-99.77	-1,845.89	1,093.67	1,051.41	42.26	25.881		
8,100.00	7,610.00	7,575.08	7,567.63	29.18	13.48	-90.36	-99.77	-1,845.89	1,098.17	1,055.85	42.32	25.952		
8,200.00	7,610.00	7,576.95	7,569.50	29.43	13.48	-90.47	-99.74	-1,845.89	1,132.10	1,089.36	42.74	26.487		
8,300.00	7,610.00	7,578.84	7,571.39	29.94	13.48	-90.57	-99.70	-1,845.88	1,173.60	1,130.37	43.23	27.150		
8,400.00	7,610.00	7,580.74	7,573.30	30.54	13.48	-90.67	-99.67	-1,845.88	1,221.89	1,178.15	43.73	27.939		
8,500.00	7,610.00	7,582.67	7,575.22	31.21	13.49	-90.78	-99.64	-1,845.88	1,276.19	1,231.95	44.24	28.847		
8,600.00	7,610.00	7,584.61	7,577.17	31.93	13.49	-90.88	-99.60	-1,845.87	1,335.79	1,291.06	44.73	29.866		
8,700.00	7,610.00	7,586.58	7,579.13	32.71	13.49	-90.99	-99.57	-1,845.87	1,399.99	1,354.81	45.18	30.985		
8,800.00	7,610.00	7,588.56	7,581.11	33.54	13.50	-91.10	-99.53	-1,845.87	1,468.20	1,422.60	45.60	32.195		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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							
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	167.74	-14.57	3.17	29.98				
100.00	100.00	73.89	73.89	0.14	0.13	167.52	-14.80	3.28	15.16	14.89	0.27	55.570	
200.00	200.00	173.85	173.85	0.50	0.30	167.21	-15.64	3.55	16.04	15.23	0.80	19.980	
300.00	299.98	273.89	273.88	0.84	0.48	-35.73	-16.43	3.57	15.37	14.05	1.32	11.639	
350.00	349.93	323.88	323.87	1.02	0.57	-40.86	-16.68	3.60	13.90	12.32	1.58	8.797	
400.00	399.85	373.83	373.82	1.19	0.65	-62.93	-16.83	3.60	12.26	10.42	1.84	6.658	
452.80	452.51	426.49	426.48	1.38	0.75	-88.94	-16.91	3.57	11.40	9.27	2.12	5.365 CC, ES	
500.00	499.53	473.49	473.48	1.55	0.83	-112.90	-17.08	3.60	12.32	9.94	2.38	5.181 SF	
600.00	598.92	572.87	572.86	1.93	1.00	-147.40	-17.70	3.83	20.06	17.13	2.92	6.858	
634.55	633.17	607.12	607.11	2.06	1.06	-154.13	-17.93	3.93	24.12	21.00	3.12	7.742	
700.00	697.99	671.95	671.93	2.32	1.18	-160.23	-18.36	4.15	32.56	29.09	3.47	9.396	
800.00	797.04	771.27	771.25	2.72	1.35	-164.92	-19.26	4.37	45.64	41.64	4.00	11.414	
900.00	896.09	870.62	870.59	3.12	1.52	-167.31	-20.59	4.09	58.26	53.72	4.53	12.848	
1,000.00	995.14	969.69	969.66	3.53	1.70	-169.67	-21.02	3.35	70.90	65.83	5.07	13.987	
1,100.00	1,094.19	1,068.74	1,068.70	3.93	1.87	-171.61	-20.97	2.59	83.82	78.22	5.60	14.960	
1,200.00	1,193.24	1,167.79	1,167.75	4.34	2.04	-172.99	-20.95	1.92	96.88	90.74	6.14	15.781	
1,300.00	1,292.28	1,267.04	1,267.00	4.75	2.21	-173.95	-21.07	1.35	109.99	103.32	6.68	16.473	
1,400.00	1,391.33	1,366.20	1,366.16	5.17	2.39	-174.71	-21.27	0.65	122.99	115.77	7.22	17.046	
1,500.00	1,490.38	1,465.45	1,465.41	5.58	2.56	-175.37	-21.35	-0.10	136.01	128.26	7.75	17.540	
1,600.00	1,589.43	1,564.67	1,564.63	5.99	2.73	-175.90	-21.55	-0.92	148.93	140.64	8.29	17.958	
1,700.00	1,688.48	1,664.04	1,663.99	6.40	2.91	-176.32	-21.81	-1.75	161.82	152.99	8.83	18.318	
1,800.00	1,787.53	1,763.55	1,763.49	6.82	3.08	-176.73	-22.07	-2.80	174.53	165.16	9.38	18.616	
1,900.00	1,886.58	1,863.01	1,862.94	7.23	3.26	-177.15	-22.22	-4.13	187.08	177.16	9.92	18.865	
2,000.00	1,985.62	1,962.52	1,962.44	7.65	3.43	-177.66	-22.02	-5.85	199.50	189.04	10.46	19.076	
2,100.00	2,084.67	2,061.20	2,061.10	8.06	3.61	-178.23	-21.50	-7.81	211.90	200.90	11.00	19.272	
2,200.00	2,183.72	2,159.57	2,159.44	8.47	3.78	-178.81	-20.47	-9.62	224.73	213.20	11.53	19.490	
2,300.00	2,282.77	2,257.94	2,257.80	8.89	3.95	-179.35	-19.22	-11.22	237.88	225.82	12.07	19.714	
2,400.00	2,381.82	2,357.59	2,357.42	9.30	4.13	-179.81	-17.97	-12.61	251.23	238.62	12.61	19.923	
2,500.00	2,480.87	2,458.13	2,457.95	9.72	4.30	-179.83	-17.20	-14.31	264.07	250.91	13.16	20.068	
2,600.00	2,579.92	2,557.93	2,557.73	10.13	4.48	-179.53	-16.78	-16.25	276.52	262.82	13.70	20.179	
2,700.00	2,678.96	2,657.14	2,656.92	10.55	4.65	-179.26	-16.40	-18.24	288.90	274.66	14.25	20.280	
2,800.00	2,778.01	2,756.53	2,756.29	10.96	4.83	-178.99	-15.95	-20.27	301.30	286.51	14.79	20.374	
2,900.00	2,877.06	2,856.45	2,856.18	11.38	5.01	-178.74	-15.57	-22.43	313.56	298.23	15.33	20.448	
3,000.00	2,976.11	2,955.72	2,955.42	11.79	5.18	-178.53	-15.39	-24.67	325.64	309.76	15.88	20.510	
3,100.00	3,075.16	3,054.16	3,053.85	12.21	5.36	-178.32	-15.00	-26.84	337.89	321.47	16.42	20.583	
3,200.00	3,174.21	3,153.24	3,152.89	12.62	5.53	-178.07	-14.31	-29.02	350.34	333.38	16.96	20.659	
3,300.00	3,273.26	3,251.30	3,250.93	13.04	5.71	-177.83	-13.52	-31.22	362.82	345.32	17.50	20.738	
3,400.00	3,372.30	3,347.29	3,346.90	13.45	5.88	-177.60	-12.29	-32.93	375.96	357.94	18.02	20.862	
3,500.00	3,471.35	3,444.19	3,443.76	13.87	6.05	-177.35	-10.39	-34.13	389.94	371.39	18.55	21.019	
3,600.00	3,570.40	3,543.97	3,543.52	14.28	6.22	-177.11	-8.36	-35.25	404.06	384.96	19.10	21.156	
3,700.00	3,669.45	3,644.27	3,643.80	14.70	6.40	-176.89	-6.58	-36.66	417.81	398.16	19.65	21.262	
3,800.00	3,768.50	3,743.51	3,743.01	15.11	6.58	-176.69	-4.87	-38.16	431.45	411.25	20.19	21.364	
3,900.00	3,867.55	3,842.02	3,841.50	15.53	6.75	-176.50	-3.21	-39.64	445.08	424.35	20.74	21.465	
4,000.00	3,966.59	3,942.17	3,941.63	15.95	6.93	-176.37	-1.68	-40.80	458.88	437.60	21.28	21.559	
4,100.00	4,065.64	4,042.49	4,041.93	16.36	7.11	-176.24	-0.57	-42.47	472.03	450.20	21.84	21.618	
4,200.00	4,164.69	4,139.64	4,139.06	16.78	7.28	-176.11	0.86	-43.85	485.60	463.23	22.37	21.709	
4,300.00	4,263.74	4,238.91	4,238.31	17.19	7.45	-175.97	2.42	-45.31	499.20	476.28	22.91	21.786	
4,400.00	4,362.79	4,336.78	4,336.15	17.61	7.63	-175.82	4.13	-46.76	512.90	489.44	23.45	21.871	
4,500.00	4,461.84	4,434.34	4,433.69	18.02	7.80	-175.70	5.95	-47.89	526.92	502.94	23.99	21.967	
4,600.00	4,560.89	4,533.04	4,532.34	18.44	7.98	-175.52	8.27	-49.28	541.08	516.55	24.53	22.057	
4,700.00	4,659.93	4,631.48	4,630.74	18.85	8.15	-175.33	10.78	-50.73	555.30	530.23	25.07	22.147	
4,800.00	4,758.98	4,729.55	4,728.76	19.27	8.33	-175.14	13.48	-52.18	569.67	544.05	25.61	22.240	

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 4F-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 4F-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 #3	<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							
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
4,900.00	4,858.03	4,826.87	4,826.03	19.69	8.50	174.93	16.50	-53.70	584.20	558.05	26.15	22.338	
5,000.00	4,957.08	4,923.16	4,922.23	20.10	8.68	174.67	20.19	-55.19	599.22	572.53	26.69	22.455	
5,100.00	5,056.13	5,022.44	5,021.42	20.52	8.86	174.40	24.29	-56.91	614.31	587.07	27.24	22.554	
5,200.00	5,155.18	5,120.23	5,119.12	20.93	9.04	174.16	28.20	-58.32	629.54	601.77	27.78	22.663	
5,300.00	5,254.23	5,222.35	5,221.16	21.35	9.22	173.95	31.94	-59.71	644.63	616.28	28.35	22.741	
5,400.00	5,353.27	5,325.70	5,324.45	21.76	9.41	173.80	34.78	-61.40	658.90	629.99	28.92	22.784	
5,500.00	5,452.32	5,420.72	5,419.43	22.18	9.58	173.69	37.27	-62.73	673.29	643.84	29.44	22.867	
5,600.00	5,551.37	5,515.96	5,514.62	22.60	9.75	173.58	40.13	-63.52	688.33	658.37	29.97	22.970	
5,700.00	5,650.42	5,619.76	5,618.38	23.01	9.93	173.50	42.94	-64.34	703.22	672.68	30.54	23.025	
5,800.00	5,749.47	5,722.72	5,721.31	23.43	10.12	173.42	45.17	-65.72	717.34	686.23	31.11	23.058	
5,900.00	5,848.52	5,818.62	5,817.17	23.84	10.29	173.32	47.58	-67.20	731.55	699.91	31.64	23.120	
6,000.00	5,947.57	5,916.25	5,914.76	24.26	10.46	173.24	50.05	-68.38	746.02	713.84	32.18	23.184	
6,100.00	6,046.61	6,012.05	6,010.54	24.67	10.63	173.23	51.94	-68.68	760.77	728.07	32.70	23.264	
6,200.00	6,145.66	6,106.60	6,105.07	25.09	10.80	173.30	53.45	-67.94	776.08	742.86	33.21	23.366	
6,300.00	6,244.71	6,213.49	6,211.96	25.50	10.98	173.43	54.40	-66.90	791.05	757.25	33.80	23.405	
6,400.00	6,343.76	6,314.51	6,312.97	25.92	11.15	173.52	55.12	-66.54	805.46	771.11	34.35	23.448	
6,500.00	6,442.81	6,417.41	6,415.87	26.34	11.33	173.62	55.50	-66.44	819.45	784.54	34.91	23.473	
6,600.00	6,541.86	6,516.43	6,514.89	26.75	11.50	173.73	55.50	-66.31	833.22	797.77	35.45	23.505	
6,700.00	6,640.91	6,613.97	6,612.43	27.17	11.67	173.84	55.52	-66.04	847.13	811.15	35.98	23.545	
6,800.00	6,739.95	6,713.73	6,712.19	27.58	11.84	173.95	55.51	-65.71	861.05	824.52	36.52	23.577	
6,900.51	6,839.51	6,812.37	6,810.83	28.00	12.01	174.06	55.56	-65.44	875.04	837.99	37.06	23.613	
6,950.00	6,888.63	6,860.14	6,858.60	28.20	12.09	144.19	55.63	-65.26	880.86	843.55	37.31	23.607	
7,000.00	6,938.30	6,908.69	6,907.15	28.38	12.18	110.52	55.74	-65.02	884.48	846.91	37.57	23.544	
7,050.00	6,987.78	6,958.20	6,956.66	28.54	12.26	89.23	55.88	-64.75	885.80	847.99	37.82	23.423	
7,100.00	7,036.82	7,007.53	7,005.99	28.68	12.35	78.17	56.03	-64.51	884.86	846.80	38.06	23.248	
7,150.00	7,085.18	7,057.54	7,055.99	28.81	12.44	72.37	56.19	-64.35	881.68	843.38	38.31	23.017	
7,200.00	7,132.63	7,106.63	7,105.09	28.92	12.52	69.36	56.35	-64.31	876.36	837.82	38.54	22.738	
7,250.00	7,178.95	7,154.47	7,152.93	29.02	12.60	68.01	56.46	-64.34	869.05	830.28	38.77	22.415	
7,300.00	7,223.89	7,200.00	7,198.45	29.11	12.68	67.75	56.51	-64.42	859.96	820.97	38.99	22.058	
7,350.00	7,267.25	7,242.12	7,240.57	29.19	12.76	68.23	56.54	-64.47	849.41	810.22	39.19	21.675	
7,400.00	7,308.81	7,281.74	7,280.20	29.25	12.82	69.28	56.59	-64.41	837.73	798.35	39.38	21.272	
7,450.00	7,348.36	7,320.17	7,318.62	29.30	12.89	70.81	56.67	-64.28	825.20	785.62	39.58	20.850	
7,500.00	7,385.73	7,357.17	7,355.63	29.33	12.95	72.70	56.82	-64.16	812.08	772.30	39.78	20.416	
7,550.00	7,420.72	7,391.96	7,390.41	29.36	13.02	74.85	57.01	-64.05	798.72	758.74	39.98	19.978	
7,600.00	7,453.16	7,424.01	7,422.46	29.38	13.07	77.14	57.22	-63.95	785.48	745.30	40.19	19.546	
7,650.00	7,482.91	7,453.28	7,451.74	29.38	13.12	79.46	57.40	-63.82	772.78	732.39	40.40	19.130	
7,700.00	7,509.80	7,479.74	7,478.19	29.38	13.17	81.74	57.54	-63.68	761.04	720.42	40.62	18.738	
7,750.00	7,533.71	7,503.43	7,501.88	29.36	13.21	83.88	57.66	-63.52	750.65	709.81	40.84	18.379	
7,800.00	7,554.53	7,525.02	7,523.47	29.35	13.25	85.87	57.76	-63.38	742.00	700.92	41.08	18.062	
7,850.00	7,572.14	7,543.34	7,541.79	29.32	13.28	87.55	57.84	-63.28	735.46	694.14	41.32	17.799	
7,900.00	7,586.48	7,558.29	7,556.74	29.29	13.30	88.86	57.91	-63.21	731.35	689.79	41.56	17.598	
7,949.83	7,597.43	7,569.76	7,568.21	29.26	13.32	89.74	57.97	-63.15	729.94	688.15	41.79	17.469	
7,950.00	7,597.46	7,569.80	7,568.24	29.26	13.32	89.75	57.97	-63.15	729.94	688.15	41.79	17.468	
8,000.00	7,605.04	7,577.81	7,576.25	29.22	13.34	90.18	58.00	-63.12	731.41	689.41	42.00	17.415	
8,050.00	7,609.17	7,582.28	7,580.73	29.19	13.34	90.14	58.02	-63.10	735.85	693.66	42.19	17.441	
8,084.63	7,610.00	7,583.30	7,581.75	29.18	13.35	89.82	58.03	-63.10	740.67	698.36	42.31	17.507	
8,100.00	7,610.00	7,583.37	7,581.82	29.18	13.35	89.83	58.03	-63.10	743.27	700.91	42.36	17.548	
8,200.00	7,610.00	7,583.85	7,582.30	29.43	13.35	89.87	58.03	-63.09	767.54	724.91	42.63	18.004	
8,300.00	7,610.00	7,584.32	7,582.77	29.94	13.35	89.90	58.03	-63.09	803.61	760.77	42.84	18.759	
8,400.00	7,610.00	7,584.80	7,583.25	30.54	13.35	89.94	58.03	-63.09	849.97	806.99	42.98	19.777	
8,500.00	7,610.00	7,585.27	7,583.72	31.21	13.35	89.98	58.04	-63.09	905.05	861.99	43.06	21.020	
8,600.00	7,610.00	7,585.74	7,584.19	31.93	13.35	90.02	58.04	-63.09	967.36	924.27	43.09	22.450	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S26-T2N-R68W - Sullivan 44-26 - CPR WELL - GYRO												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 100-Geolink MWD												<b>Offset Well Error:</b>	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
8,700.00	7,610.00	7,586.22	7,584.66	32.71	13.35	90.05	58.04	-63.09	1,035.59	992.49	43.09	24.031	
8,800.00	7,610.00	7,586.69	7,585.14	33.54	13.35	90.09	58.04	-63.08	1,108.65	1,065.57	43.08	25.736	
8,900.00	7,610.00	7,587.16	7,585.61	34.42	13.35	90.13	58.05	-63.08	1,185.65	1,142.60	43.05	27.542	
9,000.00	7,610.00	7,587.63	7,586.08	35.34	13.35	90.16	58.05	-63.08	1,265.87	1,222.86	43.01	29.429	
9,100.00	7,610.00	7,588.11	7,586.55	36.31	13.35	90.20	58.05	-63.08	1,348.74	1,305.76	42.98	31.382	
9,200.00	7,610.00	7,588.58	7,587.02	37.31	13.36	90.24	58.05	-63.08	1,433.79	1,390.85	42.94	33.390	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 4-6-26 - CPR WELL - SURVEYS													Offset Site Error:	0.00 usft
Survey Program: 74-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		
7,700.00	7,509.80	7,540.24	7,467.79	29.38	18.58	-65.76	743.33	-1,942.36	1,475.13	1,430.13	45.00	32.780		
7,750.00	7,533.71	7,563.88	7,491.43	29.36	18.61	-69.56	743.65	-1,942.31	1,446.98	1,401.84	45.14	32.058		
7,800.00	7,554.53	7,584.56	7,512.11	29.35	18.64	-73.29	743.93	-1,942.27	1,419.00	1,373.72	45.28	31.340		
7,850.00	7,572.14	7,602.19	7,529.73	29.32	18.67	-76.85	744.17	-1,942.24	1,391.46	1,346.04	45.43	30.632		
7,900.00	7,586.48	7,617.98	7,545.53	29.29	18.69	-80.24	744.39	-1,942.23	1,364.67	1,319.09	45.58	29.938		
7,950.00	7,597.46	7,628.33	7,555.88	29.26	18.70	-83.24	744.54	-1,942.22	1,338.91	1,293.16	45.76	29.262		
8,000.00	7,605.04	7,636.64	7,564.19	29.22	18.71	-85.96	744.65	-1,942.21	1,314.45	1,268.51	45.94	28.609		
8,050.00	7,609.17	7,641.51	7,569.05	29.19	18.72	-88.29	744.72	-1,942.21	1,291.56	1,245.41	46.15	27.986		
8,084.63	7,610.00	7,642.84	7,570.38	29.18	18.72	-89.67	744.74	-1,942.20	1,276.75	1,230.44	46.30	27.573		
8,100.00	7,610.00	7,643.06	7,570.60	29.18	18.72	-89.68	744.75	-1,942.20	1,270.45	1,224.08	46.38	27.394		
8,200.00	7,610.00	7,644.48	7,572.03	29.43	18.73	-89.75	744.77	-1,942.20	1,233.40	1,186.47	46.93	26.284		
8,300.00	7,610.00	7,645.92	7,573.46	29.94	18.73	-89.82	744.79	-1,942.20	1,203.53	1,155.92	47.61	25.279		
8,400.00	7,610.00	7,647.35	7,574.89	30.54	18.73	-89.89	744.81	-1,942.20	1,181.40	1,132.98	48.42	24.400		
8,500.00	7,610.00	7,648.79	7,576.33	31.21	18.73	-89.96	744.83	-1,942.20	1,167.44	1,118.11	49.33	23.667		
8,600.00	7,610.00	7,650.23	7,577.77	31.93	18.73	-90.03	744.85	-1,942.20	1,161.95	1,111.65	50.30	23.102		
8,613.99	7,610.00	7,650.43	7,577.97	32.04	18.73	-90.04	744.85	-1,942.20	1,161.86	1,111.42	50.44	23.035 CC, ES		
8,700.00	7,610.00	7,651.67	7,579.21	32.71	18.74	-90.10	744.87	-1,942.20	1,165.04	1,113.76	51.28	22.718		
8,800.00	7,610.00	7,653.11	7,580.65	33.54	18.74	-90.18	744.89	-1,942.19	1,176.66	1,124.42	52.24	22.526		
8,900.00	7,610.00	7,654.56	7,582.10	34.42	18.74	-90.25	744.91	-1,942.19	1,196.54	1,143.42	53.12	22.526 SF		
9,000.00	7,610.00	7,656.01	7,583.55	35.34	18.74	-90.32	744.93	-1,942.19	1,224.30	1,170.39	53.90	22.713		
9,100.00	7,610.00	7,657.46	7,585.00	36.31	18.74	-90.39	744.95	-1,942.19	1,259.40	1,204.83	54.57	23.079		
9,200.00	7,610.00	7,658.92	7,586.46	37.31	18.75	-90.46	744.97	-1,942.19	1,301.26	1,246.14	55.12	23.609		
9,300.00	7,610.00	7,660.38	7,587.92	38.35	18.75	-90.53	744.99	-1,942.19	1,349.24	1,293.69	55.55	24.288		
9,400.00	7,610.00	7,661.84	7,589.38	39.42	18.75	-90.61	745.01	-1,942.18	1,402.72	1,346.84	55.88	25.103		
9,500.00	7,610.00	7,663.30	7,590.84	40.53	18.75	-90.68	745.03	-1,942.18	1,461.09	1,404.97	56.12	26.037		

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 4F-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 4F-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 #3	<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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-89.93	0.06	-50.07	50.07	49.80	0.28	181.407	
100.00	100.00	100.00	100.00	0.14	0.14	-89.93	0.06	-50.07	50.07	49.08	0.99	50.427 CC, ES	
200.00	200.00	200.00	200.00	0.50	0.50	-89.93	0.06	-50.07	50.07	49.42	1.72	29.754	
300.00	299.98	298.33	298.31	0.84	0.84	71.31	-0.42	-51.69	51.13	50.40	2.09	25.111	
350.00	349.93	347.45	347.39	1.02	1.02	72.80	-1.02	-53.71	52.49	51.70	2.47	21.974	
400.00	399.85	396.54	396.39	1.19	1.19	62.30	-1.87	-56.53	54.17	54.42	3.23	17.858	
500.00	499.53	494.66	494.15	1.55	1.55	51.92	-4.27	-64.58	57.65	57.27	4.00	15.319	
600.00	598.92	592.72	591.49	1.93	1.92	47.97	-7.62	-75.83	61.27	58.29	4.27	14.654	
634.55	633.17	626.59	625.01	2.06	2.06	47.30	-9.00	-80.45	62.56	60.89	4.78	13.729	
700.00	697.99	690.69	688.30	2.32	2.32	48.72	-11.92	-90.24	65.67	67.33	5.58	13.062	
800.00	797.04	788.39	784.26	2.72	2.73	49.49	-17.15	-107.77	72.91	76.68	6.38	13.013	
900.00	896.09	885.60	879.07	3.12	3.18	48.93	-23.28	-128.31	83.07	88.97	7.19	13.376	
1,000.00	995.14	982.09	972.41	3.53	3.66	47.51	-30.27	-151.74	96.16	104.24	7.98	14.063	
1,100.00	1,094.19	1,078.13	1,064.46	3.93	4.17	45.66	-38.11	-178.00	112.22	120.72	8.74	14.815	
1,200.00	1,193.24	1,176.58	1,158.46	4.34	4.72	44.01	-46.47	-206.02	129.46	137.27	9.50	15.445	
1,300.00	1,292.28	1,275.02	1,252.46	4.75	5.29	42.74	-54.83	-234.04	146.77	153.87	10.27	15.978	
1,400.00	1,391.33	1,373.46	1,346.46	5.17	5.86	41.74	-63.19	-262.06	164.14	170.51	11.05	16.434	
1,500.00	1,490.38	1,471.91	1,440.46	5.58	6.44	40.93	-71.55	-290.08	181.55	187.17	11.83	16.827	
1,600.00	1,589.43	1,570.35	1,534.46	5.99	7.02	40.27	-79.91	-318.10	198.99	203.84	12.61	17.169	
1,700.00	1,688.48	1,668.79	1,628.46	6.40	7.60	39.71	-88.27	-346.12	216.45	220.54	13.39	17.468	
1,800.00	1,787.53	1,767.24	1,722.46	6.82	8.19	39.23	-96.63	-374.13	233.93	237.24	14.18	17.732	
1,900.00	1,886.58	1,865.68	1,816.46	7.23	8.78	38.82	-104.99	-402.15	251.42	253.95	14.97	17.966	
2,000.00	1,985.62	1,964.12	1,910.46	7.65	9.37	38.47	-113.35	-430.17	268.92	270.67	15.76	18.175	
2,100.00	2,084.67	2,062.57	2,004.47	8.06	9.97	38.16	-121.71	-458.19	286.43	287.40	16.55	18.363	
2,200.00	2,183.72	2,161.01	2,098.47	8.47	10.56	37.88	-130.07	-486.21	303.95	304.13	17.35	18.532	
2,300.00	2,282.77	2,259.46	2,192.47	8.89	11.16	37.63	-138.43	-514.23	321.48	320.86	18.14	18.686	
2,400.00	2,381.82	2,357.90	2,286.47	9.30	11.75	37.41	-146.79	-542.25	339.01	337.60	18.94	18.826	
2,500.00	2,480.87	2,456.34	2,380.47	9.72	12.35	37.21	-155.15	-570.27	356.54	354.34	19.74	18.953	
2,600.00	2,579.92	2,554.79	2,474.47	10.13	12.95	37.03	-163.51	-598.29	374.08	371.08	20.54	19.071	
2,700.00	2,678.96	2,653.23	2,568.47	10.55	13.55	36.87	-171.87	-626.31	391.62	387.83	21.33	19.179	
2,800.00	2,778.01	2,751.67	2,662.47	10.96	14.15	36.72	-180.23	-654.33	409.16	404.57	22.13	19.278	
2,900.00	2,877.06	2,850.12	2,756.47	11.38	14.75	36.58	-188.59	-682.35	426.71	421.32	22.93	19.370	
3,000.00	2,976.11	2,948.56	2,850.47	11.79	15.35	36.45	-196.95	-710.36	444.26	438.07	23.74	19.456	
3,100.00	3,075.16	3,047.00	2,944.47	12.21	15.95	36.33	-205.31	-738.38	461.81	454.82	24.54	19.536	
3,200.00	3,174.21	3,145.45	3,038.48	12.62	16.55	36.23	-213.67	-766.40	479.36	471.57	25.34	19.610	
3,300.00	3,273.26	3,243.89	3,132.48	13.04	17.15	36.13	-222.03	-794.42	496.91	488.33	26.14	19.680	
3,400.00	3,372.30	3,342.34	3,226.48	13.45	17.75	36.03	-230.39	-822.44	514.47	505.08	26.95	19.745	
3,500.00	3,471.35	3,440.78	3,320.48	13.87	18.35	35.94	-238.75	-850.46	532.02	521.83	27.75	19.806	
3,600.00	3,570.40	3,539.22	3,414.48	14.28	18.95	35.86	-247.11	-878.48	549.58	538.59	28.55	19.863	
3,700.00	3,669.45	3,637.67	3,508.48	14.70	19.55	35.78	-255.47	-906.50	567.14	555.34	29.36	19.918	
3,800.00	3,768.50	3,736.11	3,602.48	15.11	20.15	35.71	-263.83	-934.52	584.70	572.10	30.16	19.969	
3,900.00	3,867.55	3,834.55	3,696.48	15.53	20.76	35.64	-272.19	-962.54	602.26	588.86	30.96	20.017	
4,000.00	3,966.59	3,933.00	3,790.48	15.95	21.36	35.58	-280.55	-990.56	619.82	605.61	31.77	20.063	
4,100.00	4,065.64	4,031.44	3,884.48	16.36	21.96	35.52	-288.91	-1,018.58	637.38	622.37	32.57	20.106	
4,200.00	4,164.69	4,129.88	3,978.49	16.78	22.56	35.46	-297.27	-1,046.59	654.94	639.13	33.38	20.147	
4,300.00	4,263.74	4,228.33	4,072.49	17.19	23.16	35.40	-305.63	-1,074.61	672.51	655.89	34.18	20.186	
4,400.00	4,362.79	4,326.77	4,166.49	17.61	23.77	35.35	-313.99	-1,102.63	690.07	672.65	34.99	20.224	
4,500.00	4,461.84	4,425.22	4,260.49	18.02	24.37	35.30	-322.35	-1,130.65	707.64	689.40	35.80	20.259	
4,600.00	4,560.89	4,523.66	4,354.49	18.44	24.97	35.26	-330.71	-1,158.67	725.20	706.16	36.60	20.293	
4,700.00	4,659.93	4,622.10	4,448.49	18.85	25.57	35.21	-339.07	-1,186.69	742.77	722.92	37.41	20.325	
4,800.00	4,758.98	4,720.55	4,542.49	19.27	26.18	35.17	-347.43	-1,214.71	760.33				
4,900.00	4,858.03	4,818.99	4,636.49	19.69	26.78	35.13	-355.79	-1,242.73	777.90	739.68	38.21	20.356	

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 4F-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 4F-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 #3	<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: 0-MWD+HDGM													Offset Well Error: 0.00 usft	
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,000.00	4,957.08	4,917.43	4,730.49	20.10	27.38	35.09	-364.15	-1,270.75	795.46	756.44	39.02	20.386		
5,100.00	5,056.13	5,015.88	4,824.49	20.52	27.98	35.05	-372.51	-1,298.77	813.03	773.20	39.83	20.414		
5,200.00	5,155.18	5,114.32	4,918.50	20.93	28.59	35.02	-380.87	-1,326.79	830.60	789.96	40.63	20.441		
5,300.00	5,254.23	5,212.76	5,012.50	21.35	29.19	34.98	-389.23	-1,354.81	848.16	806.72	41.44	20.467		
5,400.00	5,353.27	5,311.21	5,106.50	21.76	29.79	34.95	-397.59	-1,382.82	865.73	823.48	42.25	20.492		
5,500.00	5,452.32	5,409.65	5,200.50	22.18	30.40	34.92	-405.95	-1,410.84	883.30	840.25	43.05	20.516		
5,600.00	5,551.37	5,508.10	5,294.50	22.60	31.00	34.89	-414.31	-1,438.86	900.87	857.01	43.86	20.539		
5,700.00	5,650.42	5,606.54	5,388.50	23.01	31.60	34.86	-422.67	-1,466.88	918.44	873.77	44.67	20.561		
5,800.00	5,749.47	5,704.98	5,482.50	23.43	32.21	34.83	-431.03	-1,494.90	936.00	890.53	45.48	20.583		
5,900.00	5,848.52	5,803.43	5,576.50	23.84	32.81	34.80	-439.39	-1,522.92	953.57	907.29	46.28	20.603		
6,000.00	5,947.57	5,901.87	5,670.50	24.26	33.41	34.78	-447.75	-1,550.94	971.14	924.05	47.09	20.623		
6,100.00	6,046.61	6,000.31	5,764.50	24.67	34.02	34.75	-456.11	-1,578.96	988.71	940.81	47.90	20.642		
6,200.00	6,145.66	6,098.76	5,858.51	25.09	34.62	34.73	-464.47	-1,606.98	1,006.28	957.58	48.70	20.661		
6,300.00	6,244.71	6,197.20	5,952.51	25.50	35.22	34.70	-472.83	-1,635.00	1,023.85	974.34	49.51	20.679		
6,400.00	6,343.76	6,295.64	6,046.51	25.92	35.83	34.68	-481.19	-1,663.02	1,041.42	991.10	50.32	20.696		
6,500.00	6,442.81	6,394.09	6,140.51	26.34	36.43	34.66	-489.55	-1,691.04	1,058.99	1,007.86	51.13	20.713		
6,600.00	6,541.86	6,492.53	6,234.51	26.75	37.03	34.64	-497.91	-1,719.05	1,076.56	1,024.62	51.94	20.729		
6,700.00	6,640.91	6,590.98	6,328.51	27.17	37.64	34.62	-506.27	-1,747.07	1,094.13	1,041.38	52.74	20.744		
6,800.00	6,739.95	6,689.42	6,422.51	27.58	38.24	34.60	-514.63	-1,775.09	1,111.70	1,058.15	53.55	20.759		
6,900.51	6,839.51	6,788.37	6,516.99	28.00	38.85	34.58	-523.04	-1,803.26	1,129.36	1,075.00	54.36	20.774		
6,950.00	6,888.63	6,837.03	6,563.46	28.20	39.14	5.54	-527.17	-1,817.11	1,138.11	1,083.37	54.74	20.791		
7,000.00	6,938.30	6,885.92	6,610.15	28.38	39.44	-27.75	-531.32	-1,831.02	1,147.04	1,091.97	55.07	20.829		
7,050.00	6,987.78	6,934.31	6,656.35	28.54	39.74	-49.12	-535.43	-1,844.79	1,156.07	1,100.72	55.35	20.887		
7,100.00	7,036.82	6,981.95	6,701.84	28.68	40.03	-60.70	-539.48	-1,858.35	1,165.23	1,109.65	55.59	20.963		
7,150.00	7,085.18	7,028.62	6,746.40	28.81	40.32	-67.44	-543.44	-1,871.64	1,174.58	1,118.80	55.78	21.056		
7,200.00	7,132.63	7,074.07	6,789.81	28.92	40.60	-71.79	-547.30	-1,884.57	1,184.20	1,128.26	55.95	21.167		
7,250.00	7,178.95	7,118.11	6,831.85	29.02	40.87	-74.84	-551.04	-1,897.11	1,194.19	1,138.11	56.08	21.294		
7,300.00	7,223.89	7,160.50	6,872.33	29.11	41.13	-77.10	-554.64	-1,909.17	1,204.65	1,148.46	56.19	21.438		
7,350.00	7,267.25	7,201.05	6,911.05	29.19	41.38	-78.84	-558.08	-1,920.71	1,215.70	1,159.42	56.29	21.599		
7,400.00	7,308.81	7,240.56	6,948.78	29.25	41.62	-80.23	-561.43	-1,931.96	1,227.48	1,171.10	56.38	21.771		
7,450.00	7,348.36	7,295.77	7,001.65	29.30	41.94	-81.80	-563.43	-1,947.68	1,239.78	1,183.15	56.63	21.893		
7,500.00	7,385.73	7,356.38	7,059.66	29.33	42.28	-83.26	-560.11	-1,964.85	1,252.30	1,195.37	56.93	21.998		
7,550.00	7,420.72	7,423.57	7,123.31	29.36	42.61	-84.66	-549.73	-1,983.60	1,264.85	1,207.59	57.26	22.089		
7,600.00	7,453.16	7,498.77	7,192.88	29.38	42.93	-86.02	-529.91	-2,003.97	1,277.19	1,219.58	57.61	22.169		
7,650.00	7,482.91	7,583.51	7,268.01	29.38	43.23	-87.37	-497.51	-2,025.82	1,289.03	1,231.08	57.94	22.246		
7,700.00	7,509.80	7,679.25	7,347.10	29.38	43.49	-88.65	-448.80	-2,048.62	1,299.97	1,241.75	58.22	22.327		
7,750.00	7,533.71	7,786.83	7,426.54	29.36	43.70	-89.80	-380.08	-2,071.24	1,309.59	1,251.16	58.43	22.412		
7,800.00	7,554.53	7,905.76	7,500.13	29.35	43.83	-90.67	-289.17	-2,091.82	1,317.41	1,258.81	58.59	22.483		
7,850.00	7,572.14	8,033.45	7,559.70	29.32	43.88	-91.11	-177.63	-2,107.94	1,322.97	1,264.18	58.79	22.504		
7,900.00	7,586.48	8,165.05	7,597.57	29.29	43.86	-91.01	-52.20	-2,117.43	1,325.99	1,266.87	59.12	22.430		
7,950.00	7,597.46	8,294.04	7,610.00	29.26	43.81	-90.38	75.96	-2,119.33	1,326.43	1,266.79	59.64	22.239		
8,000.00	7,605.04	8,343.45	7,610.00	29.22	43.78	-90.17	125.36	-2,118.64	1,325.89	1,265.91	59.98	22.107		
8,039.88	7,608.61	8,383.17	7,610.00	29.20	43.77	-90.06	165.08	-2,118.09	1,325.76	1,265.53	60.23	22.012		
8,050.00	7,609.17	8,393.27	7,610.00	29.19	43.77	-90.04	175.18	-2,117.94	1,325.77	1,265.48	60.29	21.990		
8,084.63	7,610.00	8,427.88	7,610.00	29.18	43.77	-90.00	209.79	-2,117.46	1,325.91	1,265.40	60.52	21.909		
8,100.00	7,610.00	8,443.26	7,610.00	29.18	43.77	-90.00	225.16	-2,117.25	1,326.02	1,265.40	60.62	21.874		
8,200.00	7,610.00	8,543.25	7,610.00	29.43	43.79	-90.00	325.15	-2,115.85	1,326.72	1,265.38	61.35	21.627		
8,300.00	7,610.00	8,643.25	7,610.00	29.94	43.84	-90.00	425.14	-2,114.45	1,327.42	1,265.19	62.22	21.333		
8,400.00	7,610.00	8,743.25	7,610.00	30.54	43.94	-90.00	525.12	-2,113.06	1,328.12	1,264.87	63.25	20.999		
8,500.00	7,610.00	8,843.25	7,610.00	31.21	44.08	-90.00	625.11	-2,111.66	1,328.81	1,264.41	64.41	20.632		
8,600.00	7,610.00	8,943.24	7,610.00	31.93	44.27	-90.00	725.10	-2,110.27	1,329.51	1,263.82	65.70	20.237		
8,700.00	7,610.00	9,043.24	7,610.00	32.71	44.51	-90.00	825.09	-2,108.87	1,330.21	1,263.10	67.11	19.822		

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 4F-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 4F-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 #3	<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							
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	7,610.00	9,143.24	7,610.00	33.54	44.80	-90.00	925.07	-2,107.47	1,330.91	1,262.27	68.64	19.391		
8,900.00	7,610.00	9,243.24	7,610.00	34.42	45.16	-90.00	1,025.06	-2,106.08	1,331.61	1,261.34	70.27	18.950		
9,000.00	7,610.00	9,343.23	7,610.00	35.34	45.57	-90.00	1,125.05	-2,104.68	1,332.31	1,260.30	72.00	18.503		
9,100.00	7,610.00	9,443.23	7,610.00	36.31	46.05	-90.00	1,225.04	-2,103.28	1,333.00	1,259.17	73.83	18.055		
9,200.00	7,610.00	9,543.23	7,610.00	37.31	46.59	-90.00	1,325.03	-2,101.89	1,333.70	1,257.96	75.74	17.608		
9,300.00	7,610.00	9,643.23	7,610.00	38.35	47.19	-90.00	1,425.01	-2,100.49	1,334.40	1,256.66	77.74	17.166		
9,400.00	7,610.00	9,743.22	7,610.00	39.42	47.86	-90.00	1,525.00	-2,099.10	1,335.10	1,255.29	79.80	16.730		
9,500.00	7,610.00	9,843.22	7,610.00	40.53	48.59	-90.00	1,624.99	-2,097.70	1,335.80	1,253.86	81.94	16.302		
9,600.00	7,610.00	9,943.22	7,610.00	41.66	49.37	-90.00	1,724.98	-2,096.30	1,336.49	1,252.36	84.14	15.885		
9,700.00	7,610.00	10,043.22	7,610.00	42.82	50.21	-90.00	1,824.96	-2,094.91	1,337.19	1,250.80	86.39	15.478		
9,800.00	7,610.00	10,143.21	7,610.00	44.00	51.10	-90.00	1,924.95	-2,093.51	1,337.89	1,249.19	88.70	15.083		
9,900.00	7,610.00	10,243.21	7,610.00	45.21	52.03	-90.00	2,024.94	-2,092.12	1,338.59	1,247.52	91.06	14.699		
10,000.00	7,610.00	10,343.21	7,610.00	46.44	53.00	-90.00	2,124.93	-2,090.72	1,339.29	1,245.82	93.47	14.329		
10,100.00	7,610.00	10,443.21	7,610.00	47.69	54.01	-90.00	2,224.92	-2,089.32	1,339.98	1,244.07	95.92	13.970		
10,200.00	7,610.00	10,543.20	7,610.00	48.95	55.06	-90.00	2,324.90	-2,087.93	1,340.68	1,242.28	98.41	13.624		
10,300.00	7,610.00	10,643.20	7,610.00	50.23	56.14	-90.00	2,424.89	-2,086.53	1,341.38	1,240.45	100.93	13.290		
10,400.00	7,610.00	10,743.20	7,610.00	51.53	57.24	-90.00	2,524.88	-2,085.13	1,342.08	1,238.59	103.49	12.968		
10,500.00	7,610.00	10,843.20	7,610.00	52.84	58.37	-90.00	2,624.87	-2,083.74	1,342.78	1,236.70	106.08	12.658		
10,600.00	7,610.00	10,943.19	7,610.00	54.17	59.53	-90.00	2,724.86	-2,082.34	1,343.48	1,234.78	108.70	12.360		
10,700.00	7,610.00	11,043.19	7,610.00	55.51	60.71	-90.00	2,824.84	-2,080.95	1,344.17	1,232.83	111.34	12.073		
10,800.00	7,610.00	11,143.19	7,610.00	56.86	61.91	-90.00	2,924.83	-2,079.55	1,344.87	1,230.86	114.01	11.796		
10,900.00	7,610.00	11,243.19	7,610.00	58.22	63.13	-90.00	3,024.82	-2,078.15	1,345.57	1,228.86	116.71	11.530		
11,000.00	7,610.00	11,343.19	7,610.00	59.59	64.37	-90.00	3,124.81	-2,076.76	1,346.27	1,226.85	119.42	11.273		
11,100.00	7,610.00	11,443.18	7,610.00	60.97	65.62	-90.00	3,224.79	-2,075.36	1,346.97	1,224.81	122.16	11.026		
11,200.00	7,610.00	11,543.18	7,610.00	62.35	66.89	-90.00	3,324.78	-2,073.96	1,347.66	1,222.75	124.91	10.789		
11,300.00	7,610.00	11,643.18	7,610.00	63.75	68.17	-90.00	3,424.77	-2,072.57	1,348.36	1,220.67	127.69	10.560		
11,400.00	7,610.00	11,743.18	7,610.00	65.15	69.47	-90.00	3,524.76	-2,071.17	1,349.06	1,218.58	130.48	10.339		
11,500.00	7,610.00	11,843.17	7,610.00	66.57	70.78	-90.00	3,624.75	-2,069.78	1,349.76	1,216.48	133.28	10.127		
11,600.00	7,610.00	11,943.17	7,610.00	67.98	72.10	-90.00	3,724.73	-2,068.38	1,350.46	1,214.35	136.10	9.922		
11,700.00	7,610.00	12,043.17	7,610.00	69.41	73.43	-90.00	3,824.72	-2,066.98	1,351.15	1,212.22	138.94	9.725		
11,800.00	7,610.00	12,143.17	7,610.00	70.84	74.77	-90.00	3,924.71	-2,065.59	1,351.85	1,210.07	141.78	9.535		
11,900.00	7,610.00	12,243.16	7,610.00	72.27	76.12	-90.00	4,024.70	-2,064.19	1,352.55	1,207.91	144.64	9.351		
12,000.00	7,610.00	12,343.16	7,610.00	73.72	77.48	-90.00	4,124.68	-2,062.80	1,353.25	1,205.73	147.51	9.174		
12,100.00	7,610.00	12,443.16	7,610.00	75.16	78.85	-90.00	4,224.67	-2,061.40	1,353.95	1,203.55	150.40	9.003		
12,200.00	7,610.00	12,543.16	7,610.00	76.61	80.22	-90.00	4,324.66	-2,060.00	1,354.65	1,201.36	153.29	8.837		
12,300.00	7,610.00	12,643.15	7,610.00	78.07	81.60	-90.00	4,424.65	-2,058.61	1,355.34	1,199.15	156.19	8.678		
12,400.00	7,610.00	12,743.15	7,610.00	79.53	82.99	-90.00	4,524.64	-2,057.21	1,356.04	1,196.94	159.10	8.523		
12,500.00	7,610.00	12,843.15	7,610.00	80.99	84.39	-90.00	4,624.62	-2,055.81	1,356.74	1,194.72	162.02	8.374		
12,600.00	7,610.00	12,943.15	7,610.00	82.46	85.79	-90.00	4,724.61	-2,054.42	1,357.44	1,192.49	164.95	8.230		
12,700.00	7,610.00	13,043.14	7,610.00	83.93	87.20	-90.00	4,824.60	-2,053.02	1,358.14	1,190.25	167.88	8.090		
12,800.00	7,610.00	13,143.14	7,610.00	85.41	88.62	-90.00	4,924.59	-2,051.63	1,358.83	1,188.01	170.82	7.955		
12,900.00	7,610.00	13,243.14	7,610.00	86.88	90.04	-90.00	5,024.57	-2,050.23	1,359.53	1,185.76	173.77	7.824		
13,000.00	7,610.00	13,343.14	7,610.00	88.37	91.46	-90.00	5,124.56	-2,048.83	1,360.23	1,183.50	176.73	7.697		
13,100.00	7,610.00	13,443.13	7,610.00	89.85	92.89	-90.00	5,224.55	-2,047.44	1,360.93	1,181.24	179.69	7.574		
13,200.00	7,610.00	13,543.13	7,610.00	91.34	94.33	-90.00	5,324.54	-2,046.04	1,361.63	1,178.97	182.66	7.454		
13,300.00	7,610.00	13,643.13	7,610.00	92.83	95.77	-90.00	5,424.53	-2,044.64	1,362.32	1,176.69	185.63	7.339		
13,400.00	7,610.00	13,743.13	7,610.00	94.32	97.21	-90.00	5,524.51	-2,043.25	1,363.02	1,174.41	188.61	7.227		
13,500.00	7,610.00	13,843.12	7,610.00	95.81	98.66	-90.00	5,624.50	-2,041.85	1,363.72	1,172.12	191.60	7.118		
13,600.00	7,610.00	13,943.12	7,610.00	97.31	100.11	-90.00	5,724.49	-2,040.46	1,364.42	1,169.83	194.59	7.012		
13,700.00	7,610.00	14,043.12	7,610.00	98.81	101.56	-90.00	5,824.48	-2,039.06	1,365.12	1,167.54	197.58	6.909		
13,800.00	7,610.00	14,143.12	7,610.00	100.31	103.02	-90.00	5,924.47	-2,037.66	1,365.82	1,165.23	200.58	6.809		
13,894.63	7,610.00	14,237.74	7,610.00	101.73	104.41	-90.00	6,019.08	-2,036.34	1,366.48	1,163.05	203.42	6.717		

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 4F-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 4F-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 #3	<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: 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	7,610.00	14,243.11	7,610.00	101.81	104.48	-90.00	6,024.45	-2,036.27	1,366.50	1,162.92	203.58	6.712		
14,000.00	7,610.00	14,328.73	7,610.00	103.35	105.74	-90.00	6,110.06	-2,035.07	1,362.33	1,155.65	206.67	6.592		
14,100.00	7,610.00	14,407.86	7,610.00	104.93	106.92	-90.00	6,189.18	-2,035.58	1,351.17	1,141.36	209.81	6.440		
14,200.00	7,610.00	14,505.91	7,610.00	106.56	108.38	-90.00	6,287.23	-2,036.70	1,331.72	1,118.81	212.91	6.255		
14,300.00	7,610.00	14,601.84	7,610.00	108.20	109.82	-90.00	6,383.16	-2,037.79	1,303.60	1,087.60	216.00	6.035		
14,385.81	7,610.00	14,681.89	7,610.00	109.62	111.02	-90.00	6,463.20	-2,038.71	1,272.72	1,054.11	218.61	5.822		
14,400.00	7,610.00	14,694.92	7,610.00	109.86	111.22	-90.00	6,476.23	-2,038.85	1,267.11	1,048.07	219.04	5.785		
14,500.00	7,610.00	14,786.77	7,610.00	111.52	112.60	-90.00	6,568.07	-2,039.90	1,227.58	1,005.50	222.07	5.528		
14,600.00	7,610.00	14,878.62	7,610.00	113.20	113.98	-90.00	6,659.92	-2,040.95	1,188.04	962.92	225.11	5.277		
14,700.00	7,610.00	14,970.47	7,610.00	114.90	115.36	-90.00	6,751.76	-2,041.99	1,148.50	920.33	228.17	5.034		
14,800.00	7,610.00	15,062.33	7,610.00	116.61	116.75	-90.00	6,843.61	-2,043.04	1,108.97	877.73	231.24	4.796		
14,886.04	7,610.00	15,141.36	7,610.00	118.09	117.94	-90.00	6,922.64	-2,043.94	1,074.95	841.06	233.89	4.596 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4B-26H-P268 - OH - PLAN #4													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.83	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	39.73	0.28	144.925		
200.00	200.00	200.00	200.00	0.50	0.50	-89.83	0.12	-40.00	40.00	39.01	0.99	40.286		
300.00	299.98	299.98	299.98	0.84	0.85	72.56	0.12	-40.00	39.44	37.75	1.70	23.264		
339.18	339.13	338.63	338.63	0.98	0.99	74.71	0.06	-40.26	39.24	37.27	1.97	19.923	CC	
350.00	349.93	349.30	349.29	1.02	1.03	75.39	0.02	-40.41	39.25	37.21	2.05	19.184		
400.00	399.85	398.61	398.59	1.19	1.20	66.47	-0.28	-41.65	39.48	37.07	2.41	16.388	ES	
500.00	499.53	497.25	497.10	1.55	1.55	59.56	-1.47	-46.60	40.41	37.26	3.15	12.827		
600.00	598.92	595.93	595.40	1.93	1.90	59.31	-3.45	-54.85	42.00	38.10	3.90	10.757		
634.55	633.17	630.03	629.30	2.06	2.03	59.93	-4.32	-58.47	42.71	38.55	4.17	10.247		
700.00	697.99	694.63	693.39	2.32	2.27	63.39	-6.22	-66.39	44.81	40.13	4.67	9.589		
800.00	797.04	793.27	790.83	2.72	2.66	65.74	-9.77	-81.19	50.30	44.84	5.46	9.210		
900.00	896.09	891.60	887.41	3.12	3.08	65.24	-14.09	-99.19	58.30	52.03	6.27	9.301		
1,000.00	995.14	989.41	982.77	3.53	3.52	62.95	-19.16	-120.27	68.84	61.75	7.08	9.718		
1,100.00	1,094.19	1,086.46	1,076.62	3.93	3.99	59.79	-24.93	-144.31	82.10	74.19	7.90	10.391		
1,200.00	1,193.24	1,183.34	1,169.45	4.34	4.50	56.42	-31.40	-171.25	98.15	89.45	8.70	11.282		
1,300.00	1,292.28	1,281.75	1,263.51	4.75	5.04	53.73	-38.15	-199.39	115.17	105.69	9.48	12.147		
1,400.00	1,391.33	1,380.17	1,357.58	5.17	5.60	51.74	-44.91	-227.54	132.38	122.11	10.26	12.897		
1,500.00	1,490.38	1,478.59	1,451.64	5.58	6.16	50.21	-51.67	-255.68	149.70	138.65	11.05	13.549		
1,600.00	1,589.43	1,577.01	1,545.71	5.99	6.73	48.99	-58.43	-283.83	167.11	155.27	11.84	14.118		
1,700.00	1,688.48	1,675.43	1,639.77	6.40	7.30	48.00	-65.18	-311.97	184.57	171.94	12.63	14.618		
1,800.00	1,787.53	1,773.84	1,733.84	6.82	7.88	47.19	-71.94	-340.12	202.08	188.66	13.42	15.060		
1,900.00	1,886.58	1,872.26	1,827.90	7.23	8.46	46.50	-78.70	-368.26	219.62	205.41	14.21	15.453		
2,000.00	1,985.62	1,970.68	1,921.97	7.65	9.05	45.92	-85.46	-396.41	237.19	222.18	15.01	15.803		
2,100.00	2,084.67	2,069.10	2,016.04	8.06	9.63	45.41	-92.21	-424.55	254.78	238.97	15.81	16.118		
2,200.00	2,183.72	2,167.52	2,110.10	8.47	10.22	44.97	-98.97	-452.70	272.38	255.78	16.61	16.402		
2,300.00	2,282.77	2,265.93	2,204.17	8.89	10.81	44.59	-105.73	-480.84	290.00	272.59	17.41	16.659		
2,400.00	2,381.82	2,364.35	2,298.23	9.30	11.40	44.25	-112.49	-508.98	307.63	289.42	18.21	16.893		
2,500.00	2,480.87	2,462.77	2,392.30	9.72	11.99	43.94	-119.25	-537.13	325.27	306.26	19.01	17.107		
2,600.00	2,579.92	2,561.19	2,486.36	10.13	12.58	43.67	-126.00	-565.27	342.92	323.10	19.82	17.303		
2,700.00	2,678.96	2,659.61	2,580.43	10.55	13.18	43.42	-132.76	-593.42	360.57	339.95	20.62	17.483		
2,800.00	2,778.01	2,758.02	2,674.49	10.96	13.77	43.20	-139.52	-621.56	378.23	356.80	21.43	17.649		
2,900.00	2,877.06	2,856.44	2,768.56	11.38	14.36	43.00	-146.28	-649.71	395.90	373.66	22.24	17.803		
3,000.00	2,976.11	2,954.86	2,862.62	11.79	14.96	42.81	-153.03	-677.85	413.57	390.52	23.05	17.946		
3,100.00	3,075.16	3,053.28	2,956.69	12.21	15.55	42.64	-159.79	-706.00	431.24	407.39	23.85	18.079		
3,200.00	3,174.21	3,151.70	3,050.76	12.62	16.15	42.48	-166.55	-734.14	448.92	424.26	24.66	18.203		
3,300.00	3,273.26	3,250.11	3,144.82	13.04	16.75	42.34	-173.31	-762.29	466.60	441.13	25.47	18.318		
3,400.00	3,372.30	3,348.53	3,238.89	13.45	17.34	42.20	-180.07	-790.43	484.28	458.00	26.28	18.427		
3,500.00	3,471.35	3,446.95	3,332.95	13.87	17.94	42.08	-186.82	-818.58	501.97	474.88	27.09	18.528		
3,600.00	3,570.40	3,545.37	3,427.02	14.28	18.54	41.96	-193.58	-846.72	519.66	491.75	27.90	18.624		
3,700.00	3,669.45	3,643.79	3,521.08	14.70	19.13	41.85	-200.34	-874.87	537.35	508.63	28.71	18.714		
3,800.00	3,768.50	3,742.20	3,615.15	15.11	19.73	41.75	-207.10	-903.01	555.04	525.51	29.52	18.799		
3,900.00	3,867.55	3,840.62	3,709.21	15.53	20.33	41.66	-213.85	-931.15	572.73	542.39	30.34	18.880		
4,000.00	3,966.59	3,939.04	3,803.28	15.95	20.93	41.57	-220.61	-959.30	590.42	559.28	31.15	18.956		
4,100.00	4,065.64	4,037.46	3,897.35	16.36	21.52	41.48	-227.37	-987.44	608.12	576.16	31.96	19.028		
4,200.00	4,164.69	4,135.88	3,991.41	16.78	22.12	41.40	-234.13	-1,015.59	625.82	593.04	32.77	19.096		
4,300.00	4,263.74	4,234.29	4,085.48	17.19	22.72	41.32	-240.88	-1,043.73	643.51	609.93	33.58	19.161		
4,400.00	4,362.79	4,332.71	4,179.54	17.61	23.32	41.25	-247.64	-1,071.88	661.21	626.82	34.40	19.223		
4,500.00	4,461.84	4,431.13	4,273.61	18.02	23.92	41.19	-254.40	-1,100.02	678.91	643.70	35.21	19.282		
4,600.00	4,560.89	4,529.55	4,367.67	18.44	24.52	41.12	-261.16	-1,128.17	696.61	660.59	36.02	19.338		
4,700.00	4,659.93	4,627.97	4,461.74	18.85	25.12	41.06	-267.92	-1,156.31	714.32	677.48	36.84	19.391		
4,800.00	4,758.98	4,726.38	4,555.80	19.27	25.71	41.00	-274.67	-1,184.46	732.02	694.37	37.65	19.443		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4B-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							
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
4,900.00	4,858.03	4,824.80	4,649.87	19.69	26.31	40.95	-281.43	-1,212.60	749.72	711.26	38.46	19.492	
5,000.00	4,957.08	4,923.22	4,743.93	20.10	26.91	40.89	-288.19	-1,240.75	767.42	728.15	39.28	19.539	
5,100.00	5,056.13	5,021.64	4,838.00	20.52	27.51	40.84	-294.95	-1,268.89	785.13	745.04	40.09	19.584	
5,200.00	5,155.18	5,120.06	4,932.07	20.93	28.11	40.79	-301.70	-1,297.03	802.83	761.93	40.91	19.627	
5,300.00	5,254.23	5,218.47	5,026.13	21.35	28.71	40.75	-308.46	-1,325.18	820.54	778.82	41.72	19.668	
5,400.00	5,353.27	5,316.89	5,120.20	21.76	29.31	40.70	-315.22	-1,353.32	838.24	795.71	42.53	19.708	
5,500.00	5,452.32	5,415.31	5,214.26	22.18	29.91	40.66	-321.98	-1,381.47	855.95	812.60	43.35	19.746	
5,600.00	5,551.37	5,513.73	5,308.33	22.60	30.51	40.62	-328.74	-1,409.61	873.66	829.50	44.16	19.783	
5,700.00	5,650.42	5,612.15	5,402.39	23.01	31.11	40.58	-335.49	-1,437.76	891.36	846.39	44.98	19.818	
5,800.00	5,749.47	5,710.56	5,496.46	23.43	31.71	40.54	-342.25	-1,465.90	909.07	863.28	45.79	19.852	
5,900.00	5,848.52	5,808.98	5,590.52	23.84	32.31	40.51	-349.01	-1,494.05	926.78	880.17	46.61	19.885	
6,000.00	5,947.57	5,907.40	5,684.59	24.26	32.91	40.47	-355.77	-1,522.19	944.49	897.07	47.42	19.917	
6,100.00	6,046.61	6,005.82	5,778.66	24.67	33.51	40.44	-362.52	-1,550.34	962.20	913.96	48.24	19.948	
6,200.00	6,145.66	6,104.24	5,872.72	25.09	34.11	40.41	-369.28	-1,578.48	979.91	930.85	49.05	19.977	
6,300.00	6,244.71	6,202.65	5,966.79	25.50	34.71	40.38	-376.04	-1,606.63	997.62	947.75	49.87	20.006	
6,400.00	6,343.76	6,301.07	6,060.85	25.92	35.31	40.35	-382.80	-1,634.77	1,015.32	964.64	50.68	20.033	
6,500.00	6,442.81	6,399.49	6,154.92	26.34	35.91	40.32	-389.55	-1,662.91	1,033.03	981.54	51.50	20.060	
6,600.00	6,541.86	6,497.91	6,248.98	26.75	36.51	40.29	-396.31	-1,691.06	1,050.74	998.43	52.31	20.086	
6,700.00	6,640.91	6,596.33	6,343.05	27.17	37.11	40.26	-403.07	-1,719.20	1,068.45	1,015.33	53.13	20.111	
6,800.00	6,739.95	6,694.74	6,437.11	27.58	37.71	40.24	-409.83	-1,747.35	1,086.16	1,032.22	53.94	20.135	
6,900.51	6,839.51	6,793.67	6,531.66	28.00	38.31	40.21	-416.62	-1,775.64	1,103.97	1,049.20	54.76	20.159	
6,950.00	6,888.63	6,842.34	6,578.19	28.20	38.61	11.16	-419.96	-1,789.56	1,112.62	1,057.48	55.14	20.178	
7,000.00	6,938.30	6,891.31	6,624.99	28.38	38.90	-22.18	-423.32	-1,803.56	1,121.12	1,065.65	55.47	20.212	
7,050.00	6,987.78	6,939.82	6,671.36	28.54	39.20	-43.62	-426.66	-1,817.43	1,129.39	1,073.65	55.74	20.261	
7,100.00	7,036.82	6,987.65	6,717.07	28.68	39.49	-55.31	-429.94	-1,831.11	1,137.46	1,081.49	55.97	20.323	
7,150.00	7,085.18	7,032.32	6,759.79	28.81	39.76	-62.14	-432.55	-1,843.89	1,145.43	1,089.30	56.13	20.406	
7,200.00	7,132.63	7,075.77	6,801.41	28.92	40.02	-66.45	-432.39	-1,856.32	1,153.45	1,097.18	56.27	20.500	
7,250.00	7,178.95	7,120.18	6,843.85	29.02	40.26	-69.40	-429.18	-1,868.96	1,161.50	1,105.10	56.40	20.595	
7,300.00	7,223.89	7,165.63	6,886.96	29.11	40.50	-71.53	-422.70	-1,881.78	1,169.54	1,113.01	56.53	20.689	
7,350.00	7,267.25	7,212.20	6,930.57	29.19	40.72	-73.14	-412.75	-1,894.71	1,177.52	1,120.85	56.67	20.779	
7,400.00	7,308.81	7,259.96	6,974.45	29.25	40.94	-74.39	-399.12	-1,907.69	1,185.40	1,128.59	56.82	20.863	
7,450.00	7,348.36	7,309.00	7,018.37	29.30	41.14	-75.40	-381.60	-1,920.65	1,193.14	1,136.15	56.98	20.939	
7,500.00	7,385.73	7,359.37	7,062.01	29.33	41.32	-76.23	-359.99	-1,933.49	1,200.66	1,143.50	57.16	21.005	
7,550.00	7,420.72	7,411.16	7,105.03	29.36	41.49	-76.92	-334.10	-1,946.11	1,207.93	1,150.57	57.36	21.060	
7,600.00	7,453.16	7,464.40	7,147.01	29.38	41.64	-77.51	-303.77	-1,958.38	1,214.88	1,157.31	57.57	21.102	
7,650.00	7,482.91	7,519.13	7,187.49	29.38	41.77	-78.02	-268.90	-1,970.16	1,221.45	1,163.65	57.80	21.131	
7,700.00	7,509.80	7,575.35	7,225.94	29.38	41.89	-78.45	-229.45	-1,981.30	1,227.59	1,169.54	58.05	21.146	
7,750.00	7,533.71	7,633.06	7,261.79	29.36	41.99	-78.82	-185.44	-1,991.62	1,233.24	1,174.92	58.32	21.146	
7,800.00	7,554.53	7,692.19	7,294.41	29.35	42.07	-79.14	-137.04	-2,000.94	1,238.33	1,179.72	58.61	21.130	
7,850.00	7,572.14	7,752.65	7,323.18	29.32	42.14	-79.40	-84.51	-2,009.07	1,242.81	1,183.91	58.91	21.098	
7,900.00	7,586.48	7,814.32	7,347.48	29.29	42.18	-79.61	-28.27	-2,015.83	1,246.63	1,187.41	59.22	21.049	
7,950.00	7,597.46	7,877.01	7,366.73	29.26	42.22	-79.76	31.14	-2,021.06	1,249.74	1,190.19	59.56	20.984	
8,000.00	7,605.04	7,940.52	7,380.44	29.22	42.24	-79.86	93.03	-2,024.61	1,252.11	1,192.20	59.91	20.901	
8,050.00	7,609.17	8,004.60	7,388.21	29.19	42.26	-79.90	156.58	-2,026.38	1,253.70	1,193.43	60.27	20.801	
8,084.63	7,610.00	8,049.17	7,389.99	29.18	42.27	-79.90	201.10	-2,026.52	1,254.33	1,193.80	60.53	20.722	
8,100.00	7,610.00	8,065.49	7,390.00	29.18	42.28	-79.90	217.42	-2,026.38	1,254.52	1,193.88	60.64	20.688	
8,200.00	7,610.00	8,165.48	7,390.00	29.43	42.32	-79.91	317.41	-2,025.51	1,255.72	1,194.30	61.42	20.443	
8,300.00	7,610.00	8,265.47	7,390.00	29.94	42.40	-79.92	417.40	-2,024.64	1,256.92	1,194.58	62.35	20.160	
8,400.00	7,610.00	8,365.47	7,390.00	30.54	42.53	-79.93	517.39	-2,023.77	1,258.13	1,194.72	63.41	19.842	
8,500.00	7,610.00	8,465.46	7,390.00	31.21	42.70	-79.94	617.38	-2,022.89	1,259.33	1,194.73	64.60	19.494	
8,600.00	7,610.00	8,565.45	7,390.00	31.93	42.92	-79.95	717.37	-2,022.02	1,260.53	1,194.61	65.92	19.122	
8,700.00	7,610.00	8,665.44	7,390.00	32.71	43.19	-79.96	817.36	-2,021.15	1,261.74	1,194.38	67.35	18.733	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4B-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						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	7,610.00	8,765.44	7,390.00	33.54	43.52	-79.97	917.34	-2,020.28	1,262.94	1,194.04	68.90	18.330		
8,900.00	7,610.00	8,865.43	7,390.00	34.42	43.90	-79.98	1,017.33	-2,019.40	1,264.14	1,193.59	70.55	17.918		
9,000.00	7,610.00	8,965.42	7,390.00	35.34	44.35	-79.99	1,117.32	-2,018.53	1,265.34	1,193.05	72.30	17.502		
9,100.00	7,610.00	9,065.41	7,390.00	36.31	44.85	-80.00	1,217.31	-2,017.66	1,266.55	1,192.42	74.13	17.086		
9,200.00	7,610.00	9,165.41	7,390.00	37.31	45.42	-80.01	1,317.30	-2,016.79	1,267.75	1,191.70	76.05	16.671		
9,300.00	7,610.00	9,265.40	7,390.00	38.35	46.05	-80.02	1,417.29	-2,015.91	1,268.95	1,190.91	78.04	16.260		
9,400.00	7,610.00	9,365.39	7,390.00	39.42	46.73	-80.02	1,517.28	-2,015.04	1,270.16	1,190.05	80.11	15.856		
9,500.00	7,610.00	9,465.38	7,390.00	40.53	47.47	-80.03	1,617.27	-2,014.17	1,271.36	1,189.12	82.24	15.460		
9,600.00	7,610.00	9,565.38	7,390.00	41.66	48.27	-80.04	1,717.25	-2,013.29	1,272.56	1,188.14	84.43	15.073		
9,700.00	7,610.00	9,665.37	7,390.00	42.82	49.12	-80.05	1,817.24	-2,012.42	1,273.77	1,187.09	86.68	14.696		
9,800.00	7,610.00	9,765.36	7,390.00	44.00	50.01	-80.06	1,917.23	-2,011.55	1,274.97	1,186.00	88.97	14.330		
9,900.00	7,610.00	9,865.35	7,390.00	45.21	50.95	-80.07	2,017.22	-2,010.68	1,276.17	1,184.85	91.32	13.974		
10,000.00	7,610.00	9,965.35	7,390.00	46.44	51.93	-80.08	2,117.21	-2,009.80	1,277.38	1,183.66	93.71	13.631		
10,100.00	7,610.00	10,065.34	7,390.00	47.69	52.95	-80.09	2,217.20	-2,008.93	1,278.58	1,182.43	96.15	13.298		
10,200.00	7,610.00	10,165.33	7,390.00	48.95	54.00	-80.10	2,317.19	-2,008.06	1,279.78	1,181.17	98.62	12.977		
10,300.00	7,610.00	10,265.32	7,390.00	50.23	55.08	-80.11	2,417.18	-2,007.19	1,280.99	1,179.86	101.12	12.667		
10,400.00	7,610.00	10,365.32	7,390.00	51.53	56.19	-80.12	2,517.16	-2,006.31	1,282.19	1,178.53	103.66	12.369		
10,500.00	7,610.00	10,465.31	7,390.00	52.84	57.33	-80.13	2,617.15	-2,005.44	1,283.39	1,177.16	106.23	12.081		
10,600.00	7,610.00	10,565.30	7,390.00	54.17	58.49	-80.14	2,717.14	-2,004.57	1,284.60	1,175.77	108.83	11.804		
10,700.00	7,610.00	10,665.29	7,390.00	55.51	59.68	-80.15	2,817.13	-2,003.70	1,285.80	1,174.35	111.45	11.537		
10,800.00	7,610.00	10,765.29	7,390.00	56.86	60.88	-80.16	2,917.12	-2,002.82	1,287.01	1,172.90	114.10	11.279		
10,900.00	7,610.00	10,865.28	7,390.00	58.22	62.11	-80.17	3,017.11	-2,001.95	1,288.21	1,171.43	116.77	11.032		
11,000.00	7,610.00	10,965.27	7,390.00	59.59	63.35	-80.18	3,117.10	-2,001.08	1,289.41	1,169.95	119.47	10.793		
11,100.00	7,610.00	11,065.26	7,390.00	60.97	64.61	-80.18	3,217.09	-2,000.21	1,290.62	1,168.44	122.18	10.563		
11,200.00	7,610.00	11,165.26	7,390.00	62.35	65.88	-80.19	3,317.07	-1,999.33	1,291.82	1,166.91	124.91	10.342		
11,300.00	7,610.00	11,265.25	7,390.00	63.75	67.17	-80.20	3,417.06	-1,998.46	1,293.02	1,165.36	127.66	10.129		
11,400.00	7,610.00	11,365.24	7,390.00	65.15	68.47	-80.21	3,517.05	-1,997.59	1,294.23	1,163.80	130.43	9.923		
11,500.00	7,610.00	11,465.24	7,390.00	66.57	69.79	-80.22	3,617.04	-1,996.72	1,295.43	1,162.23	133.21	9.725		
11,600.00	7,610.00	11,565.23	7,390.00	67.98	71.12	-80.23	3,717.03	-1,995.84	1,296.64	1,160.63	136.00	9.534		
11,700.00	7,610.00	11,665.22	7,390.00	69.41	72.45	-80.24	3,817.02	-1,994.97	1,297.84	1,159.03	138.81	9.350		
11,800.00	7,610.00	11,765.21	7,390.00	70.84	73.80	-80.25	3,917.01	-1,994.10	1,299.04	1,157.41	141.63	9.172		
11,900.00	7,610.00	11,865.21	7,390.00	72.27	75.16	-80.26	4,017.00	-1,993.23	1,300.25	1,155.78	144.47	9.000		
12,000.00	7,610.00	11,965.20	7,390.00	73.72	76.52	-80.27	4,116.98	-1,992.35	1,301.45	1,154.14	147.31	8.835		
12,100.00	7,610.00	12,065.19	7,390.00	75.16	77.90	-80.28	4,216.97	-1,991.48	1,302.66	1,152.49	150.17	8.675		
12,200.00	7,610.00	12,165.18	7,390.00	76.61	79.28	-80.29	4,316.96	-1,990.61	1,303.86	1,150.83	153.03	8.520		
12,300.00	7,610.00	12,265.18	7,390.00	78.07	80.67	-80.29	4,416.95	-1,989.73	1,305.07	1,149.16	155.91	8.371		
12,400.00	7,610.00	12,365.17	7,390.00	79.53	82.07	-80.30	4,516.94	-1,988.86	1,306.27	1,147.48	158.79	8.226		
12,500.00	7,610.00	12,465.16	7,390.00	80.99	83.47	-80.31	4,616.93	-1,987.99	1,307.47	1,145.79	161.68	8.087		
12,600.00	7,610.00	12,565.15	7,390.00	82.46	84.88	-80.32	4,716.92	-1,987.12	1,308.68	1,144.09	164.58	7.951		
12,700.00	7,610.00	12,665.15	7,390.00	83.93	86.30	-80.33	4,816.91	-1,986.24	1,309.88	1,142.39	167.49	7.821		
12,800.00	7,610.00	12,765.14	7,390.00	85.41	87.72	-80.34	4,916.89	-1,985.37	1,311.09	1,140.68	170.41	7.694		
12,900.00	7,610.00	12,865.13	7,390.00	86.88	89.14	-80.35	5,016.88	-1,984.50	1,312.29	1,138.96	173.33	7.571		
13,000.00	7,610.00	12,965.12	7,390.00	88.37	90.58	-80.36	5,116.87	-1,983.63	1,313.50	1,137.24	176.26	7.452		
13,100.00	7,610.00	13,065.12	7,390.00	89.85	92.01	-80.37	5,216.86	-1,982.75	1,314.70	1,135.50	179.20	7.337		
13,200.00	7,610.00	13,165.11	7,390.00	91.34	93.46	-80.38	5,316.85	-1,981.88	1,315.90	1,133.77	182.14	7.225		
13,300.00	7,610.00	13,265.10	7,390.00	92.83	94.90	-80.38	5,416.84	-1,981.01	1,317.11	1,132.02	185.09	7.116		
13,400.00	7,610.00	13,365.09	7,390.00	94.32	96.35	-80.39	5,516.83	-1,980.14	1,318.31	1,130.28	188.04	7.011		
13,500.00	7,610.00	13,465.09	7,390.00	95.81	97.81	-80.40	5,616.81	-1,979.26	1,319.52	1,128.52	191.00	6.909		
13,600.00	7,610.00	13,565.08	7,390.00	97.31	99.26	-80.41	5,716.80	-1,978.39	1,320.72	1,126.76	193.96	6.809		
13,700.00	7,610.00	13,665.07	7,390.00	98.81	100.73	-80.42	5,816.79	-1,977.52	1,321.93	1,125.00	196.93	6.713		
13,800.00	7,610.00	13,765.06	7,390.00	100.31	102.19	-80.43	5,916.78	-1,976.65	1,323.13	1,123.23	199.90	6.619		
13,894.63	7,610.00	13,859.68	7,390.00	101.73	103.58	-80.44	6,011.40	-1,975.82	1,324.27	1,121.56	202.72	6.533		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4B-26H-P268 - OH - PLAN #4													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	7,610.00	13,865.06	7,390.00	101.81	103.66	-80.44	6,016.77	-1,975.77	1,324.32	1,121.45	202.88	6.528		
14,000.00	7,610.00	13,953.41	7,390.00	103.35	104.96	-80.39	6,105.12	-1,975.00	1,320.70	1,114.78	205.93	6.413		
14,100.00	7,610.00	14,015.87	7,390.00	104.93	105.90	-80.25	6,167.58	-1,975.62	1,310.25	1,101.21	209.04	6.268		
14,200.00	7,610.00	14,077.40	7,390.00	106.56	106.84	-80.03	6,229.03	-1,978.47	1,294.34	1,082.30	212.04	6.104		
14,300.00	7,610.00	14,174.53	7,390.00	108.20	108.34	-79.63	6,326.00	-1,984.05	1,271.03	1,055.91	215.12	5.909		
14,385.81	7,610.00	14,255.91	7,390.00	109.62	109.60	-79.13	6,407.25	-1,988.73	1,244.30	1,026.59	217.71	5.715		
14,400.00	7,610.00	14,269.18	7,390.00	109.86	109.80	-79.09	6,420.50	-1,989.50	1,239.38	1,021.24	218.14	5.682		
14,500.00	7,610.00	14,362.76	7,390.00	111.52	111.25	-78.77	6,513.93	-1,994.88	1,204.70	983.57	221.13	5.448		
14,600.00	7,610.00	14,456.34	7,390.00	113.20	112.70	-78.44	6,607.35	-2,000.26	1,170.05	945.93	224.12	5.221		
14,700.00	7,610.00	14,549.92	7,390.00	114.90	114.16	-78.08	6,700.77	-2,005.65	1,135.44	908.34	227.10	5.000		
14,800.00	7,610.00	14,643.50	7,390.00	116.61	115.61	-77.70	6,794.20	-2,011.03	1,100.87	870.80	230.08	4.785		
14,886.04	7,610.00	14,724.02	7,390.00	118.09	116.87	-77.36	6,874.58	-2,015.66	1,071.17	838.54	232.63	4.605 SF		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.69	0.16	-29.93	29.93					
100.00	100.00	100.00	100.00	0.14	0.14	-89.69	0.16	-29.93	29.93	29.66	0.28	108.443		
200.00	200.00	200.00	200.00	0.50	0.50	-89.69	0.16	-29.93	29.93	28.94	0.99	30.145		
300.00	299.98	299.98	299.98	0.84	0.85	73.52	0.16	-29.93	29.39	27.70	1.70	17.335		
350.00	349.93	349.93	349.93	1.02	1.03	77.69	0.16	-29.93	28.85	26.80	2.05	14.103		
400.00	399.85	399.85	399.85	1.19	1.21	71.11	0.16	-29.93	28.03	25.63	2.40	11.679		
500.00	499.53	498.92	498.90	1.55	1.56	70.64	-0.43	-31.54	26.59	23.47	3.12	8.534		
552.59	551.85	551.10	551.03	1.75	1.74	73.75	-1.21	-33.67	26.39	22.89	3.50	7.546 CC		
600.00	598.92	598.17	598.01	1.93	1.90	77.49	-2.20	-36.36	26.55	22.71	3.84	6.915 ES		
634.55	633.17	632.51	632.25	2.06	2.02	80.50	-3.09	-38.78	26.87	22.77	4.09	6.561		
700.00	697.99	697.63	697.10	2.32	2.26	87.45	-5.16	-44.43	28.13	23.55	4.58	6.143		
800.00	797.04	797.29	796.01	2.72	2.63	91.55	-9.32	-55.75	31.34	25.99	5.35	5.862		
900.00	896.09	896.90	894.41	3.12	3.02	89.37	-14.66	-70.28	35.47	29.32	6.14	5.775		
1,000.00	995.14	996.23	991.94	3.53	3.43	83.01	-21.15	-87.96	40.82	33.85	6.97	5.859		
1,100.00	1,094.19	1,095.05	1,088.25	3.93	3.87	74.57	-28.77	-108.69	48.23	40.43	7.81	6.178		
1,200.00	1,193.24	1,193.67	1,183.64	4.34	4.34	66.03	-37.40	-132.19	58.33	49.70	8.63	6.758		
1,300.00	1,292.28	1,292.77	1,279.35	4.75	4.83	59.73	-46.26	-156.31	69.75	60.32	9.43	7.397		
1,400.00	1,391.33	1,391.87	1,375.06	5.17	5.33	55.23	-55.12	-180.43	81.76	71.55	10.21	8.006		
1,500.00	1,490.38	1,490.97	1,470.78	5.58	5.84	51.89	-63.98	-204.55	94.14	83.15	10.99	8.565		
1,600.00	1,589.43	1,590.08	1,566.49	5.99	6.35	49.34	-72.84	-228.66	106.76	95.00	11.77	9.073		
1,700.00	1,688.48	1,689.18	1,662.20	6.40	6.88	47.33	-81.70	-252.78	119.55	107.01	12.54	9.531		
1,800.00	1,787.53	1,788.28	1,757.91	6.82	7.40	45.71	-90.56	-276.90	132.45	119.13	13.32	9.944		
1,900.00	1,886.58	1,887.38	1,853.63	7.23	7.93	44.37	-99.42	-301.02	145.44	131.35	14.10	10.317		
2,000.00	1,985.62	1,986.48	1,949.34	7.65	8.46	43.26	-108.28	-325.14	158.50	143.62	14.88	10.654		
2,100.00	2,084.67	2,085.58	2,045.05	8.06	8.99	42.31	-117.13	-349.26	171.60	155.95	15.66	10.960		
2,200.00	2,183.72	2,184.68	2,140.76	8.47	9.53	41.50	-125.99	-373.37	184.75	168.31	16.44	11.238		
2,300.00	2,282.77	2,283.78	2,236.47	8.89	10.06	40.80	-134.85	-397.49	197.93	180.70	17.22	11.492		
2,400.00	2,381.82	2,382.88	2,332.19	9.30	10.60	40.19	-143.71	-421.61	211.13	193.12	18.01	11.725		
2,500.00	2,480.87	2,481.98	2,427.90	9.72	11.14	39.64	-152.57	-445.73	224.35	205.56	18.79	11.939		
2,600.00	2,579.92	2,581.08	2,523.61	10.13	11.68	39.16	-161.43	-469.85	237.59	218.01	19.58	12.136		
2,700.00	2,678.96	2,680.19	2,619.32	10.55	12.22	38.73	-170.29	-493.97	250.85	230.48	20.36	12.318		
2,800.00	2,778.01	2,779.29	2,715.03	10.96	12.76	38.34	-179.15	-518.09	264.11	242.96	21.15	12.487		
2,900.00	2,877.06	2,878.39	2,810.75	11.38	13.30	37.99	-188.01	-542.20	277.39	255.45	21.94	12.644		
3,000.00	2,976.11	2,977.49	2,906.46	11.79	13.84	37.67	-196.87	-566.32	290.68	267.95	22.73	12.789		
3,100.00	3,075.16	3,076.59	3,002.17	12.21	14.38	37.38	-205.73	-590.44	303.98	280.46	23.52	12.926		
3,200.00	3,174.21	3,175.69	3,097.88	12.62	14.92	37.11	-214.59	-614.56	317.28	292.97	24.31	13.053		
3,300.00	3,273.26	3,274.79	3,193.59	13.04	15.47	36.87	-223.45	-638.68	330.59	305.49	25.10	13.172		
3,400.00	3,372.30	3,373.89	3,289.31	13.45	16.01	36.64	-232.31	-662.80	343.90	318.02	25.89	13.284		
3,500.00	3,471.35	3,472.99	3,385.02	13.87	16.55	36.43	-241.17	-686.91	357.22	330.54	26.68	13.390		
3,600.00	3,570.40	3,572.09	3,480.73	14.28	17.10	36.24	-250.03	-711.03	370.55	343.08	27.47	13.489		
3,700.00	3,669.45	3,671.19	3,576.44	14.70	17.64	36.06	-258.88	-735.15	383.87	355.61	28.26	13.583		
3,800.00	3,768.50	3,770.29	3,672.15	15.11	18.19	35.89	-267.74	-759.27	397.20	368.15	29.05	13.672		
3,900.00	3,867.55	3,869.40	3,767.87	15.53	18.73	35.73	-276.60	-783.39	410.54	380.69	29.85	13.755		
4,000.00	3,966.59	3,968.50	3,863.58	15.95	19.28	35.58	-285.46	-807.51	423.88	393.24	30.64	13.835		
4,100.00	4,065.64	4,067.60	3,959.29	16.36	19.82	35.45	-294.32	-831.63	437.22	405.79	31.43	13.911		
4,200.00	4,164.69	4,166.70	4,055.00	16.78	20.37	35.31	-303.18	-855.74	450.56	418.34	32.22	13.982		
4,300.00	4,263.74	4,265.80	4,150.71	17.19	20.91	35.19	-312.04	-879.86	463.90	430.89	33.02	14.051		
4,400.00	4,362.79	4,364.90	4,246.43	17.61	21.46	35.08	-320.90	-903.98	477.25	443.44	33.81	14.116		
4,500.00	4,461.84	4,464.00	4,342.14	18.02	22.00	34.97	-329.76	-928.10	490.60	455.99	34.60	14.178		
4,600.00	4,560.89	4,563.10	4,437.85	18.44	22.55	34.86	-338.62	-952.22	503.95	468.55	35.40	14.237		
4,700.00	4,659.93	4,662.20	4,533.56	18.85	23.09	34.76	-347.48	-976.34	517.30	481.11	36.19	14.294		
4,800.00	4,758.98	4,761.30	4,629.27	19.27	23.64	34.67	-356.34	-1,000.45	530.65	493.67	36.99	14.348		

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 4F-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 4F-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 #3	<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								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		
4,900.00	4,858.03	4,860.40	4,724.99	19.69	24.19	34.58	-365.20	-1,024.57	544.01	506.23	37.78	14.400		
5,000.00	4,957.08	4,959.51	4,820.70	20.10	24.73	34.50	-374.06	-1,048.69	557.36	518.79	38.57	14.449		
5,100.00	5,056.13	5,058.61	4,916.41	20.52	25.28	34.42	-382.92	-1,072.81	570.72	531.35	39.37	14.497		
5,200.00	5,155.18	5,157.71	5,012.12	20.93	25.83	34.34	-391.78	-1,096.93	584.08	543.91	40.16	14.543		
5,300.00	5,254.23	5,256.81	5,107.83	21.35	26.37	34.26	-400.64	-1,121.05	597.43	556.48	40.96	14.587		
5,400.00	5,353.27	5,355.91	5,203.55	21.76	26.92	34.19	-409.49	-1,145.17	610.79	569.04	41.75	14.629		
5,500.00	5,452.32	5,455.01	5,299.26	22.18	27.46	34.13	-418.35	-1,169.28	624.15	581.61	42.55	14.670		
5,600.00	5,551.37	5,554.11	5,394.97	22.60	28.01	34.06	-427.21	-1,193.40	637.52	594.17	43.34	14.709		
5,700.00	5,650.42	5,653.21	5,490.68	23.01	28.56	34.00	-436.07	-1,217.52	650.88	606.74	44.14	14.747		
5,800.00	5,749.47	5,752.31	5,586.39	23.43	29.10	33.94	-444.93	-1,241.64	664.24	619.31	44.93	14.783		
5,900.00	5,848.52	5,851.41	5,682.11	23.84	29.65	33.88	-453.79	-1,265.76	677.60	631.88	45.73	14.819		
6,000.00	5,947.57	5,950.51	5,777.82	24.26	30.20	33.83	-462.65	-1,289.88	690.97	644.45	46.52	14.852		
6,100.00	6,046.61	6,049.61	5,873.53	24.67	30.74	33.78	-471.51	-1,313.99	704.33	657.01	47.32	14.885		
6,200.00	6,145.66	6,148.72	5,969.24	25.09	31.29	33.72	-480.37	-1,338.11	717.70	669.58	48.11	14.917		
6,300.00	6,244.71	6,247.82	6,064.95	25.50	31.84	33.68	-489.23	-1,362.23	731.06	682.15	48.91	14.948		
6,400.00	6,343.76	6,346.92	6,160.67	25.92	32.38	33.63	-498.09	-1,386.35	744.43	694.73	49.70	14.977		
6,500.00	6,442.81	6,446.02	6,256.38	26.34	32.93	33.58	-506.95	-1,410.47	757.80	707.30	50.50	15.006		
6,600.00	6,541.86	6,545.12	6,352.09	26.75	33.48	33.54	-515.81	-1,434.59	771.16	719.87	51.30	15.034		
6,700.00	6,640.91	6,644.22	6,447.80	27.17	34.03	33.50	-524.67	-1,458.70	784.53	732.44	52.09	15.061		
6,800.00	6,739.95	6,743.32	6,543.51	27.58	34.57	33.46	-533.53	-1,482.82	797.90	745.01	52.89	15.087		
6,900.51	6,839.51	6,842.93	6,639.72	28.00	35.12	33.42	-542.43	-1,507.07	811.34	757.65	53.69	15.112		
6,950.00	6,888.63	6,891.91	6,687.02	28.20	35.39	4.16	-546.81	-1,518.99	818.04	763.99	54.05	15.134		
7,000.00	6,938.30	6,941.09	6,734.52	28.38	35.66	-29.40	-551.20	-1,530.95	825.00	770.63	54.37	15.174		
7,050.00	6,987.78	6,989.22	6,781.10	28.54	35.92	-50.97	-553.80	-1,542.78	832.19	777.56	54.63	15.232		
7,100.00	7,036.82	7,037.78	6,828.11	28.68	36.17	-62.59	-553.15	-1,554.89	839.63	784.75	54.88	15.300		
7,150.00	7,085.18	7,086.79	6,875.36	28.81	36.40	-69.25	-549.16	-1,567.23	847.27	792.17	55.11	15.375		
7,200.00	7,132.63	7,136.27	6,922.64	28.92	36.62	-73.40	-541.77	-1,579.77	855.09	799.77	55.32	15.456		
7,250.00	7,178.95	7,186.25	6,969.73	29.02	36.83	-76.16	-530.89	-1,592.43	863.04	807.51	55.53	15.541		
7,300.00	7,223.89	7,236.75	7,016.41	29.11	37.01	-78.09	-516.47	-1,605.18	871.09	815.36	55.73	15.630		
7,350.00	7,267.25	7,287.80	7,062.44	29.19	37.18	-79.47	-498.48	-1,617.94	879.19	823.27	55.93	15.720		
7,400.00	7,308.81	7,339.42	7,107.55	29.25	37.34	-80.49	-476.88	-1,630.66	887.31	831.18	56.13	15.809		
7,450.00	7,348.36	7,391.62	7,151.48	29.30	37.48	-81.25	-451.66	-1,643.26	895.40	839.07	56.32	15.897		
7,500.00	7,385.73	7,444.44	7,193.94	29.33	37.60	-81.81	-422.84	-1,655.68	903.41	846.88	56.53	15.981		
7,550.00	7,420.72	7,497.87	7,234.65	29.36	37.71	-82.22	-390.44	-1,667.83	911.30	854.56	56.74	16.061		
7,600.00	7,453.16	7,551.94	7,273.29	29.38	37.81	-82.52	-354.55	-1,679.64	919.03	862.07	56.96	16.135		
7,650.00	7,482.91	7,606.63	7,309.57	29.38	37.89	-82.73	-315.24	-1,691.02	926.56	869.37	57.19	16.200		
7,700.00	7,509.80	7,661.96	7,343.15	29.38	37.95	-82.86	-272.66	-1,701.87	933.83	876.39	57.44	16.257		
7,750.00	7,533.71	7,717.90	7,373.73	29.36	38.01	-82.93	-226.97	-1,712.12	940.82	883.11	57.71	16.304		
7,800.00	7,554.53	7,774.44	7,401.01	29.35	38.05	-82.95	-178.38	-1,721.67	947.46	889.47	57.99	16.339		
7,850.00	7,572.14	7,831.56	7,424.66	29.32	38.09	-82.93	-127.15	-1,730.44	953.73	895.44	58.29	16.362		
7,900.00	7,586.48	7,889.22	7,444.43	29.29	38.12	-82.86	-73.59	-1,738.32	959.58	900.97	58.61	16.371		
7,950.00	7,597.46	7,947.37	7,460.05	29.26	38.15	-82.76	-18.02	-1,745.24	964.98	906.02	58.96	16.368		
8,000.00	7,605.04	8,005.96	7,471.29	29.22	38.18	-82.62	39.16	-1,751.13	969.89	910.57	59.32	16.350		
8,050.00	7,609.17	8,064.92	7,477.98	29.19	38.21	-82.46	97.54	-1,755.91	974.28	914.57	59.71	16.316		
8,084.63	7,610.00	8,105.94	7,479.87	29.18	38.24	-82.32	138.42	-1,758.53	977.01	917.03	59.98	16.289		
8,100.00	7,610.00	8,123.45	7,480.00	29.18	38.25	-82.34	155.91	-1,759.48	978.14	918.03	60.10	16.274		
8,200.00	7,610.00	8,223.18	7,480.00	29.43	38.34	-82.40	255.50	-1,764.70	985.39	924.43	60.97	16.163		
8,300.00	7,610.00	8,322.92	7,480.00	29.94	38.49	-82.45	355.10	-1,769.92	992.66	930.68	61.97	16.017		
8,400.00	7,610.00	8,422.65	7,480.00	30.54	38.70	-82.51	454.69	-1,775.14	999.92	936.79	63.12	15.840		
8,500.00	7,610.00	8,522.38	7,480.00	31.21	38.98	-82.56	554.29	-1,780.36	1,007.18	942.77	64.41	15.637		
8,600.00	7,610.00	8,622.11	7,480.00	31.93	39.34	-82.62	653.88	-1,785.58	1,014.44	948.62	65.82	15.412		
8,700.00	7,610.00	8,721.84	7,480.00	32.71	39.77	-82.67	753.48	-1,790.80	1,021.71	954.35	67.35	15.170		

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 4F-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 4F-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 #3	<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							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	7,610.00	8,821.57	7,480.00	33.54	40.28	-82.72	853.07	-1,796.02	1,028.97	959.98	68.99	14.914		
8,900.00	7,610.00	8,921.30	7,480.00	34.42	40.87	-82.77	952.67	-1,801.24	1,036.24	965.50	70.74	14.649		
9,000.00	7,610.00	9,021.04	7,480.00	35.34	41.53	-82.82	1,052.26	-1,806.46	1,043.50	970.92	72.58	14.377		
9,100.00	7,610.00	9,120.77	7,480.00	36.31	42.26	-82.87	1,151.86	-1,811.68	1,050.77	976.26	74.51	14.102		
9,200.00	7,610.00	9,220.50	7,480.00	37.31	43.06	-82.92	1,251.45	-1,816.90	1,058.04	981.51	76.52	13.826		
9,300.00	7,610.00	9,320.23	7,480.00	38.35	43.93	-82.97	1,351.05	-1,822.12	1,065.31	986.69	78.61	13.551		
9,400.00	7,610.00	9,419.96	7,480.00	39.42	44.84	-83.02	1,450.64	-1,827.34	1,072.58	991.80	80.77	13.279		
9,500.00	7,610.00	9,549.66	7,480.00	40.53	46.09	-83.07	1,580.21	-1,833.01	1,079.15	996.21	82.93	13.012		
9,600.00	7,610.00	9,671.21	7,480.00	41.66	47.27	-83.10	1,701.75	-1,834.10	1,082.01	996.89	85.12	12.711		
9,700.00	7,610.00	9,771.17	7,480.00	42.82	48.27	-83.11	1,801.71	-1,834.53	1,084.51	997.09	87.42	12.405		
9,800.00	7,610.00	9,871.14	7,480.00	44.00	49.31	-83.13	1,901.68	-1,834.95	1,087.01	997.24	89.78	12.108		
9,900.00	7,610.00	9,971.11	7,480.00	45.21	50.39	-83.15	2,001.65	-1,835.38	1,089.52	997.34	92.18	11.820		
10,000.00	7,610.00	10,071.08	7,480.00	46.44	51.49	-83.16	2,101.62	-1,835.80	1,092.02	997.40	94.62	11.541		
10,100.00	7,610.00	10,171.05	7,480.00	47.69	52.62	-83.18	2,201.58	-1,836.23	1,094.52	997.42	97.10	11.272		
10,200.00	7,610.00	10,271.02	7,480.00	48.95	53.78	-83.19	2,301.55	-1,836.65	1,097.02	997.40	99.62	11.012		
10,300.00	7,610.00	10,370.98	7,480.00	50.23	54.96	-83.21	2,401.52	-1,837.08	1,099.52	997.35	102.17	10.761		
10,400.00	7,610.00	10,470.95	7,480.00	51.53	56.16	-83.22	2,501.49	-1,837.51	1,102.02	997.27	104.76	10.520		
10,500.00	7,610.00	10,570.92	7,480.00	52.84	57.39	-83.24	2,601.45	-1,837.93	1,104.53	997.15	107.37	10.287		
10,600.00	7,610.00	10,670.89	7,480.00	54.17	58.63	-83.25	2,701.42	-1,838.36	1,107.03	997.01	110.01	10.063		
10,700.00	7,610.00	10,770.86	7,480.00	55.51	59.89	-83.27	2,801.39	-1,838.78	1,109.53	996.85	112.68	9.847		
10,800.00	7,610.00	10,890.75	7,480.00	56.86	61.42	-83.28	2,921.28	-1,838.82	1,111.75	996.49	115.26	9.646		
10,900.00	7,610.00	10,994.79	7,480.00	58.22	62.73	-83.29	3,025.31	-1,837.03	1,112.11	994.18	117.93	9.430		
11,000.00	7,610.00	11,094.79	7,480.00	59.59	64.01	-83.29	3,125.29	-1,835.28	1,112.45	991.81	120.65	9.221		
11,100.00	7,610.00	11,194.79	7,480.00	60.97	65.31	-83.29	3,225.28	-1,833.54	1,112.80	989.42	123.38	9.019		
11,200.00	7,610.00	11,294.79	7,480.00	62.35	66.61	-83.29	3,325.26	-1,831.79	1,113.15	987.01	126.13	8.825		
11,300.00	7,610.00	11,394.79	7,480.00	63.75	67.93	-83.30	3,425.24	-1,830.05	1,113.49	984.59	128.90	8.638		
11,400.00	7,610.00	11,494.79	7,480.00	65.15	69.26	-83.30	3,525.23	-1,828.30	1,113.84	982.15	131.69	8.458		
11,500.00	7,610.00	11,594.79	7,480.00	66.57	70.59	-83.30	3,625.21	-1,826.56	1,114.19	979.69	134.49	8.284		
11,600.00	7,610.00	11,694.79	7,480.00	67.98	71.94	-83.30	3,725.20	-1,824.81	1,114.53	977.23	137.31	8.117		
11,700.00	7,610.00	11,794.79	7,480.00	69.41	73.30	-83.30	3,825.18	-1,823.07	1,114.88	974.74	140.13	7.956		
11,800.00	7,610.00	11,894.79	7,480.00	70.84	74.67	-83.31	3,925.16	-1,821.32	1,115.23	972.25	142.97	7.800		
11,900.00	7,610.00	11,994.79	7,480.00	72.27	76.04	-83.31	4,025.15	-1,819.58	1,115.57	969.75	145.83	7.650		
12,000.00	7,610.00	12,094.79	7,480.00	73.72	77.42	-83.31	4,125.13	-1,817.83	1,115.92	967.23	148.69	7.505		
12,100.00	7,610.00	12,194.79	7,480.00	75.16	78.81	-83.31	4,225.12	-1,816.09	1,116.27	964.70	151.56	7.365		
12,200.00	7,610.00	12,294.79	7,480.00	76.61	80.21	-83.31	4,325.10	-1,814.34	1,116.61	962.17	154.44	7.230		
12,300.00	7,610.00	12,394.79	7,480.00	78.07	81.61	-83.32	4,425.09	-1,812.59	1,116.96	959.62	157.34	7.099		
12,400.00	7,610.00	12,494.78	7,480.00	79.53	83.02	-83.32	4,525.07	-1,810.85	1,117.31	957.07	160.24	6.973		
12,500.00	7,610.00	12,594.78	7,480.00	80.99	84.43	-83.32	4,625.05	-1,809.10	1,117.65	954.51	163.14	6.851		
12,600.00	7,610.00	12,694.78	7,480.00	82.46	85.85	-83.32	4,725.04	-1,807.36	1,118.00	951.94	166.06	6.732		
12,700.00	7,610.00	12,794.78	7,480.00	83.93	87.27	-83.32	4,825.02	-1,805.61	1,118.35	949.36	168.99	6.618		
12,800.00	7,610.00	12,894.78	7,480.00	85.41	88.70	-83.33	4,925.01	-1,803.87	1,118.69	946.78	171.92	6.507		
12,900.00	7,610.00	12,994.78	7,480.00	86.88	90.14	-83.33	5,024.99	-1,802.12	1,119.04	944.19	174.85	6.400		
13,000.00	7,610.00	13,094.78	7,480.00	88.37	91.58	-83.33	5,124.97	-1,800.38	1,119.39	941.59	177.80	6.296		
13,100.00	7,610.00	13,194.78	7,480.00	89.85	93.02	-83.33	5,224.96	-1,798.63	1,119.73	938.99	180.75	6.195		
13,200.00	7,610.00	13,294.78	7,480.00	91.34	94.47	-83.34	5,324.94	-1,796.89	1,120.08	936.38	183.70	6.097		
13,300.00	7,610.00	13,394.78	7,480.00	92.83	95.92	-83.34	5,424.93	-1,795.14	1,120.43	933.76	186.66	6.002		
13,400.00	7,610.00	13,494.78	7,480.00	94.32	97.38	-83.34	5,524.91	-1,793.40	1,120.77	931.14	189.63	5.910		
13,500.00	7,610.00	13,594.78	7,480.00	95.81	98.83	-83.34	5,624.90	-1,791.65	1,121.12	928.52	192.60	5.821		
13,600.00	7,610.00	13,694.78	7,480.00	97.31	100.30	-83.34	5,724.88	-1,789.91	1,121.47	925.89	195.58	5.734		
13,700.00	7,610.00	13,794.78	7,480.00	98.81	101.76	-83.35	5,824.86	-1,788.16	1,121.81	923.25	198.56	5.650		
13,800.00	7,610.00	13,894.78	7,480.00	100.31	103.23	-83.35	5,924.85	-1,786.42	1,122.16	920.62	201.54	5.568		
13,894.63	7,610.00	13,989.40	7,480.00	101.73	104.62	-83.35	6,019.46	-1,784.76	1,122.49	918.12	204.37	5.492		

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 4F-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 4F-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 #3	<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: 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	7,610.00	13,994.78	7,480.00	101.81	104.70	-83.35	6,024.83	-1,784.67	1,122.49	917.96	204.53	5.488		
14,000.00	7,610.00	14,094.64	7,480.00	103.35	106.17	-83.29	6,124.68	-1,782.93	1,117.93	910.38	207.55	5.386		
14,100.00	7,610.00	14,193.69	7,480.00	104.93	107.64	-83.13	6,223.72	-1,781.20	1,104.54	893.95	210.58	5.245		
14,200.00	7,610.00	14,291.14	7,480.00	106.56	109.08	-82.85	6,321.16	-1,779.50	1,082.43	868.81	213.62	5.067		
14,300.00	7,610.00	14,386.22	7,480.00	108.20	110.49	-82.42	6,416.22	-1,777.84	1,051.78	835.17	216.61	4.856		
14,385.81	7,610.00	14,465.35	7,480.00	109.62	111.66	-81.93	6,495.33	-1,776.46	1,018.87	799.74	219.13	4.650		
14,400.00	7,610.00	14,478.21	7,480.00	109.86	111.85	-81.88	6,508.19	-1,776.23	1,012.94	793.39	219.55	4.614		
14,500.00	7,610.00	14,568.88	7,480.00	111.52	113.20	-81.53	6,598.85	-1,774.65	971.13	748.69	222.44	4.366		
14,600.00	7,610.00	14,659.56	7,480.00	113.20	114.55	-81.14	6,689.51	-1,773.07	929.36	704.02	225.34	4.124		
14,700.00	7,610.00	14,750.23	7,480.00	114.90	115.90	-80.73	6,780.17	-1,771.49	887.63	659.39	228.23	3.889		
14,800.00	7,610.00	14,840.90	7,480.00	116.61	117.25	-80.27	6,870.83	-1,769.90	845.93	614.82	231.11	3.660		
14,886.04	7,610.00	14,901.25	7,480.00	118.09	118.16	-79.94	6,931.17	-1,768.85	810.29	576.34	233.95	3.463 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-89.42	0.20	-20.14	20.14					
100.00	100.00	100.00	100.00	0.14	0.14	-89.42	0.20	-20.14	20.14	19.87	0.28	72.976		
200.00	200.00	200.00	200.00	0.50	0.50	-89.42	0.20	-20.14	20.14	19.15	0.99	20.286		
300.00	299.98	299.98	299.98	0.84	0.85	75.40	0.20	-20.14	19.63	17.94	1.70	11.579		
350.00	349.93	349.93	349.93	1.02	1.03	81.71	0.20	-20.14	19.20	17.15	2.05	9.386		
400.00	399.85	399.85	399.85	1.19	1.21	78.16	0.20	-20.14	18.66	16.26	2.40	7.773		
500.00	499.53	499.53	499.53	1.55	1.57	89.42	0.20	-20.14	17.60	14.48	3.12	5.643		
502.13	501.65	501.65	501.65	1.56	1.58	89.87	0.20	-20.14	17.60	14.47	3.13	5.615 CC, ES		
600.00	598.92	599.01	598.99	1.93	1.92	110.73	-0.44	-21.73	19.76	15.92	3.83	5.153		
634.55	633.17	633.45	633.40	2.06	2.03	116.86	-0.97	-23.02	21.38	17.29	4.08	5.236		
700.00	697.99	698.85	698.69	2.32	2.26	126.93	-2.39	-26.53	24.97	20.41	4.56	5.480		
800.00	797.04	799.12	798.58	2.72	2.61	132.81	-5.67	-34.59	29.96	24.66	5.30	5.655		
900.00	896.09	899.60	898.31	3.12	2.98	131.95	-10.27	-45.92	33.36	27.31	6.06	5.508		
1,000.00	995.14	1,000.05	997.52	3.53	3.37	126.18	-16.19	-60.47	35.27	28.43	6.84	5.157		
1,100.00	1,094.19	1,100.22	1,095.83	3.93	3.78	115.83	-23.39	-78.18	36.58	28.92	7.66	4.773		
1,200.00	1,193.24	1,199.86	1,192.92	4.34	4.22	101.43	-31.83	-98.93	38.94	30.41	8.54	4.561		
1,300.00	1,292.28	1,299.23	1,289.41	4.75	4.67	87.50	-40.78	-120.96	43.81	34.39	9.42	4.653		
1,400.00	1,391.33	1,398.61	1,385.90	5.17	5.14	76.81	-49.74	-142.99	50.71	40.46	10.25	4.946		
1,500.00	1,490.38	1,497.98	1,482.38	5.58	5.62	68.88	-58.69	-165.01	58.94	47.88	11.06	5.330		
1,600.00	1,589.43	1,597.35	1,578.87	5.99	6.10	62.96	-67.65	-187.04	68.02	56.17	11.84	5.742		
1,700.00	1,688.48	1,696.73	1,675.36	6.40	6.60	58.47	-76.61	-209.07	77.64	65.02	12.62	6.152		
1,800.00	1,787.53	1,796.10	1,771.84	6.82	7.09	54.98	-85.56	-231.09	87.64	74.25	13.39	6.544		
1,900.00	1,886.58	1,895.47	1,868.33	7.23	7.59	52.21	-94.52	-253.12	97.89	83.73	14.16	6.912		
2,000.00	1,985.62	1,994.85	1,964.82	7.65	8.09	49.97	-103.47	-275.15	108.32	93.39	14.93	7.255		
2,100.00	2,084.67	2,094.22	2,061.30	8.06	8.59	48.13	-112.43	-297.18	118.89	103.19	15.70	7.571		
2,200.00	2,183.72	2,193.59	2,157.79	8.47	9.10	46.59	-121.38	-319.20	129.56	113.09	16.47	7.864		
2,300.00	2,282.77	2,292.97	2,254.28	8.89	9.61	45.28	-130.34	-341.23	140.31	123.06	17.25	8.135		
2,400.00	2,381.82	2,392.34	2,350.76	9.30	10.12	44.16	-139.29	-363.26	151.12	133.10	18.02	8.385		
2,500.00	2,480.87	2,491.71	2,447.25	9.72	10.63	43.19	-148.25	-385.28	161.98	143.19	18.80	8.617		
2,600.00	2,579.92	2,591.09	2,543.74	10.13	11.14	42.34	-157.20	-407.31	172.89	153.31	19.58	8.832		
2,700.00	2,678.96	2,690.46	2,640.22	10.55	11.65	41.59	-166.16	-429.34	183.82	163.47	20.35	9.031		
2,800.00	2,778.01	2,789.84	2,736.71	10.96	12.16	40.93	-175.12	-451.37	194.78	173.65	21.13	9.217		
2,900.00	2,877.06	2,889.21	2,833.20	11.38	12.67	40.33	-184.07	-473.39	205.77	183.85	21.91	9.391		
3,000.00	2,976.11	2,988.58	2,929.68	11.79	13.19	39.80	-193.03	-495.42	216.77	194.08	22.69	9.553		
3,100.00	3,075.16	3,087.96	3,026.17	12.21	13.70	39.32	-201.98	-517.45	227.79	204.32	23.47	9.704		
3,200.00	3,174.21	3,187.33	3,122.66	12.62	14.22	38.88	-210.94	-539.47	238.83	214.57	24.26	9.846		
3,300.00	3,273.26	3,286.70	3,219.14	13.04	14.73	38.48	-219.89	-561.50	249.88	224.84	25.04	9.980		
3,400.00	3,372.30	3,386.08	3,315.63	13.45	15.25	38.12	-228.85	-583.53	260.94	235.11	25.82	10.106		
3,500.00	3,471.35	3,485.45	3,412.12	13.87	15.77	37.78	-237.80	-605.56	272.00	245.40	26.60	10.224		
3,600.00	3,570.40	3,584.82	3,508.60	14.28	16.28	37.47	-246.76	-627.58	283.08	255.69	27.39	10.336		
3,700.00	3,669.45	3,684.20	3,605.09	14.70	16.80	37.19	-255.71	-649.61	294.17	265.99	28.17	10.442		
3,800.00	3,768.50	3,783.57	3,701.58	15.11	17.32	36.92	-264.67	-671.64	305.26	276.30	28.96	10.542		
3,900.00	3,867.55	3,882.94	3,798.06	15.53	17.83	36.68	-273.63	-693.66	316.36	286.61	29.74	10.637		
4,000.00	3,966.59	3,982.32	3,894.55	15.95	18.35	36.45	-282.58	-715.69	327.46	296.93	30.53	10.727		
4,100.00	4,065.64	4,081.69	3,991.04	16.36	18.87	36.23	-291.54	-737.72	338.57	307.25	31.31	10.812		
4,200.00	4,164.69	4,181.06	4,087.52	16.78	19.39	36.03	-300.49	-759.74	349.68	317.58	32.10	10.894		
4,300.00	4,263.74	4,280.44	4,184.01	17.19	19.90	35.84	-309.45	-781.77	360.79	327.91	32.89	10.971		
4,400.00	4,362.79	4,379.81	4,280.50	17.61	20.42	35.67	-318.40	-803.80	371.91	338.24	33.67	11.045		
4,500.00	4,461.84	4,479.18	4,376.98	18.02	20.94	35.50	-327.36	-825.83	383.04	348.58	34.46	11.116		
4,600.00	4,560.89	4,578.56	4,473.47	18.44	21.46	35.34	-336.31	-847.85	394.16	358.92	35.25	11.183		
4,700.00	4,659.93	4,677.93	4,569.96	18.85	21.98	35.19	-345.27	-869.88	405.29	369.26	36.03	11.248		
4,800.00	4,758.98	4,777.30	4,666.44	19.27	22.50	35.05	-354.22	-891.91	416.42	379.60	36.82	11.310		

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 4F-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 4F-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 #3	<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								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		
4,900.00	4,858.03	4,876.68	4,762.93	19.69	23.02	34.92	-363.18	-913.93	427.56	389.95	37.61	11.369		
5,000.00	4,957.08	4,976.05	4,859.42	20.10	23.53	34.79	-372.14	-935.96	438.69	400.30	38.39	11.426		
5,100.00	5,056.13	5,075.42	4,955.90	20.52	24.05	34.67	-381.09	-957.99	449.83	410.65	39.18	11.480		
5,200.00	5,155.18	5,174.80	5,052.39	20.93	24.57	34.56	-390.05	-980.02	460.97	421.00	39.97	11.533		
5,300.00	5,254.23	5,274.17	5,148.88	21.35	25.09	34.45	-399.00	-1,002.04	472.11	431.35	40.76	11.583		
5,400.00	5,353.27	5,373.55	5,245.36	21.76	25.61	34.34	-407.96	-1,024.07	483.26	441.71	41.55	11.632		
5,500.00	5,452.32	5,472.92	5,341.85	22.18	26.13	34.24	-416.91	-1,046.10	494.40	452.07	42.33	11.678		
5,600.00	5,551.37	5,572.29	5,438.34	22.60	26.65	34.15	-425.87	-1,068.12	505.55	462.42	43.12	11.723		
5,700.00	5,650.42	5,671.67	5,534.83	23.01	27.17	34.06	-434.82	-1,090.15	516.69	472.78	43.91	11.767		
5,800.00	5,749.47	5,771.04	5,631.31	23.43	27.69	33.97	-443.78	-1,112.18	527.84	483.14	44.70	11.808		
5,900.00	5,848.52	5,870.41	5,727.80	23.84	28.21	33.89	-452.73	-1,134.21	538.99	493.50	45.49	11.849		
6,000.00	5,947.57	5,969.79	5,824.29	24.26	28.73	33.81	-461.69	-1,156.23	550.14	503.86	46.28	11.888		
6,100.00	6,046.61	6,069.16	5,920.77	24.67	29.25	33.73	-470.64	-1,178.26	561.29	514.23	47.07	11.925		
6,200.00	6,145.66	6,168.53	6,017.26	25.09	29.77	33.66	-479.60	-1,200.29	572.45	524.59	47.86	11.962		
6,300.00	6,244.71	6,267.91	6,113.75	25.50	30.29	33.59	-488.56	-1,222.31	583.60	534.96	48.64	11.997		
6,400.00	6,343.76	6,367.28	6,210.23	25.92	30.81	33.52	-497.51	-1,244.34	594.76	545.32	49.43	12.031		
6,500.00	6,442.81	6,466.65	6,306.72	26.34	31.33	33.45	-506.47	-1,266.37	605.91	555.69	50.22	12.064		
6,600.00	6,541.86	6,566.03	6,403.21	26.75	31.85	33.39	-515.42	-1,288.40	617.07	566.06	51.01	12.096		
6,700.00	6,640.91	6,665.40	6,499.69	27.17	32.37	33.33	-524.38	-1,310.42	628.22	576.42	51.80	12.127		
6,800.00	6,739.95	6,764.77	6,596.18	27.58	32.89	33.27	-533.33	-1,332.45	639.38	586.79	52.59	12.158		
6,900.51	6,839.51	6,865.64	6,694.29	28.00	33.40	33.48	-539.42	-1,354.87	650.55	597.13	53.41	12.179		
6,950.00	6,888.63	6,915.18	6,742.53	28.20	33.63	4.63	-537.63	-1,365.94	656.07	602.25	53.82	12.189		
7,000.00	6,938.30	6,964.93	6,790.74	28.38	33.84	-28.29	-532.40	-1,377.03	661.79	607.60	54.19	12.211		
7,050.00	6,987.78	7,014.40	6,838.19	28.54	34.03	-49.14	-523.80	-1,387.98	667.61	613.08	54.53	12.244		
7,100.00	7,036.82	7,063.59	6,884.70	28.68	34.20	-60.07	-511.95	-1,398.74	673.50	618.68	54.82	12.285		
7,150.00	7,085.18	7,112.52	6,930.05	28.81	34.36	-66.05	-496.93	-1,409.26	679.44	624.35	55.09	12.334		
7,200.00	7,132.63	7,161.20	6,974.07	28.92	34.49	-69.56	-478.87	-1,419.50	685.39	630.07	55.32	12.389		
7,250.00	7,178.95	7,209.64	7,016.58	29.02	34.61	-71.71	-457.89	-1,429.42	691.32	635.79	55.53	12.450		
7,300.00	7,223.89	7,257.87	7,057.43	29.11	34.71	-73.05	-434.12	-1,438.99	697.19	641.48	55.71	12.515		
7,350.00	7,267.25	7,305.89	7,096.46	29.19	34.80	-73.89	-407.70	-1,448.16	702.99	647.12	55.87	12.582		
7,400.00	7,308.81	7,353.73	7,133.53	29.25	34.87	-74.39	-378.77	-1,456.91	708.67	652.65	56.02	12.650		
7,450.00	7,348.36	7,401.39	7,168.50	29.30	34.93	-74.67	-347.49	-1,465.19	714.21	658.05	56.16	12.718		
7,500.00	7,385.73	7,450.00	7,202.00	29.33	34.98	-74.78	-313.19	-1,473.17	719.58	663.28	56.30	12.780		
7,550.00	7,420.72	7,496.25	7,231.69	29.36	35.02	-74.80	-278.46	-1,480.27	724.75	668.33	56.42	12.846		
7,600.00	7,453.16	7,543.48	7,259.69	29.38	35.05	-74.73	-241.04	-1,487.01	729.70	673.14	56.56	12.902		
7,650.00	7,482.91	7,590.59	7,285.16	29.38	35.06	-74.62	-201.90	-1,493.19	734.39	677.68	56.70	12.951		
7,700.00	7,509.80	7,637.60	7,308.02	29.38	35.07	-74.47	-161.21	-1,498.78	738.80	681.94	56.87	12.992		
7,750.00	7,533.71	7,684.52	7,328.18	29.36	35.08	-74.30	-119.15	-1,503.77	742.92	685.87	57.05	13.023		
7,800.00	7,554.53	7,731.36	7,345.59	29.35	35.08	-74.12	-75.90	-1,508.13	746.72	689.47	57.25	13.043		
7,850.00	7,572.14	7,778.14	7,360.19	29.32	35.07	-73.94	-31.62	-1,511.86	750.18	692.70	57.48	13.051		
7,900.00	7,586.48	7,824.86	7,371.93	29.29	35.07	-73.76	13.49	-1,514.95	753.28	695.55	57.73	13.047		
7,950.00	7,597.46	7,871.54	7,380.76	29.26	35.07	-73.59	59.25	-1,517.37	756.01	697.99	58.02	13.030		
8,000.00	7,605.04	7,918.19	7,386.67	29.22	35.06	-73.43	105.48	-1,519.13	758.36	700.02	58.33	13.001		
8,050.00	7,609.17	7,964.81	7,389.63	29.19	35.07	-73.29	152.00	-1,520.21	760.30	701.63	58.67	12.958		
8,084.63	7,610.00	7,997.74	7,390.00	29.18	35.07	-73.20	184.91	-1,520.58	761.41	702.48	58.93	12.921		
8,100.00	7,610.00	8,013.10	7,390.00	29.18	35.08	-73.21	200.28	-1,520.72	761.85	702.80	59.05	12.901		
8,200.00	7,610.00	8,113.06	7,390.00	29.43	35.13	-73.27	300.23	-1,521.59	764.69	704.76	59.93	12.760		
8,300.00	7,610.00	8,213.02	7,390.00	29.94	35.25	-73.34	400.18	-1,522.46	767.53	706.59	60.94	12.595		
8,400.00	7,610.00	8,312.97	7,390.00	30.54	35.45	-73.40	500.14	-1,523.33	770.37	708.28	62.09	12.408		
8,500.00	7,610.00	8,412.93	7,390.00	31.21	35.73	-73.46	600.09	-1,524.21	773.22	709.85	63.36	12.203		
8,600.00	7,610.00	8,512.88	7,390.00	31.93	36.10	-73.52	700.04	-1,525.08	776.06	711.30	64.76	11.984		
8,700.00	7,610.00	8,612.84	7,390.00	32.71	36.56	-73.59	799.99	-1,525.95	778.91	712.64	66.27	11.754		

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 4F-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 4F-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 #3	<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						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	7,610.00	8,712.80	7,390.00	33.54	37.12	-73.65	899.95	-1,526.82	781.75	713.88	67.88	11.517	
8,900.00	7,610.00	8,812.75	7,390.00	34.42	37.77	-73.71	999.90	-1,527.70	784.60	715.01	69.59	11.275	
9,000.00	7,610.00	8,912.71	7,390.00	35.34	38.50	-73.77	1,099.85	-1,528.57	787.45	716.06	71.39	11.031	
9,100.00	7,610.00	9,012.66	7,390.00	36.31	39.31	-73.83	1,199.80	-1,529.44	790.30	717.03	73.27	10.786	
9,200.00	7,610.00	9,112.62	7,390.00	37.31	40.18	-73.89	1,299.75	-1,530.31	793.15	717.91	75.23	10.542	
9,300.00	7,610.00	9,212.58	7,390.00	38.35	41.10	-73.95	1,399.71	-1,531.18	796.00	718.73	77.27	10.302	
9,400.00	7,610.00	9,312.53	7,390.00	39.42	42.07	-74.01	1,499.66	-1,532.06	798.85	719.48	79.37	10.065	
9,500.00	7,610.00	9,412.49	7,390.00	40.53	43.09	-74.07	1,599.61	-1,532.93	801.70	720.16	81.54	9.832	
9,600.00	7,610.00	9,512.44	7,390.00	41.66	44.15	-74.12	1,699.56	-1,533.80	804.55	720.80	83.76	9.606	
9,700.00	7,610.00	9,612.40	7,390.00	42.82	45.24	-74.18	1,799.52	-1,534.67	807.41	721.38	86.03	9.385	
9,800.00	7,610.00	9,712.36	7,390.00	44.00	46.36	-74.24	1,899.47	-1,535.55	810.26	721.91	88.36	9.170	
9,900.00	7,610.00	9,812.31	7,390.00	45.21	47.51	-74.30	1,999.42	-1,536.42	813.12	722.39	90.72	8.963	
10,000.00	7,610.00	9,912.27	7,390.00	46.44	48.69	-74.35	2,099.37	-1,537.29	815.97	722.84	93.13	8.761	
10,100.00	7,610.00	10,012.22	7,390.00	47.69	49.89	-74.41	2,199.32	-1,538.16	818.83	723.25	95.58	8.567	
10,200.00	7,610.00	10,112.18	7,390.00	48.95	51.12	-74.46	2,299.28	-1,539.03	821.69	723.62	98.07	8.379	
10,300.00	7,610.00	10,212.14	7,390.00	50.23	52.36	-74.52	2,399.23	-1,539.91	824.55	723.96	100.59	8.197	
10,400.00	7,610.00	10,312.09	7,390.00	51.53	53.63	-74.57	2,499.18	-1,540.78	827.41	724.27	103.14	8.022	
10,500.00	7,610.00	10,412.05	7,390.00	52.84	54.91	-74.63	2,599.13	-1,541.65	830.27	724.55	105.72	7.854	
10,600.00	7,610.00	10,512.00	7,390.00	54.17	56.20	-74.68	2,699.09	-1,542.52	833.13	724.80	108.32	7.691	
10,700.00	7,610.00	10,611.96	7,390.00	55.51	57.52	-74.74	2,799.04	-1,543.40	835.99	725.03	110.96	7.534	
10,800.00	7,610.00	10,711.92	7,390.00	56.86	58.84	-74.79	2,898.99	-1,544.27	838.85	725.24	113.61	7.384	
10,900.00	7,610.00	10,811.87	7,390.00	58.22	60.18	-74.84	2,998.94	-1,545.14	841.72	725.43	116.29	7.238	
11,000.00	7,610.00	10,911.83	7,390.00	59.59	61.53	-74.89	3,098.89	-1,546.01	844.58	725.60	118.98	7.098	
11,100.00	7,610.00	11,011.78	7,390.00	60.97	62.89	-74.95	3,198.85	-1,546.89	847.44	725.74	121.70	6.963	
11,200.00	7,610.00	11,111.74	7,390.00	62.35	64.26	-75.00	3,298.80	-1,547.76	850.31	725.87	124.44	6.833	
11,300.00	7,610.00	11,211.70	7,390.00	63.75	65.65	-75.05	3,398.75	-1,548.63	853.18	725.99	127.19	6.708	
11,400.00	7,610.00	11,311.65	7,390.00	65.15	67.04	-75.10	3,498.70	-1,549.50	856.04	726.09	129.95	6.587	
11,500.00	7,610.00	11,411.61	7,390.00	66.57	68.44	-75.15	3,598.65	-1,550.37	858.91	726.17	132.74	6.471	
11,600.00	7,610.00	11,511.56	7,390.00	67.98	69.84	-75.20	3,698.61	-1,551.25	861.78	726.25	135.53	6.358	
11,700.00	7,610.00	11,611.52	7,390.00	69.41	71.26	-75.25	3,798.56	-1,552.12	864.65	726.30	138.34	6.250	
11,800.00	7,610.00	11,711.48	7,390.00	70.84	72.68	-75.30	3,898.51	-1,552.99	867.52	726.35	141.16	6.145	
11,900.00	7,610.00	11,811.43	7,390.00	72.27	74.11	-75.35	3,998.46	-1,553.86	870.39	726.39	144.00	6.044	
12,000.00	7,610.00	11,911.39	7,390.00	73.72	75.55	-75.40	4,098.42	-1,554.74	873.26	726.41	146.84	5.947	
12,100.00	7,610.00	12,011.34	7,390.00	75.16	76.99	-75.45	4,198.37	-1,555.61	876.13	726.43	149.70	5.853	
12,200.00	7,610.00	12,112.33	7,390.00	76.61	78.47	-75.49	4,298.32	-1,556.48	879.00	726.45	152.62	5.760	
12,300.00	7,610.00	12,212.32	7,390.00	78.07	80.00	-75.50	4,398.27	-1,557.35	881.87	726.46	155.57	5.666	
12,400.00	7,610.00	12,312.32	7,390.00	79.53	81.54	-75.52	4,498.22	-1,558.22	884.74	726.47	158.53	5.564	
12,500.00	7,610.00	12,412.31	7,390.00	80.99	83.08	-75.53	4,598.17	-1,559.09	887.61	726.48	161.00	5.471	
12,600.00	7,610.00	12,512.31	7,390.00	82.46	84.63	-75.55	4,698.12	-1,559.96	890.48	726.49	163.87	5.380	
12,700.00	7,610.00	12,612.30	7,390.00	83.93	86.18	-75.57	4,798.07	-1,560.83	893.35	726.50	166.76	5.293	
12,800.00	7,610.00	12,712.30	7,390.00	85.41	87.73	-75.58	4,898.02	-1,561.70	896.22	726.51	169.65	5.208	
12,900.00	7,610.00	12,812.29	7,390.00	86.88	89.28	-75.60	4,997.97	-1,562.57	899.09	726.52	172.54	5.126	
13,000.00	7,610.00	12,912.29	7,390.00	88.37	90.83	-75.61	5,097.92	-1,563.44	901.96	726.53	175.45	5.047	
13,100.00	7,610.00	13,012.28	7,390.00	89.85	92.38	-75.63	5,197.87	-1,564.31	904.83	726.54	178.36	4.970	
13,200.00	7,610.00	13,112.28	7,390.00	91.34	93.93	-75.64	5,297.82	-1,565.18	907.70	726.55	181.27	4.895	
13,300.00	7,610.00	13,212.28	7,390.00	92.83	95.48	-75.66	5,397.77	-1,566.05	910.57	726.56	184.19	4.822	
13,400.00	7,610.00	13,312.27	7,390.00	94.32	97.03	-75.67	5,497.72	-1,566.92	913.44	726.57	187.12	4.752	
13,500.00	7,610.00	13,412.27	7,390.00	95.81	98.58	-75.69	5,597.67	-1,567.79	916.31	726.58	190.05	4.684	
13,600.00	7,610.00	13,512.26	7,390.00	97.31	100.13	-75.71	5,697.62	-1,568.66	919.18	726.59	192.98	4.617	
13,700.00	7,610.00	13,612.26	7,390.00	98.81	101.68	-75.72	5,797.57	-1,569.53	922.05	726.60	195.92	4.553	
13,800.00	7,610.00	13,712.25	7,390.00	100.31	103.23	-75.74	5,897.52	-1,570.40	924.92	726.61	198.86	4.490	
13,894.63	7,610.00	13,822.87	7,390.00	101.73	103.50	-75.75	6,009.78	-1,536.26	893.81	692.16	201.65	4.432	

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 4F-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 4F-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 #3	<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: 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	7,610.00	13,828.25	7,390.00	101.81	103.58	-75.75	6,015.16	-1,536.20	893.85	692.04	201.81	4.429		
14,000.00	7,610.00	13,928.13	7,390.00	103.35	105.07	-75.64	6,115.04	-1,535.07	889.99	685.24	204.75	4.347		
14,100.00	7,610.00	14,027.27	7,390.00	104.93	106.55	-75.27	6,214.17	-1,533.95	877.52	669.87	207.65	4.226		
14,200.00	7,610.00	14,124.86	7,390.00	106.56	108.01	-74.61	6,311.75	-1,532.85	856.56	646.10	210.46	4.070		
14,300.00	7,610.00	14,220.13	7,390.00	108.20	109.44	-73.62	6,407.01	-1,531.77	827.33	614.19	213.14	3.882		
14,385.81	7,610.00	14,299.45	7,390.00	109.62	110.63	-72.45	6,486.33	-1,530.88	795.87	580.58	215.28	3.697		
14,400.00	7,610.00	14,312.35	7,390.00	109.86	110.83	-72.32	6,499.23	-1,530.73	790.20	574.57	215.62	3.665		
14,500.00	7,610.00	14,403.28	7,390.00	111.52	112.20	-71.36	6,590.16	-1,529.70	750.32	532.37	217.95	3.443		
14,600.00	7,610.00	14,494.21	7,390.00	113.20	113.56	-70.30	6,681.08	-1,528.68	710.64	490.48	220.16	3.228		
14,700.00	7,610.00	14,585.15	7,390.00	114.90	114.94	-69.12	6,772.01	-1,527.65	671.20	448.98	222.23	3.020		
14,800.00	7,610.00	14,676.08	7,390.00	116.61	116.31	-67.79	6,862.93	-1,526.62	632.04	407.94	224.09	2.820		
14,886.04	7,610.00	14,745.41	7,390.00	118.09	117.35	-66.66	6,932.27	-1,525.84	598.67	372.91	225.76	2.652 SF		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-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						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.58	0.25	-10.07	10.07					
100.00	100.00	100.00	100.00	0.14	0.14	-88.58	0.25	-10.07	10.07	9.80	0.28	36.500		
200.00	200.00	200.00	200.00	0.50	0.50	-88.58	0.25	-10.07	10.07	9.08	0.99	10.146		
300.00	299.98	299.98	299.98	0.84	0.85	81.28	0.25	-10.07	9.66	7.97	1.70	5.698		
335.65	335.60	335.60	335.60	0.97	0.98	90.00	0.25	-10.07	9.55	7.60	1.94	4.910 CC		
350.00	349.93	349.93	349.93	1.02	1.03	94.28	0.25	-10.07	9.58	7.53	2.05	4.682		
400.00	399.85	399.85	399.85	1.19	1.21	99.12	0.25	-10.07	9.89	7.49	2.40	4.119 ES		
500.00	499.53	499.53	499.53	1.55	1.57	123.56	0.25	-10.07	12.76	9.64	3.12	4.093		
600.00	598.92	598.92	598.92	1.93	1.93	144.22	0.25	-10.07	20.57	16.73	3.84	5.360		
634.55	633.17	633.36	633.36	2.06	2.05	148.64	0.18	-10.25	24.25	20.17	4.09	5.936		
700.00	697.99	698.84	698.82	2.32	2.27	155.32	-0.35	-11.67	31.13	26.57	4.55	6.835		
800.00	797.04	799.44	799.28	2.72	2.62	158.86	-2.19	-16.57	39.73	34.45	5.28	7.527		
900.00	896.09	900.49	899.94	3.12	2.97	158.65	-5.29	-24.81	45.56	39.54	6.02	7.568		
1,000.00	995.14	1,001.74	1,000.42	3.53	3.34	155.98	-9.64	-36.40	48.59	41.82	6.77	7.175		
1,100.00	1,094.19	1,102.93	1,100.35	3.93	3.73	150.88	-15.24	-51.29	49.12	41.58	7.54	6.516		
1,187.38	1,180.74	1,190.18	1,186.27	4.29	4.08	145.28	-20.59	-65.53	48.88	40.68	8.20	5.959		
1,200.00	1,193.24	1,202.78	1,198.67	4.34	4.13	144.47	-21.36	-67.59	48.89	40.59	8.30	5.889		
1,300.00	1,292.28	1,302.63	1,296.99	4.75	4.54	138.08	-27.48	-83.89	49.27	40.17	9.10	5.416		
1,400.00	1,391.33	1,402.48	1,395.31	5.17	4.95	131.86	-33.61	-100.18	50.26	40.34	9.92	5.065		
1,500.00	1,490.38	1,502.33	1,493.63	5.58	5.37	125.95	-39.73	-116.48	51.81	41.04	10.77	4.811		
1,600.00	1,589.43	1,602.18	1,591.95	5.99	5.79	120.43	-45.85	-132.78	53.88	42.25	11.63	4.633		
1,700.00	1,688.48	1,702.03	1,690.27	6.40	6.22	115.37	-51.98	-149.08	56.42	43.92	12.50	4.513		
1,800.00	1,787.53	1,801.88	1,788.59	6.82	6.65	110.77	-58.10	-165.37	59.35	45.98	13.37	4.438		
1,900.00	1,886.58	1,901.72	1,886.91	7.23	7.08	106.63	-64.22	-181.67	62.63	48.39	14.24	4.397		
2,000.00	1,985.62	2,001.57	1,985.23	7.65	7.52	102.91	-70.35	-197.97	66.21	51.10	15.11	4.382		
2,100.00	2,084.67	2,101.42	2,083.55	8.06	7.95	99.59	-76.47	-214.26	70.03	54.06	15.97	4.385		
2,200.00	2,183.72	2,201.27	2,181.87	8.47	8.39	96.62	-82.59	-230.56	74.06	57.24	16.83	4.401		
2,300.00	2,282.77	2,301.12	2,280.19	8.89	8.83	93.97	-88.71	-246.86	78.28	60.60	17.68	4.428		
2,400.00	2,381.82	2,400.97	2,378.51	9.30	9.27	91.59	-94.84	-263.16	82.64	64.11	18.53	4.461		
2,500.00	2,480.87	2,500.82	2,476.83	9.72	9.71	89.45	-100.96	-279.45	87.13	67.76	19.37	4.499		
2,600.00	2,579.92	2,600.67	2,575.15	10.13	10.15	87.52	-107.08	-295.75	91.73	71.52	20.21	4.540		
2,700.00	2,678.96	2,700.52	2,673.46	10.55	10.59	85.78	-113.21	-312.05	96.42	75.38	21.04	4.582		
2,800.00	2,778.01	2,800.36	2,771.78	10.96	11.03	84.20	-119.33	-328.35	101.20	79.32	21.88	4.626		
2,900.00	2,877.06	2,900.21	2,870.10	11.38	11.47	82.77	-125.45	-344.64	106.04	83.34	22.71	4.670		
3,000.00	2,976.11	3,000.06	2,968.42	11.79	11.91	81.46	-131.58	-360.94	110.95	87.41	23.54	4.714		
3,100.00	3,075.16	3,099.91	3,066.74	12.21	12.36	80.26	-137.70	-377.24	115.91	91.54	24.36	4.758		
3,200.00	3,174.21	3,199.76	3,165.06	12.62	12.80	79.16	-143.82	-393.53	120.91	95.72	25.19	4.800		
3,300.00	3,273.26	3,299.61	3,263.38	13.04	13.24	78.15	-149.95	-409.83	125.96	99.94	26.01	4.842		
3,400.00	3,372.30	3,399.46	3,361.70	13.45	13.69	77.21	-156.07	-426.13	131.04	104.20	26.83	4.883		
3,500.00	3,471.35	3,499.31	3,460.02	13.87	14.13	76.35	-162.19	-442.43	136.15	108.49	27.66	4.923		
3,600.00	3,570.40	3,599.16	3,558.34	14.28	14.58	75.55	-168.31	-458.72	141.29	112.81	28.48	4.961		
3,700.00	3,669.45	3,699.00	3,656.66	14.70	15.02	74.80	-174.44	-475.02	146.46	117.16	29.30	4.999		
3,800.00	3,768.50	3,798.85	3,754.98	15.11	15.47	74.11	-180.56	-491.32	151.65	121.53	30.12	5.035		
3,900.00	3,867.55	3,898.70	3,853.30	15.53	15.91	73.46	-186.68	-507.62	156.86	125.92	30.94	5.070		
4,000.00	3,966.59	3,996.55	3,951.62	15.95	16.36	72.86	-192.81	-523.91	162.09	130.34	31.76	5.104		
4,100.00	4,065.64	4,098.40	4,049.94	16.36	16.80	72.29	-198.93	-540.21	167.34	134.76	32.58	5.137		
4,200.00	4,164.69	4,198.25	4,148.26	16.78	17.25	71.76	-205.05	-556.51	172.60	139.21	33.39	5.169		
4,300.00	4,263.74	4,298.10	4,246.58	17.19	17.70	71.25	-211.18	-572.80	177.88	143.67	34.21	5.199		
4,400.00	4,362.79	4,397.95	4,344.90	17.61	18.14	70.78	-217.30	-589.10	183.17	148.14	35.03	5.229		
4,500.00	4,461.84	4,497.80	4,443.21	18.02	18.59	70.33	-223.42	-605.40	188.47	152.62	35.85	5.258		
4,600.00	4,560.89	4,597.65	4,541.53	18.44	19.03	69.91	-229.54	-621.70	193.78	157.12	36.66	5.285		
4,700.00	4,659.93	4,697.49	4,639.85	18.85	19.48	69.51	-235.67	-637.99	199.10	161.62	37.48	5.312		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-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							
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
4,800.00	4,758.98	4,797.34	4,738.17	19.27	19.93	69.13	-241.79	-654.29	204.44	166.14	38.30	5.338	
4,900.00	4,858.03	4,897.19	4,836.49	19.69	20.37	68.78	-247.91	-670.59	209.78	170.66	39.12	5.363	
5,000.00	4,957.08	4,997.04	4,934.81	20.10	20.82	68.43	-254.04	-686.89	215.12	175.19	39.93	5.387	
5,100.00	5,056.13	5,096.89	5,033.13	20.52	21.26	68.11	-260.16	-703.18	220.48	179.73	40.75	5.411	
5,200.00	5,155.18	5,196.74	5,131.45	20.93	21.71	67.80	-266.28	-719.48	225.84	184.27	41.56	5.433	
5,300.00	5,254.23	5,296.59	5,229.77	21.35	22.16	67.50	-272.41	-735.78	231.21	188.83	42.38	5.455	
5,400.00	5,353.27	5,396.44	5,328.09	21.76	22.60	67.22	-278.53	-752.07	236.58	193.38	43.20	5.477	
5,500.00	5,452.32	5,496.29	5,426.41	22.18	23.05	66.95	-284.65	-768.37	241.96	197.95	44.01	5.497	
5,600.00	5,551.37	5,596.13	5,524.73	22.60	23.50	66.70	-290.78	-784.67	247.34	202.51	44.83	5.517	
5,700.00	5,650.42	5,695.98	5,623.05	23.01	23.95	66.45	-296.90	-800.97	252.73	207.09	45.65	5.537	
5,800.00	5,749.47	5,795.83	5,721.37	23.43	24.39	66.21	-303.02	-817.26	258.12	211.66	46.46	5.556	
5,900.00	5,848.52	5,895.68	5,819.69	23.84	24.84	65.99	-309.14	-833.56	263.52	216.24	47.28	5.574	
6,000.00	5,947.57	5,995.53	5,918.01	24.26	25.29	65.77	-315.27	-849.86	268.92	220.83	48.09	5.592	
6,100.00	6,046.61	6,095.38	6,016.33	24.67	25.73	65.56	-321.39	-866.15	274.33	225.42	48.91	5.609	
6,200.00	6,145.66	6,195.23	6,114.65	25.09	26.18	65.36	-327.51	-882.45	279.74	230.01	49.72	5.626	
6,300.00	6,244.71	6,295.08	6,212.96	25.50	26.63	65.17	-333.64	-898.75	285.15	234.61	50.54	5.642	
6,400.00	6,343.76	6,394.93	6,311.28	25.92	27.07	64.98	-339.76	-915.05	290.56	239.21	51.36	5.658	
6,500.00	6,442.81	6,494.77	6,409.60	26.34	27.52	64.80	-345.88	-931.34	295.98	243.81	52.17	5.673	
6,600.00	6,541.86	6,594.62	6,507.92	26.75	27.97	64.63	-352.01	-947.64	301.40	248.42	52.99	5.688	
6,700.00	6,640.91	6,694.47	6,606.24	27.17	28.42	64.46	-358.13	-963.94	306.83	253.02	53.80	5.703	
6,800.00	6,739.95	6,794.32	6,704.56	27.58	28.86	64.30	-364.25	-980.24	312.25	257.63	54.62	5.717	
6,900.51	6,839.51	6,881.31	6,790.32	28.00	29.24	64.61	-366.80	-994.40	319.31	264.03	55.28	5.776	
6,950.00	6,888.63	6,921.73	6,830.14	28.20	29.40	35.73	-364.57	-1,000.92	323.95	268.43	55.51	5.835	
7,000.00	6,938.30	6,962.41	6,870.03	28.38	29.55	2.65	-360.04	-1,007.41	328.36	272.71	55.65	5.900	
7,050.00	6,987.78	7,000.00	6,906.63	28.54	29.69	-18.47	-353.82	-1,013.33	332.48	276.88	55.60	5.980	
7,100.00	7,036.82	7,043.35	6,948.36	28.68	29.83	-29.75	-344.24	-1,020.03	336.23	280.58	55.65	6.042	
7,150.00	7,085.18	7,083.67	6,986.61	28.81	29.95	-36.20	-333.05	-1,026.14	339.64	284.12	55.52	6.117	
7,200.00	7,132.63	7,123.92	7,024.12	28.92	30.06	-40.26	-319.72	-1,032.08	342.68	287.35	55.33	6.193	
7,250.00	7,178.95	7,164.13	7,060.79	29.02	30.16	-43.05	-304.30	-1,037.85	345.33	290.25	55.08	6.269	
7,300.00	7,223.89	7,200.00	7,092.75	29.11	30.25	-45.09	-288.81	-1,042.84	347.62	293.05	54.57	6.370	
7,350.00	7,267.25	7,244.52	7,131.29	29.19	30.34	-46.74	-267.35	-1,048.81	349.44	294.97	54.47	6.415	
7,400.00	7,308.81	7,284.74	7,164.93	29.25	30.42	-48.11	-245.92	-1,053.98	350.89	296.75	54.14	6.482	
7,450.00	7,348.36	7,325.02	7,197.38	29.30	30.49	-49.32	-222.58	-1,058.92	351.94	298.14	53.80	6.541	
7,500.00	7,385.73	7,365.37	7,228.54	29.33	30.55	-50.44	-197.38	-1,063.61	352.59	299.10	53.48	6.592	
7,550.00	7,420.72	7,405.83	7,258.33	29.36	30.61	-51.51	-170.38	-1,068.04	352.85	299.65	53.20	6.632	
7,600.00	7,453.16	7,450.00	7,289.09	29.38	30.66	-52.62	-139.01	-1,072.56	352.76	299.59	53.16	6.635	
7,650.00	7,482.91	7,487.14	7,313.43	29.38	30.69	-53.63	-111.20	-1,076.08	352.26	299.45	52.81	6.670	
7,700.00	7,509.80	7,528.04	7,338.57	29.38	30.72	-54.72	-79.13	-1,079.66	351.44	298.71	52.73	6.665	
7,750.00	7,533.71	7,569.15	7,361.97	29.36	30.75	-55.85	-45.50	-1,082.93	350.31	297.56	52.75	6.641	
7,800.00	7,554.53	7,610.49	7,383.54	29.35	30.78	-57.03	-10.37	-1,085.87	348.88	296.01	52.87	6.599	
7,850.00	7,572.14	7,650.00	7,402.27	29.32	30.80	-58.20	24.33	-1,088.34	347.20	294.17	53.03	6.548	
7,900.00	7,586.48	7,693.96	7,420.85	29.29	30.81	-59.54	64.10	-1,090.71	345.26	291.82	53.44	6.460	
7,950.00	7,597.46	7,736.16	7,436.39	29.26	30.83	-60.89	103.28	-1,092.59	343.14	289.25	53.89	6.367	
8,000.00	7,605.04	7,778.70	7,449.73	29.22	30.84	-62.30	143.64	-1,094.08	340.86	286.42	54.44	6.262	
8,050.00	7,609.17	7,821.62	7,460.77	29.19	30.86	-63.78	185.10	-1,095.17	338.46	283.38	55.08	6.145	
8,084.63	7,610.00	7,850.00	7,466.72	29.18	30.88	-64.79	212.84	-1,095.67	336.76	281.23	55.53	6.064	
8,100.00	7,610.00	7,864.99	7,469.42	29.18	30.88	-65.24	227.57	-1,095.86	336.04	280.27	55.77	6.026	
8,200.00	7,610.00	7,953.88	7,479.15	29.43	30.96	-66.90	315.88	-1,095.92	333.54	276.55	56.98	5.853	
8,228.24	7,610.00	7,979.30	7,479.93	29.56	30.99	-67.04	341.28	-1,095.60	333.42	276.14	57.28	5.821	
8,300.00	7,610.00	8,049.99	7,480.00	29.94	31.10	-67.07	411.96	-1,094.38	333.63	275.65	57.98	5.754	
8,400.00	7,610.00	8,149.99	7,480.00	30.54	31.36	-67.09	511.95	-1,092.63	333.95	274.88	59.07	5.653	
8,500.00	7,610.00	8,249.99	7,480.00	31.21	31.74	-67.11	611.93	-1,090.89	334.27	273.99	60.29	5.545	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-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							
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	7,610.00	8,349.99	7,480.00	31.93	32.25	-67.14	711.92	-1,089.14	334.60	272.97	61.62	5.430		
8,700.00	7,610.00	8,449.99	7,480.00	32.71	32.86	-67.16	811.90	-1,087.40	334.92	271.85	63.06	5.311		
8,800.00	7,610.00	8,549.99	7,480.00	33.54	33.55	-67.18	911.88	-1,085.65	335.24	270.63	64.61	5.189		
8,900.00	7,610.00	8,649.99	7,480.00	34.42	34.32	-67.21	1,011.87	-1,083.91	335.56	269.31	66.25	5.065		
9,000.00	7,610.00	8,749.99	7,480.00	35.34	35.15	-67.23	1,111.85	-1,082.16	335.88	267.90	67.99	4.940		
9,100.00	7,610.00	8,849.99	7,480.00	36.31	36.04	-67.25	1,211.84	-1,080.42	336.20	266.40	69.80	4.817		
9,200.00	7,610.00	8,949.99	7,480.00	37.31	36.97	-67.28	1,311.82	-1,078.67	336.53	264.83	71.69	4.694		
9,300.00	7,610.00	9,049.99	7,480.00	38.35	37.95	-67.30	1,411.81	-1,076.93	336.85	263.19	73.66	4.573		
9,400.00	7,610.00	9,149.99	7,480.00	39.42	38.97	-67.32	1,511.79	-1,075.18	337.17	261.48	75.69	4.455		
9,500.00	7,610.00	9,249.99	7,480.00	40.53	40.02	-67.34	1,611.77	-1,073.44	337.49	259.72	77.77	4.339		
9,600.00	7,610.00	9,349.98	7,480.00	41.66	41.11	-67.37	1,711.76	-1,071.69	337.81	257.90	79.92	4.227		
9,700.00	7,610.00	9,449.98	7,480.00	42.82	42.22	-67.39	1,811.74	-1,069.95	338.14	256.02	82.11	4.118		
9,800.00	7,610.00	9,549.98	7,480.00	44.00	43.37	-67.41	1,911.73	-1,068.20	338.46	254.10	84.36	4.012		
9,900.00	7,610.00	9,649.98	7,480.00	45.21	44.54	-67.44	2,011.71	-1,066.46	338.78	252.14	86.64	3.910		
10,000.00	7,610.00	9,749.98	7,480.00	46.44	45.74	-67.46	2,111.69	-1,064.71	339.10	250.13	88.97	3.811		
10,100.00	7,610.00	9,849.98	7,480.00	47.69	46.95	-67.48	2,211.68	-1,062.97	339.43	248.09	91.34	3.716		
10,200.00	7,610.00	9,949.98	7,480.00	48.95	48.19	-67.50	2,311.66	-1,061.22	339.75	246.01	93.74	3.625		
10,300.00	7,610.00	10,049.98	7,480.00	50.23	49.45	-67.53	2,411.65	-1,059.47	340.07	243.90	96.17	3.536		
10,400.00	7,610.00	10,149.98	7,480.00	51.53	50.72	-67.55	2,511.63	-1,057.73	340.39	241.76	98.63	3.451		
10,500.00	7,610.00	10,249.98	7,480.00	52.84	52.01	-67.57	2,611.62	-1,055.98	340.72	239.60	101.12	3.369		
10,600.00	7,610.00	10,349.98	7,480.00	54.17	53.31	-67.59	2,711.60	-1,054.24	341.04	237.40	103.63	3.291		
10,700.00	7,610.00	10,449.98	7,480.00	55.51	54.63	-67.61	2,811.58	-1,052.49	341.36	235.19	106.17	3.215		
10,800.00	7,610.00	10,549.98	7,480.00	56.86	55.96	-67.64	2,911.57	-1,050.75	341.68	232.95	108.73	3.142		
10,900.00	7,610.00	10,649.98	7,480.00	58.22	57.30	-67.66	3,011.55	-1,049.00	342.01	230.69	111.32	3.072		
11,000.00	7,610.00	10,749.98	7,480.00	59.59	58.66	-67.68	3,111.54	-1,047.26	342.33	228.41	113.92	3.005		
11,100.00	7,610.00	10,849.98	7,480.00	60.97	60.02	-67.70	3,211.52	-1,045.51	342.65	226.11	116.54	2.940		
11,200.00	7,610.00	10,949.97	7,480.00	62.35	61.40	-67.73	3,311.50	-1,043.77	342.98	223.80	119.18	2.878		
11,300.00	7,610.00	11,049.97	7,480.00	63.75	62.78	-67.75	3,411.49	-1,042.02	343.30	221.47	121.83	2.818		
11,400.00	7,610.00	11,149.97	7,480.00	65.15	64.17	-67.77	3,511.47	-1,040.28	343.62	219.12	124.50	2.760		
11,500.00	7,610.00	11,249.97	7,480.00	66.57	65.57	-67.79	3,611.46	-1,038.53	343.95	216.76	127.18	2.704		
11,600.00	7,610.00	11,349.97	7,480.00	67.98	66.98	-67.81	3,711.44	-1,036.79	344.27	214.39	129.88	2.651		
11,700.00	7,610.00	11,449.97	7,480.00	69.41	68.39	-67.84	3,811.43	-1,035.04	344.59	212.01	132.58	2.599		
11,800.00	7,610.00	11,549.97	7,480.00	70.84	69.81	-67.86	3,911.41	-1,033.30	344.92	209.61	135.30	2.549		
11,900.00	7,610.00	11,649.97	7,480.00	72.27	71.24	-67.88	4,011.39	-1,031.55	345.24	207.20	138.04	2.501		
12,000.00	7,610.00	11,749.97	7,480.00	73.72	72.67	-67.90	4,111.38	-1,029.81	345.56	204.78	140.78	2.455		
12,100.00	7,610.00	11,849.97	7,480.00	75.16	74.11	-67.92	4,211.36	-1,028.06	345.89	202.36	143.53	2.410		
12,200.00	7,610.00	11,949.97	7,480.00	76.61	75.55	-67.94	4,311.35	-1,026.32	346.21	199.92	146.29	2.367		
12,300.00	7,610.00	12,049.97	7,480.00	78.07	77.00	-67.97	4,411.33	-1,024.57	346.53	197.47	149.06	2.325		
12,400.00	7,610.00	12,149.97	7,480.00	79.53	78.46	-67.99	4,511.31	-1,022.82	346.86	195.02	151.84	2.284		
12,500.00	7,610.00	12,249.97	7,480.00	80.99	79.91	-68.01	4,611.30	-1,021.08	347.18	192.55	154.63	2.245		
12,600.00	7,610.00	12,349.97	7,480.00	82.46	81.37	-68.03	4,711.28	-1,019.33	347.50	190.08	157.42	2.207		
12,700.00	7,610.00	12,449.97	7,480.00	83.93	82.84	-68.05	4,811.27	-1,017.59	347.83	187.60	160.22	2.171		
12,800.00	7,610.00	12,549.97	7,480.00	85.41	84.31	-68.07	4,911.25	-1,015.84	348.15	185.12	163.03	2.135		
12,900.00	7,610.00	12,649.96	7,480.00	86.88	85.78	-68.10	5,011.24	-1,014.10	348.47	182.63	165.85	2.101		
13,000.00	7,610.00	12,749.96	7,480.00	88.37	87.26	-68.12	5,111.22	-1,012.35	348.80	180.13	168.67	2.068		
13,100.00	7,610.00	12,849.96	7,480.00	89.85	88.74	-68.14	5,211.20	-1,010.61	349.12	177.63	171.50	2.036		
13,200.00	7,610.00	12,949.96	7,480.00	91.34	90.22	-68.16	5,311.19	-1,008.86	349.45	175.12	174.33	2.005		
13,300.00	7,610.00	13,049.96	7,480.00	92.83	91.71	-68.18	5,411.17	-1,007.12	349.77	172.60	177.17	1.974		
13,400.00	7,610.00	13,149.96	7,480.00	94.32	93.19	-68.20	5,511.16	-1,005.37	350.09	170.08	180.01	1.945		
13,500.00	7,610.00	13,249.96	7,480.00	95.81	94.68	-68.22	5,611.14	-1,003.63	350.42	167.56	182.86	1.916		
13,600.00	7,610.00	13,348.85	7,480.00	97.31	96.16	-68.25	5,710.01	-1,001.92	350.76	165.01	185.75	1.888		
13,700.00	7,610.00	13,438.59	7,480.00	98.81	97.52	-68.37	5,799.75	-1,002.06	352.86	163.91	188.95	1.867		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4E-26H-P268 - OH - PLAN #3													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	7,610.00	13,528.11	7,480.00	100.31	98.89	-68.65	5,889.22	-1,005.01	357.87	165.72	192.14	1.863		
13,894.63	7,610.00	13,612.47	7,480.00	101.73	100.21	-69.06	5,973.41	-1,010.34	365.29	170.14	195.15	1.872		
13,900.00	7,610.00	13,617.25	7,480.00	101.81	100.28	-69.09	5,978.17	-1,010.72	365.78	170.46	195.32	1.873		
14,000.00	7,610.00	13,706.27	7,480.00	103.35	101.69	-69.53	6,066.79	-1,019.18	372.01	173.73	198.29	1.876		
14,100.00	7,610.00	13,800.00	7,480.00	104.93	103.20	-69.58	6,159.76	-1,031.06	372.83	171.71	201.12	1.854		
14,200.00	7,610.00	13,884.44	7,480.00	106.56	104.57	-69.26	6,243.14	-1,044.36	368.14	164.96	203.18	1.812		
14,300.00	7,610.00	13,973.31	7,480.00	108.20	106.03	-68.53	6,330.44	-1,061.00	358.07	153.03	205.04	1.746		
14,385.81	7,610.00	14,049.32	7,480.00	109.62	107.29	-67.52	6,404.65	-1,077.38	345.18	138.94	206.24	1.674		
14,400.00	7,610.00	14,061.86	7,480.00	109.86	107.50	-67.37	6,416.86	-1,080.27	342.76	136.36	206.40	1.661		
14,500.00	7,610.00	14,150.87	7,480.00	111.52	108.99	-66.36	6,503.09	-1,102.33	327.40	119.91	207.49	1.578		
14,600.00	7,610.00	14,245.56	7,480.00	113.20	110.59	-65.39	6,594.16	-1,128.24	314.57	105.42	209.15	1.504		
14,700.00	7,610.00	14,344.61	7,480.00	114.90	112.28	-64.31	6,689.34	-1,155.66	302.15	90.92	211.23	1.430 Level 3		
14,800.00	7,610.00	14,443.67	7,480.00	116.61	113.97	-63.13	6,784.53	-1,183.09	289.85	76.71	213.14	1.360 Level 3		
14,886.04	7,610.00	14,528.90	7,480.00	118.09	115.43	-62.04	6,866.43	-1,206.68	279.37	64.77	214.60	1.302 Level 3, SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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: O-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	89.75	0.04	10.07	10.07					
100.00	100.00	100.00	100.00	0.14	0.14	89.75	0.04	10.07	10.07	9.79	0.28	36.483		
200.00	200.00	200.00	200.00	0.50	0.50	89.75	0.04	10.07	10.07	9.08	0.99	10.142 CC, ES		
300.00	299.98	299.98	299.98	0.84	0.85	-118.96	0.04	10.07	10.80	9.10	1.70	6.368		
350.00	349.93	349.93	349.93	1.02	1.03	-128.08	0.04	10.07	12.01	9.96	2.05	5.864		
400.00	399.85	399.85	399.85	1.19	1.21	-148.62	0.04	10.07	14.21	11.81	2.40	5.911		
500.00	499.53	499.53	499.53	1.55	1.57	-170.51	0.04	10.07	21.68	18.56	3.12	6.949		
600.00	598.92	598.92	598.92	1.93	1.93	-179.31	0.04	10.07	32.64	28.81	3.84	8.502		
634.55	633.17	633.17	633.17	2.06	2.05	179.07	0.04	10.07	37.20	33.11	4.09	9.091		
700.00	697.99	697.99	697.99	2.32	2.28	179.25	0.04	10.07	46.21	41.65	4.56	10.135		
800.00	797.04	797.04	797.04	2.72	2.64	179.42	0.04	10.07	59.97	54.70	5.27	11.374		
900.00	896.09	898.58	898.56	3.12	2.99	179.62	-1.04	8.77	72.08	66.09	5.99	12.027		
1,000.00	995.14	1,000.94	1,000.78	3.53	3.33	179.93	-4.46	4.65	80.66	73.94	6.72	12.001		
1,100.00	1,094.19	1,103.80	1,103.23	3.93	3.69	-179.62	-10.25	-2.30	85.68	78.22	7.46	11.484		
1,200.00	1,193.24	1,206.89	1,205.52	4.34	4.05	-179.03	-18.40	-12.11	87.13	78.92	8.20	10.619		
1,300.00	1,292.28	1,307.27	1,304.83	4.75	4.42	-178.32	-27.75	-23.35	86.37	77.45	8.92	9.685		
1,400.00	1,391.33	1,407.26	1,403.75	5.17	4.80	-177.59	-37.08	-34.58	85.60	75.97	9.63	8.886		
1,500.00	1,490.38	1,507.25	1,502.67	5.58	5.19	-176.86	-46.42	-45.80	84.85	74.50	10.35	8.196		
1,600.00	1,589.43	1,607.24	1,601.59	5.99	5.58	-176.11	-55.75	-57.02	84.11	73.03	11.08	7.593		
1,700.00	1,688.48	1,707.23	1,700.51	6.40	5.97	-175.35	-65.08	-68.24	83.38	71.58	11.81	7.063		
1,800.00	1,787.53	1,807.22	1,799.43	6.82	6.37	-174.58	-74.41	-79.47	82.67	70.14	12.54	6.595		
1,900.00	1,886.58	1,907.21	1,898.35	7.23	6.77	-173.79	-83.75	-90.69	81.98	68.71	13.27	6.177		
2,000.00	1,985.62	2,007.20	1,997.27	7.65	7.17	-172.99	-93.08	-101.91	81.30	67.29	14.01	5.803		
2,100.00	2,084.67	2,107.20	2,096.19	8.06	7.58	-172.18	-102.41	-113.13	80.64	65.89	14.75	5.467		
2,200.00	2,183.72	2,207.19	2,195.11	8.47	7.99	-171.35	-111.74	-124.36	79.99	64.50	15.49	5.163		
2,300.00	2,282.77	2,307.18	2,294.03	8.89	8.40	-170.51	-121.07	-135.58	79.36	63.12	16.24	4.887		
2,400.00	2,381.82	2,407.17	2,392.95	9.30	8.81	-169.66	-130.41	-146.80	78.75	61.76	16.99	4.635		
2,500.00	2,480.87	2,507.16	2,491.87	9.72	9.22	-168.79	-139.74	-158.02	78.15	60.41	17.74	4.405		
2,600.00	2,579.92	2,607.15	2,590.79	10.13	9.63	-167.91	-149.07	-169.25	77.57	59.08	18.49	4.194		
2,700.00	2,678.96	2,707.14	2,689.71	10.55	10.04	-167.02	-158.40	-180.47	77.02	57.76	19.25	4.000		
2,800.00	2,778.01	2,807.13	2,788.63	10.96	10.46	-166.12	-167.74	-191.69	76.48	56.46	20.01	3.821		
2,900.00	2,877.06	2,907.12	2,887.55	11.38	10.87	-165.20	-177.07	-202.91	75.96	55.18	20.78	3.656		
3,000.00	2,976.11	3,007.12	2,986.47	11.79	11.29	-164.27	-186.40	-214.14	75.46	53.91	21.55	3.502		
3,100.00	3,075.16	3,107.11	3,085.39	12.21	11.70	-163.32	-195.73	-225.36	74.98	52.66	22.32	3.360		
3,200.00	3,174.21	3,207.10	3,184.31	12.62	12.12	-162.37	-205.07	-236.58	74.52	51.43	23.09	3.227		
3,300.00	3,273.26	3,307.09	3,283.23	13.04	12.53	-161.40	-214.40	-247.80	74.08	50.21	23.87	3.104		
3,400.00	3,372.30	3,407.08	3,382.15	13.45	12.95	-160.43	-223.73	-259.03	73.66	49.01	24.65	2.988		
3,500.00	3,471.35	3,507.07	3,481.07	13.87	13.37	-159.44	-233.06	-270.25	73.27	47.83	25.44	2.880		
3,600.00	3,570.40	3,607.06	3,579.99	14.28	13.79	-158.44	-242.40	-281.47	72.89	46.67	26.23	2.779		
3,700.00	3,669.45	3,707.05	3,678.91	14.70	14.20	-157.43	-251.73	-292.69	72.54	45.52	27.02	2.685		
3,800.00	3,768.50	3,807.05	3,777.83	15.11	14.62	-156.41	-261.06	-303.92	72.21	44.40	27.82	2.596		
3,900.00	3,867.55	3,907.04	3,876.75	15.53	15.04	-155.39	-270.39	-315.14	71.91	43.29	28.62	2.512		
4,000.00	3,966.59	4,007.03	3,975.67	15.95	15.46	-154.35	-279.73	-326.36	71.63	42.20	29.43	2.434		
4,100.00	4,065.64	4,107.02	4,074.59	16.36	15.88	-153.31	-289.06	-337.58	71.37	41.13	30.24	2.360		
4,200.00	4,164.69	4,207.01	4,173.51	16.78	16.30	-152.26	-298.39	-348.81	71.13	40.08	31.05	2.291		
4,300.00	4,263.74	4,307.00	4,272.43	17.19	16.72	-151.20	-307.72	-360.03	70.92	39.05	31.87	2.225		
4,400.00	4,362.79	4,406.99	4,371.35	17.61	17.13	-150.14	-317.06	-371.25	70.74	38.04	32.70	2.163		
4,500.00	4,461.84	4,506.98	4,470.27	18.02	17.55	-149.07	-326.39	-382.47	70.57	37.05	33.52	2.105		
4,600.00	4,560.89	4,606.97	4,569.19	18.44	17.97	-148.00	-335.72	-393.70	70.44	36.08	34.36	2.050		
4,700.00	4,659.93	4,706.97	4,668.11	18.85	18.39	-146.92	-345.05	-404.92	70.32	35.13	35.19	1.998		
4,800.00	4,758.98	4,806.96	4,767.03	19.27	18.81	-145.84	-354.39	-416.14	70.24	34.20	36.04	1.949		
4,900.00	4,858.03	4,906.95	4,865.95	19.69	19.23	-144.76	-363.72	-427.36	70.17	33.29	36.88	1.903		

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 4F-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 4F-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 #3	<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: O-MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.00	4,957.08	5,006.94	4,964.87	20.10	19.65	-143.68	-373.05	-438.59	70.14	32.41	37.73	1.859	
5,099.43	5,055.56	5,106.36	5,063.23	20.51	20.07	-142.60	-382.33	-449.74	70.12	31.54	38.58	1.818	
5,100.00	5,056.13	5,106.93	5,063.79	20.52	20.07	-142.59	-382.38	-449.81	70.12	31.54	38.58	1.817	
5,200.00	5,155.18	5,206.92	5,162.71	20.93	20.49	-141.51	-391.72	-461.03	70.14	30.69	39.44	1.778	
5,300.00	5,254.23	5,306.91	5,261.63	21.35	20.91	-140.42	-401.05	-472.25	70.17	29.87	40.30	1.741	
5,400.00	5,353.27	5,406.90	5,360.55	21.76	21.33	-139.34	-410.38	-483.48	70.24	29.07	41.17	1.706	
5,500.00	5,452.32	5,506.90	5,459.47	22.18	21.76	-138.26	-419.71	-494.70	70.33	28.29	42.03	1.673	
5,600.00	5,551.37	5,606.89	5,558.40	22.60	22.18	-137.19	-429.05	-505.92	70.44	27.53	42.90	1.642	
5,700.00	5,650.42	5,706.88	5,657.32	23.01	22.60	-136.11	-438.38	-517.14	70.58	26.80	43.78	1.612	
5,800.00	5,749.47	5,806.87	5,756.24	23.43	23.02	-135.05	-447.71	-528.37	70.74	26.08	44.65	1.584	
5,900.00	5,848.52	5,906.86	5,855.16	23.84	23.44	-133.98	-457.04	-539.59	70.92	25.39	45.53	1.558	
6,000.00	5,947.57	6,006.85	5,954.08	24.26	23.86	-132.93	-466.38	-550.81	71.14	24.72	46.41	1.533	
6,100.00	6,046.61	6,106.84	6,053.00	24.67	24.28	-131.88	-475.71	-562.03	71.37	24.07	47.30	1.509	
6,200.00	6,145.66	6,206.83	6,151.92	25.09	24.70	-130.83	-485.04	-573.26	71.63	23.45	48.18	1.487 Level 3	
6,300.00	6,244.71	6,306.83	6,250.84	25.50	25.12	-129.80	-494.37	-584.48	71.91	22.84	49.07	1.466 Level 3	
6,400.00	6,343.76	6,406.82	6,349.76	25.92	25.54	-128.77	-503.70	-595.70	72.22	22.26	49.96	1.446 Level 3	
6,500.00	6,442.81	6,506.81	6,448.68	26.34	25.96	-127.75	-513.04	-606.92	72.55	21.70	50.84	1.427 Level 3	
6,600.00	6,541.86	6,606.80	6,547.60	26.75	26.39	-126.75	-522.37	-618.15	72.90	21.16	51.73	1.409 Level 3	
6,700.00	6,640.91	6,707.95	6,647.74	27.17	26.81	-126.43	-530.88	-629.50	72.99	20.43	52.56	1.389 Level 3	
6,800.00	6,739.95	6,809.87	6,748.88	27.58	27.17	-135.03	-527.95	-640.91	70.36	17.82	52.54	1.339 Level 3	
6,854.19	6,793.63	6,863.22	6,801.39	27.81	27.33	-144.45	-520.66	-646.80	69.38	17.29	52.08	1.332 Level 3, SF	
6,900.51	6,839.51	6,907.27	6,844.25	28.00	27.45	-154.58	-511.69	-651.60	70.59	19.14	51.46	1.372 Level 3	
6,950.00	6,888.63	6,953.02	6,888.08	28.20	27.56	164.67	-499.59	-656.49	74.91	24.25	50.66	1.479 Level 3	
7,000.00	6,938.30	6,998.39	6,930.71	28.38	27.66	121.27	-484.82	-661.22	81.78	31.98	49.80	1.642	
7,050.00	6,987.78	7,042.97	6,971.62	28.54	27.74	91.67	-467.70	-665.76	90.42	41.60	48.83	1.852	
7,100.00	7,036.82	7,086.82	7,010.75	28.68	27.82	73.52	-448.40	-670.07	100.20	52.50	47.70	2.100	
7,150.00	7,085.18	7,130.01	7,048.07	28.81	27.88	61.59	-427.06	-674.18	110.62	64.20	46.42	2.383	
7,200.00	7,132.63	7,172.59	7,083.54	28.92	27.93	53.14	-403.85	-678.06	121.34	76.35	44.99	2.697	
7,250.00	7,178.95	7,214.60	7,117.15	29.02	27.98	46.84	-378.91	-681.73	132.10	88.69	43.41	3.043	
7,300.00	7,223.89	7,256.10	7,148.86	29.11	28.02	41.97	-352.38	-685.17	142.71	101.01	41.70	3.422	
7,350.00	7,267.25	7,300.00	7,180.68	29.19	28.05	37.98	-322.34	-688.61	153.09	112.59	40.49	3.781	
7,400.00	7,308.81	7,337.73	7,206.53	29.25	28.06	34.97	-295.00	-691.39	163.01	125.02	37.99	4.291	
7,450.00	7,348.36	7,377.94	7,232.46	29.30	28.08	32.39	-264.40	-694.15	172.51	136.50	36.01	4.791	
7,500.00	7,385.73	7,417.80	7,256.44	29.33	28.08	30.25	-232.67	-696.70	181.47	147.50	33.97	5.342	
7,550.00	7,420.72	7,457.35	7,278.47	29.36	28.09	28.45	-199.92	-699.01	189.85	157.95	31.90	5.951	
7,600.00	7,453.16	7,500.00	7,300.17	29.38	28.08	26.86	-163.27	-701.27	197.64	167.17	30.47	6.485	
7,650.00	7,482.91	7,535.61	7,316.60	29.38	28.08	25.64	-131.73	-702.96	204.70	176.93	27.76	7.373	
7,700.00	7,509.80	7,574.39	7,332.70	29.38	28.07	24.55	-96.49	-704.60	211.09	185.34	25.75	8.196	
7,750.00	7,533.71	7,612.98	7,346.82	29.36	28.05	23.62	-60.61	-706.01	216.76	192.93	23.84	9.093	
7,800.00	7,554.53	7,650.00	7,358.54	29.35	28.04	22.85	-25.52	-707.15	221.70	199.83	21.87	10.139	
7,850.00	7,572.14	7,689.67	7,369.08	29.32	28.02	22.18	12.71	-708.14	225.86	205.35	20.51	11.013	
7,900.00	7,586.48	7,727.83	7,377.22	29.29	28.01	21.63	49.98	-708.86	229.25	210.01	19.23	11.920	
7,950.00	7,597.46	7,765.90	7,383.37	29.26	28.00	21.19	87.54	-709.36	231.84	213.52	18.32	12.655	
8,000.00	7,605.04	7,800.00	7,387.18	29.22	28.00	20.87	121.42	-709.61	233.68	215.95	17.73	13.180	
8,050.00	7,609.17	7,841.85	7,389.67	29.19	28.03	20.59	163.19	-709.67	234.63	216.79	17.84	13.149	
8,084.63	7,610.00	7,869.51	7,390.00	29.18	28.08	20.46	190.84	-709.57	234.82	216.73	18.10	12.975	
8,100.00	7,610.00	7,884.88	7,390.00	29.18	28.11	20.41	206.22	-709.49	234.74	216.56	18.18	12.910	
8,200.00	7,610.00	7,984.87	7,390.00	29.43	28.51	20.05	306.20	-708.96	234.20	215.36	18.84	12.434	
8,300.00	7,610.00	8,084.85	7,390.00	29.94	29.05	19.69	406.19	-708.44	233.66	214.03	19.63	11.901	
8,400.00	7,610.00	8,184.84	7,390.00	30.54	29.68	19.32	506.18	-707.91	233.14	212.58	20.56	11.339	
8,500.00	7,610.00	8,284.83	7,390.00	31.21	30.37	18.96	606.16	-707.39	232.62	211.03	21.60	10.772	
8,600.00	7,610.00	8,384.82	7,390.00	31.93	31.12	18.59	706.15	-706.87	232.12	209.40	22.72	10.216	

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 4F-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 4F-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 #3	<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				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	7,610.00	8,484.80	7,390.00	32.71	31.93	18.22	806.13	-706.34	231.62	207.70	23.92	9.683		
8,800.00	7,610.00	8,584.79	7,390.00	33.54	32.80	17.85	906.12	-705.82	231.13	205.95	25.18	9.179		
8,900.00	7,610.00	8,684.78	7,390.00	34.42	33.71	17.48	1,006.11	-705.30	230.66	204.17	26.49	8.707		
9,000.00	7,610.00	8,784.77	7,390.00	35.34	34.67	17.11	1,106.09	-704.77	230.19	202.35	27.84	8.267		
9,100.00	7,610.00	8,884.76	7,390.00	36.31	35.67	16.74	1,206.08	-704.25	229.73	200.51	29.23	7.860		
9,200.00	7,610.00	8,984.74	7,390.00	37.31	36.71	16.36	1,306.07	-703.73	229.29	198.65	30.64	7.484		
9,300.00	7,610.00	9,084.73	7,390.00	38.35	37.78	15.98	1,406.05	-703.20	228.85	196.78	32.07	7.136		
9,400.00	7,610.00	9,184.72	7,390.00	39.42	38.89	15.60	1,506.04	-702.68	228.42	194.90	33.52	6.815		
9,500.00	7,610.00	9,284.71	7,390.00	40.53	40.03	15.22	1,606.03	-702.16	228.00	193.03	34.98	6.518		
9,600.00	7,610.00	9,384.69	7,390.00	41.66	41.20	14.84	1,706.01	-701.63	227.60	191.15	36.45	6.244		
9,700.00	7,610.00	9,484.68	7,390.00	42.82	42.39	14.46	1,806.00	-701.11	227.20	189.27	37.93	5.990		
9,800.00	7,610.00	9,584.67	7,390.00	44.00	43.61	14.08	1,905.98	-700.59	226.81	187.39	39.42	5.754		
9,900.00	7,610.00	9,684.66	7,390.00	45.21	44.85	13.69	2,005.97	-700.06	226.43	185.52	40.91	5.535		
10,000.00	7,610.00	9,784.64	7,390.00	46.44	46.11	13.30	2,105.96	-699.54	226.07	183.66	42.41	5.331		
10,100.00	7,610.00	9,884.63	7,390.00	47.69	47.39	12.92	2,205.94	-699.01	225.71	181.81	43.90	5.141		
10,200.00	7,610.00	9,984.62	7,390.00	48.95	48.68	12.53	2,305.93	-698.49	225.37	179.96	45.40	4.964		
10,300.00	7,610.00	10,084.61	7,390.00	50.23	49.99	12.14	2,405.92	-697.97	225.03	178.13	46.90	4.798		
10,400.00	7,610.00	10,184.60	7,390.00	51.53	51.32	11.74	2,505.90	-697.44	224.71	176.30	48.41	4.642		
10,500.00	7,610.00	10,284.58	7,390.00	52.84	52.66	11.35	2,605.89	-696.92	224.39	174.48	49.91	4.496		
10,600.00	7,610.00	10,384.57	7,390.00	54.17	54.01	10.96	2,705.87	-696.40	224.09	172.67	51.41	4.359		
10,700.00	7,610.00	10,484.56	7,390.00	55.51	55.38	10.56	2,805.86	-695.87	223.79	170.88	52.92	4.229		
10,800.00	7,610.00	10,584.55	7,390.00	56.86	56.75	10.17	2,905.85	-695.35	223.51	169.09	54.42	4.107		
10,900.00	7,610.00	10,684.53	7,390.00	58.22	58.14	9.77	3,005.83	-694.83	223.24	167.31	55.92	3.992		
11,000.00	7,610.00	10,784.52	7,390.00	59.59	59.53	9.37	3,105.82	-694.30	222.98	165.55	57.43	3.883		
11,074.79	7,610.00	10,858.75	7,390.00	60.62	60.57	9.17	3,180.04	-693.56	222.85	164.27	58.58	3.804		
11,100.00	7,610.00	10,883.85	7,390.00	60.97	60.92	9.18	3,205.14	-692.97	222.86	163.87	58.99	3.778		
11,200.00	7,610.00	10,983.85	7,390.00	62.35	62.32	9.26	3,305.11	-690.58	222.90	162.28	60.62	3.677		
11,300.00	7,610.00	11,083.85	7,390.00	63.75	63.72	9.34	3,405.08	-688.18	222.95	160.70	62.25	3.581		
11,400.00	7,610.00	11,183.85	7,390.00	65.15	65.13	9.41	3,505.05	-685.79	223.00	159.11	63.89	3.490		
11,500.00	7,610.00	11,283.85	7,390.00	66.57	66.55	9.49	3,605.02	-683.39	223.05	157.52	65.53	3.404		
11,600.00	7,610.00	11,383.85	7,390.00	67.98	67.98	9.56	3,704.99	-681.00	223.10	155.93	67.17	3.321		
11,700.00	7,610.00	11,483.85	7,390.00	69.41	69.41	9.64	3,804.96	-678.60	223.15	154.34	68.81	3.243		
11,800.00	7,610.00	11,583.85	7,390.00	70.84	70.85	9.72	3,904.93	-676.21	223.20	152.74	70.46	3.168		
11,900.00	7,610.00	11,683.85	7,390.00	72.27	72.29	9.79	4,004.90	-673.81	223.25	151.14	72.11	3.096		
12,000.00	7,610.00	11,783.85	7,390.00	73.72	73.74	9.87	4,104.87	-671.42	223.30	149.54	73.77	3.027		
12,100.00	7,610.00	11,883.84	7,390.00	75.16	75.19	9.94	4,204.84	-669.02	223.36	147.93	75.42	2.961		
12,200.00	7,610.00	11,983.84	7,390.00	76.61	76.64	10.02	4,304.82	-666.63	223.41	146.33	77.08	2.898		
12,300.00	7,610.00	12,083.84	7,390.00	78.07	78.10	10.10	4,404.79	-664.23	223.46	144.72	78.74	2.838		
12,400.00	7,610.00	12,183.84	7,390.00	79.53	79.57	10.17	4,504.76	-661.84	223.51	143.11	80.41	2.780		
12,500.00	7,610.00	12,283.84	7,390.00	80.99	81.04	10.25	4,604.73	-659.44	223.57	141.49	82.08	2.724		
12,600.00	7,610.00	12,383.84	7,390.00	82.46	82.51	10.32	4,704.70	-657.05	223.62	139.87	83.75	2.670		
12,700.00	7,610.00	12,483.84	7,390.00	83.93	83.98	10.40	4,804.67	-654.65	223.67	138.26	85.42	2.619		
12,800.00	7,610.00	12,583.84	7,390.00	85.41	85.46	10.48	4,904.64	-652.26	223.73	136.63	87.09	2.569		
12,900.00	7,610.00	12,683.84	7,390.00	86.88	86.94	10.55	5,004.61	-649.86	223.78	135.01	88.77	2.521		
13,000.00	7,610.00	12,783.84	7,390.00	88.37	88.43	10.63	5,104.58	-647.47	223.84	133.39	90.45	2.475		
13,100.00	7,610.00	12,883.84	7,390.00	89.85	89.92	10.70	5,204.55	-645.07	223.89	131.76	92.14	2.430		
13,200.00	7,610.00	12,983.84	7,390.00	91.34	91.41	10.78	5,304.52	-642.68	223.95	130.13	93.82	2.387		
13,300.00	7,610.00	13,083.84	7,390.00	92.83	92.90	10.85	5,404.49	-640.28	224.01	128.49	95.51	2.345		
13,400.00	7,610.00	13,183.84	7,390.00	94.32	94.39	10.93	5,504.47	-637.89	224.06	126.86	97.21	2.305		
13,500.00	7,610.00	13,283.84	7,390.00	95.81	95.89	11.00	5,604.44	-635.50	224.12	125.22	98.90	2.266		
13,600.00	7,610.00	13,383.84	7,390.00	97.31	97.39	11.08	5,704.41	-633.10	224.18	123.58	100.60	2.228		
13,700.00	7,610.00	13,483.84	7,390.00	98.81	98.89	11.16	5,804.38	-630.71	224.24	121.94	102.30	2.192		

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 4F-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 4F-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 #3	<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						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	7,610.00	13,585.32	7,390.00	100.31	100.43	10.80	5,905.85	-630.01	223.97	120.27	103.70	2.160		
13,894.63	7,610.00	13,681.16	7,390.00	101.73	101.91	9.63	6,001.66	-632.65	223.15	118.69	104.47	2.136		
13,900.00	7,610.00	13,686.60	7,390.00	101.81	101.99	9.54	6,007.08	-632.89	223.10	118.60	104.50	2.135		
14,000.00	7,610.00	13,787.75	7,390.00	103.35	103.58	8.66	6,108.03	-639.35	222.54	116.95	105.59	2.108		
14,015.36	7,610.00	13,803.29	7,390.00	103.59	103.82	8.65	6,123.51	-640.65	222.53	116.71	105.82	2.103		
14,100.00	7,610.00	13,888.06	7,390.00	104.93	105.17	9.33	6,207.92	-648.44	222.96	115.35	107.61	2.072		
14,200.00	7,610.00	13,987.37	7,390.00	106.56	106.75	12.07	6,306.80	-657.61	225.10	113.67	111.44	2.020		
14,300.00	7,610.00	14,085.26	7,390.00	108.20	108.31	16.66	6,404.28	-666.65	230.25	111.76	118.48	1.943		
14,385.81	7,610.00	14,167.54	7,390.00	109.62	109.62	21.66	6,486.21	-674.25	238.54	110.46	128.08	1.862		
14,400.00	7,610.00	14,180.99	7,390.00	109.86	109.83	22.62	6,499.59	-675.50	240.33	110.37	129.96	1.849		
14,500.00	7,610.00	14,275.74	7,390.00	111.52	111.35	29.00	6,593.94	-684.25	254.88	111.26	143.63	1.775		
14,600.00	7,610.00	14,370.49	7,390.00	113.20	112.86	34.68	6,688.29	-693.00	272.42	115.40	157.02	1.735		
14,700.00	7,610.00	14,465.25	7,390.00	114.90	114.38	39.68	6,782.64	-701.75	292.42	123.00	169.42	1.726		
14,800.00	7,610.00	14,560.00	7,390.00	116.61	115.89	44.05	6,876.99	-710.51	314.40	133.81	180.59	1.741		
14,886.04	7,610.00	14,619.31	7,390.00	118.09	116.78	46.49	6,936.04	-715.98	335.34	146.49	188.85	1.776		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4H-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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.77	0.08	19.86	19.86				
100.00	100.00	100.00	100.00	0.14	0.14	89.77	0.08	19.86	19.86	19.58	0.28	71.489	
200.00	200.00	200.00	200.00	0.50	0.50	89.77	0.08	19.86	19.86	18.87	0.99	19.965 CC	
300.00	299.98	300.00	299.98	0.84	0.84	-109.91	-1.67	19.86	20.46	18.77	1.68	12.159 ES	
350.00	349.93	349.99	349.92	1.02	1.02	-109.55	-3.85	19.86	21.20	19.18	2.03	10.463	
400.00	399.85	399.97	399.80	1.19	1.19	-120.61	-6.90	19.86	22.52	20.15	2.38	9.480	
500.00	499.53	500.59	500.10	1.55	1.55	-130.29	-14.82	18.34	26.22	23.11	3.11	8.440	
600.00	598.92	601.26	600.19	1.93	1.93	-133.03	-24.53	13.79	30.41	26.53	3.87	7.856	
634.55	633.17	636.06	634.71	2.06	2.06	-133.20	-28.30	11.51	31.98	27.83	4.14	7.719	
700.00	697.99	701.97	699.95	2.32	2.32	-129.86	-36.03	6.19	34.51	29.86	4.66	7.413	
800.00	797.04	801.86	798.67	2.72	2.72	-124.42	-48.30	-2.79	37.86	32.42	5.44	6.965	
900.00	896.09	901.74	897.39	3.12	3.13	-119.89	-60.56	-11.78	41.49	35.26	6.24	6.652	
1,000.00	995.14	1,001.63	996.11	3.53	3.54	-116.10	-72.82	-20.77	45.34	38.29	7.05	6.430	
1,100.00	1,094.19	1,101.51	1,094.83	3.93	3.96	-112.93	-85.08	-29.76	49.36	41.49	7.87	6.268	
1,200.00	1,193.24	1,201.40	1,193.55	4.34	4.38	-110.23	-97.35	-38.75	53.51	44.80	8.70	6.149	
1,300.00	1,292.28	1,301.28	1,292.27	4.75	4.79	-107.93	-109.61	-47.74	57.75	48.22	9.53	6.059	
1,400.00	1,391.33	1,401.17	1,391.00	5.17	5.22	-105.94	-121.87	-56.73	62.08	51.72	10.36	5.991	
1,500.00	1,490.38	1,501.05	1,489.72	5.58	5.64	-104.22	-134.13	-65.72	66.47	55.28	11.19	5.938	
1,600.00	1,589.43	1,600.94	1,588.44	5.99	6.06	-102.71	-146.40	-74.71	70.91	58.89	12.03	5.897	
1,700.00	1,688.48	1,700.82	1,687.16	6.40	6.48	-101.38	-158.66	-83.70	75.40	62.54	12.86	5.864	
1,800.00	1,787.53	1,800.71	1,785.88	6.82	6.90	-100.20	-170.92	-92.69	79.93	66.23	13.69	5.838	
1,900.00	1,886.58	1,900.59	1,884.60	7.23	7.33	-99.15	-183.18	-101.67	84.48	69.96	14.52	5.817	
2,000.00	1,985.62	2,000.48	1,983.32	7.65	7.75	-98.20	-195.45	-110.66	89.06	73.70	15.36	5.800	
2,100.00	2,084.67	2,100.36	2,082.04	8.06	8.18	-97.35	-207.71	-119.65	93.66	77.47	16.19	5.786	
2,200.00	2,183.72	2,200.24	2,180.76	8.47	8.60	-96.57	-219.97	-128.64	98.28	81.26	17.02	5.775	
2,300.00	2,282.77	2,300.13	2,279.48	8.89	9.03	-95.87	-232.24	-137.63	102.92	85.06	17.85	5.765	
2,400.00	2,381.82	2,400.01	2,378.20	9.30	9.45	-95.23	-244.50	-146.62	107.57	88.88	18.68	5.757	
2,500.00	2,480.87	2,499.90	2,476.93	9.72	9.88	-94.64	-256.76	-155.61	112.23	92.71	19.51	5.751	
2,600.00	2,579.92	2,599.78	2,575.65	10.13	10.30	-94.10	-269.02	-164.60	116.90	96.56	20.35	5.746	
2,700.00	2,678.96	2,699.67	2,674.37	10.55	10.73	-93.60	-281.29	-173.59	121.59	100.41	21.18	5.741	
2,800.00	2,778.01	2,799.55	2,773.09	10.96	11.15	-93.13	-293.55	-182.58	126.28	104.27	22.01	5.738	
2,900.00	2,877.06	2,899.44	2,871.81	11.38	11.58	-92.70	-305.81	-191.57	130.98	108.14	22.84	5.735	
3,000.00	2,976.11	2,999.32	2,970.53	11.79	12.00	-92.30	-318.07	-200.55	135.68	112.01	23.67	5.732	
3,100.00	3,075.16	3,099.21	3,069.25	12.21	12.43	-91.93	-330.34	-209.54	140.40	115.90	24.50	5.730	
3,200.00	3,174.21	3,199.09	3,167.97	12.62	12.85	-91.58	-342.60	-218.53	145.11	119.78	25.33	5.729	
3,300.00	3,273.26	3,298.98	3,266.69	13.04	13.28	-91.25	-354.86	-227.52	149.84	123.67	26.16	5.727	
3,400.00	3,372.30	3,398.86	3,365.41	13.45	13.71	-90.95	-367.12	-236.51	154.57	127.57	26.99	5.726	
3,500.00	3,471.35	3,498.75	3,464.13	13.87	14.13	-90.66	-379.39	-245.50	159.30	131.47	27.82	5.725	
3,600.00	3,570.40	3,598.63	3,562.85	14.28	14.56	-90.38	-391.65	-254.49	164.03	135.38	28.65	5.725	
3,700.00	3,669.45	3,698.52	3,661.58	14.70	14.98	-90.13	-403.91	-263.48	168.77	139.29	29.48	5.724	
3,800.00	3,768.50	3,798.40	3,760.30	15.11	15.41	-89.88	-416.17	-272.47	173.51	143.20	30.31	5.724	
3,900.00	3,867.55	3,898.29	3,859.02	15.53	15.84	-89.65	-428.44	-281.46	178.26	147.11	31.15	5.724	
4,000.00	3,966.59	3,998.17	3,957.74	15.95	16.26	-89.44	-440.70	-290.45	183.01	151.03	31.98	5.723	
4,100.00	4,065.64	4,098.06	4,056.46	16.36	16.69	-89.23	-452.96	-299.43	187.76	154.95	32.81	5.723	
4,200.00	4,164.69	4,197.94	4,155.18	16.78	17.11	-89.03	-465.22	-308.42	192.51	158.88	33.64	5.723	
4,300.00	4,263.74	4,297.83	4,253.90	17.19	17.54	-88.84	-477.49	-317.41	197.27	162.80	34.47	5.724	
4,400.00	4,362.79	4,397.71	4,352.62	17.61	17.97	-88.67	-489.75	-326.40	202.02	166.73	35.30	5.724	
4,500.00	4,461.84	4,497.60	4,451.34	18.02	18.39	-88.50	-502.01	-335.39	206.78	170.66	36.13	5.724	
4,600.00	4,560.89	4,597.48	4,550.06	18.44	18.82	-88.33	-514.28	-344.38	211.54	174.59	36.96	5.724	
4,700.00	4,659.93	4,699.59	4,651.18	18.85	19.24	-88.51	-525.73	-352.78	215.86	178.06	37.80	5.710	
4,800.00	4,758.98	4,801.99	4,753.01	19.27	19.64	-89.58	-534.32	-359.07	219.04	180.39	38.65	5.668	
4,900.00	4,858.03	4,904.06	4,854.84	19.69	20.01	-91.51	-539.95	-363.20	221.25	181.77	39.48	5.604	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4H-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							
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	4,957.08	5,005.55	4,956.27	20.10	20.35	-94.28	-542.65	-365.18	222.82	182.53	40.29	5.530	
5,100.00	5,056.13	5,105.41	5,056.13	20.52	20.64	-97.70	-542.92	-365.38	224.34	183.30	41.05	5.466	
5,200.00	5,155.18	5,204.46	5,155.18	20.93	20.92	-101.12	-542.92	-365.38	226.61	184.85	41.76	5.426	
5,300.00	5,254.23	5,303.51	5,254.23	21.35	21.20	-104.46	-542.92	-365.38	229.69	187.24	42.45	5.411	
5,400.00	5,353.27	5,402.56	5,353.27	21.76	21.49	-107.70	-542.92	-365.38	233.54	190.43	43.11	5.418	
5,500.00	5,452.32	5,501.61	5,452.32	22.18	21.77	-110.83	-542.92	-365.38	238.12	194.38	43.74	5.444	
5,600.00	5,551.37	5,600.65	5,551.37	22.60	22.06	-113.84	-542.92	-365.38	243.40	199.04	44.36	5.487	
5,700.00	5,650.42	5,699.70	5,650.42	23.01	22.35	-116.71	-542.92	-365.38	249.32	204.36	44.95	5.546	
5,800.00	5,749.47	5,798.75	5,749.47	23.43	22.64	-119.45	-542.92	-365.38	255.85	210.31	45.54	5.618	
5,900.00	5,848.52	5,897.80	5,848.52	23.84	22.94	-122.04	-542.92	-365.38	262.93	216.82	46.12	5.702	
6,000.00	5,947.57	5,996.85	5,947.57	24.26	23.23	-124.50	-542.92	-365.38	270.53	223.85	46.69	5.795	
6,100.00	6,046.61	6,095.90	6,046.61	24.67	23.53	-126.81	-542.92	-365.38	278.61	231.36	47.25	5.896	
6,200.00	6,145.66	6,194.95	6,145.66	25.09	23.83	-129.00	-542.92	-365.38	287.11	239.30	47.82	6.005	
6,300.00	6,244.71	6,293.99	6,244.71	25.50	24.13	-131.06	-542.92	-365.38	296.02	247.64	48.38	6.118	
6,400.00	6,343.76	6,393.04	6,343.76	25.92	24.43	-133.00	-542.92	-365.38	305.28	256.33	48.95	6.237	
6,500.00	6,442.81	6,492.09	6,442.81	26.34	24.73	-134.82	-542.92	-365.38	314.87	265.35	49.52	6.358	
6,600.00	6,541.86	6,591.14	6,541.86	26.75	25.04	-136.54	-542.92	-365.38	324.77	274.67	50.10	6.483	
6,700.00	6,640.91	6,690.19	6,640.91	27.17	25.34	-138.15	-542.92	-365.38	334.93	284.25	50.68	6.609	
6,800.00	6,739.95	6,789.24	6,739.95	27.58	25.65	-139.67	-542.92	-365.38	345.35	294.08	51.26	6.737	
6,900.51	6,839.51	6,890.61	6,841.17	28.00	25.95	-141.80	-538.73	-365.39	355.84	304.03	51.81	6.868	
6,950.00	6,888.63	6,939.66	6,889.72	28.20	26.09	-173.38	-531.77	-365.40	361.08	309.07	52.01	6.943	
7,000.00	6,938.30	6,988.60	6,937.57	28.38	26.21	150.99	-521.52	-365.42	366.54	314.37	52.17	7.026	
7,050.00	6,987.78	7,036.95	6,984.04	28.54	26.32	127.51	-508.22	-365.45	372.12	319.83	52.29	7.116	
7,100.00	7,036.82	7,084.75	7,029.00	28.68	26.42	114.02	-492.01	-365.48	377.78	325.40	52.39	7.211	
7,150.00	7,085.18	7,132.02	7,072.30	28.81	26.52	105.57	-473.08	-365.52	383.48	331.02	52.46	7.310	
7,200.00	7,132.63	7,178.79	7,113.82	28.92	26.60	99.69	-451.56	-365.56	389.16	336.66	52.50	7.413	
7,250.00	7,178.95	7,225.11	7,153.47	29.02	26.67	95.26	-427.64	-365.61	394.77	342.26	52.51	7.517	
7,300.00	7,223.89	7,270.99	7,191.14	29.11	26.74	91.75	-401.46	-365.67	400.27	347.77	52.51	7.623	
7,350.00	7,267.25	7,316.46	7,226.75	29.19	26.80	88.85	-373.19	-365.72	405.62	353.14	52.48	7.729	
7,400.00	7,308.81	7,361.56	7,260.22	29.25	26.86	86.40	-342.97	-365.78	410.77	358.34	52.43	7.835	
7,450.00	7,348.36	7,406.31	7,291.49	29.30	26.91	84.28	-310.97	-365.85	415.68	363.31	52.37	7.937	
7,500.00	7,385.73	7,450.00	7,320.02	29.33	26.96	82.46	-277.90	-365.92	420.32	368.02	52.29	8.038	
7,550.00	7,420.72	7,494.87	7,347.18	29.36	27.01	80.83	-242.19	-365.99	424.64	372.40	52.23	8.130	
7,600.00	7,453.16	7,538.73	7,371.51	29.38	27.05	79.42	-205.71	-366.06	428.61	376.44	52.16	8.216	
7,650.00	7,482.91	7,582.33	7,393.45	29.38	27.10	78.17	-168.03	-366.14	432.20	380.10	52.11	8.295	
7,700.00	7,509.80	7,625.71	7,412.95	29.38	27.16	77.08	-129.29	-366.22	435.39	383.33	52.06	8.363	
7,750.00	7,533.71	7,668.89	7,430.00	29.36	27.22	76.14	-89.63	-366.30	438.16	386.11	52.05	8.419	
7,800.00	7,554.53	7,711.87	7,444.57	29.35	27.29	75.33	-49.19	-366.38	440.47	388.41	52.05	8.462	
7,850.00	7,572.14	7,754.70	7,456.65	29.32	27.37	74.64	-8.12	-366.46	442.31	390.21	52.10	8.490	
7,900.00	7,586.48	7,800.00	7,466.73	29.29	27.46	74.05	36.04	-366.55	443.68	391.48	52.19	8.501	
7,950.00	7,597.46	7,839.93	7,473.28	29.26	27.56	73.62	75.43	-366.63	444.53	392.22	52.30	8.499	
8,000.00	7,605.04	7,882.38	7,477.83	29.22	27.68	73.28	117.63	-366.72	444.88	392.41	52.48	8.478	
8,050.00	7,609.17	7,924.75	7,479.88	29.19	27.81	73.05	159.94	-366.80	444.73	392.03	52.69	8.440	
8,084.63	7,610.00	7,956.95	7,480.00	29.18	27.92	72.98	192.13	-366.87	444.26	391.37	52.89	8.400	
8,100.00	7,610.00	7,972.32	7,480.00	29.18	27.98	72.97	207.50	-366.90	443.92	390.93	52.99	8.378	
8,200.00	7,610.00	8,072.29	7,480.00	29.43	28.40	72.88	307.48	-367.10	441.72	387.97	53.75	8.218	
8,300.00	7,610.00	8,172.26	7,480.00	29.94	28.91	72.79	407.45	-367.30	439.53	384.86	54.67	8.040	
8,400.00	7,610.00	8,272.24	7,480.00	30.54	29.51	72.70	507.42	-367.51	437.33	381.60	55.73	7.847	
8,500.00	7,610.00	8,372.21	7,480.00	31.21	30.18	72.61	607.40	-367.71	435.14	378.21	56.94	7.643	
8,600.00	7,610.00	8,472.18	7,480.00	31.93	30.92	72.52	707.37	-367.91	432.95	374.68	58.27	7.430	
8,700.00	7,610.00	8,572.16	7,480.00	32.71	31.72	72.43	807.35	-368.11	430.76	371.03	59.73	7.211	
8,800.00	7,610.00	8,672.13	7,480.00	33.54	32.59	72.34	907.32	-368.31	428.57	367.27	61.31	6.991	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4H-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		
8,900.00	7,610.00	8,772.11	7,480.00	34.42	33.50	72.24	1,007.29	-368.52	426.38	363.40	62.98	6.770		
9,000.00	7,610.00	8,872.08	7,480.00	35.34	34.46	72.15	1,107.27	-368.72	424.20	359.44	64.75	6.551		
9,100.00	7,610.00	8,972.05	7,480.00	36.31	35.47	72.05	1,207.24	-368.92	422.01	355.40	66.61	6.335		
9,200.00	7,610.00	9,072.03	7,480.00	37.31	36.52	71.96	1,307.21	-369.12	419.83	351.27	68.55	6.124		
9,300.00	7,610.00	9,172.00	7,480.00	38.35	37.61	71.86	1,407.19	-369.33	417.64	347.08	70.57	5.918		
9,400.00	7,610.00	9,271.97	7,480.00	39.42	38.73	71.76	1,507.16	-369.53	415.46	342.82	72.65	5.719		
9,500.00	7,610.00	9,371.95	7,480.00	40.53	39.88	71.66	1,607.13	-369.73	413.28	338.49	74.79	5.526		
9,600.00	7,610.00	9,471.92	7,480.00	41.66	41.06	71.56	1,707.11	-369.93	411.10	334.12	76.99	5.340		
9,700.00	7,610.00	9,571.89	7,480.00	42.82	42.26	71.46	1,807.08	-370.14	408.93	329.69	79.23	5.161		
9,800.00	7,610.00	9,671.87	7,480.00	44.00	43.49	71.36	1,907.05	-370.34	406.75	325.22	81.52	4.989		
9,900.00	7,610.00	9,771.84	7,480.00	45.21	44.75	71.25	2,007.03	-370.54	404.57	320.71	83.86	4.824		
10,000.00	7,610.00	9,871.82	7,480.00	46.44	46.02	71.15	2,107.00	-370.74	402.40	316.17	86.23	4.667		
10,100.00	7,610.00	9,971.79	7,480.00	47.69	47.31	71.04	2,206.97	-370.94	400.23	311.59	88.64	4.515		
10,200.00	7,610.00	10,071.76	7,480.00	48.95	48.62	70.93	2,306.95	-371.15	398.05	306.98	91.07	4.371		
10,300.00	7,610.00	10,171.74	7,480.00	50.23	49.94	70.82	2,406.92	-371.35	395.88	302.34	93.54	4.232		
10,400.00	7,610.00	10,271.71	7,480.00	51.53	51.28	70.72	2,506.89	-371.55	393.72	297.68	96.03	4.100		
10,500.00	7,610.00	10,371.68	7,480.00	52.84	52.64	70.60	2,606.87	-371.75	391.55	293.00	98.55	3.973		
10,600.00	7,610.00	10,471.66	7,480.00	54.17	54.00	70.49	2,706.84	-371.96	389.38	288.30	101.08	3.852		
10,700.00	7,610.00	10,571.63	7,480.00	55.51	55.38	70.38	2,806.81	-372.16	387.22	283.58	103.64	3.736		
10,800.00	7,610.00	10,671.60	7,480.00	56.86	56.77	70.26	2,906.79	-372.36	385.06	278.84	106.21	3.625		
10,900.00	7,610.00	10,771.58	7,480.00	58.22	58.16	70.15	3,006.76	-372.56	382.90	274.09	108.80	3.519		
11,000.00	7,610.00	10,871.55	7,480.00	59.59	59.57	70.03	3,106.73	-372.77	380.74	269.33	111.41	3.418		
11,100.00	7,610.00	10,971.53	7,480.00	60.97	60.99	69.91	3,206.71	-372.97	378.58	264.56	114.02	3.320		
11,200.00	7,610.00	11,071.50	7,480.00	62.35	62.41	69.79	3,306.68	-373.17	376.42	259.77	116.65	3.227		
11,300.00	7,610.00	11,171.47	7,480.00	63.75	63.84	69.67	3,406.65	-373.37	374.27	254.98	119.29	3.137		
11,400.00	7,610.00	11,271.45	7,480.00	65.15	65.28	69.55	3,506.63	-373.58	372.12	250.18	121.94	3.052		
11,500.00	7,610.00	11,371.42	7,480.00	66.57	66.72	69.42	3,606.60	-373.78	369.96	245.37	124.60	2.969		
11,600.00	7,610.00	11,471.39	7,480.00	67.98	68.17	69.30	3,706.57	-373.98	367.82	240.56	127.26	2.890		
11,700.00	7,610.00	11,571.37	7,480.00	69.41	69.63	69.17	3,806.55	-374.18	365.67	235.74	129.93	2.814		
11,800.00	7,610.00	11,671.34	7,480.00	70.84	71.09	69.04	3,906.52	-374.38	363.52	230.92	132.61	2.741		
11,900.00	7,610.00	11,771.31	7,480.00	72.27	72.56	68.91	4,006.49	-374.59	361.38	226.09	135.29	2.671		
12,000.00	7,610.00	11,871.29	7,480.00	73.72	74.03	68.78	4,106.47	-374.79	359.24	221.26	137.97	2.604		
12,100.00	7,610.00	11,971.26	7,480.00	75.16	75.51	68.65	4,206.44	-374.99	357.10	216.44	140.66	2.539		
12,200.00	7,610.00	12,071.24	7,480.00	76.61	76.99	68.51	4,306.41	-375.19	354.96	211.61	143.35	2.476		
12,300.00	7,610.00	12,171.21	7,480.00	78.07	78.47	68.37	4,406.39	-375.40	352.82	206.78	146.05	2.416		
12,400.00	7,610.00	12,271.18	7,480.00	79.53	79.96	68.24	4,506.36	-375.60	350.69	201.95	148.74	2.358		
12,500.00	7,610.00	12,371.16	7,480.00	80.99	81.46	68.10	4,606.34	-375.80	348.56	197.12	151.44	2.302		
12,600.00	7,610.00	12,471.13	7,480.00	82.46	82.95	67.95	4,706.31	-376.00	346.43	192.29	154.13	2.248		
12,700.00	7,610.00	12,571.10	7,480.00	83.93	84.45	67.81	4,806.28	-376.21	344.30	187.47	156.83	2.195		
12,800.00	7,610.00	12,671.08	7,480.00	85.41	85.95	67.67	4,906.26	-376.41	342.17	182.65	159.53	2.145		
12,900.00	7,610.00	12,771.05	7,480.00	86.88	87.46	67.52	5,006.23	-376.61	340.05	177.83	162.22	2.096		
13,000.00	7,610.00	12,871.02	7,480.00	88.37	88.96	67.37	5,106.20	-376.81	337.93	173.02	164.91	2.049		
13,100.00	7,610.00	12,971.00	7,480.00	89.85	90.48	67.22	5,206.18	-377.01	335.81	168.20	167.61	2.004		
13,200.00	7,610.00	13,070.97	7,480.00	91.34	91.99	67.07	5,306.15	-377.22	333.69	163.40	170.30	1.960		
13,300.00	7,610.00	13,170.95	7,480.00	92.83	93.50	66.91	5,406.12	-377.42	331.58	158.60	172.98	1.917		
13,400.00	7,610.00	13,270.92	7,480.00	94.32	95.02	66.76	5,506.10	-377.62	329.47	153.80	175.66	1.876		
13,500.00	7,610.00	13,370.89	7,480.00	95.81	96.54	66.60	5,606.07	-377.82	327.36	149.02	178.34	1.836		
13,600.00	7,610.00	13,470.87	7,480.00	97.31	98.06	66.44	5,706.04	-378.03	325.25	144.23	181.02	1.797		
13,700.00	7,610.00	13,570.84	7,480.00	98.81	99.58	66.27	5,806.02	-378.23	323.15	139.46	183.69	1.759		
13,800.00	7,610.00	13,670.81	7,480.00	100.31	101.11	66.11	5,905.99	-378.43	321.05	134.69	186.36	1.723		
13,894.63	7,610.00	13,765.41	7,480.00	101.73	102.55	65.95	6,000.59	-378.62	319.06	130.19	188.87	1.689		
13,900.00	7,610.00	13,770.79	7,480.00	101.81	102.64	65.94	6,005.96	-378.63	318.96	129.94	189.02	1.687		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - SULLIVAN 4H-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		
13,920.33	7,610.00	13,791.12	7,480.00	102.12	102.95	65.93	6,026.30	-378.67	318.79	129.21	189.59	1.682		
14,000.00	7,610.00	13,870.72	7,480.00	103.35	104.16	66.09	6,105.89	-378.84	321.38	129.27	192.12	1.673 SF		
14,100.00	7,610.00	13,970.02	7,480.00	104.93	105.68	66.68	6,205.19	-379.04	331.98	136.02	195.96	1.694		
14,200.00	7,610.00	14,067.89	7,480.00	106.56	107.18	67.62	6,303.06	-379.23	350.81	150.46	200.35	1.751		
14,300.00	7,610.00	14,163.55	7,480.00	108.20	108.65	68.77	6,398.72	-379.43	377.92	172.88	205.04	1.843		
14,385.81	7,610.00	14,243.30	7,480.00	109.62	109.88	69.81	6,478.48	-379.59	407.76	198.65	209.10	1.950		
14,400.00	7,610.00	14,256.28	7,480.00	109.86	110.08	70.08	6,491.45	-379.62	413.19	203.43	209.76	1.970		
14,500.00	7,610.00	14,347.76	7,480.00	111.52	111.48	71.81	6,582.93	-379.80	451.71	237.50	214.22	2.109		
14,600.00	7,610.00	14,439.23	7,480.00	113.20	112.89	73.28	6,674.41	-379.99	490.54	272.16	218.38	2.246		
14,700.00	7,610.00	14,526.72	7,480.00	114.90	114.23	74.48	6,761.89	-380.12	529.66	307.47	222.19	2.384		
14,800.00	7,610.00	14,600.00	7,480.00	116.61	115.34	75.42	6,835.13	-377.93	571.60	346.36	225.24	2.538		
14,886.04	7,610.00	14,648.61	7,480.00	118.09	116.06	76.03	6,883.63	-374.53	610.74	383.96	226.77	2.693		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.75	0.13	29.93	29.93				
100.00	100.00	100.00	100.00	0.14	0.14	89.75	0.13	29.93	29.93	29.65	0.28	108.436	
200.00	200.00	200.00	200.00	0.50	0.50	89.75	0.13	29.93	29.93	28.94	0.99	30.143 CC	
300.00	299.98	299.98	299.98	0.84	0.85	-113.31	0.13	29.93	30.58	28.88	1.70	18.034 ES	
350.00	349.93	349.98	349.98	1.02	1.03	-116.15	-0.30	29.94	31.47	29.43	2.04	15.437	
400.00	399.85	400.00	399.98	1.19	1.20	-130.33	-1.61	29.98	32.96	30.58	2.39	13.815	
500.00	499.53	500.00	499.84	1.55	1.54	-143.94	-6.84	30.12	38.27	35.18	3.09	12.396	
600.00	598.92	599.74	599.19	1.93	1.89	-147.33	-15.53	30.36	46.68	42.87	3.81	12.242	
634.55	633.17	634.09	633.33	2.06	2.02	-147.33	-19.32	30.47	50.37	46.30	4.07	12.366	
700.00	697.99	699.05	697.80	2.32	2.26	-144.19	-27.27	30.69	57.84	53.28	4.56	12.677	
800.00	797.04	798.29	796.28	2.72	2.64	-140.63	-39.53	31.03	69.50	64.17	5.32	13.059	
900.00	896.09	897.53	894.76	3.12	3.02	-138.09	-51.80	31.37	81.34	75.25	6.09	13.353	
1,000.00	995.14	996.77	993.24	3.53	3.41	-136.20	-64.06	31.71	93.31	86.44	6.87	13.585	
1,100.00	1,094.19	1,096.01	1,091.72	3.93	3.81	-134.74	-76.32	32.05	105.35	97.70	7.65	13.772	
1,200.00	1,193.24	1,195.25	1,190.20	4.34	4.20	-133.58	-88.59	32.39	117.45	109.01	8.43	13.924	
1,300.00	1,292.28	1,294.49	1,288.68	4.75	4.59	-132.64	-100.85	32.73	129.58	120.36	9.22	14.052	
1,400.00	1,391.33	1,393.73	1,387.16	5.17	4.99	-131.86	-113.11	33.07	141.75	131.74	10.01	14.159	
1,500.00	1,490.38	1,492.97	1,485.64	5.58	5.39	-131.20	-125.38	33.41	153.93	143.13	10.80	14.251	
1,600.00	1,589.43	1,592.21	1,584.12	5.99	5.79	-130.64	-137.64	33.75	166.14	154.54	11.59	14.330	
1,700.00	1,688.48	1,691.45	1,682.60	6.40	6.19	-130.15	-149.90	34.09	178.35	165.96	12.39	14.399	
1,800.00	1,787.53	1,790.69	1,781.08	6.82	6.58	-129.73	-162.17	34.43	190.58	177.40	13.18	14.459	
1,900.00	1,886.58	1,889.93	1,879.55	7.23	6.98	-129.36	-174.43	34.77	202.81	188.84	13.97	14.513	
2,000.00	1,985.62	1,989.18	1,978.03	7.65	7.38	-129.03	-186.69	35.11	215.06	200.29	14.77	14.561	
2,100.00	2,084.67	2,088.42	2,076.51	8.06	7.78	-128.74	-198.96	35.45	227.31	211.74	15.56	14.604	
2,200.00	2,183.72	2,187.66	2,174.99	8.47	8.18	-128.47	-211.22	35.79	239.56	223.20	16.36	14.643	
2,300.00	2,282.77	2,286.90	2,273.47	8.89	8.58	-128.23	-223.48	36.13	251.82	234.66	17.16	14.678	
2,400.00	2,381.82	2,386.14	2,371.95	9.30	8.98	-128.02	-235.74	36.47	264.08	246.13	17.95	14.710	
2,500.00	2,480.87	2,485.38	2,470.43	9.72	9.39	-127.82	-248.01	36.81	276.35	257.60	18.75	14.739	
2,600.00	2,579.92	2,584.62	2,568.91	10.13	9.79	-127.64	-260.27	37.15	288.62	269.07	19.55	14.766	
2,700.00	2,678.96	2,683.86	2,667.39	10.55	10.19	-127.48	-272.53	37.49	300.89	280.55	20.34	14.791	
2,800.00	2,778.01	2,783.10	2,765.87	10.96	10.59	-127.32	-284.80	37.83	313.17	292.03	21.14	14.813	
2,900.00	2,877.06	2,882.34	2,864.35	11.38	10.99	-127.18	-297.06	38.17	325.44	303.51	21.94	14.835	
3,000.00	2,976.11	2,981.58	2,962.83	11.79	11.39	-127.05	-309.32	38.51	337.72	314.99	22.74	14.854	
3,100.00	3,075.16	3,080.82	3,061.31	12.21	11.79	-126.93	-321.59	38.85	350.00	326.47	23.53	14.872	
3,200.00	3,174.21	3,180.06	3,159.79	12.62	12.19	-126.82	-333.85	39.19	362.28	337.95	24.33	14.890	
3,300.00	3,273.26	3,279.30	3,258.27	13.04	12.60	-126.71	-346.11	39.53	374.57	349.44	25.13	14.906	
3,400.00	3,372.30	3,378.54	3,356.74	13.45	13.00	-126.61	-358.38	39.87	386.85	360.92	25.93	14.920	
3,500.00	3,471.35	3,477.78	3,455.22	13.87	13.40	-126.52	-370.64	40.21	399.13	372.41	26.73	14.935	
3,600.00	3,570.40	3,577.02	3,553.70	14.28	13.80	-126.43	-382.90	40.55	411.42	383.90	27.52	14.948	
3,700.00	3,669.45	3,676.26	3,652.18	14.70	14.20	-126.35	-395.17	40.89	423.71	395.38	28.32	14.960	
3,800.00	3,768.50	3,775.50	3,750.66	15.11	14.60	-126.27	-407.43	41.23	435.99	406.87	29.12	14.972	
3,900.00	3,867.55	3,874.75	3,849.14	15.53	15.01	-126.20	-419.69	41.57	448.28	418.36	29.92	14.983	
4,000.00	3,966.59	3,973.99	3,947.62	15.95	15.41	-126.13	-431.96	41.91	460.57	429.85	30.72	14.994	
4,100.00	4,065.64	4,073.23	4,046.10	16.36	15.81	-126.06	-444.22	42.25	472.86	441.35	31.52	15.004	
4,200.00	4,164.69	4,172.47	4,144.58	16.78	16.21	-126.00	-456.48	42.59	485.15	452.84	32.31	15.013	
4,300.00	4,263.74	4,271.71	4,243.06	17.19	16.61	-125.94	-468.75	42.93	497.44	464.33	33.11	15.023	
4,400.00	4,362.79	4,370.95	4,341.54	17.61	17.02	-125.89	-481.01	43.27	509.73	475.82	33.91	15.031	
4,500.00	4,461.84	4,470.19	4,440.02	18.02	17.42	-125.83	-493.27	43.61	522.02	487.31	34.71	15.039	
4,600.00	4,560.89	4,569.43	4,538.50	18.44	17.82	-125.78	-505.53	43.95	534.32	498.81	35.51	15.047	
4,700.00	4,659.93	4,668.67	4,636.98	18.85	18.22	-125.73	-517.80	44.29	546.61	510.30	36.31	15.055	
4,800.00	4,758.98	4,774.30	4,741.98	19.27	18.64	-125.84	-529.23	44.61	558.39	521.24	37.14	15.034	
4,900.00	4,858.03	4,880.65	4,848.05	19.69	19.03	-126.32	-536.84	44.82	568.94	530.99	37.95	14.992	

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 4F-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 4F-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 #3	<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		
5,000.00	4,957.08	4,986.80	4,954.14	20.10	19.40	-127.15	-540.50	44.92	578.34	539.62	38.72	14.936		
5,100.00	5,056.13	5,088.80	5,056.13	20.52	19.71	-128.21	-540.87	44.93	586.91	547.49	39.42	14.889		
5,200.00	5,155.18	5,187.85	5,155.18	20.93	20.00	-129.24	-540.87	44.93	595.57	555.48	40.09	14.857		
5,300.00	5,254.23	5,286.90	5,254.23	21.35	20.29	-130.25	-540.87	44.93	604.42	563.67	40.75	14.831		
5,400.00	5,353.27	5,385.94	5,353.27	21.76	20.58	-131.22	-540.87	44.93	613.45	572.03	41.42	14.810		
5,500.00	5,452.32	5,484.99	5,452.32	22.18	20.88	-132.17	-540.87	44.93	622.65	580.57	42.09	14.794		
5,600.00	5,551.37	5,584.04	5,551.37	22.60	21.18	-133.09	-540.87	44.93	632.02	589.27	42.75	14.783		
5,700.00	5,650.42	5,683.09	5,650.42	23.01	21.47	-133.98	-540.87	44.93	641.55	598.13	43.42	14.775		
5,800.00	5,749.47	5,782.14	5,749.47	23.43	21.77	-134.85	-540.87	44.93	651.23	607.14	44.09	14.771		
5,900.00	5,848.52	5,881.19	5,848.52	23.84	22.07	-135.69	-540.87	44.93	661.05	616.30	44.76	14.770		
6,000.00	5,947.57	5,980.24	5,947.57	24.26	22.38	-136.51	-540.87	44.93	671.01	625.59	45.42	14.773		
6,100.00	6,046.61	6,079.28	6,046.61	24.67	22.68	-137.30	-540.87	44.93	681.11	635.02	46.09	14.778		
6,200.00	6,145.66	6,178.33	6,145.66	25.09	22.99	-138.07	-540.87	44.93	691.33	644.57	46.76	14.785		
6,300.00	6,244.71	6,277.38	6,244.71	25.50	23.30	-138.82	-540.87	44.93	701.67	654.24	47.43	14.795		
6,400.00	6,343.76	6,376.43	6,343.76	25.92	23.60	-139.55	-540.87	44.93	712.13	664.03	48.10	14.806		
6,500.00	6,442.81	6,475.48	6,442.81	26.34	23.92	-140.25	-540.87	44.93	722.70	673.93	48.77	14.820		
6,600.00	6,541.86	6,574.53	6,541.86	26.75	24.23	-140.94	-540.87	44.93	733.37	683.93	49.44	14.835		
6,700.00	6,640.91	6,673.58	6,640.91	27.17	24.54	-141.60	-540.87	44.93	744.15	694.04	50.11	14.851		
6,800.00	6,739.95	6,774.67	6,741.90	27.58	24.85	-142.51	-537.62	44.94	754.93	704.16	50.77	14.870		
6,900.51	6,839.51	6,872.80	6,838.64	28.00	25.12	-144.32	-521.64	44.96	765.89	714.56	51.33	14.921		
6,950.00	6,888.63	6,918.90	6,883.13	28.20	25.23	-175.48	-509.59	44.98	771.62	720.06	51.56	14.966		
7,000.00	6,938.30	6,964.63	6,926.41	28.38	25.34	149.27	-494.84	45.00	777.63	725.87	51.75	15.025		
7,050.00	6,987.78	7,009.57	6,967.93	28.54	25.44	126.16	-477.68	45.03	783.80	731.88	51.92	15.096		
7,100.00	7,036.82	7,053.79	7,007.67	28.68	25.54	113.01	-458.29	45.06	790.09	738.03	52.06	15.177		
7,150.00	7,085.18	7,097.35	7,045.56	28.81	25.62	104.87	-436.83	45.09	796.43	744.26	52.17	15.266		
7,200.00	7,132.63	7,140.30	7,081.58	28.92	25.71	99.27	-413.45	45.13	802.78	750.52	52.26	15.362		
7,250.00	7,178.95	7,182.69	7,115.70	29.02	25.79	95.12	-388.29	45.17	809.08	756.75	52.33	15.462		
7,300.00	7,223.89	7,224.58	7,147.89	29.11	25.87	91.85	-361.50	45.21	815.27	762.90	52.37	15.566		
7,350.00	7,267.25	7,266.00	7,178.12	29.19	25.95	89.17	-333.20	45.25	821.30	768.90	52.41	15.671		
7,400.00	7,308.81	7,307.00	7,206.39	29.25	26.03	86.92	-303.51	45.30	827.13	774.70	52.43	15.776		
7,450.00	7,348.36	7,350.00	7,234.17	29.30	26.12	84.96	-270.69	45.35	832.71	780.24	52.46	15.872		
7,500.00	7,385.73	7,387.89	7,256.97	29.33	26.20	83.33	-240.44	45.40	837.97	785.51	52.46	15.974		
7,550.00	7,420.72	7,427.84	7,279.24	29.36	26.29	81.88	-207.27	45.45	842.90	790.43	52.47	16.064		
7,600.00	7,453.16	7,467.51	7,299.49	29.38	26.39	80.61	-173.17	45.50	847.45	794.96	52.49	16.144		
7,650.00	7,482.91	7,506.93	7,317.72	29.38	26.49	79.50	-138.22	45.56	851.58	799.06	52.53	16.213		
7,700.00	7,509.80	7,550.00	7,335.40	29.38	26.60	78.51	-98.95	45.62	855.28	802.67	52.60	16.260		
7,750.00	7,533.71	7,585.11	7,348.04	29.36	26.71	77.73	-66.20	45.67	858.47	805.82	52.65	16.306		
7,800.00	7,554.53	7,623.93	7,360.14	29.35	26.82	77.03	-29.32	45.72	861.18	808.43	52.75	16.327		
7,850.00	7,572.14	7,662.60	7,370.18	29.32	26.95	76.46	8.01	45.78	863.36	810.48	52.87	16.329		
7,900.00	7,586.48	7,700.00	7,377.97	29.29	27.08	76.01	44.59	45.84	865.00	811.97	53.03	16.312		
7,950.00	7,597.46	7,739.56	7,384.11	29.26	27.22	75.66	83.67	45.90	866.08	812.85	53.23	16.271		
8,000.00	7,605.04	7,777.91	7,388.00	29.22	27.37	75.43	121.81	45.96	866.60	813.14	53.46	16.209		
8,050.00	7,609.17	7,816.19	7,389.84	29.19	27.52	75.30	160.05	46.02	866.55	812.82	53.73	16.127		
8,084.63	7,610.00	7,846.12	7,390.00	29.18	27.65	75.28	189.98	46.06	866.15	812.19	53.96	16.053		
8,100.00	7,610.00	7,861.49	7,390.00	29.18	27.72	75.28	205.35	46.09	865.86	811.79	54.07	16.013		
8,200.00	7,610.00	7,961.47	7,390.00	29.43	28.20	75.25	305.33	46.24	863.98	809.07	54.91	15.733		
8,300.00	7,610.00	8,061.45	7,390.00	29.94	28.76	75.21	405.31	46.40	862.11	806.20	55.91	15.420		
8,400.00	7,610.00	8,161.44	7,390.00	30.54	29.40	75.18	505.29	46.55	860.23	803.18	57.05	15.079		
8,500.00	7,610.00	8,261.42	7,390.00	31.21	30.10	75.15	605.27	46.71	858.36	800.03	58.33	14.716		
8,600.00	7,610.00	8,361.40	7,390.00	31.93	30.87	75.11	705.25	46.86	856.48	796.75	59.74	14.337		
8,700.00	7,610.00	8,461.38	7,390.00	32.71	31.70	75.08	805.23	47.02	854.61	793.34	61.27	13.949		
8,800.00	7,610.00	8,561.36	7,390.00	33.54	32.59	75.05	905.21	47.17	852.74	789.83	62.91	13.555		

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 4F-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 4F-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 #3	<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							
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
8,900.00	7,610.00	8,661.34	7,390.00	34.42	33.52	75.01	1,005.20	47.33	850.86	786.21	64.66	13.160	
9,000.00	7,610.00	8,761.32	7,390.00	35.34	34.51	74.98	1,105.18	47.48	848.99	782.49	66.50	12.768	
9,100.00	7,610.00	8,861.30	7,390.00	36.31	35.53	74.94	1,205.16	47.64	847.12	778.69	68.42	12.381	
9,200.00	7,610.00	8,961.29	7,390.00	37.31	36.60	74.91	1,305.14	47.79	845.24	774.81	70.43	12.001	
9,300.00	7,610.00	9,061.27	7,390.00	38.35	37.70	74.88	1,405.12	47.95	843.37	770.86	72.51	11.631	
9,400.00	7,610.00	9,161.25	7,390.00	39.42	38.84	74.84	1,505.10	48.10	841.50	766.84	74.66	11.271	
9,500.00	7,610.00	9,261.23	7,390.00	40.53	40.00	74.81	1,605.08	48.26	839.63	762.76	76.87	10.923	
9,600.00	7,610.00	9,361.21	7,390.00	41.66	41.20	74.77	1,705.06	48.41	837.76	758.63	79.13	10.587	
9,700.00	7,610.00	9,461.19	7,390.00	42.82	42.42	74.74	1,805.04	48.57	835.89	754.44	81.45	10.263	
9,800.00	7,610.00	9,561.17	7,390.00	44.00	43.66	74.70	1,905.03	48.72	834.02	750.20	83.81	9.951	
9,900.00	7,610.00	9,661.15	7,390.00	45.21	44.92	74.67	2,005.01	48.88	832.15	745.93	86.22	9.652	
10,000.00	7,610.00	9,761.13	7,390.00	46.44	46.21	74.63	2,104.99	49.03	830.28	741.61	88.66	9.364	
10,100.00	7,610.00	9,861.12	7,390.00	47.69	47.51	74.60	2,204.97	49.19	828.41	737.26	91.14	9.089	
10,200.00	7,610.00	9,961.10	7,390.00	48.95	48.83	74.56	2,304.95	49.34	826.54	732.88	93.66	8.825	
10,300.00	7,610.00	10,061.08	7,390.00	50.23	50.16	74.52	2,404.93	49.50	824.67	728.46	96.21	8.572	
10,400.00	7,610.00	10,161.06	7,390.00	51.53	51.51	74.49	2,504.91	49.65	822.80	724.02	98.78	8.330	
10,500.00	7,610.00	10,261.04	7,390.00	52.84	52.87	74.45	2,604.89	49.81	820.93	719.55	101.38	8.098	
10,600.00	7,610.00	10,361.02	7,390.00	54.17	54.24	74.42	2,704.87	49.96	819.06	715.06	104.00	7.876	
10,700.00	7,610.00	10,461.00	7,390.00	55.51	55.62	74.38	2,804.85	50.12	817.19	710.55	106.65	7.663	
10,800.00	7,610.00	10,560.98	7,390.00	56.86	57.02	74.34	2,904.84	50.27	815.33	706.01	109.31	7.459	
10,900.00	7,610.00	10,660.97	7,390.00	58.22	58.42	74.31	3,004.82	50.43	813.46	701.46	112.00	7.263	
11,000.00	7,610.00	10,760.95	7,390.00	59.59	59.83	74.27	3,104.80	50.58	811.59	696.89	114.70	7.076	
11,100.00	7,610.00	10,860.93	7,390.00	60.97	61.25	74.23	3,204.78	50.74	809.73	692.31	117.42	6.896	
11,200.00	7,610.00	10,960.91	7,390.00	62.35	62.68	74.19	3,304.76	50.89	807.86	687.71	120.15	6.724	
11,300.00	7,610.00	11,060.89	7,390.00	63.75	64.12	74.16	3,404.74	51.05	805.99	683.10	122.90	6.558	
11,400.00	7,610.00	11,160.87	7,390.00	65.15	65.56	74.12	3,504.72	51.20	804.13	678.47	125.66	6.399	
11,500.00	7,610.00	11,260.85	7,390.00	66.57	67.01	74.08	3,604.70	51.36	802.26	673.84	128.43	6.247	
11,600.00	7,610.00	11,360.83	7,390.00	67.98	68.46	74.04	3,704.68	51.51	800.40	669.19	131.21	6.100	
11,700.00	7,610.00	11,460.82	7,390.00	69.41	69.92	74.01	3,804.67	51.67	798.54	664.53	134.00	5.959	
11,800.00	7,610.00	11,560.80	7,390.00	70.84	71.39	73.97	3,904.65	51.82	796.67	659.87	136.81	5.823	
11,900.00	7,610.00	11,660.78	7,390.00	72.27	72.86	73.93	4,004.63	51.98	794.81	655.19	139.62	5.693	
12,000.00	7,610.00	11,760.76	7,390.00	73.72	74.33	73.89	4,104.61	52.14	792.94	650.51	142.44	5.567	
12,100.00	7,610.00	11,868.49	7,390.00	75.16	75.93	73.84	4,212.34	52.15	790.98	645.57	145.41	5.440	
12,200.00	7,610.00	11,976.67	7,390.00	76.61	77.54	73.79	4,320.50	50.21	787.21	638.84	148.37	5.306	
12,300.00	7,610.00	12,076.59	7,390.00	78.07	79.05	73.68	4,420.40	48.26	783.33	632.13	151.20	5.181	
12,400.00	7,610.00	12,176.51	7,390.00	79.53	80.55	73.59	4,520.30	46.31	779.44	625.42	154.03	5.060	
12,500.00	7,610.00	12,276.43	7,390.00	80.99	82.06	73.51	4,620.20	44.36	775.56	618.70	156.86	4.944	
12,600.00	7,610.00	12,376.34	7,390.00	82.46	83.57	73.42	4,720.10	42.41	771.69	611.98	159.71	4.832	
12,700.00	7,610.00	12,476.26	7,390.00	83.93	85.09	73.34	4,820.00	40.46	767.81	605.26	162.55	4.724	
12,800.00	7,610.00	12,576.18	7,390.00	85.41	86.60	73.25	4,919.90	38.51	763.93	598.54	165.40	4.619	
12,900.00	7,610.00	12,676.10	7,390.00	86.88	88.12	73.16	5,019.80	36.55	760.06	591.81	168.25	4.518	
13,000.00	7,610.00	12,776.02	7,390.00	88.37	89.65	73.07	5,119.70	34.60	756.19	585.09	171.10	4.420	
13,100.00	7,610.00	12,875.93	7,390.00	89.85	91.17	72.98	5,219.60	32.65	752.32	578.36	173.96	4.325	
13,200.00	7,610.00	12,975.85	7,390.00	91.34	92.70	72.89	5,319.49	30.70	748.45	571.64	176.81	4.233	
13,300.00	7,610.00	13,075.77	7,390.00	92.83	94.23	72.80	5,419.39	28.75	744.58	564.91	179.67	4.144	
13,400.00	7,610.00	13,175.69	7,390.00	94.32	95.76	72.71	5,519.29	26.80	740.72	558.19	182.53	4.058	
13,500.00	7,610.00	13,275.61	7,390.00	95.81	97.30	72.62	5,619.19	24.85	736.86	551.47	185.39	3.975	
13,600.00	7,610.00	13,375.53	7,390.00	97.31	98.83	72.52	5,719.09	22.90	733.00	544.75	188.25	3.894	
13,700.00	7,610.00	13,475.44	7,390.00	98.81	100.37	72.43	5,818.99	20.95	729.14	538.03	191.11	3.815	
13,800.00	7,610.00	13,575.36	7,390.00	100.31	101.91	72.33	5,918.89	19.00	725.28	531.31	193.97	3.739	
13,894.63	7,610.00	13,669.91	7,390.00	101.73	103.37	72.24	6,013.42	17.15	721.64	524.96	196.68	3.669	
13,900.00	7,610.00	13,675.28	7,390.00	101.81	103.46	72.23	6,018.79	17.05	721.44	524.61	196.83	3.665	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S26-T2N-R68W - SULLIVAN 4I-26H-P268 - OH - PLAN #2												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 0-MWD+HDGM												<b>Offset Well Error:</b>	0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
13,939.93	7,610.00	13,715.20	7,390.00	102.42	104.07	72.23	6,058.70	16.27	720.76	522.76	198.01	3.640	
14,000.00	7,610.00	13,775.24	7,390.00	103.35	105.00	72.24	6,118.73	15.10	722.30	522.47	199.83	3.615	
14,100.00	7,610.00	13,874.73	7,390.00	104.93	106.54	72.33	6,218.20	13.15	731.65	528.60	203.05	3.603 SF	
14,200.00	7,610.00	13,972.94	7,390.00	106.56	108.06	72.49	6,316.39	11.24	749.46	543.00	206.46	3.630	
14,300.00	7,610.00	14,069.09	7,390.00	108.20	109.55	72.68	6,412.53	9.36	775.64	565.63	210.00	3.693	
14,385.81	7,610.00	14,149.39	7,390.00	109.62	110.79	72.86	6,492.81	7.79	804.66	591.57	213.09	3.776	
14,400.00	7,610.00	14,162.46	7,390.00	109.86	111.00	72.98	6,505.88	7.54	809.96	596.35	213.60	3.792	
14,500.00	7,610.00	14,254.63	7,390.00	111.52	112.43	73.74	6,598.03	5.74	847.35	630.17	217.18	3.902	
14,600.00	7,610.00	14,346.80	7,390.00	113.20	113.86	74.44	6,690.18	3.94	884.87	664.16	220.71	4.009	
14,700.00	7,610.00	14,438.98	7,390.00	114.90	115.29	75.08	6,782.34	2.14	922.49	698.29	224.20	4.115	
14,800.00	7,610.00	14,531.15	7,390.00	116.61	116.72	75.67	6,874.49	0.34	960.20	732.54	227.66	4.218	
14,886.04	7,610.00	14,595.94	7,390.00	118.09	117.73	76.06	6,939.27	-0.93	992.83	762.53	230.29	4.311	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.75	0.18	40.00	40.00				
100.00	100.00	100.00	100.00	0.14	0.14	89.75	0.18	40.00	40.00	39.72	0.28	144.919	
200.00	200.00	200.00	200.00	0.50	0.50	89.75	0.18	40.00	40.00	39.01	0.99	40.284 CC	
300.00	299.98	299.98	299.98	0.84	0.85	-112.55	0.18	40.00	40.64	38.94	1.70	23.967 ES	
350.00	349.93	349.93	349.93	1.02	1.03	-115.31	0.18	40.00	41.52	39.48	2.05	20.291	
400.00	399.85	399.66	399.65	1.19	1.20	-130.21	-0.22	40.17	43.25	40.85	2.39	18.067	
500.00	499.53	499.02	498.95	1.55	1.54	-145.94	-3.39	41.52	50.07	46.98	3.09	16.199	
600.00	598.92	597.95	597.64	1.93	1.89	-151.63	-9.69	44.20	61.14	57.33	3.81	16.043	
634.55	633.17	631.97	631.51	2.06	2.01	-152.38	-12.58	45.43	65.96	61.89	4.07	16.207	
700.00	697.99	696.18	695.34	2.32	2.24	-150.31	-19.05	48.17	75.82	71.27	4.55	16.666	
800.00	797.04	794.36	792.65	2.72	2.61	-146.63	-31.05	53.28	91.82	86.52	5.30	17.335	
900.00	896.09	892.89	890.25	3.12	2.99	-143.85	-43.43	58.54	108.22	102.17	6.05	17.879	
1,000.00	995.14	991.42	987.86	3.53	3.38	-141.81	-55.81	63.80	124.81	117.99	6.82	18.312	
1,100.00	1,094.19	1,089.95	1,085.47	3.93	3.78	-140.24	-68.19	69.07	141.51	133.93	7.58	18.660	
1,200.00	1,193.24	1,188.48	1,183.07	4.34	4.17	-139.01	-80.57	74.33	158.30	149.95	8.36	18.946	
1,300.00	1,292.28	1,287.01	1,280.68	4.75	4.57	-138.01	-92.95	79.60	175.15	166.02	9.13	19.184	
1,400.00	1,391.33	1,385.54	1,378.29	5.17	4.97	-137.19	-105.34	84.86	192.03	182.12	9.91	19.384	
1,500.00	1,490.38	1,484.07	1,475.90	5.58	5.37	-136.50	-117.72	90.12	208.95	198.26	10.69	19.555	
1,600.00	1,589.43	1,582.60	1,573.50	5.99	5.77	-135.92	-130.10	95.39	225.89	214.43	11.47	19.702	
1,700.00	1,688.48	1,681.13	1,671.11	6.40	6.18	-135.41	-142.48	100.65	242.86	230.61	12.25	19.831	
1,800.00	1,787.53	1,779.66	1,768.72	6.82	6.58	-134.97	-154.86	105.92	259.84	246.81	13.03	19.943	
1,900.00	1,886.58	1,878.19	1,866.32	7.23	6.99	-134.59	-167.24	111.18	276.83	263.02	13.81	20.043	
2,000.00	1,985.62	1,976.72	1,963.93	7.65	7.39	-134.25	-179.62	116.45	293.83	279.24	14.60	20.132	
2,100.00	2,084.67	2,075.25	2,061.54	8.06	7.80	-133.95	-192.01	121.71	310.84	295.46	15.38	20.211	
2,200.00	2,183.72	2,173.78	2,159.14	8.47	8.20	-133.67	-204.39	126.97	327.86	311.70	16.16	20.283	
2,300.00	2,282.77	2,272.31	2,256.75	8.89	8.61	-133.43	-216.77	132.24	344.89	327.94	16.95	20.347	
2,400.00	2,381.82	2,370.84	2,354.36	9.30	9.01	-133.21	-229.15	137.50	361.92	344.18	17.74	20.406	
2,500.00	2,480.87	2,469.37	2,451.96	9.72	9.42	-133.01	-241.53	142.77	378.96	360.44	18.52	20.460	
2,600.00	2,579.92	2,567.90	2,549.57	10.13	9.83	-132.82	-253.91	148.03	396.00	376.69	19.31	20.509	
2,700.00	2,678.96	2,666.43	2,647.18	10.55	10.23	-132.65	-266.30	153.30	413.04	392.95	20.09	20.555	
2,800.00	2,778.01	2,764.96	2,744.79	10.96	10.64	-132.50	-278.68	158.56	430.09	409.21	20.88	20.597	
2,900.00	2,877.06	2,863.49	2,842.39	11.38	11.05	-132.35	-291.06	163.82	447.14	425.47	21.67	20.635	
3,000.00	2,976.11	2,962.02	2,940.00	11.79	11.46	-132.22	-303.44	169.09	464.19	441.74	22.46	20.671	
3,100.00	3,075.16	3,060.54	3,037.61	12.21	11.86	-132.10	-315.82	174.35	481.25	458.00	23.24	20.705	
3,200.00	3,174.21	3,159.07	3,135.21	12.62	12.27	-131.98	-328.20	179.62	498.30	474.27	24.03	20.736	
3,300.00	3,273.26	3,257.60	3,232.82	13.04	12.68	-131.87	-340.58	184.88	515.36	490.54	24.82	20.765	
3,400.00	3,372.30	3,356.13	3,330.43	13.45	13.09	-131.77	-352.97	190.14	532.42	506.82	25.61	20.793	
3,500.00	3,471.35	3,454.66	3,428.03	13.87	13.49	-131.68	-365.35	195.41	549.48	523.09	26.39	20.818	
3,600.00	3,570.40	3,553.19	3,525.64	14.28	13.90	-131.59	-377.73	200.67	566.55	539.37	27.18	20.843	
3,700.00	3,669.45	3,651.72	3,623.25	14.70	14.31	-131.51	-390.11	205.94	583.61	555.64	27.97	20.865	
3,800.00	3,768.50	3,750.25	3,720.85	15.11	14.72	-131.43	-402.49	211.20	600.68	571.92	28.76	20.887	
3,900.00	3,867.55	3,848.78	3,818.46	15.53	15.12	-131.35	-414.87	216.47	617.74	588.20	29.55	20.907	
4,000.00	3,966.59	3,947.31	3,916.07	15.95	15.53	-131.28	-427.25	221.73	634.81	604.48	30.34	20.926	
4,100.00	4,065.64	4,045.84	4,013.67	16.36	15.94	-131.22	-439.64	226.99	651.88	620.76	31.12	20.945	
4,200.00	4,164.69	4,144.37	4,111.28	16.78	16.35	-131.15	-452.02	232.26	668.95	637.04	31.91	20.962	
4,300.00	4,263.74	4,242.90	4,208.89	17.19	16.76	-131.09	-464.40	237.52	686.02	653.32	32.70	20.979	
4,400.00	4,362.79	4,341.43	4,306.50	17.61	17.16	-131.03	-476.78	242.79	703.09	669.60	33.49	20.994	
4,500.00	4,461.84	4,439.96	4,404.10	18.02	17.57	-130.98	-489.16	248.05	720.16	685.88	34.28	21.009	
4,600.00	4,560.89	4,538.49	4,501.71	18.44	17.98	-130.93	-501.54	253.31	737.23	702.17	35.07	21.023	
4,700.00	4,659.93	4,637.02	4,599.32	18.85	18.39	-130.88	-513.93	258.58	754.31	718.45	35.86	21.037	
4,800.00	4,758.98	4,732.27	4,713.73	19.27	18.85	-130.94	-526.63	263.98	770.41	733.66	36.76	20.959	
4,900.00	4,858.03	4,836.96	4,831.03	19.69	19.29	-131.29	-535.24	267.64	784.16	746.53	37.64	20.836	

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 4F-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 4F-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 #3	<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: 0-MWD+HDGM													Offset Well Error: 0.00 usft	
Reference				Offset		Semi Major Axis				Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,000.00	4,957.08	4,987.92	4,948.90	20.10	19.70	-131.90	-539.41	269.41	795.58	757.11	38.47	20.682		
5,100.00	5,056.13	5,095.15	5,056.13	20.52	20.03	-132.66	-539.82	269.59	805.11	765.91	39.19	20.542		
5,200.00	5,155.18	5,194.20	5,155.18	20.93	20.31	-133.37	-539.82	269.59	814.54	774.67	39.88	20.427		
5,300.00	5,254.23	5,293.25	5,254.23	21.35	20.60	-134.06	-539.82	269.59	824.10	783.54	40.56	20.319		
5,400.00	5,353.27	5,392.30	5,353.27	21.76	20.89	-134.74	-539.82	269.59	833.78	792.54	41.24	20.218		
5,500.00	5,452.32	5,491.34	5,452.32	22.18	21.18	-135.40	-539.82	269.59	843.57	801.64	41.92	20.122		
5,600.00	5,551.37	5,590.39	5,551.37	22.60	21.48	-136.05	-539.82	269.59	853.47	810.86	42.61	20.032		
5,700.00	5,650.42	5,689.44	5,650.42	23.01	21.78	-136.68	-539.82	269.59	863.47	820.18	43.29	19.947		
5,800.00	5,749.47	5,788.49	5,749.47	23.43	22.07	-137.29	-539.82	269.59	873.58	829.61	43.97	19.867		
5,900.00	5,848.52	5,887.54	5,848.52	23.84	22.37	-137.90	-539.82	269.59	883.78	839.13	44.66	19.791		
6,000.00	5,947.57	5,986.59	5,947.57	24.26	22.68	-138.49	-539.82	269.59	894.09	848.75	45.34	19.720		
6,100.00	6,046.61	6,085.64	6,046.61	24.67	22.98	-139.06	-539.82	269.59	904.48	858.45	46.02	19.652		
6,200.00	6,145.66	6,184.68	6,145.66	25.09	23.28	-139.62	-539.82	269.59	914.96	868.25	46.71	19.589		
6,300.00	6,244.71	6,283.73	6,244.71	25.50	23.59	-140.17	-539.82	269.59	925.53	878.14	47.39	19.529		
6,400.00	6,343.76	6,382.78	6,343.76	25.92	23.90	-140.71	-539.82	269.59	936.18	888.10	48.08	19.472		
6,500.00	6,442.81	6,481.83	6,442.81	26.34	24.21	-141.24	-539.82	269.59	946.91	898.15	48.76	19.418		
6,600.00	6,541.86	6,580.88	6,541.86	26.75	24.52	-141.75	-539.82	269.59	957.72	908.27	49.45	19.368		
6,700.00	6,640.91	6,679.93	6,640.91	27.17	24.83	-142.25	-539.82	269.59	968.60	918.47	50.14	19.320		
6,800.00	6,739.95	6,778.98	6,739.95	27.58	25.14	-142.74	-539.82	269.59	979.56	928.74	50.82	19.274		
6,900.51	6,839.51	6,880.52	6,841.35	28.00	25.45	-143.48	-535.61	269.57	990.56	939.06	51.50	19.234		
6,950.00	6,888.63	6,929.68	6,890.00	28.20	25.58	-174.10	-528.62	269.53	995.97	944.17	51.80	19.226		
7,000.00	6,938.30	6,978.73	6,937.94	28.38	25.71	151.18	-518.33	269.47	1,001.44	949.36	52.08	19.230		
7,050.00	6,987.78	7,027.18	6,984.51	28.54	25.83	128.57	-504.97	269.40	1,006.88	954.55	52.32	19.244		
7,100.00	7,036.82	7,075.08	7,029.55	28.68	25.94	115.91	-488.70	269.31	1,012.25	959.71	52.54	19.265		
7,150.00	7,085.18	7,122.44	7,072.92	28.81	26.04	108.23	-469.68	269.21	1,017.54	964.79	52.74	19.292		
7,200.00	7,132.63	7,169.31	7,114.50	28.92	26.14	103.08	-448.09	269.09	1,022.70	969.77	52.92	19.324		
7,250.00	7,178.95	7,215.71	7,154.20	29.02	26.23	99.34	-424.07	268.96	1,027.70	974.61	53.09	19.358		
7,300.00	7,223.89	7,261.67	7,191.90	29.11	26.31	96.46	-397.80	268.82	1,032.52	979.28	53.24	19.393		
7,350.00	7,267.25	7,307.22	7,227.53	29.19	26.39	94.15	-369.43	268.66	1,037.13	983.74	53.38	19.428		
7,400.00	7,308.81	7,352.40	7,261.01	29.25	26.47	92.25	-339.12	268.50	1,041.49	987.97	53.52	19.461		
7,450.00	7,348.36	7,397.21	7,292.27	29.30	26.55	90.64	-307.01	268.33	1,045.58	991.93	53.65	19.490		
7,500.00	7,385.73	7,441.70	7,321.26	29.33	26.63	89.27	-273.28	268.14	1,049.37	995.60	53.78	19.514		
7,550.00	7,420.72	7,485.89	7,347.92	29.36	26.71	88.09	-238.05	267.95	1,052.85	998.94	53.91	19.531		
7,600.00	7,453.16	7,529.80	7,372.22	29.38	26.79	87.07	-201.49	267.75	1,055.97	1,001.93	54.04	19.539		
7,650.00	7,482.91	7,573.45	7,394.10	29.38	26.89	86.19	-163.72	267.55	1,058.74	1,004.54	54.19	19.537		
7,700.00	7,509.80	7,616.87	7,413.55	29.38	26.98	85.43	-124.91	267.34	1,061.12	1,006.76	54.35	19.523		
7,750.00	7,533.71	7,660.07	7,430.53	29.36	27.09	84.79	-85.19	267.12	1,063.09	1,008.57	54.53	19.497		
7,800.00	7,554.53	7,700.00	7,444.07	29.35	27.19	84.26	-47.64	266.92	1,064.67	1,009.96	54.71	19.461		
7,850.00	7,572.14	7,745.93	7,457.03	29.32	27.33	83.81	-3.58	266.68	1,065.80	1,010.87	54.94	19.401		
7,900.00	7,586.48	7,788.63	7,466.52	29.29	27.46	83.47	38.04	266.45	1,066.51	1,011.34	55.17	19.330		
7,950.00	7,597.46	7,831.19	7,473.49	29.26	27.60	83.22	80.03	266.22	1,066.77	1,011.34	55.44	19.244		
8,000.00	7,605.04	7,873.65	7,477.95	29.22	27.75	83.05	122.24	265.99	1,066.59	1,010.87	55.72	19.142		
8,050.00	7,609.17	7,916.01	7,479.90	29.19	27.91	82.98	164.55	265.76	1,065.97	1,009.94	56.03	19.025		
8,084.63	7,610.00	7,948.48	7,480.00	29.18	28.05	82.99	197.02	265.59	1,065.24	1,008.96	56.28	18.929		
8,100.00	7,610.00	7,963.85	7,480.00	29.18	28.11	82.99	212.39	265.50	1,064.84	1,008.44	56.40	18.881		
8,200.00	7,610.00	8,063.82	7,480.00	29.43	28.58	82.97	312.35	264.96	1,062.22	1,004.95	57.27	18.548		
8,300.00	7,610.00	8,163.78	7,480.00	29.94	29.13	82.95	412.32	264.42	1,059.60	1,001.31	58.29	18.178		
8,400.00	7,610.00	8,263.75	7,480.00	30.54	29.76	82.93	512.28	263.87	1,056.98	997.52	59.46	17.775		
8,500.00	7,610.00	8,363.71	7,480.00	31.21	30.46	82.92	612.24	263.33	1,054.37	993.59	60.77	17.349		
8,600.00	7,610.00	8,463.68	7,480.00	31.93	31.22	82.90	712.21	262.79	1,051.75	989.54	62.21	16.905		
8,700.00	7,610.00	8,563.64	7,480.00	32.71	32.04	82.88	812.17	262.24	1,049.13	985.36	63.78	16.450		
8,800.00	7,610.00	8,663.61	7,480.00	33.54	32.92	82.86	912.14	261.70	1,046.52	981.06	65.45	15.989		

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 4F-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 4F-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 #3	<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: 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		
8,900.00	7,610.00	8,763.57	7,480.00	34.42	33.86	82.84	1,012.10	261.16	1,043.90	976.67	67.23	15.527		
9,000.00	7,610.00	8,863.54	7,480.00	35.34	34.84	82.83	1,112.06	260.61	1,041.28	972.17	69.11	15.068		
9,100.00	7,610.00	8,963.50	7,480.00	36.31	35.86	82.81	1,212.03	260.07	1,038.66	967.59	71.07	14.614		
9,200.00	7,610.00	9,063.47	7,480.00	37.31	36.92	82.79	1,311.99	259.53	1,036.05	962.93	73.12	14.170		
9,300.00	7,610.00	9,163.43	7,480.00	38.35	38.02	82.77	1,411.95	258.98	1,033.43	958.19	75.24	13.736		
9,400.00	7,610.00	9,263.40	7,480.00	39.42	39.16	82.75	1,511.92	258.44	1,030.81	953.39	77.43	13.313		
9,500.00	7,610.00	9,363.36	7,480.00	40.53	40.32	82.73	1,611.88	257.90	1,028.20	948.52	79.68	12.904		
9,600.00	7,610.00	9,463.33	7,480.00	41.66	41.51	82.72	1,711.84	257.35	1,025.58	943.59	81.99	12.509		
9,700.00	7,610.00	9,563.29	7,480.00	42.82	42.73	82.70	1,811.81	256.81	1,022.97	938.61	84.35	12.127		
9,800.00	7,610.00	9,663.26	7,480.00	44.00	43.97	82.68	1,911.77	256.27	1,020.35	933.59	86.76	11.760		
9,900.00	7,610.00	9,763.23	7,480.00	45.21	45.23	82.66	2,011.74	255.72	1,017.73	928.51	89.22	11.407		
10,000.00	7,610.00	9,863.19	7,480.00	46.44	46.51	82.64	2,111.70	255.18	1,015.12	923.40	91.72	11.068		
10,100.00	7,610.00	9,963.16	7,480.00	47.69	47.81	82.62	2,211.66	254.64	1,012.50	918.25	94.25	10.743		
10,200.00	7,610.00	10,063.12	7,480.00	48.95	49.13	82.60	2,311.63	254.09	1,009.89	913.07	96.82	10.430		
10,300.00	7,610.00	10,163.09	7,480.00	50.23	50.46	82.58	2,411.59	253.55	1,007.27	907.85	99.42	10.131		
10,400.00	7,610.00	10,263.05	7,480.00	51.53	51.81	82.56	2,511.55	253.01	1,004.66	902.60	102.05	9.844		
10,500.00	7,610.00	10,363.02	7,480.00	52.84	53.17	82.54	2,611.52	252.47	1,002.04	897.33	104.71	9.569		
10,600.00	7,610.00	10,462.98	7,480.00	54.17	54.54	82.52	2,711.48	251.92	999.42	892.03	107.40	9.306		
10,700.00	7,610.00	10,562.95	7,480.00	55.51	55.93	82.50	2,811.45	251.38	996.81	886.71	110.10	9.053		
10,800.00	7,610.00	10,662.91	7,480.00	56.86	57.32	82.48	2,911.41	250.84	994.19	881.36	112.83	8.811		
10,900.00	7,610.00	10,762.88	7,480.00	58.22	58.73	82.46	3,011.37	250.29	991.58	876.00	115.58	8.579		
11,000.00	7,610.00	10,862.84	7,480.00	59.59	60.14	82.44	3,111.34	249.75	988.97	870.62	118.35	8.356		
11,100.00	7,610.00	10,962.81	7,480.00	60.97	61.56	82.42	3,211.30	249.21	986.35	865.22	121.14	8.143		
11,200.00	7,610.00	11,062.77	7,480.00	62.35	62.99	82.40	3,311.26	248.66	983.74	859.80	123.94	7.937		
11,300.00	7,610.00	11,162.74	7,480.00	63.75	64.43	82.38	3,411.23	248.12	981.12	854.37	126.75	7.740		
11,400.00	7,610.00	11,262.70	7,480.00	65.15	65.87	82.36	3,511.19	247.58	978.51	848.92	129.58	7.551		
11,500.00	7,610.00	11,362.67	7,480.00	66.57	67.32	82.34	3,611.16	247.03	975.89	843.47	132.43	7.369		
11,600.00	7,610.00	11,462.63	7,480.00	67.98	68.78	82.32	3,711.12	246.49	973.28	837.99	135.29	7.194		
11,700.00	7,610.00	11,562.60	7,480.00	69.41	70.24	82.30	3,811.08	245.95	970.67	832.51	138.15	7.026		
11,800.00	7,610.00	11,662.56	7,480.00	70.84	71.71	82.28	3,911.05	245.40	968.05	827.02	141.03	6.864		
11,900.00	7,610.00	11,762.53	7,480.00	72.27	73.18	82.26	4,011.01	244.86	965.44	821.52	143.92	6.708		
12,000.00	7,610.00	11,862.49	7,480.00	73.72	74.65	82.24	4,110.97	244.32	962.83	816.01	146.82	6.558		
12,100.00	7,610.00	11,962.46	7,480.00	75.16	76.14	82.22	4,210.94	243.77	960.21	810.49	149.73	6.413		
12,200.00	7,610.00	12,062.42	7,480.00	76.61	77.62	82.19	4,310.90	243.23	957.60	804.96	152.64	6.273		
12,300.00	7,610.00	12,162.39	7,480.00	78.07	79.11	82.17	4,410.87	242.69	954.99	799.42	155.57	6.139		
12,400.00	7,610.00	12,262.36	7,480.00	79.53	80.60	82.15	4,510.83	242.14	952.37	793.88	158.50	6.009		
12,500.00	7,610.00	12,362.32	7,480.00	80.99	82.10	82.13	4,610.79	241.60	949.76	788.33	161.44	5.883		
12,600.00	7,610.00	12,462.29	7,480.00	82.46	83.60	82.11	4,710.76	241.06	947.15	782.77	164.38	5.762		
12,700.00	7,610.00	12,562.25	7,480.00	83.93	85.10	82.09	4,810.72	240.51	944.54	777.20	167.33	5.645		
12,800.00	7,610.00	12,662.22	7,480.00	85.41	86.61	82.06	4,910.68	239.97	941.92	771.63	170.29	5.531		
12,900.00	7,610.00	12,762.18	7,480.00	86.88	88.12	82.04	5,010.65	239.43	939.31	766.06	173.25	5.422		
13,000.00	7,610.00	12,862.15	7,480.00	88.37	89.63	82.02	5,110.61	238.88	936.70	760.48	176.22	5.316		
13,100.00	7,610.00	12,962.11	7,480.00	89.85	91.14	82.00	5,210.58	238.34	934.09	754.89	179.19	5.213		
13,200.00	7,610.00	13,062.08	7,480.00	91.34	92.66	81.97	5,310.54	237.80	931.47	749.31	182.17	5.113		
13,300.00	7,610.00	13,162.04	7,480.00	92.83	94.18	81.95	5,410.50	237.25	928.86	743.71	185.15	5.017		
13,400.00	7,610.00	13,262.01	7,480.00	94.32	95.70	81.93	5,510.47	236.71	926.25	738.11	188.14	4.923		
13,500.00	7,610.00	13,361.97	7,480.00	95.81	97.22	81.91	5,610.43	236.17	923.64	732.51	191.13	4.833		
13,600.00	7,610.00	13,461.94	7,480.00	97.31	98.75	81.88	5,710.39	235.62	921.03	726.91	194.12	4.745		
13,700.00	7,610.00	13,561.90	7,480.00	98.81	100.27	81.86	5,810.36	235.08	918.42	721.30	197.12	4.659		
13,800.00	7,610.00	13,661.87	7,480.00	100.31	101.80	81.84	5,910.32	234.54	915.81	715.68	200.12	4.576		
13,894.63	7,610.00	13,756.46	7,480.00	101.73	103.25	81.81	6,004.91	234.02	913.34	710.37	202.97	4.500		
13,900.00	7,610.00	13,761.83	7,480.00	101.81	103.33	81.81	6,010.29	234.00	913.21	710.08	203.13	4.496		

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 4F-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 4F-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 #3	<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: 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		
13,924.15	7,610.00	13,785.98	7,480.00	102.18	103.70	81.81	6,034.44	233.86	912.95	709.09	203.86	4.478		
14,000.00	7,610.00	13,861.77	7,480.00	103.35	104.86	81.82	6,110.22	233.45	915.49	709.31	206.18	4.440		
14,100.00	7,610.00	13,961.11	7,480.00	104.93	106.39	81.84	6,209.56	232.91	926.60	717.29	209.31	4.427 SF		
14,200.00	7,610.00	14,059.05	7,480.00	106.56	107.89	81.86	6,307.50	232.38	946.44	733.96	212.47	4.454		
14,300.00	7,610.00	14,154.81	7,480.00	108.20	109.36	81.89	6,403.26	231.86	974.86	759.21	215.65	4.521		
14,385.81	7,610.00	14,234.67	7,480.00	109.62	110.59	81.90	6,483.11	231.43	1,005.94	787.59	218.35	4.607		
14,400.00	7,610.00	14,247.67	7,480.00	109.86	110.79	81.95	6,496.11	231.35	1,011.58	792.78	218.80	4.623		
14,500.00	7,610.00	14,339.28	7,480.00	111.52	112.20	82.25	6,587.72	230.86	1,051.35	829.41	221.93	4.737		
14,600.00	7,610.00	14,430.90	7,480.00	113.20	113.62	82.54	6,679.34	230.36	1,091.13	866.06	225.07	4.848		
14,700.00	7,610.00	14,522.51	7,480.00	114.90	115.03	82.80	6,770.95	229.86	1,130.94	902.73	228.21	4.956		
14,800.00	7,610.00	14,614.13	7,480.00	116.61	116.44	83.05	6,862.57	229.36	1,170.77	939.41	231.35	5.061		
14,886.04	7,610.00	14,691.86	7,480.00	118.09	117.64	83.24	6,940.30	228.94	1,205.05	971.01	234.04	5.149		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.75	0.22	50.07	50.07				
100.00	100.00	100.00	100.00	0.14	0.14	89.75	0.22	50.07	50.07	49.80	0.28	181.402	
200.00	200.00	200.00	200.00	0.50	0.50	89.75	0.22	50.07	50.07	49.08	0.99	50.426 CC	
300.00	299.98	299.98	299.98	0.84	0.85	-112.08	0.22	50.07	50.70	49.01	1.70	29.902 ES	
350.00	349.93	349.93	349.93	1.02	1.03	-114.31	0.22	50.07	51.56	49.52	2.05	25.198	
400.00	399.85	399.85	399.85	1.19	1.21	-129.20	0.22	50.07	53.12	50.72	2.40	22.118	
500.00	499.53	499.53	499.53	1.55	1.57	-147.94	0.22	50.07	59.16	56.04	3.12	18.959	
600.00	598.92	598.92	598.92	1.93	1.93	-159.11	0.22	50.07	69.07	65.22	3.85	17.962	
634.55	633.17	633.01	633.01	2.06	2.04	-161.79	0.05	50.16	73.41	69.31	4.09	17.930	
700.00	697.99	697.52	697.50	2.32	2.26	-162.73	-1.24	50.87	82.27	77.71	4.55	18.069	
800.00	797.04	795.97	795.82	2.72	2.60	-162.16	-5.66	53.28	96.32	91.07	5.25	18.361	
900.00	896.09	894.07	893.56	3.12	2.93	-160.02	-13.02	57.30	111.08	105.13	5.95	18.660	
1,000.00	995.14	991.65	990.43	3.53	3.28	-156.91	-23.24	62.88	126.85	120.17	6.68	19.002	
1,100.00	1,094.19	1,090.02	1,087.90	3.93	3.64	-153.88	-34.88	69.25	143.40	135.98	7.42	19.338	
1,200.00	1,193.24	1,188.39	1,185.37	4.34	4.01	-151.47	-46.53	75.61	160.26	152.10	8.16	19.630	
1,300.00	1,292.28	1,286.76	1,282.84	4.75	4.39	-149.53	-58.17	81.97	177.34	168.43	8.92	19.884	
1,400.00	1,391.33	1,385.12	1,380.31	5.17	4.78	-147.93	-69.82	88.33	194.59	184.91	9.68	20.105	
1,500.00	1,490.38	1,483.49	1,477.78	5.58	5.16	-146.59	-81.46	94.69	211.96	201.52	10.44	20.299	
1,600.00	1,589.43	1,581.86	1,575.25	5.99	5.55	-145.45	-93.10	101.05	229.43	218.22	11.21	20.469	
1,700.00	1,688.48	1,680.23	1,672.72	6.40	5.94	-144.47	-104.75	107.42	246.97	234.99	11.98	20.620	
1,800.00	1,787.53	1,778.60	1,770.19	6.82	6.34	-143.63	-116.39	113.78	264.57	251.83	12.75	20.754	
1,900.00	1,886.58	1,876.97	1,867.66	7.23	6.73	-142.89	-128.04	120.14	282.23	268.71	13.52	20.874	
2,000.00	1,985.62	1,975.33	1,965.13	7.65	7.13	-142.23	-139.68	126.50	299.92	285.62	14.29	20.983	
2,100.00	2,084.67	2,073.70	2,062.59	8.06	7.53	-141.65	-151.32	132.86	317.64	302.58	15.07	21.080	
2,200.00	2,183.72	2,172.07	2,160.06	8.47	7.93	-141.13	-162.97	139.22	335.40	319.55	15.84	21.169	
2,300.00	2,282.77	2,270.44	2,257.53	8.89	8.33	-140.66	-174.61	145.58	353.18	336.56	16.62	21.250	
2,400.00	2,381.82	2,368.81	2,355.00	9.30	8.73	-140.24	-186.26	151.95	370.98	353.58	17.40	21.324	
2,500.00	2,480.87	2,467.17	2,452.47	9.72	9.13	-139.86	-197.90	158.31	388.79	370.62	18.17	21.392	
2,600.00	2,579.92	2,565.54	2,549.94	10.13	9.53	-139.51	-209.55	164.67	406.62	387.67	18.95	21.454	
2,700.00	2,678.96	2,663.91	2,647.41	10.55	9.93	-139.19	-221.19	171.03	424.47	404.74	19.73	21.512	
2,800.00	2,778.01	2,762.28	2,744.88	10.96	10.33	-138.89	-232.83	177.39	442.33	421.82	20.51	21.566	
2,900.00	2,877.06	2,860.65	2,842.35	11.38	10.73	-138.62	-244.48	183.75	460.19	438.90	21.29	21.615	
3,000.00	2,976.11	2,959.01	2,939.82	11.79	11.14	-138.37	-256.12	190.11	478.07	456.00	22.07	21.662	
3,100.00	3,075.16	3,057.38	3,037.29	12.21	11.54	-138.13	-267.77	196.48	495.96	473.11	22.85	21.705	
3,200.00	3,174.21	3,155.75	3,134.76	12.62	11.94	-137.92	-279.41	202.84	513.85	490.22	23.63	21.746	
3,300.00	3,273.26	3,254.12	3,232.22	13.04	12.35	-137.71	-291.05	209.20	531.75	507.34	24.41	21.784	
3,400.00	3,372.30	3,352.49	3,329.69	13.45	12.75	-137.52	-302.70	215.56	549.66	524.46	25.19	21.819	
3,500.00	3,471.35	3,450.86	3,427.16	13.87	13.15	-137.35	-314.34	221.92	567.57	541.59	25.97	21.853	
3,600.00	3,570.40	3,549.22	3,524.63	14.28	13.56	-137.18	-325.99	228.28	585.48	558.73	26.75	21.885	
3,700.00	3,669.45	3,647.59	3,622.10	14.70	13.96	-137.02	-337.63	234.64	603.40	575.87	27.53	21.914	
3,800.00	3,768.50	3,745.96	3,719.57	15.11	14.37	-136.87	-349.27	241.01	621.33	593.01	28.32	21.943	
3,900.00	3,867.55	3,844.33	3,817.04	15.53	14.77	-136.73	-360.92	247.37	639.26	610.16	29.10	21.970	
4,000.00	3,966.59	3,942.70	3,914.51	15.95	15.18	-136.60	-372.56	253.73	657.19	627.31	29.88	21.995	
4,100.00	4,065.64	4,041.06	4,011.98	16.36	15.58	-136.48	-384.21	260.09	675.12	644.46	30.66	22.019	
4,200.00	4,164.69	4,139.43	4,109.45	16.78	15.99	-136.36	-395.85	266.45	693.06	661.62	31.44	22.042	
4,300.00	4,263.74	4,237.80	4,206.92	17.19	16.39	-136.25	-407.49	272.81	711.00	678.78	32.22	22.064	
4,400.00	4,362.79	4,336.17	4,304.38	17.61	16.80	-136.14	-419.14	279.18	728.95	695.94	33.01	22.085	
4,500.00	4,461.84	4,434.54	4,401.85	18.02	17.20	-136.04	-430.78	285.54	746.89	713.10	33.79	22.105	
4,600.00	4,560.89	4,532.90	4,499.32	18.44	17.61	-135.94	-442.43	291.90	764.84	730.27	34.57	22.123	
4,700.00	4,659.93	4,631.27	4,596.79	18.85	18.01	-135.85	-454.07	298.26	782.79	747.44	35.35	22.142	
4,800.00	4,758.98	4,729.64	4,694.26	19.27	18.42	-135.76	-465.72	304.62	800.74	764.60	36.14	22.159	
4,900.00	4,858.03	4,828.01	4,791.73	19.69	18.82	-135.68	-477.36	310.98	818.69	781.78	36.92	22.176	

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 4F-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 4F-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 #3	<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		
5,000.00	4,957.08	4,926.38	4,889.20	20.10	19.23	-135.59	-489.00	317.34	836.65	798.95	37.70	22.192		
5,100.00	5,056.13	5,024.75	4,986.67	20.52	19.64	-135.52	-500.65	323.71	854.61	816.12	38.48	22.207		
5,200.00	5,155.18	5,123.11	5,084.14	20.93	20.04	-135.44	-512.29	330.07	872.56	833.30	39.27	22.222		
5,300.00	5,254.23	5,237.35	5,197.48	21.35	20.50	-135.43	-524.73	336.86	889.91	849.75	40.16	22.157		
5,400.00	5,353.27	5,359.18	5,318.88	21.76	20.96	-135.65	-533.75	341.79	904.85	863.78	41.07	22.031		
5,500.00	5,452.32	5,481.51	5,441.08	22.18	21.39	-136.14	-538.25	344.25	917.28	875.35	41.93	21.876		
5,600.00	5,551.37	5,591.80	5,551.37	22.60	21.73	-136.76	-538.78	344.54	927.60	884.93	42.67	21.737		
5,700.00	5,650.42	5,690.85	5,650.42	23.01	22.03	-137.33	-538.78	344.54	937.72	894.36	43.36	21.627		
5,800.00	5,749.47	5,789.90	5,749.47	23.43	22.32	-137.90	-538.78	344.54	947.93	903.88	44.04	21.523		
5,900.00	5,848.52	5,888.95	5,848.52	23.84	22.62	-138.44	-538.78	344.54	958.22	913.50	44.73	21.424		
6,000.00	5,947.57	5,987.99	5,947.57	24.26	22.92	-138.98	-538.78	344.54	968.61	923.20	45.41	21.329		
6,100.00	6,046.61	6,087.04	6,046.61	24.67	23.22	-139.51	-538.78	344.54	979.07	932.98	46.10	21.239		
6,200.00	6,145.66	6,186.09	6,145.66	25.09	23.52	-140.02	-538.78	344.54	989.62	942.84	46.78	21.154		
6,300.00	6,244.71	6,285.14	6,244.71	25.50	23.82	-140.53	-538.78	344.54	1,000.25	952.78	47.47	21.072		
6,400.00	6,343.76	6,384.19	6,343.76	25.92	24.13	-141.02	-538.78	344.54	1,010.95	962.79	48.16	20.993		
6,500.00	6,442.81	6,483.24	6,442.81	26.34	24.43	-141.51	-538.78	344.54	1,021.72	972.88	48.84	20.919		
6,600.00	6,541.86	6,582.29	6,541.86	26.75	24.74	-141.98	-538.78	344.54	1,032.57	983.04	49.53	20.847		
6,700.00	6,640.91	6,681.33	6,640.91	27.17	25.05	-142.44	-538.78	344.54	1,043.49	993.27	50.22	20.779		
6,800.00	6,739.95	6,780.38	6,739.95	27.58	25.36	-142.90	-538.78	344.54	1,054.47	1,003.56	50.91	20.714		
6,900.51	6,839.51	6,879.94	6,839.51	28.00	25.67	-143.35	-538.78	344.54	1,065.57	1,013.97	51.60	20.652		
6,950.00	6,888.63	6,929.06	6,888.63	28.20	25.82	-173.57	-538.78	344.54	1,071.05	1,019.12	51.93	20.624		
7,000.00	6,938.30	6,978.83	6,938.37	28.38	25.97	152.23	-537.40	344.55	1,076.57	1,024.32	52.25	20.604		
7,050.00	6,987.78	7,028.61	6,987.91	28.54	26.12	130.11	-532.58	344.60	1,082.02	1,029.48	52.54	20.593		
7,100.00	7,036.82	7,078.38	7,036.98	28.68	26.26	117.93	-524.33	344.69	1,087.39	1,034.58	52.81	20.589		
7,150.00	7,085.18	7,128.16	7,085.37	28.81	26.38	110.72	-512.69	344.81	1,092.65	1,039.58	53.06	20.591		
7,200.00	7,132.63	7,177.94	7,132.84	28.92	26.50	106.01	-497.72	344.96	1,097.77	1,044.47	53.30	20.598		
7,250.00	7,178.95	7,227.73	7,179.16	29.02	26.61	102.70	-479.49	345.15	1,102.73	1,049.22	53.51	20.608		
7,300.00	7,223.89	7,277.54	7,224.11	29.11	26.71	100.23	-458.07	345.37	1,107.50	1,053.79	53.71	20.621		
7,350.00	7,267.25	7,327.36	7,267.49	29.19	26.81	98.31	-433.57	345.62	1,112.06	1,058.16	53.90	20.634		
7,400.00	7,308.81	7,377.21	7,309.07	29.25	26.90	96.76	-406.11	345.90	1,116.39	1,062.31	54.07	20.646		
7,450.00	7,348.36	7,427.07	7,348.66	29.30	26.98	95.50	-375.81	346.21	1,120.46	1,066.22	54.25	20.655		
7,500.00	7,385.73	7,476.96	7,386.06	29.33	27.06	94.45	-342.81	346.55	1,124.27	1,069.85	54.42	20.660		
7,550.00	7,420.72	7,526.87	7,421.09	29.36	27.14	93.56	-307.27	346.91	1,127.78	1,073.19	54.59	20.659		
7,600.00	7,453.16	7,576.80	7,453.57	29.38	27.22	92.81	-269.37	347.30	1,130.98	1,076.21	54.77	20.650		
7,650.00	7,482.91	7,626.76	7,483.35	29.38	27.30	92.17	-229.27	347.71	1,133.86	1,078.91	54.96	20.632		
7,700.00	7,509.80	7,676.73	7,510.26	29.38	27.39	91.63	-187.18	348.14	1,136.40	1,081.25	55.16	20.603		
7,750.00	7,533.71	7,726.72	7,534.19	29.36	27.48	91.18	-143.30	348.59	1,138.59	1,083.22	55.37	20.563		
7,800.00	7,554.53	7,776.72	7,555.00	29.35	27.59	90.81	-97.85	349.05	1,140.42	1,084.82	55.61	20.509		
7,850.00	7,572.14	7,826.74	7,572.59	29.32	27.70	90.52	-51.05	349.53	1,141.88	1,086.02	55.86	20.442		
7,900.00	7,586.48	7,876.76	7,586.88	29.29	27.83	90.29	-3.12	350.02	1,142.96	1,086.83	56.14	20.360		
7,950.00	7,597.46	7,926.78	7,597.79	29.26	27.97	90.13	45.68	350.52	1,143.66	1,087.23	56.44	20.265		
8,000.00	7,605.04	7,976.80	7,605.26	29.22	28.12	90.03	95.13	351.03	1,143.98	1,087.22	56.76	20.155		
8,050.00	7,609.17	8,026.81	7,609.27	29.19	28.29	89.99	144.96	351.53	1,143.90	1,086.80	57.10	20.033		
8,084.63	7,610.00	8,061.43	7,610.00	29.18	28.42	90.00	179.58	351.89	1,143.62	1,086.27	57.35	19.941		
8,100.00	7,610.00	8,076.81	7,610.00	29.18	28.48	90.00	194.95	352.05	1,143.46	1,085.99	57.47	19.897		
8,200.00	7,610.00	8,176.80	7,610.00	29.43	28.91	90.00	294.94	353.07	1,142.39	1,084.07	58.32	19.589		
8,300.00	7,610.00	8,276.80	7,610.00	29.94	29.42	90.00	394.93	354.09	1,141.32	1,082.00	59.32	19.241		
8,400.00	7,610.00	8,376.79	7,610.00	30.54	30.01	90.00	494.92	355.11	1,140.24	1,079.78	60.46	18.859		
8,500.00	7,610.00	8,476.78	7,610.00	31.21	30.67	90.00	594.91	356.14	1,139.17	1,077.43	61.74	18.450		
8,600.00	7,610.00	8,576.78	7,610.00	31.93	31.40	90.00	694.89	357.16	1,138.10	1,074.94	63.16	18.019		
8,700.00	7,610.00	8,676.77	7,610.00	32.71	32.19	90.00	794.88	358.18	1,137.03	1,072.33	64.70	17.575		
8,800.00	7,610.00	8,776.77	7,610.00	33.54	33.03	90.00	894.87	359.21	1,135.96	1,069.61	66.35	17.122		

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 4F-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 4F-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 #3	<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							
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
8,900.00	7,610.00	8,876.76	7,610.00	34.42	33.93	90.00	994.86	360.23	1,134.89	1,066.79	68.10	16.665	
9,000.00	7,610.00	8,976.76	7,610.00	35.34	34.88	90.00	1,094.85	361.25	1,133.82	1,063.86	69.95	16.208	
9,100.00	7,610.00	9,076.75	7,610.00	36.31	35.87	90.00	1,194.84	362.27	1,132.74	1,060.85	71.90	15.755	
9,200.00	7,610.00	9,176.74	7,610.00	37.31	36.90	90.00	1,294.83	363.30	1,131.67	1,057.75	73.92	15.309	
9,300.00	7,610.00	9,276.74	7,610.00	38.35	37.97	90.00	1,394.82	364.32	1,130.60	1,054.58	76.02	14.872	
9,400.00	7,610.00	9,376.73	7,610.00	39.42	39.08	90.00	1,494.81	365.34	1,129.53	1,051.34	78.19	14.445	
9,500.00	7,610.00	9,476.73	7,610.00	40.53	40.21	90.00	1,594.80	366.37	1,128.46	1,048.03	80.43	14.030	
9,600.00	7,610.00	9,576.72	7,610.00	41.66	41.38	90.00	1,694.79	367.39	1,127.39	1,044.66	82.72	13.628	
9,700.00	7,610.00	9,676.71	7,610.00	42.82	42.57	90.00	1,794.77	368.41	1,126.32	1,041.24	85.07	13.239	
9,800.00	7,610.00	9,776.71	7,610.00	44.00	43.78	90.00	1,894.76	369.43	1,125.24	1,037.77	87.47	12.864	
9,900.00	7,610.00	9,876.70	7,610.00	45.21	45.02	90.00	1,994.75	370.46	1,124.17	1,034.26	89.92	12.502	
10,000.00	7,610.00	9,976.70	7,610.00	46.44	46.28	90.00	2,094.74	371.48	1,123.10	1,030.70	92.40	12.154	
10,100.00	7,610.00	10,076.69	7,610.00	47.69	47.55	90.00	2,194.73	372.50	1,122.03	1,027.10	94.93	11.820	
10,200.00	7,610.00	10,176.69	7,610.00	48.95	48.85	90.00	2,294.72	373.52	1,120.96	1,023.47	97.49	11.498	
10,300.00	7,610.00	10,276.68	7,610.00	50.23	50.16	90.00	2,394.71	374.55	1,119.89	1,019.80	100.09	11.189	
10,400.00	7,610.00	10,376.67	7,610.00	51.53	51.48	90.00	2,494.70	375.57	1,118.81	1,016.10	102.71	10.893	
10,500.00	7,610.00	10,476.67	7,610.00	52.84	52.82	90.00	2,594.69	376.59	1,117.74	1,012.38	105.37	10.608	
10,600.00	7,610.00	10,576.66	7,610.00	54.17	54.17	90.00	2,694.68	377.62	1,116.67	1,008.62	108.05	10.335	
10,700.00	7,610.00	10,676.66	7,610.00	55.51	55.53	90.00	2,794.66	378.64	1,115.60	1,004.85	110.75	10.073	
10,800.00	7,610.00	10,776.65	7,610.00	56.86	56.91	90.00	2,894.65	379.66	1,114.53	1,001.05	113.48	9.821	
10,900.00	7,610.00	10,876.65	7,610.00	58.22	58.29	90.00	2,994.64	380.68	1,113.46	997.23	116.23	9.580	
11,000.00	7,610.00	10,976.64	7,610.00	59.59	59.69	90.00	3,094.63	381.71	1,112.39	993.39	119.00	9.348	
11,100.00	7,610.00	11,076.63	7,610.00	60.97	61.09	90.00	3,194.62	382.73	1,111.31	989.53	121.78	9.125	
11,200.00	7,610.00	11,176.63	7,610.00	62.35	62.50	90.00	3,294.61	383.75	1,110.24	985.66	124.59	8.911	
11,300.00	7,610.00	11,276.62	7,610.00	63.75	63.92	90.00	3,394.60	384.78	1,109.17	981.77	127.41	8.706	
11,400.00	7,610.00	11,376.62	7,610.00	65.15	65.34	90.00	3,494.59	385.80	1,108.10	977.86	130.24	8.508	
11,500.00	7,610.00	11,476.61	7,610.00	66.57	66.78	90.00	3,594.58	386.82	1,107.03	973.94	133.09	8.318	
11,600.00	7,610.00	11,576.61	7,610.00	67.98	68.21	90.00	3,694.57	387.84	1,105.96	970.01	135.95	8.135	
11,700.00	7,610.00	11,676.60	7,610.00	69.41	69.66	90.00	3,794.55	388.87	1,104.89	966.06	138.82	7.959	
11,800.00	7,610.00	11,776.59	7,610.00	70.84	71.11	90.00	3,894.54	389.89	1,103.81	962.11	141.71	7.789	
11,900.00	7,610.00	11,876.59	7,610.00	72.27	72.56	90.00	3,994.53	390.91	1,102.74	958.14	144.60	7.626	
12,000.00	7,610.00	11,976.58	7,610.00	73.72	74.02	90.00	4,094.52	391.93	1,101.67	954.16	147.51	7.469	
12,100.00	7,610.00	12,076.58	7,610.00	75.16	75.49	90.00	4,194.51	392.96	1,100.60	950.18	150.42	7.317	
12,200.00	7,610.00	12,176.57	7,610.00	76.61	76.96	90.00	4,294.50	393.98	1,099.53	946.18	153.35	7.170	
12,300.00	7,610.00	12,276.57	7,610.00	78.07	78.43	90.00	4,394.49	395.00	1,098.46	942.17	156.28	7.029	
12,400.00	7,610.00	12,376.56	7,610.00	79.53	79.91	90.00	4,494.48	396.03	1,097.38	938.16	159.22	6.892	
12,500.00	7,610.00	12,476.55	7,610.00	80.99	81.39	90.00	4,594.47	397.05	1,096.31	934.14	162.17	6.760	
12,600.00	7,610.00	12,576.55	7,610.00	82.46	82.87	90.00	4,694.46	398.07	1,095.24	930.11	165.13	6.633	
12,700.00	7,610.00	12,676.54	7,610.00	83.93	84.36	90.00	4,794.45	399.09	1,094.17	926.08	168.09	6.509	
12,800.00	7,610.00	12,776.54	7,610.00	85.41	85.85	90.00	4,894.43	400.12	1,093.10	922.04	171.06	6.390	
12,900.00	7,610.00	12,876.53	7,610.00	86.88	87.35	90.00	4,994.42	401.14	1,092.03	917.99	174.03	6.275	
13,000.00	7,610.00	12,976.53	7,610.00	88.37	88.84	90.00	5,094.41	402.16	1,090.96	913.94	177.01	6.163	
13,100.00	7,610.00	13,076.52	7,610.00	89.85	90.34	90.00	5,194.40	403.19	1,089.88	909.88	180.00	6.055	
13,200.00	7,610.00	13,176.51	7,610.00	91.34	91.84	90.00	5,294.39	404.21	1,088.81	905.82	182.99	5.950	
13,300.00	7,610.00	13,276.51	7,610.00	92.83	93.35	90.00	5,394.38	405.23	1,087.74	901.75	185.99	5.848	
13,400.00	7,610.00	13,376.50	7,610.00	94.32	94.86	90.00	5,494.37	406.25	1,086.67	897.68	188.99	5.750	
13,500.00	7,610.00	13,476.50	7,610.00	95.81	96.36	90.00	5,594.36	407.28	1,085.60	893.60	192.00	5.654	
13,600.00	7,610.00	13,576.49	7,610.00	97.31	97.88	90.00	5,694.35	408.30	1,084.53	889.52	195.01	5.561	
13,700.00	7,610.00	13,676.49	7,610.00	98.81	99.39	90.00	5,794.34	409.32	1,083.45	885.43	198.02	5.471	
13,800.00	7,610.00	13,776.48	7,610.00	100.31	100.90	90.00	5,894.32	410.35	1,082.38	881.34	201.04	5.384	
13,894.63	7,610.00	13,871.10	7,610.00	101.73	102.34	90.00	5,988.94	411.31	1,081.37	877.47	203.90	5.303	
13,900.00	7,610.00	13,876.47	7,610.00	101.81	102.42	90.00	5,994.31	411.37	1,081.32	877.26	204.06	5.299	

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 4F-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 4F-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 #3	<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					
13,906.62	7,610.00	13,883.09	7,610.00	101.91	102.52	90.00	6,000.93	411.44	1,081.31	877.04	204.27	5.294					
14,000.00	7,610.00	13,976.37	7,610.00	103.35	103.94	90.00	6,094.20	412.39	1,085.20	878.08	207.12	5.240					
14,100.00	7,610.00	14,075.51	7,610.00	104.93	105.44	90.00	6,193.34	413.40	1,097.97	887.77	210.20	5.223 SF					
14,200.00	7,610.00	14,173.13	7,610.00	106.56	106.93	90.00	6,290.95	414.40	1,119.53	906.24	213.29	5.249					
14,300.00	7,610.00	14,268.43	7,610.00	108.20	108.38	90.00	6,386.25	415.38	1,149.72	933.36	216.36	5.314					
14,385.81	7,610.00	14,347.79	7,610.00	109.62	109.59	90.00	6,465.60	416.19	1,182.32	963.37	218.95	5.400					
14,400.00	7,610.00	14,360.69	7,610.00	109.86	109.79	90.00	6,478.51	416.32	1,188.21	968.83	219.38	5.416					
14,500.00	7,610.00	14,451.67	7,610.00	111.52	111.18	90.00	6,569.48	417.25	1,229.72	1,007.34	222.38	5.530					
14,600.00	7,610.00	14,542.64	7,610.00	113.20	112.57	90.00	6,660.45	418.18	1,271.23	1,045.84	225.39	5.640					
14,700.00	7,610.00	14,633.62	7,610.00	114.90	113.96	90.00	6,751.42	419.11	1,312.75	1,084.33	228.41	5.747					
14,800.00	7,610.00	14,724.60	7,610.00	116.61	115.35	90.00	6,842.39	420.04	1,354.26	1,122.81	231.45	5.851					
14,886.04	7,610.00	14,802.87	7,610.00	118.09	116.54	90.00	6,920.67	420.84	1,389.98	1,155.91	234.07	5.938					



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<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		
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	59.86	59.86					
100.00	100.00	100.00	100.00	0.14	0.14	90.00	0.00	59.86	59.86	59.59	0.28	216.875		
200.00	200.00	200.00	200.00	0.50	0.50	90.00	0.00	59.86	59.86	58.87	0.99	60.287	CC, ES	
300.00	299.98	298.48	298.46	0.84	0.84	-110.38	-1.17	61.08	61.70	60.00	1.70	36.271		
350.00	349.93	347.65	347.59	1.02	1.01	-110.81	-2.64	62.61	64.00	61.94	2.06	31.028		
400.00	399.85	396.73	396.58	1.19	1.18	-123.39	-4.68	64.73	67.48	65.05	2.43	27.784		
500.00	499.53	494.34	493.82	1.55	1.54	-136.78	-10.46	70.76	78.74	75.56	3.18	24.756		
600.00	598.92	590.79	589.58	1.93	1.90	-142.69	-18.43	79.06	95.68	91.73	3.95	24.233		
634.55	633.17	623.76	622.22	2.06	2.03	-143.88	-21.67	82.43	102.84	98.62	4.22	24.367		
700.00	697.99	686.76	684.45	2.32	2.29	-143.04	-28.44	89.48	117.42	112.71	4.70	24.969		
800.00	797.04	784.18	780.65	2.72	2.69	-142.03	-39.06	100.55	139.90	134.47	5.42	25.789		
900.00	896.09	881.59	876.85	3.12	3.09	-141.29	-49.69	111.62	162.41	156.25	6.16	26.378		
1,000.00	995.14	979.01	973.05	3.53	3.50	-140.74	-60.31	122.68	184.94	178.04	6.90	26.806		
1,100.00	1,094.19	1,076.42	1,069.25	3.93	3.91	-140.30	-70.94	133.75	207.48	199.84	7.65	27.132		
1,200.00	1,193.24	1,173.84	1,165.45	4.34	4.33	-139.95	-81.56	144.82	230.04	221.64	8.40	27.386		
1,300.00	1,292.28	1,271.25	1,261.65	4.75	4.74	-139.66	-92.19	155.89	252.59	243.44	9.16	27.588		
1,400.00	1,391.33	1,368.67	1,357.85	5.17	5.16	-139.42	-102.81	166.95	275.16	265.24	9.91	27.753		
1,500.00	1,490.38	1,466.08	1,454.05	5.58	5.58	-139.22	-113.44	178.02	297.73	287.05	10.68	27.888		
1,600.00	1,589.43	1,563.50	1,550.25	5.99	6.00	-139.05	-124.06	189.09	320.30	308.86	11.44	28.002		
1,700.00	1,688.48	1,660.91	1,646.45	6.40	6.41	-138.89	-134.68	200.16	342.87	330.67	12.20	28.098		
1,800.00	1,787.53	1,758.33	1,742.65	6.82	6.83	-138.76	-145.31	211.23	365.45	352.48	12.97	28.180		
1,900.00	1,886.58	1,855.74	1,838.85	7.23	7.25	-138.64	-155.93	222.29	388.03	374.29	13.73	28.251		
2,000.00	1,985.62	1,953.16	1,935.05	7.65	7.67	-138.54	-166.56	233.36	410.60	396.10	14.50	28.314		
2,100.00	2,084.67	2,050.57	2,031.25	8.06	8.09	-138.44	-177.18	244.43	433.18	417.91	15.27	28.368		
2,200.00	2,183.72	2,147.99	2,127.44	8.47	8.51	-138.36	-187.81	255.50	455.76	439.73	16.04	28.417		
2,300.00	2,282.77	2,245.40	2,223.64	8.89	8.93	-138.28	-198.43	266.56	478.35	461.54	16.81	28.460		
2,400.00	2,381.82	2,342.82	2,319.84	9.30	9.35	-138.21	-209.06	277.63	500.93	483.35	17.58	28.498		
2,500.00	2,480.87	2,440.23	2,416.04	9.72	9.77	-138.15	-219.68	288.70	523.51	505.16	18.35	28.533		
2,600.00	2,579.92	2,537.65	2,512.24	10.13	10.19	-138.09	-230.31	299.77	546.10	526.98	19.12	28.565		
2,700.00	2,678.96	2,635.06	2,608.44	10.55	10.61	-138.04	-240.93	310.83	568.68	548.79	19.89	28.593		
2,800.00	2,778.01	2,732.48	2,704.64	10.96	11.03	-137.99	-251.56	321.90	591.26	570.61	20.66	28.619		
2,900.00	2,877.06	2,829.89	2,800.84	11.38	11.45	-137.94	-262.18	332.97	613.85	592.42	21.43	28.643		
3,000.00	2,976.11	2,927.31	2,897.04	11.79	11.87	-137.90	-272.81	344.04	636.44	614.23	22.20	28.665		
3,100.00	3,075.16	3,024.72	2,993.24	12.21	12.29	-137.86	-283.43	355.10	659.02	636.05	22.97	28.685		
3,200.00	3,174.21	3,122.14	3,089.44	12.62	12.71	-137.82	-294.06	366.17	681.61	657.86	23.75	28.704		
3,300.00	3,273.26	3,219.55	3,185.64	13.04	13.13	-137.79	-304.68	377.24	704.19	679.68	24.52	28.721		
3,400.00	3,372.30	3,316.97	3,281.84	13.45	13.55	-137.75	-315.31	388.31	726.78	701.49	25.29	28.738		
3,500.00	3,471.35	3,414.38	3,378.04	13.87	13.97	-137.72	-325.93	399.37	749.37	723.30	26.06	28.753		
3,600.00	3,570.40	3,511.80	3,474.24	14.28	14.40	-137.69	-336.56	410.44	771.95	745.12	26.84	28.767		
3,700.00	3,669.45	3,609.21	3,570.43	14.70	14.82	-137.67	-347.18	421.51	794.54	766.93	27.61	28.780		
3,800.00	3,768.50	3,706.63	3,666.63	15.11	15.24	-137.64	-357.81	432.58	817.13	788.75	28.38	28.792		
3,900.00	3,867.55	3,804.04	3,762.83	15.53	15.66	-137.62	-368.43	443.65	839.71	810.56	29.15	28.804		
4,000.00	3,966.59	3,901.46	3,859.03	15.95	16.08	-137.59	-379.06	454.71	862.30	832.38	29.93	28.814		
4,100.00	4,065.64	3,998.87	3,955.23	16.36	16.50	-137.57	-389.68	465.78	884.89	854.19	30.70	28.825		
4,200.00	4,164.69	4,096.29	4,051.43	16.78	16.92	-137.55	-400.31	476.85	907.48	876.01	31.47	28.834		
4,300.00	4,263.74	4,193.70	4,147.63	17.19	17.34	-137.53	-410.93	487.92	930.07	897.82	32.25	28.843		
4,400.00	4,362.79	4,291.12	4,243.83	17.61	17.76	-137.51	-421.56	498.98	952.65	919.63	33.02	28.852		
4,500.00	4,461.84	4,388.53	4,340.03	18.02	18.18	-137.49	-432.18	510.05	975.24	941.45	33.79	28.860		
4,600.00	4,560.89	4,485.95	4,436.23	18.44	18.61	-137.48	-442.81	521.12	997.83	963.26	34.57	28.868		
4,700.00	4,659.93	4,583.36	4,532.43	18.85	19.03	-137.46	-453.43	532.19	1,020.42	985.08	35.34	28.875		
4,800.00	4,758.98	4,713.56	4,661.32	19.27	19.57	-137.52	-466.09	545.37	1,041.73	1,005.39	36.34	28.863		
4,900.00	4,858.03	4,852.20	4,799.34	19.69	20.09	-137.79	-475.13	554.79	1,059.37	1,022.04	37.34	28.375		

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 4F-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 4F-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 #3	<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							
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	4,957.08	4,992.15	4,939.12	20.10	20.57	-138.28	-479.55	559.40	1,073.24	1,034.99	38.25	28.055	
5,100.00	5,056.13	5,109.16	5,056.13	20.52	20.92	-138.82	-480.00	559.86	1,083.96	1,044.95	39.01	27.787	
5,200.00	5,155.18	5,208.21	5,155.18	20.93	21.20	-139.30	-480.00	559.86	1,094.40	1,054.70	39.70	27.568	
5,300.00	5,254.23	5,307.25	5,254.23	21.35	21.48	-139.76	-480.00	559.86	1,104.91	1,064.53	40.39	27.358	
5,400.00	5,353.27	5,406.30	5,353.27	21.76	21.77	-140.21	-480.00	559.86	1,115.50	1,074.42	41.08	27.157	
5,500.00	5,452.32	5,505.35	5,452.32	22.18	22.05	-140.66	-480.00	559.86	1,126.15	1,084.38	41.77	26.963	
5,600.00	5,551.37	5,604.40	5,551.37	22.60	22.34	-141.10	-480.00	559.86	1,136.86	1,094.41	42.46	26.777	
5,700.00	5,650.42	5,703.45	5,650.42	23.01	22.63	-141.53	-480.00	559.86	1,147.65	1,104.50	43.15	26.598	
5,800.00	5,749.47	5,802.50	5,749.47	23.43	22.93	-141.95	-480.00	559.86	1,158.49	1,114.65	43.84	26.426	
5,900.00	5,848.52	5,901.55	5,848.52	23.84	23.22	-142.37	-480.00	559.86	1,169.40	1,124.87	44.53	26.260	
6,000.00	5,947.57	6,000.59	5,947.57	24.26	23.52	-142.77	-480.00	559.86	1,180.36	1,135.14	45.22	26.100	
6,100.00	6,046.61	6,099.64	6,046.61	24.67	23.81	-143.17	-480.00	559.86	1,191.39	1,145.47	45.92	25.946	
6,200.00	6,145.66	6,198.69	6,145.66	25.09	24.11	-143.56	-480.00	559.86	1,202.47	1,155.86	46.61	25.798	
6,300.00	6,244.71	6,297.74	6,244.71	25.50	24.41	-143.95	-480.00	559.86	1,213.60	1,166.30	47.31	25.655	
6,400.00	6,343.76	6,396.79	6,343.76	25.92	24.72	-144.32	-480.00	559.86	1,224.79	1,176.79	48.00	25.517	
6,500.00	6,442.81	6,495.84	6,442.81	26.34	25.02	-144.70	-480.00	559.86	1,236.04	1,187.34	48.69	25.384	
6,600.00	6,541.86	6,594.89	6,541.86	26.75	25.32	-145.06	-480.00	559.86	1,247.33	1,197.94	49.39	25.255	
6,700.00	6,640.91	6,693.93	6,640.91	27.17	25.63	-145.42	-480.00	559.86	1,258.67	1,208.58	50.09	25.131	
6,800.00	6,739.95	6,790.94	6,737.82	27.58	25.92	-145.89	-477.13	559.83	1,270.11	1,219.35	50.76	25.020	
6,900.51	6,839.51	6,883.58	6,829.30	28.00	26.18	-146.85	-462.92	559.66	1,282.09	1,230.70	51.39	24.951	
6,950.00	6,888.63	6,927.34	6,871.70	28.20	26.28	-177.56	-452.12	559.53	1,288.22	1,236.56	51.66	24.936	
7,000.00	6,938.30	6,970.88	6,913.15	28.38	26.38	147.66	-438.83	559.37	1,294.44	1,242.53	51.91	24.936	
7,050.00	6,987.78	7,013.80	6,953.15	28.54	26.48	124.99	-423.28	559.18	1,300.64	1,248.50	52.13	24.949	
7,100.00	7,036.82	7,056.16	6,991.65	28.68	26.56	112.29	-405.61	558.97	1,306.76	1,254.43	52.33	24.970	
7,150.00	7,085.18	7,100.00	7,030.31	28.81	26.64	104.56	-384.97	558.73	1,312.78	1,260.26	52.52	24.996	
7,200.00	7,132.63	7,139.38	7,063.92	28.92	26.71	99.40	-364.44	558.48	1,318.63	1,265.96	52.67	25.035	
7,250.00	7,178.95	7,180.34	7,097.60	29.02	26.77	95.65	-341.16	558.20	1,324.29	1,271.48	52.82	25.074	
7,300.00	7,223.89	7,220.90	7,129.61	29.11	26.83	92.78	-316.25	557.90	1,329.71	1,276.77	52.95	25.114	
7,350.00	7,267.25	7,261.12	7,159.89	29.19	26.89	90.49	-289.80	557.59	1,334.86	1,281.79	53.07	25.154	
7,400.00	7,308.81	7,300.00	7,187.72	29.25	26.94	88.61	-262.65	557.26	1,339.69	1,286.51	53.17	25.194	
7,450.00	7,348.36	7,340.63	7,215.18	29.30	26.98	87.04	-232.71	556.91	1,344.17	1,290.89	53.29	25.225	
7,500.00	7,385.73	7,379.99	7,240.11	29.33	27.03	85.71	-202.26	556.54	1,348.28	1,294.89	53.39	25.251	
7,550.00	7,420.72	7,419.13	7,263.22	29.36	27.07	84.59	-170.68	556.16	1,351.98	1,298.48	53.51	25.268	
7,600.00	7,453.16	7,458.06	7,284.45	29.38	27.11	83.64	-138.06	555.77	1,355.25	1,301.63	53.62	25.274	
7,650.00	7,482.91	7,500.00	7,305.31	29.38	27.15	82.82	-101.68	555.34	1,358.07	1,304.31	53.77	25.259	
7,700.00	7,509.80	7,535.44	7,321.24	29.38	27.19	82.17	-70.04	554.96	1,360.41	1,306.52	53.89	25.243	
7,750.00	7,533.71	7,573.92	7,336.75	29.36	27.24	81.62	-34.82	554.54	1,362.26	1,308.21	54.05	25.203	
7,800.00	7,554.53	7,612.30	7,350.32	29.35	27.29	81.19	1.07	554.11	1,363.61	1,309.38	54.23	25.145	
7,850.00	7,572.14	7,650.00	7,361.75	29.32	27.35	80.87	36.99	553.68	1,364.45	1,310.02	54.43	25.069	
7,900.00	7,586.48	7,688.83	7,371.53	29.29	27.42	80.65	74.56	553.23	1,364.76	1,310.10	54.66	24.970	
7,950.00	7,597.46	7,727.02	7,379.15	29.26	27.51	80.52	111.97	552.78	1,364.55	1,309.64	54.91	24.851	
8,000.00	7,605.04	7,765.19	7,384.77	29.22	27.60	80.50	149.72	552.33	1,363.81	1,308.63	55.19	24.713	
8,050.00	7,609.17	7,800.00	7,388.13	29.19	27.69	80.57	184.36	551.92	1,362.56	1,307.09	55.47	24.563	
8,084.63	7,610.00	7,829.80	7,389.66	29.18	27.79	80.68	214.12	551.56	1,361.38	1,305.67	55.71	24.435	
8,100.00	7,610.00	7,841.55	7,389.93	29.18	27.82	80.69	225.86	551.42	1,360.83	1,305.01	55.82	24.381	
8,200.00	7,610.00	7,938.34	7,390.00	29.43	28.20	80.67	322.64	550.26	1,357.56	1,300.91	56.65	23.964	
8,300.00	7,610.00	8,038.28	7,390.00	29.94	28.70	80.65	422.58	549.07	1,354.32	1,296.67	57.65	23.494	
8,400.00	7,610.00	8,138.23	7,390.00	30.54	29.29	80.62	522.52	547.87	1,351.07	1,292.28	58.79	22.981	
8,500.00	7,610.00	8,238.17	7,390.00	31.21	29.96	80.60	622.46	546.68	1,347.83	1,287.75	60.08	22.435	
8,600.00	7,610.00	8,338.12	7,390.00	31.93	30.71	80.58	722.40	545.48	1,344.58	1,283.09	61.49	21.865	
8,700.00	7,610.00	8,438.07	7,390.00	32.71	31.52	80.55	822.34	544.29	1,341.34	1,278.30	63.04	21.279	
8,800.00	7,610.00	8,538.01	7,390.00	33.54	32.39	80.53	922.27	543.09	1,338.09	1,273.40	64.69	20.685	

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 4F-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 4F-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 #3	<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		
8,900.00	7,610.00	8,637.96	7,390.00	34.42	33.31	80.51	1,022.21	541.90	1,334.85	1,268.40	66.45	20.088		
9,000.00	7,610.00	8,737.90	7,390.00	35.34	34.28	80.49	1,122.15	540.70	1,331.60	1,263.29	68.31	19.494		
9,100.00	7,610.00	8,837.85	7,390.00	36.31	35.30	80.46	1,222.09	539.51	1,328.36	1,258.10	70.26	18.907		
9,200.00	7,610.00	8,937.79	7,390.00	37.31	36.36	80.44	1,322.03	538.31	1,325.11	1,252.83	72.29	18.331		
9,300.00	7,610.00	9,037.74	7,390.00	38.35	37.45	80.41	1,421.97	537.12	1,321.87	1,247.48	74.39	17.769		
9,400.00	7,610.00	9,137.69	7,390.00	39.42	38.58	80.39	1,521.91	535.92	1,318.63	1,242.06	76.57	17.222		
9,500.00	7,610.00	9,237.63	7,390.00	40.53	39.74	80.37	1,621.85	534.73	1,315.38	1,236.58	78.81	16.691		
9,600.00	7,610.00	9,337.58	7,390.00	41.66	40.93	80.34	1,721.78	533.53	1,312.14	1,231.04	81.10	16.179		
9,700.00	7,610.00	9,437.52	7,390.00	42.82	42.15	80.32	1,821.72	532.34	1,308.90	1,225.44	83.45	15.684		
9,800.00	7,610.00	9,537.47	7,390.00	44.00	43.39	80.29	1,921.66	531.14	1,305.65	1,219.80	85.85	15.208		
9,900.00	7,610.00	9,637.42	7,390.00	45.21	44.65	80.27	2,021.60	529.95	1,302.41	1,214.12	88.30	14.751		
10,000.00	7,610.00	9,737.36	7,390.00	46.44	45.94	80.25	2,121.54	528.75	1,299.17	1,208.39	90.78	14.311		
10,100.00	7,610.00	9,837.31	7,390.00	47.69	47.24	80.22	2,221.48	527.56	1,295.93	1,202.62	93.30	13.889		
10,200.00	7,610.00	9,937.25	7,390.00	48.95	48.56	80.20	2,321.42	526.36	1,292.69	1,196.82	95.86	13.485		
10,300.00	7,610.00	10,037.20	7,390.00	50.23	49.89	80.17	2,421.36	525.17	1,289.44	1,190.99	98.45	13.097		
10,400.00	7,610.00	10,137.14	7,390.00	51.53	51.24	80.15	2,521.29	523.97	1,286.20	1,185.13	101.07	12.726		
10,500.00	7,610.00	10,237.09	7,390.00	52.84	52.60	80.12	2,621.23	522.78	1,282.96	1,179.24	103.72	12.370		
10,600.00	7,610.00	10,337.04	7,390.00	54.17	53.98	80.10	2,721.17	521.58	1,279.72	1,173.33	106.39	12.028		
10,700.00	7,610.00	10,436.98	7,390.00	55.51	55.37	80.07	2,821.11	520.39	1,276.48	1,167.39	109.09	11.701		
10,800.00	7,610.00	10,536.93	7,390.00	56.86	56.76	80.04	2,921.05	519.19	1,273.24	1,161.44	111.80	11.388		
10,900.00	7,610.00	10,636.87	7,390.00	58.22	58.17	80.02	3,020.99	518.00	1,270.00	1,155.46	114.54	11.088		
11,000.00	7,610.00	10,736.82	7,390.00	59.59	59.59	79.99	3,120.93	516.80	1,266.76	1,149.46	117.30	10.799		
11,100.00	7,610.00	10,836.77	7,390.00	60.97	61.01	79.97	3,220.87	515.61	1,263.52	1,143.45	120.07	10.523		
11,200.00	7,610.00	10,936.71	7,390.00	62.35	62.44	79.94	3,320.80	514.41	1,260.28	1,137.42	122.86	10.258		
11,300.00	7,610.00	11,036.66	7,390.00	63.75	63.89	79.92	3,420.74	513.22	1,257.04	1,131.38	125.67	10.003		
11,400.00	7,610.00	11,136.60	7,390.00	65.15	65.33	79.89	3,520.68	512.02	1,253.80	1,125.32	128.48	9.758		
11,500.00	7,610.00	11,236.55	7,390.00	66.57	66.79	79.86	3,620.62	510.83	1,250.57	1,119.25	131.32	9.523		
11,600.00	7,610.00	11,336.50	7,390.00	67.98	68.25	79.84	3,720.56	509.63	1,247.33	1,113.17	134.16	9.297		
11,700.00	7,610.00	11,436.44	7,390.00	69.41	69.71	79.81	3,820.50	508.44	1,244.09	1,107.08	137.01	9.080		
11,800.00	7,610.00	11,536.39	7,390.00	70.84	71.18	79.78	3,920.44	507.24	1,240.85	1,100.97	139.88	8.871		
11,900.00	7,610.00	11,636.33	7,390.00	72.27	72.66	79.76	4,020.38	506.05	1,237.62	1,094.86	142.75	8.670		
12,000.00	7,610.00	11,736.28	7,390.00	73.72	74.14	79.73	4,120.31	504.85	1,234.38	1,088.74	145.64	8.476		
12,100.00	7,610.00	11,836.22	7,390.00	75.16	75.63	79.70	4,220.25	503.66	1,231.14	1,082.61	148.53	8.289		
12,200.00	7,610.00	11,936.17	7,390.00	76.61	77.12	79.67	4,320.19	502.46	1,227.91	1,076.47	151.44	8.108		
12,300.00	7,610.00	12,036.12	7,390.00	78.07	78.61	79.65	4,420.13	501.27	1,224.67	1,070.32	154.35	7.935		
12,400.00	7,610.00	12,136.06	7,390.00	79.53	80.11	79.62	4,520.07	500.07	1,221.43	1,064.17	157.26	7.767		
12,500.00	7,610.00	12,236.01	7,390.00	80.99	81.61	79.59	4,620.01	498.87	1,218.20	1,058.01	160.19	7.605		
12,600.00	7,610.00	12,335.95	7,390.00	82.46	83.11	79.56	4,719.95	497.68	1,214.96	1,051.85	163.12	7.448		
12,700.00	7,610.00	12,435.90	7,390.00	83.93	84.62	79.53	4,819.89	496.48	1,211.73	1,045.67	166.05	7.297		
12,800.00	7,610.00	12,535.85	7,390.00	85.41	86.13	79.51	4,919.82	495.29	1,208.49	1,039.50	168.99	7.151		
12,900.00	7,610.00	12,635.79	7,390.00	86.88	87.64	79.48	5,019.76	494.09	1,205.26	1,033.32	171.94	7.010		
13,000.00	7,610.00	12,735.74	7,390.00	88.37	89.16	79.45	5,119.70	492.90	1,202.02	1,027.13	174.89	6.873		
13,100.00	7,610.00	12,835.68	7,390.00	89.85	90.68	79.42	5,219.64	491.70	1,198.79	1,020.94	177.85	6.740		
13,200.00	7,610.00	12,935.63	7,390.00	91.34	92.20	79.39	5,319.58	490.51	1,195.56	1,014.74	180.81	6.612		
13,300.00	7,610.00	13,035.58	7,390.00	92.83	93.72	79.36	5,419.52	489.31	1,192.32	1,008.54	183.78	6.488		
13,400.00	7,610.00	13,135.52	7,390.00	94.32	95.25	79.33	5,519.46	488.12	1,189.09	1,002.34	186.75	6.367		
13,500.00	7,610.00	13,235.47	7,390.00	95.81	96.78	79.30	5,619.40	486.92	1,185.86	996.13	189.72	6.250		
13,600.00	7,610.00	13,335.41	7,390.00	97.31	98.31	79.27	5,719.33	485.73	1,182.63	989.92	192.70	6.137		
13,700.00	7,610.00	13,435.36	7,390.00	98.81	99.84	79.24	5,819.27	484.53	1,179.39	983.71	195.68	6.027		
13,800.00	7,610.00	13,535.30	7,390.00	100.31	101.37	79.21	5,919.21	483.34	1,176.16	977.50	198.67	5.920		
13,894.63	7,610.00	13,629.88	7,390.00	101.73	102.83	79.19	6,013.78	482.21	1,173.10	971.61	201.49	5.822		
13,900.00	7,610.00	13,635.25	7,390.00	101.81	102.91	79.19	6,019.15	482.14	1,172.94	971.29	201.65	5.817		

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 4F-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 4F-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 #3	<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		
13,931.45	7,610.00	13,666.70	7,390.00	102.29	103.39	79.19	6,050.60	481.77	1,172.51	969.90	202.61	5.787		
14,000.00	7,610.00	13,735.20	7,390.00	103.35	104.45	79.18	6,119.10	480.95	1,174.57	969.87	204.70	5.738		
14,100.00	7,610.00	13,834.61	7,390.00	104.93	105.98	79.18	6,218.50	479.76	1,184.95	977.13	207.82	5.702 SF		
14,200.00	7,610.00	13,932.68	7,390.00	106.56	107.49	79.17	6,316.56	478.59	1,204.01	993.02	211.00	5.706		
14,300.00	7,610.00	14,028.62	7,390.00	108.20	108.97	79.14	6,412.50	477.44	1,231.62	1,017.42	214.19	5.750		
14,385.81	7,610.00	14,108.69	7,390.00	109.62	110.20	79.09	6,492.55	476.48	1,261.96	1,045.03	216.93	5.817		
14,400.00	7,610.00	14,121.72	7,390.00	109.86	110.40	79.14	6,505.58	476.33	1,267.48	1,050.10	217.38	5.831		
14,500.00	7,610.00	14,213.59	7,390.00	111.52	111.82	79.47	6,597.45	475.23	1,306.38	1,085.83	220.55	5.923		
14,600.00	7,610.00	14,305.47	7,390.00	113.20	113.24	79.77	6,689.32	474.13	1,345.32	1,121.59	223.73	6.013		
14,700.00	7,610.00	14,397.34	7,390.00	114.90	114.67	80.06	6,781.19	473.03	1,384.29	1,157.38	226.91	6.101		
14,800.00	7,610.00	14,489.22	7,390.00	116.61	116.09	80.34	6,873.06	471.93	1,423.28	1,193.20	230.09	6.186		
14,886.04	7,610.00	14,557.57	7,390.00	118.09	117.15	80.53	6,941.41	471.11	1,456.90	1,224.28	232.62	6.263		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SULLIVAN 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 6-8-26 - CPR - SURVEYS													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		
1,300.00	1,292.28	1,635.45	1,597.77	4.75	6.28	34.18	-143.74	-1,540.41	1,486.02	1,477.52	8.50	174.882		
1,400.00	1,391.33	1,707.23	1,667.32	5.17	6.62	34.06	-151.60	-1,524.51	1,453.17	1,444.11	9.07	160.292		
1,500.00	1,490.38	1,794.66	1,752.06	5.58	7.04	33.83	-163.10	-1,506.30	1,421.65	1,411.94	9.71	146.379		
1,600.00	1,589.43	1,917.58	1,870.38	5.99	7.68	33.36	-181.88	-1,478.85	1,388.69	1,378.20	10.48	132.463		
1,700.00	1,688.48	2,013.35	1,962.47	6.40	8.17	33.00	-196.06	-1,456.69	1,355.07	1,343.91	11.17	121.344		
1,800.00	1,787.53	2,118.00	2,063.34	6.82	8.69	32.69	-209.09	-1,432.11	1,321.09	1,309.27	11.83	111.699		
1,900.00	1,886.58	2,206.00	2,148.15	7.23	9.15	32.42	-219.92	-1,411.29	1,286.96	1,274.47	12.50	102.988		
2,000.00	1,985.62	2,308.39	2,246.63	7.65	9.68	32.04	-233.75	-1,386.88	1,252.75	1,239.56	13.19	94.977		
2,100.00	2,084.67	2,395.65	2,330.67	8.06	10.12	31.73	-244.70	-1,366.13	1,218.59	1,204.74	13.85	87.999		
2,200.00	2,183.72	2,491.79	2,423.51	8.47	10.59	31.45	-255.21	-1,343.48	1,184.58	1,170.08	14.50	81.714		
2,300.00	2,282.77	2,585.80	2,514.27	8.89	11.06	31.18	-265.27	-1,321.15	1,150.39	1,135.24	15.15	75.931		
2,400.00	2,381.82	2,670.63	2,596.26	9.30	11.47	30.92	-274.36	-1,301.33	1,116.61	1,100.80	15.81	70.615		
2,500.00	2,480.87	2,758.31	2,680.92	9.72	11.91	30.53	-285.75	-1,281.61	1,083.84	1,067.32	16.52	65.599		
2,600.00	2,579.92	2,859.91	2,778.77	10.13	12.43	29.98	-299.92	-1,258.20	1,050.69	1,033.43	17.26	60.882		
2,700.00	2,678.96	2,952.70	2,868.20	10.55	12.90	29.49	-312.18	-1,236.72	1,017.45	999.46	17.98	56.572		
2,800.00	2,778.01	3,044.17	2,956.41	10.96	13.36	28.98	-324.19	-1,215.73	984.47	965.77	18.71	52.627		
2,900.00	2,877.06	3,144.55	3,053.41	11.38	13.86	28.47	-336.13	-1,192.80	951.55	932.11	19.43	48.969		
3,000.00	2,976.11	3,240.41	3,145.83	11.79	14.34	27.91	-347.85	-1,170.21	918.03	897.87	20.15	45.555		
3,100.00	3,075.16	3,322.89	3,225.52	12.21	14.74	27.43	-357.44	-1,151.26	885.09	864.19	20.91	42.335		
3,200.00	3,174.21	3,432.44	3,331.39	12.62	15.28	26.75	-370.27	-1,126.25	852.41	830.80	21.61	39.440		
3,300.00	3,273.26	3,540.77	3,435.87	13.04	15.84	26.15	-380.66	-1,099.54	817.73	795.44	22.30	36.677		
3,400.00	3,372.30	3,640.61	3,531.73	13.45	16.37	25.48	-390.83	-1,073.56	781.91	758.89	23.02	33.968		
3,500.00	3,471.35	3,721.39	3,609.27	13.87	16.78	24.90	-398.87	-1,052.44	746.10	722.29	23.81	31.330		
3,600.00	3,570.40	3,789.12	3,674.71	14.28	17.11	24.32	-406.74	-1,036.82	713.48	688.79	24.69	28.903		
3,700.00	3,669.45	3,871.34	3,754.32	14.70	17.49	23.45	-417.95	-1,019.60	683.41	657.83	25.57	26.724		
3,800.00	3,768.50	3,951.99	3,832.85	15.11	17.82	22.64	-428.25	-1,004.43	655.39	628.96	26.42	24.804		
3,900.00	3,867.55	4,038.99	3,918.26	15.53	18.12	21.99	-436.68	-990.24	629.23	602.04	27.18	23.147		
4,000.00	3,966.59	4,125.99	4,004.12	15.95	18.39	21.50	-443.32	-977.84	604.63	576.73	27.90	21.668		
4,100.00	4,065.64	4,212.99	4,090.27	16.36	18.63	21.12	-449.02	-967.17	581.69	553.10	28.59	20.347		
4,200.00	4,164.69	4,300.99	4,177.67	16.78	18.84	20.82	-454.10	-958.25	560.60	531.36	29.24	19.171		
4,300.00	4,263.74	4,387.99	4,264.28	17.19	19.01	20.61	-458.74	-951.52	541.64	511.77	29.87	18.134		
4,400.00	4,362.79	4,482.55	4,358.53	17.61	19.19	20.45	-463.29	-945.48	523.89	493.43	30.45	17.202		
4,500.00	4,461.84	4,575.68	4,451.46	18.02	19.34	20.44	-466.65	-940.38	506.70	475.71	31.00	16.348		
4,600.00	4,560.89	4,669.45	4,545.14	18.44	19.46	20.64	-468.60	-936.67	490.56	459.08	31.48	15.583		
4,700.00	4,659.93	4,766.01	4,641.65	18.85	19.58	20.96	-469.88	-933.75	475.13	443.20	31.93	14.881		
4,800.00	4,758.98	4,864.37	4,739.97	19.27	19.69	21.40	-470.65	-931.22	460.01	427.66	32.35	14.220		
4,900.00	4,858.03	4,964.96	4,840.52	19.69	19.80	21.98	-470.60	-928.69	444.77	412.04	32.73	13.590		
5,000.00	4,957.08	5,066.34	4,941.86	20.10	19.91	22.68	-469.91	-925.69	429.01	395.93	33.08	12.968		
5,100.00	5,056.13	5,158.62	5,034.10	20.52	19.99	23.41	-469.05	-923.22	413.55	380.08	33.47	12.357		
5,200.00	5,155.18	5,249.24	5,124.72	20.93	20.05	24.16	-468.65	-922.55	400.13	366.28	33.85	11.821		
5,300.00	5,254.23	5,347.74	5,223.21	21.35	20.12	25.04	-468.35	-923.02	388.00	353.82	34.19	11.349		
5,400.00	5,353.27	5,447.21	5,322.68	21.76	20.19	26.06	-467.59	-923.46	375.87	341.36	34.51	10.892		
5,500.00	5,452.32	5,546.09	5,421.56	22.18	20.25	27.18	-466.53	-923.92	363.83	329.01	34.82	10.449		
5,600.00	5,551.37	5,646.46	5,521.92	22.60	20.34	28.12	-465.34	-924.37	351.90	316.78	35.12	10.019		
5,700.00	5,650.42	5,749.49	5,624.94	23.01	20.45	29.63	-464.91	-923.77	339.22	303.77	35.45	9.569		
5,800.00	5,749.47	5,846.76	5,722.20	23.43	20.53	30.75	-465.08	-922.51	326.04	290.24	35.79	9.109		
5,900.00	5,848.52	5,941.20	5,816.64	23.84	20.59	32.09	-464.43	-922.56	314.25	278.15	36.11	8.703		
6,000.00	5,947.57	6,037.93	5,913.36	24.26	20.64	33.71	-463.00	-923.77	303.84	267.46	36.39	8.351		
6,100.00	6,046.61	6,135.23	6,010.62	24.67	20.68	35.53	-461.21	-925.60	294.32	257.67	36.65	8.031		
6,200.00	6,145.66	6,233.81	6,109.14	25.09	20.72	37.55	-459.03	-927.83	285.51	248.61	36.90	7.737		
6,300.00	6,244.71	6,332.35	6,207.63	25.50	20.76	39.78	-456.47	-930.22	277.28	240.12	37.16	7.462		
6,400.00	6,343.76	6,430.98	6,306.18	25.92	20.80	42.15	-453.82	-932.78	269.67	232.23	37.44	7.203		

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 6-8-26 - CPR - SURVEYS												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	
6,500.00	6,442.81	6,530.13	6,405.26	26.34	20.85	44.67	-451.15	-935.46	262.67	224.93	37.74	6.960	
6,600.00	6,541.86	6,629.79	6,504.86	26.75	20.89	47.36	-448.38	-937.95	256.02	217.94	38.08	6.723	
6,700.00	6,640.91	6,729.57	6,604.57	27.17	20.95	50.22	-445.53	-940.15	249.71	211.24	38.47	6.492	
6,800.00	6,739.95	6,829.36	6,704.30	27.58	21.01	53.24	-442.68	-942.02	243.73	204.82	38.91	6.264	
6,900.51	6,839.51	6,930.17	6,805.06	28.00	21.08	56.45	-439.90	-943.47	237.99	198.56	39.43	6.035	
6,950.00	6,888.63	6,979.93	6,854.81	28.20	21.12	27.80	-438.61	-943.98	234.62	194.91	39.71	5.909	
7,000.00	6,938.30	7,030.07	6,904.92	28.38	21.16	-5.81	-437.35	-944.38	229.91	189.95	39.96	5.753	
7,050.00	6,987.78	7,079.77	6,954.61	28.54	21.20	-28.25	-436.12	-944.74	223.94	183.74	40.19	5.571	
7,100.00	7,036.82	7,129.12	7,003.94	28.68	21.24	-41.74	-434.93	-945.09	216.79	176.39	40.40	5.366	
7,150.00	7,085.18	7,177.86	7,052.67	28.81	21.27	-51.35	-433.77	-945.43	208.74	168.13	40.61	5.140	
7,200.00	7,132.63	7,225.76	7,100.55	28.92	21.31	-59.58	-432.66	-945.74	200.23	159.36	40.86	4.900	
7,250.00	7,178.95	7,272.56	7,147.34	29.02	21.35	-67.57	-431.63	-946.05	191.96	150.74	41.22	4.657	
7,300.00	7,223.89	7,318.02	7,192.79	29.11	21.39	-75.77	-430.66	-946.34	184.94	143.17	41.76	4.428	
7,350.00	7,267.25	7,362.00	7,236.76	29.19	21.43	-84.23	-429.77	-946.61	180.41	137.84	42.56	4.238	
7,382.83	7,294.75	7,390.18	7,264.94	29.23	21.46	-89.88	-429.25	-946.74	179.45	136.20	43.24	4.150 CC	
7,400.00	7,308.81	7,404.56	7,279.31	29.25	21.48	-92.81	-429.02	-946.78	179.74	136.10	43.64	4.119 ES	
7,450.00	7,348.36	7,444.91	7,319.66	29.30	21.52	-101.02	-428.45	-946.82	184.27	139.37	44.90	4.104 SF	
7,500.00	7,385.73	7,482.85	7,357.60	29.33	21.56	-108.45	-428.05	-946.74	194.98	148.79	46.18	4.222	
7,550.00	7,420.72	7,518.19	7,392.94	29.36	21.60	-114.82	-427.79	-946.56	212.14	164.81	47.33	4.482	
7,600.00	7,453.16	7,550.73	7,425.48	29.38	21.64	-119.99	-427.64	-946.33	235.44	187.18	48.26	4.879	
7,650.00	7,482.91	7,580.45	7,455.20	29.38	21.68	-123.96	-427.54	-946.09	264.15	215.20	48.94	5.397	
7,700.00	7,509.80	7,607.26	7,482.00	29.38	21.71	-126.76	-427.48	-945.86	297.43	248.00	49.43	6.017	
7,750.00	7,533.71	7,631.03	7,505.77	29.36	21.74	-128.40	-427.44	-945.65	334.49	284.73	49.76	6.722	
7,800.00	7,554.53	7,651.66	7,526.40	29.35	21.76	-128.86	-427.43	-945.46	374.64	324.65	49.98	7.496	
7,850.00	7,572.14	7,669.06	7,543.80	29.32	21.78	-127.99	-427.44	-945.30	417.29	367.16	50.13	8.324	
7,900.00	7,586.48	7,683.16	7,557.90	29.29	21.80	-125.50	-427.45	-945.16	461.94	411.72	50.23	9.197	
7,950.00	7,597.46	7,693.91	7,568.65	29.26	21.81	-120.86	-427.46	-945.05	508.16	457.87	50.29	10.105	
8,000.00	7,605.04	7,701.29	7,576.02	29.22	21.82	-113.18	-427.48	-944.98	555.55	505.22	50.33	11.039	
8,050.00	7,609.17	7,705.26	7,580.00	29.19	21.83	-101.28	-427.48	-944.94	603.76	553.41	50.35	11.992	
8,084.63	7,610.00	7,706.05	7,580.79	29.18	21.83	-90.16	-427.48	-944.93	637.46	587.10	50.36	12.659	
8,100.00	7,610.00	7,706.02	7,580.76	29.18	21.83	-90.15	-427.48	-944.93	652.46	602.10	50.36	12.956	
8,200.00	7,610.00	7,705.85	7,580.59	29.43	21.83	-90.08	-427.48	-944.93	750.43	700.07	50.37	14.900	
8,300.00	7,610.00	7,705.68	7,580.42	29.94	21.83	-90.01	-427.48	-944.93	848.88	798.51	50.37	16.854	
8,400.00	7,610.00	7,705.50	7,580.24	30.54	21.83	-89.94	-427.48	-944.93	947.64	897.28	50.36	18.816	
8,500.00	7,610.00	7,705.33	7,580.06	31.21	21.83	-89.87	-427.48	-944.94	1,046.65	996.29	50.36	20.784	
8,600.00	7,610.00	7,705.15	7,579.89	31.93	21.83	-89.79	-427.48	-944.94	1,145.82	1,095.47	50.36	22.754	
8,700.00	7,610.00	7,704.98	7,579.72	32.71	21.83	-89.73	-427.48	-944.94	1,245.13	1,194.78	50.36	24.727	
8,800.00	7,610.00	7,704.98	7,579.72	33.54	21.83	-89.73	-427.48	-944.94	1,344.54	1,294.19	50.36	26.701	
8,900.00	7,610.00	7,704.98	7,579.72	34.42	21.83	-89.73	-427.48	-944.94	1,444.03	1,393.68	50.36	28.676	

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 4F-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 4F-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 #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T2N-R68W - Sullivan 8-6-26 - CPR WELL - SURVEYS												Offset Site Error:	0.00 usft
Survey Program: 966-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
7,900.00	7,586.48	7,667.32	7,578.79	29.29	41.38	81.05	781.84	469.62	1,480.46	1,411.21	69.24	21.381	
7,950.00	7,597.46	7,677.61	7,589.08	29.26	41.41	83.60	781.76	469.72	1,455.81	1,386.43	69.39	20.981	
8,000.00	7,605.04	7,684.62	7,596.08	29.22	41.43	85.99	781.72	469.79	1,431.74	1,362.23	69.51	20.597	
8,050.00	7,609.17	7,688.30	7,599.76	29.19	41.44	88.20	781.69	469.83	1,408.45	1,338.82	69.62	20.230	
8,084.63	7,610.00	7,688.88	7,600.35	29.18	41.44	89.60	781.69	469.84	1,392.87	1,323.18	69.69	19.988	
8,100.00	7,610.00	7,688.78	7,600.25	29.18	41.44	89.60	781.69	469.84	1,386.13	1,316.41	69.71	19.884	
8,200.00	7,610.00	7,688.14	7,599.61	29.43	41.44	89.57	781.69	469.83	1,345.76	1,275.90	69.87	19.262	
8,300.00	7,610.00	7,687.50	7,598.97	29.94	41.44	89.54	781.70	469.82	1,311.80	1,241.81	69.99	18.743	
8,400.00	7,610.00	7,686.86	7,598.32	30.54	41.44	89.51	781.70	469.82	1,284.74	1,214.67	70.07	18.336	
8,500.00	7,610.00	7,686.21	7,597.67	31.21	41.43	89.48	781.70	469.81	1,265.02	1,194.94	70.08	18.050	
8,600.00	7,610.00	7,685.56	7,597.02	31.93	41.43	89.45	781.71	469.80	1,253.00	1,182.97	70.03	17.893	
8,700.00	7,610.00	7,684.91	7,596.37	32.71	41.43	89.42	781.71	469.80	1,248.90	1,178.99	69.90	17.866 ES, SF	
8,701.35	7,610.00	7,684.90	7,596.36	32.72	41.43	89.42	781.71	469.80	1,248.89	1,178.99	69.90	17.867 CC	
8,800.00	7,610.00	7,684.25	7,595.72	33.54	41.43	89.39	781.72	469.79	1,252.78	1,183.08	69.70	17.973	
8,900.00	7,610.00	7,683.59	7,595.06	34.42	41.43	89.36	781.72	469.78	1,264.59	1,195.15	69.44	18.211	
9,000.00	7,610.00	7,682.93	7,594.40	35.34	41.42	89.33	781.73	469.78	1,284.10	1,214.97	69.13	18.575	
9,100.00	7,610.00	7,682.27	7,593.73	36.31	41.42	89.30	781.73	469.77	1,310.97	1,242.18	68.79	19.057	
9,200.00	7,610.00	7,681.60	7,593.06	37.31	41.42	89.27	781.74	469.76	1,344.76	1,276.31	68.44	19.647	
9,300.00	7,610.00	7,680.93	7,592.39	38.35	41.42	89.24	781.74	469.76	1,384.95	1,316.85	68.10	20.336	
9,400.00	7,610.00	7,680.26	7,591.72	39.42	41.42	89.21	781.75	469.75	1,431.02	1,363.24	67.78	21.113	
9,500.00	7,610.00	7,679.58	7,591.05	40.53	41.41	89.18	781.75	469.74	1,482.41	1,414.93	67.48	21.967	

# Cathedral Energy Services

## Anticollision Report

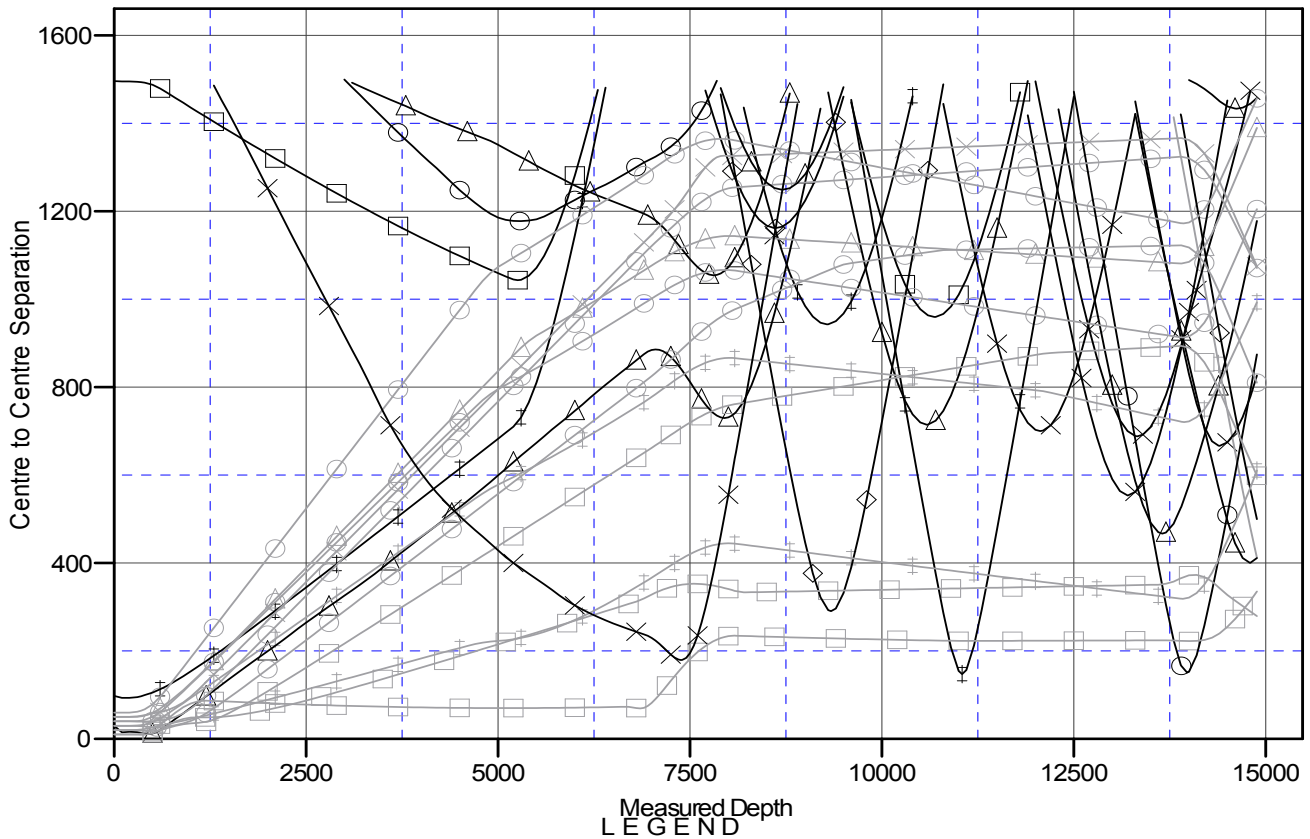
**Company:** Crestone Peak Resources  
**Project:** DJ BASIN  
**Reference Site:** S26-T2N-R68W  
**Site Error:** 0.00usft  
**Reference Well:** SULLIVAN 4F-26H-P268  
**Well Error:** 0.00usft  
**Reference Wellbore:** OH  
**Reference Design:** PLAN #3

**Local Co-ordinate Reference:** Well SULLIVAN 4F-26H-P268  
**TVD Reference:** 23' KB @ 4987.00usft  
**MD Reference:** 23' KB @ 4987.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** USA EDM 5000 Multi Users DB  
**Offset TVD Reference:** Offset Datum

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

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

### Ladder Plot



- |                                   |  |                                       |
|-----------------------------------|--|---------------------------------------|
| Wellbore #1, PLAN#1 V0            | ▲ Grant Brothers 33-23C, EXTRACTION, NO SURVEYS V0 | ○ SULLIVAN 4C-26H-P268, OH, PLAN#3 V0 |
| te 30-36, KMG WELL, SURVEYS V0    | ✕ Grant Brothers 34-23C, EXTRACTION, GYRO V0       | □ SULLIVAN 4D-26H-P268, OH, PLAN#2 V0 |
| 4-4-23, CPR WELL, SURVEYS V0      | ✕ Grant Brothers 44-23C, EXTRACTION, GYRO V0       | □ SULLIVAN 4E-26H-P268, OH, PLAN#3 V0 |
| os 23-2AE, EXTRACTION, SURVEYS V0 | ■ Johnson 1, KPK, NO SURVEYS V0                    | □ SULLIVAN 4G-26H-P268, OH, PLAN#2 V0 |
| os 23-43, EXTRACTION, SURVEYS V0  | ✕ Meredith 1, KPK WELL, NO SURVEYS V0              | ✕ SULLIVAN 4H-26H-P268, OH, PLAN#2 V0 |
| os 23-4AE, EXTRACTION, SURVEYS V0 | ◆ Sullivan 1, CPR, NO SURVEYS V0                   | ✕ SULLIVAN 4I-26H-P268, OH, PLAN#2 V0 |
| os 23-54, EXTRACTION, SURVEYS V0  | ✕ Sullivan 33-26, CPR WELL, SURVEYS V0             | ○ SULLIVAN 4J-26H-P268, OH, PLAN#2 V0 |
| os 31-26, CPR WELL, GYRO V0       | ▲ Sullivan 34-26, CPR WELL, SURVEYS V0             | ▲ SULLIVAN 4K-26H-P268, OH, PLAN#2 V0 |
| os 32-26, CPR, GYRO V0            | ▲ Sullivan 44-26, CPR WELL, GYRO V0                | ○ SULLIVAN 4L-26H-P268, OH, PLAN#2 V0 |
| os 3-23, CPR WELL, SURVEYS V0     | ◆ Sullivan 4-6-26, CPR WELL, SURVEYS V0            | ✕ Sullivan 6-8-26, CPR, SURVEYS V0    |

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