

Crestone Peak Resources

DJ BASIN

S32-T2N-R68W

FILE 3T-32H-K268

OH

PLAN #2

Anticollision Report

20 July, 2017

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	Offset Datum

Reference	PLAN #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,707.12usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/20/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	13,629.77	PLAN #2 (OH)	MWD+HDGM	OWSG MWD + HDGM	

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Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
Anderson 22-32 - KPK WELL - NO SURVEYS	200.00	158.00	1,683.02	1,682.29	2,311.863	CC, ES
Anderson 22-32 - KPK WELL - NO SURVEYS	600.00	556.70	1,701.45	1,698.39	556.723	SF
Anderson 32-32 - CPR WELL - SURVEYS	9,458.65	7,557.95	863.56	800.85	13.771	CC
Anderson 32-32 - CPR WELL - SURVEYS	9,500.00	7,558.63	864.55	800.61	13.522	ES
Anderson 32-32 - CPR WELL - SURVEYS	9,700.00	7,561.96	896.64	827.92	13.048	SF
Anderson 41-32 - CPR - GYRO						Out of range
Anderson 4-2-32 - CPR WELL - SURVEYS	10,103.57	7,605.70	307.70	243.56	4.797	CC, ES
Anderson 4-2-32 - CPR WELL - SURVEYS	10,200.00	7,605.92	322.46	253.24	4.659	SF
Anderson 6-4-32 - CPR WELL - SURVEYS	8,857.70	7,595.14	1,456.52	1,391.66	22.456	CC
Anderson 6-4-32 - CPR WELL - SURVEYS	8,900.00	7,595.20	1,457.13	1,391.65	22.252	ES
Anderson 6-4-32 - CPR WELL - SURVEYS	9,200.00	7,595.63	1,496.20	1,426.97	21.611	SF
Anderson Trust 1 - KPK - NO SURVEYS						Out of range
Anderson Trust 1 A - CPR WELL - GYRO						Out of range
Anderson Trust 2-A - CPR WELL - NO SURVEYS						Out of range
Anderson Trust 32-2 - CPR WELL - GYRO	10,862.16	7,313.65	882.75	813.69	12.783	CC, ES
Anderson Trust 32-2 - CPR WELL - GYRO	11,000.00	7,314.63	893.44	822.52	12.598	SF
Anderson Trust 32-8 - CPR WELL - GYRO						Out of range
Anderson Trust C 1 - CPR WELL - SURVEYS						Out of range
Anderson Trust C Unit 2 - CPR WELL - GYRO	10,403.38	6,724.09	1,150.82	1,087.04	18.042	CC, ES
Anderson Trust C Unit 2 - CPR WELL - GYRO	10,500.00	6,725.14	1,154.87	1,090.10	17.830	SF
Brown 22-5 - CPR WELL - GYRO						Out of range
Brown 31-5 - CPR WELL - SURVEYS						Out of range
Brown 41-5 - CPR WELL - SURVEYS						Out of range
Brown 5-3 - CPR WELL - GYRO	6,728.88	6,746.33	1,506.13	1,474.06	46.958	CC, ES
Brown 5-3 - CPR WELL - GYRO	6,900.00	6,927.49	1,525.00	1,492.18	46.475	SF
Brown 5-5 - CPR WELL - GYRO						Out of range
Brown C Unit 1 - CPR WELL - GYRO						Out of range
Brown C Unit 2 - CPR WELL - GYRO						Out of range
Bryant 10-30 - KMG WELL - SURVEYS						Out of range
Bryant 16-30 - KMG WELL - SURVEYS						Out of range
Bryant 20-30 - KMG WELL - SURVEYS						Out of range
Bryant 23-30 - KMG WELL - SURVEYS						Out of range
Bryant 24-30 - KMG WELL - SURVEYS						Out of range
Bryant 33-29 - KMG WELL - SURVEYS						Out of range
Bryant 36-30 - KMG WELL - SURVEYS						Out of range
Bryant 8-30 - KMG WELL - SURVEYS						Out of range
Bryant Federal 37-30 - KMG WELL - SURVEYS						Out of range
Bulthaup 1-6 - KMG WELL - GYRO						Out of range
Bulthaup 16-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 17-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 24-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 27-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 39-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 40-6 - KMG WELL - SURVEYS						Out of range
Bulthaup 8-6 - KMG WELL - GYRO						Out of range
Bulthaup 9-6 - KMG WELL - SURVEYS						Out of range
Canino 1-X - HUGHES CW - NO SURVEYS						Out of range
Champlin 86 Amoco F 6 - KPK - NO SURVEYS						Out of range
Champlin 86 N 1 - KMG WELL - GYRO	12,176.77	7,257.56	1,665.21	1,576.24	18.717	CC
Champlin 86 N 1 - KMG WELL - GYRO	12,200.00	7,258.51	1,665.37	1,576.12	18.660	ES
Champlin 86 N 1 - KMG WELL - GYRO	12,400.00	7,266.60	1,680.08	1,589.06	18.457	SF
Champlin Amoco 86 F 7 - KPK WELL - SURVEYS						Out of range
Cinque 1 - FOUNDATION WELL - NO SURVEYS						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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
Cinque 2 - FOUNDATION WELL - NO SURVEYS						Out of range
Cinque 4 - FOUNDATION WELL - NO SURVEYS						Out of range
FILE 3A-32H-K268 - OH - PLAN #1	200.00	200.00	189.97	188.98	191.315	CC, ES
FILE 3A-32H-K268 - OH - PLAN #1	4,200.00	3,908.11	1,531.55	1,501.88	51.623	SF
FILE 3B-32H-K268 - OH - PLAN #1	200.00	200.00	179.90	178.90	181.172	CC, ES
FILE 3B-32H-K268 - OH - PLAN #1	5,300.00	5,017.57	1,680.61	1,642.65	44.270	SF
FILE 3C-32H-K268 - OH - PLAN #1	0.00	0.00	169.83			
FILE 3C-32H-K268 - OH - PLAN #1	200.00	198.70	170.26	169.54	236.451	ES
FILE 3C-32H-K268 - OH - PLAN #1	5,700.00	5,427.27	1,686.54	1,648.56	44.408	SF
FILE 3C-32H-K268 - OH - SURVEYS	0.00	0.00	169.83			
FILE 3C-32H-K268 - OH - SURVEYS	200.00	198.70	170.26	169.54	236.451	ES
FILE 3C-32H-K268 - OH - SURVEYS	900.00	851.00	268.54	263.76	56.218	SF
FILE 3D-32H-K268 - OH - PLAN #1	0.00	0.00	160.03			
FILE 3D-32H-K268 - OH - PLAN #1	8,700.00	7,150.00	1,652.88	1,595.61	28.860	SF
FILE 3D-32H-K268 - OH - SURVEYS	0.00	0.00	160.03			
FILE 3D-32H-K268 - OH - SURVEYS	900.00	868.00	247.70	243.03	53.004	SF
FILE 3E-32H-K268 - OH - PLAN #1	235.35	236.62	149.01	148.08	160.053	CC, ES
FILE 3E-32H-K268 - OH - PLAN #1	8,300.00	7,279.82	1,162.84	1,109.01	21.602	SF
FILE 3E-32H-K268 - OH - SURVEYS	235.35	236.62	149.01	148.08	160.053	CC, ES
FILE 3E-32H-K268 - OH - SURVEYS	900.00	867.00	230.12	225.40	48.720	SF
FILE 3F-32H-K268 - OH - PLAN #1	252.26	254.20	137.95	136.91	133.448	CC, ES
FILE 3F-32H-K268 - OH - PLAN #1	7,400.00	8,029.61	826.44	772.58	15.342	SF
FILE 3F-32H-K268 - OH - SURVEYS	252.26	254.20	137.95	136.91	133.448	CC, ES
FILE 3F-32H-K268 - OH - SURVEYS	900.00	851.00	246.35	241.67	52.558	SF
FILE 3G-32H-K268 - OH - PLAN #1	0.00	0.00	129.82			
FILE 3G-32H-K268 - OH - PLAN #1	8,130.96	7,495.21	555.63	501.44	10.253	SF
FILE 3G-32H-K268 - OH - SURVEYS	0.00	0.00	129.82			
FILE 3G-32H-K268 - OH - SURVEYS	900.00	873.00	223.70	218.92	46.722	SF
FILE 3H-32H-K268 - OH - PLAN #2	185.77	185.95	119.88	119.25	191.294	CC
FILE 3H-32H-K268 - OH - PLAN #2	7,727.03	7,521.12	131.59	78.77	2.492	ES, SF
FILE 3H-32H-K268 - OH - SURVEYS	185.77	185.95	119.88	119.25	191.294	CC
FILE 3H-32H-K268 - OH - SURVEYS	200.00	199.96	119.89	119.16	165.696	ES
FILE 3H-32H-K268 - OH - SURVEYS	900.00	873.00	192.54	187.84	40.995	SF
FILE 3Q-32H-K268 - OH - PLAN #2	0.00	0.00	29.94			
FILE 3Q-32H-K268 - OH - PLAN #2	200.00	199.83	30.48	29.79	43.619	ES
FILE 3Q-32H-K268 - OH - PLAN #2	13,000.00	13,051.04	549.98	367.05	3.007	SF
FILE 3Q-32H-K268 - OH - SURVEYS	0.00	0.00	29.94			
FILE 3Q-32H-K268 - OH - SURVEYS	200.00	199.83	30.48	29.79	43.619	ES
FILE 3Q-32H-K268 - OH - SURVEYS	600.00	600.83	45.05	42.13	15.423	SF
FILE 3R-32H-K268 - OH - PLAN #1	0.00	0.00	19.87			
FILE 3R-32H-K268 - OH - PLAN #1	800.00	802.15	22.28	17.97	5.173	ES
FILE 3R-32H-K268 - OH - PLAN #1	13,629.77	13,818.82	407.22	225.37	2.239	SF
FILE 3R-32H-K268 - OH - SURVEYS	0.00	0.00	19.87			
FILE 3R-32H-K268 - OH - SURVEYS	800.00	802.15	22.28	17.96	5.164	ES, SF
FILE 3S-32H-K268 - OH - PLAN #1	200.00	200.00	9.79	8.80	9.861	CC, ES
FILE 3S-32H-K268 - OH - PLAN #1	13,000.00	13,081.21	194.93	27.02	1.161	Level 2, SF
FILE FED 3I-32H-K268 - OH - PLAN #2	0.00	0.00	109.95			
FILE FED 3I-32H-K268 - OH - PLAN #2	5,600.00	5,300.57	1,683.92	1,643.29	41.442	SF
FILE FED 3I-32H-K268 - OH - SURVEYS	0.00	0.00	109.95			
FILE FED 3I-32H-K268 - OH - SURVEYS	900.00	871.00	197.90	193.13	41.472	SF
FILE FED 3J-32H-K268 - OH - PLAN #1	0.00	0.00	99.88			
FILE FED 3J-32H-K268 - OH - PLAN #1	200.00	199.75	100.13	99.43	142.951	ES
FILE FED 3J-32H-K268 - OH - PLAN #1	900.00	888.43	174.45	169.83	37.701	SF

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

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
FILE FED 3J-32H-K268 - OH - SURVEYS	0.00	0.00	99.88			
FILE FED 3J-32H-K268 - OH - SURVEYS	200.00	199.75	100.13	99.43	142.951	ES
FILE FED 3J-32H-K268 - OH - SURVEYS	800.00	789.95	157.58	153.43	37.995	SF
FILE FED 3K-32H-K268 - OH - PLAN #2	238.74	239.56	88.90	88.03	101.691	CC, ES
FILE FED 3K-32H-K268 - OH - PLAN #2	7,000.00	6,775.76	1,635.41	1,585.86	33.006	SF
FILE FED 3K-32H-K268 - OH - SURVEYS	238.74	239.56	88.90	88.03	101.691	CC, ES
FILE FED 3K-32H-K268 - OH - SURVEYS	900.00	873.00	159.13	154.47	34.154	SF
FILE FED 3L-32H-K268 - OH - PLAN #1	0.00	0.00	80.02			
FILE FED 3L-32H-K268 - OH - PLAN #1	200.00	199.74	80.34	79.64	114.996	ES
FILE FED 3L-32H-K268 - OH - PLAN #1	13,629.77	13,355.41	1,570.90	1,371.46	7.876	SF
FILE FED 3L-32H-K268 - OH - SURVEYS	0.00	0.00	80.02			
FILE FED 3L-32H-K268 - OH - SURVEYS	200.00	199.74	80.34	79.64	114.996	ES
FILE FED 3L-32H-K268 - OH - SURVEYS	900.00	873.00	140.83	136.19	30.347	SF
FILE FED 3M-32H-K268 - OH - PLAN #1	0.00	0.00	69.94			
FILE FED 3M-32H-K268 - OH - PLAN #1	13,629.77	13,819.29	1,466.47	1,265.95	7.314	SF
FILE FED 3M-32H-K268 - OH - SURVEYS	0.00	0.00	69.94			
FILE FED 3M-32H-K268 - OH - SURVEYS	900.00	865.00	137.44	132.58	28.274	SF
FILE FED 3N-32H-K268 - OH - PLAN #1	0.00	0.00	59.87			
FILE FED 3N-32H-K268 - OH - PLAN #1	200.00	199.91	60.13	59.42	84.890	ES
FILE FED 3N-32H-K268 - OH - PLAN #1	13,629.77	13,701.84	1,382.29	1,180.41	6.847	SF
FILE FED 3N-32H-K268 - OH - SURVEYS	0.00	0.00	59.87			
FILE FED 3N-32H-K268 - OH - SURVEYS	200.00	199.91	60.13	59.42	84.890	ES
FILE FED 3N-32H-K268 - OH - SURVEYS	900.00	873.00	110.88	106.08	23.117	SF
FILE FED 3O-32H-K268 - OH - PLAN #2	0.00	0.00	49.80			
FILE FED 3O-32H-K268 - OH - PLAN #2	13,100.00	13,014.14	936.27	751.90	5.078	SF
FILE FED 3O-32H-K268 - OH - SURVEYS	0.00	0.00	49.80			
FILE FED 3O-32H-K268 - OH - SURVEYS	700.00	697.86	84.53	81.03	24.180	SF
FILE FED 3P-32H-K268 - OH - PLAN #1	0.00	0.00	40.01			
FILE FED 3P-32H-K268 - OH - PLAN #1	200.00	199.92	40.19	39.50	57.797	ES
FILE FED 3P-32H-K268 - OH - PLAN #1	13,629.77	13,686.32	801.25	599.16	3.965	SF
FILE FED 3P-32H-K268 - OH - SURVEYS	0.00	0.00	40.01			
FILE FED 3P-32H-K268 - OH - SURVEYS	200.00	199.92	40.19	39.50	57.797	ES
FILE FED 3P-32H-K268 - OH - SURVEYS	800.00	802.68	59.95	55.66	13.968	SF
Foster 33-5 - CPR WELL - SURVEYS						Out of range
Foster 43-5 - CPR WELL - SURVEYS						Out of range
Foster 4-5 - CPR WELL - SURVEYS						Out of range
Foster 4-6-5 - CPR WELL - SURVEYS						Out of range
Foster 6-4-5 - CPR - SURVEYS						Out of range
Foster 6-4-5X - CPR WELL - SURVEYS						Out of range
Foster 6-8-5 - CPR WELL - SURVEYS						Out of range
Foster 8-8-5 - CPR WELL - SURVEYS						Out of range
Foster E Unit 1 - CPR - GYRO						Out of range
Gene 11-5 - KERR-MCGEE - GYRO						Out of range
Hankins 1 - KPK WELL - NO SURVEYS						Out of range
Hauck 17-29 - KMG WELL - SURVEYS						Out of range
Hauck 24-29 - KMG WELL - SURVEYS	13,629.77	7,390.22	1,631.26	1,517.63	14.357	CC, ES, SF
Hauck 7-29 - KMG WELL - SURVEYS	13,629.77	7,322.25	1,299.99	1,227.97	18.049	CC, ES, SF
HSR-Bryant 9-30A - KMG WELL - GYRO						Out of range
HSR-Williams 10-20 - KMG WELL - GYRO						Out of range
HWY52 4A-32H-O268 - OH - FINAL	7,200.00	7,189.08	289.11	240.90	5.997	ES, SF
HWY52 4A-32H-O268 - OH - FINAL	7,202.91	7,190.00	289.09	240.91	6.000	CC
HWY52 4B-32H-O268 - OH - FINAL	7,300.00	7,240.51	614.94	566.19	12.615	SF
HWY52 4B-32H-O268 - OH - FINAL	7,312.84	7,247.01	614.81	566.09	12.620	CC, ES

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

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
HWY52 4C-32H-O268 - OH - FINAL	7,200.00	7,147.52	731.68	683.42	15.161	SF
HWY52 4C-32H-O268 - OH - FINAL	7,218.79	7,153.63	731.44	683.21	15.166	CC, ES
HWY52 4D-32H-O268 - OH - FINAL	7,264.14	7,094.81	1,201.48	1,152.39	24.471	CC, ES
HWY52 4D-32H-O268 - OH - FINAL	7,300.00	7,108.87	1,201.74	1,152.61	24.460	SF
HWY52 4E-32H-O268 - OH - FINAL	6,924.18	6,740.20	1,384.03	1,336.57	29.158	CC, ES
HWY52 4E-32H-O268 - OH - FINAL	7,100.00	6,831.12	1,388.65	1,340.85	29.050	SF
HWY52 4F-32H-O268 - OH - FINAL	4,739.42	4,570.95	1,612.03	1,581.27	52.404	CC
HWY52 4F-32H-O268 - OH - FINAL	4,900.00	4,900.00	1,612.63	1,579.95	49.343	ES
HWY52 4F-32H-O268 - OH - FINAL	7,400.00	7,036.04	1,680.97	1,631.76	34.162	SF
HWY52 4G-32H-O268 - OH - FINAL	3,706.48	3,511.01	1,698.03	1,675.27	74.609	CC
HWY52 4G-32H-O268 - OH - FINAL	4,100.00	3,915.87	1,699.44	1,673.55	65.649	ES
HWY52 4G-32H-O268 - OH - FINAL	4,300.00	4,028.93	1,704.47	1,677.39	62.940	SF
HWY52 4H-32H-O268 - OH - FINAL						Out of range
HWY52 4I-32H-O268 - OH - FINAL						Out of range
HWY52 4J-32H-O268 - OH - FINAL						Out of range
HWY52 4K-32H-O268 - OH - FINAL						Out of range
HWY52 4L-32H-O268 - OH - FINAL	7,863.41	8,974.53	449.17	396.91	8.595	CC
HWY52 4L-32H-O268 - OH - FINAL	10,944.43	12,060.00	469.97	349.41	3.898	ES, SF
HWY52 4M-32H-O268 - OH - FINAL	9,826.44	10,906.55	516.52	412.60	4.970	CC
HWY52 4M-32H-O268 - OH - FINAL	10,900.00	11,963.57	532.47	398.51	3.975	ES, SF
HWY52 4N-32H-O268 - OH - PLAN #5	8,298.34	9,487.43	759.33	687.65	10.594	CC
HWY52 4N-32H-O268 - OH - PLAN #5	10,900.00	12,050.00	777.41	638.82	5.609	ES, SF
HWY52 4N-32H-O268 - OH - SURVEYS	7,770.75	8,914.80	758.50	696.70	12.273	CC
HWY52 4N-32H-O268 - OH - SURVEYS	7,800.00	8,937.43	758.71	696.57	12.210	ES
HWY52 4N-32H-O268 - OH - SURVEYS	8,300.00	9,439.62	770.37	699.50	10.870	SF
HWY52 4O-32H-O268 - OH - PLAN #3	7,869.84	9,128.10	1,077.65	1,019.25	18.455	CC
HWY52 4O-32H-O268 - OH - PLAN #3	10,946.96	12,204.09	1,100.84	955.39	7.569	ES
HWY52 4O-32H-O268 - OH - PLAN #3	11,000.00	12,194.87	1,102.29	956.56	7.564	SF
HWY52 4O-32H-O268 - OH - SURVEYS						Out of range
HWY52 4P-32H-O268 - OH - PLAN #2	7,798.75	8,914.50	1,173.65	1,110.82	18.678	CC
HWY52 4P-32H-O268 - OH - PLAN #2	10,941.99	12,057.53	1,202.38	1,065.00	8.752	ES
HWY52 4P-32H-O268 - OH - PLAN #2	11,000.00	12,057.36	1,203.71	1,065.46	8.706	SF
HWY52 4Q-32H-O268 - OH - PLAN #2	7,628.08	8,617.09	1,522.06	1,461.72	25.222	CC
HWY52 4Q-32H-O268 - OH - PLAN #2	10,940.50	11,978.18	1,523.62	1,386.04	11.075	ES
HWY52 4Q-32H-O268 - OH - PLAN #2	11,100.00	11,978.18	1,531.94	1,392.03	10.949	SF
HWY52 4R-32H-O268 - OH - PLAN #2						Out of range
HWY52 4S-32H-O268 - OH - PLAN #4						Out of range
HWY52 4S-32H-O268 - OH - SURVEYS						Out of range
HWY52 4T-32H-O268 - OH - PLAN #3						Out of range
HWY52 4U-32H-O268 - OH - PLAN #5						Out of range
HWY52 4U-32H-O268 - OH - SURVEYS						Out of range
HWY52 4V-32H-O268 - OH - PLAN #2						Out of range
HWY52 4V-32H-O268 - OH - SURVEYS						Out of range
HWY52 4W-32H-O268 - OH - PLAN #3						Out of range
HWY52 4W-32H-O268 - OH - SURVEYS						Out of range
Jack Hein Unit 1 - HS RESOURCES WELL - NO SURVE						Out of range
John Lamar 1 - KPK WELL - NO SURVEYS						Out of range
Johnson 32-30 - KPK WELL - NO SURVEYS						Out of range
Johnson 7-30A - KMG WELL - GYRO						Out of range
Kenneth Koch 1 - KPK WELL - NO SURVEYS						Out of range
Kenyon 34-19 - CPR WELL - SURVEYS						Out of range
Kenyon 4-8-19 - CPR WELL - SURVEYS						Out of range
Kenyon 8-4-19 - CPR WELL - SURVEYS						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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
Kenyon 8-6-19 - CPR WELL - SURVEYS						Out of range
Kenyon 8-8-19 - CPR WELL - SURVEYS						Out of range
Koch 41-6 - KPK WELL - NO SURVEYS						Out of range
Koch Kenneth E A-1 - KMG WELL - SURVEY						Out of range
Milton H Nelson H-1 - KMG WELL - GYRO	12,129.22	7,341.26	880.06	792.37	10.036	CC, ES
Milton H Nelson H-1 - KMG WELL - GYRO	12,200.00	7,344.73	882.90	794.06	9.939	SF
Milton H Nelson I1 - KMG WELL - GYRO						Out of range
Milton H Nelson L1 - KMG WELL - GYRO						Out of range
Milton Nelson K1 - KMG WELL - GYRO						Out of range
Nelson 1 - TEXAS TEA - NO SURVEYS	5,540.66	5,455.40	1,323.05	1,290.21	40.292	CC, ES, SF
Nelson 1-A - TEXAS TEA WELL - NO SURVEYS						Out of range
Nelson 2 - TEXAS TEA WELL - NO SURVEYS	200.00	159.00	1,092.84	1,092.11	1,494.247	CC, ES
Nelson 2 - TEXAS TEA WELL - NO SURVEYS	5,100.00	4,876.00	1,665.83	1,635.65	55.200	SF
Nelson 3 - TEXAS TEA WELL - NO SURVEYS	5,122.61	5,050.00	562.04	529.72	17.392	CC, ES
Nelson 3 - TEXAS TEA WELL - NO SURVEYS	5,200.00	5,050.00	567.35	534.59	17.322	SF
Nelson 4 - TEXAS TEA WELL - NO SURVEYS	200.00	165.00	266.97	266.22	357.341	CC
Nelson 4 - TEXAS TEA WELL - NO SURVEYS	400.00	364.84	267.26	265.37	141.348	ES
Nelson 4 - TEXAS TEA WELL - NO SURVEYS	5,100.00	4,996.00	781.64	751.72	26.124	SF
Nelson 5 - TEXAS TEA WELL - NO SURVEYS	200.00	166.00	1,316.81	1,316.06	1,765.218	CC
Nelson 5 - TEXAS TEA WELL - NO SURVEYS	300.00	265.98	1,317.06	1,315.74	1,000.286	ES
Nelson 5 - TEXAS TEA WELL - NO SURVEYS	5,300.00	5,035.00	1,619.30	1,586.82	49.853	SF
Nelson D2 - KPK WELL - NO SURVEYS						Out of range
Nelson E Unit 1 - CPR WELL - GYRO	462.03	431.76	828.99	826.99	413.950	CC
Nelson E Unit 1 - CPR WELL - GYRO	500.00	468.45	829.03	826.84	378.504	ES
Nelson E Unit 1 - CPR WELL - GYRO	7,400.00	7,183.67	1,437.86	1,401.43	39.469	SF
Nelson E Unit 2 - CPR WELL - GYRO						Out of range
NOAA Federal 11-32 - CPR WELL - GYRO						Out of range
Osarkson 2-8-33 - CPR WELL - SURVEYS						Out of range
Oskarson 13-33 - CPR - GYRO						Out of range
Oskarson 23-33 - CPR WELL - GYRO						Out of range
Oskarson 4 - HRM - NO SURVEYS						Out of range
Oskarson 4-4-33 - CPR WELL - SURVEYS						Out of range
Oskarson 4-6-33 - CPR WELL - SURVEYS						Out of range
Oskarson 4-8-33 - CPR WELL - SURVEYS						Out of range
Oskarson E Unit 1 - CPR WELL - GYRO						Out of range
Paquette 13-5 - KMG WELL - GYRO						Out of range
Paquette 14-5 - KERR-MCGEE - GYRO						Out of range
Rasmussen 10-29 - KMG WELL - SURVEYS	13,491.75	7,543.75	885.03	754.80	6.796	CC
Rasmussen 10-29 - KMG WELL - SURVEYS	13,500.00	7,543.72	885.07	754.77	6.792	ES, SF
Rasmussen 14-29 - KMG WELL - GYRO	11,492.81	7,305.88	591.15	513.82	7.645	CC
Rasmussen 14-29 - KMG WELL - GYRO	11,500.00	7,305.48	591.19	513.75	7.634	ES, SF
Rasmussen 16-29 - KMG WELL - SURVEYS						Out of range
Rasmussen 19-29 - KMG WELL - SURVEYS	12,828.31	7,459.66	1,070.74	951.64	8.990	CC, ES
Rasmussen 19-29 - KMG WELL - SURVEYS	12,900.00	7,460.80	1,073.09	953.01	8.937	SF
Rasmussen 20-29 - KMG WELL - SURVEYS	12,742.22	7,436.17	1,582.39	1,467.05	13.719	CC
Rasmussen 20-29 - KMG WELL - SURVEYS	12,800.00	7,436.34	1,583.45	1,467.05	13.604	ES
Rasmussen 20-29 - KMG WELL - SURVEYS	13,000.00	7,436.93	1,599.47	1,480.29	13.421	SF
Rasmussen 22-29 - KMG WELL - SURVEYS	13,629.77	7,923.76	1,082.62	954.78	8.468	CC, ES, SF
Rasmussen 23-29 - KMG WELL - SURVEYS	12,844.03	7,457.94	136.44	18.11	1.153	Level 2, CC, ES, SF
Rasmussen 25-29 - KMG WELL - SURVEYS	13,629.77	7,770.07	546.52	484.79	8.853	CC, ES, SF
Rasmussen 36-29 - KMG WELL - SURVEYS	11,470.63	7,443.54	231.59	134.04	2.374	CC, ES
Rasmussen 36-29 - KMG WELL - SURVEYS	11,500.00	7,444.44	233.44	135.10	2.374	SF
Rasmussen 37-29 - KMG WELL - SURVEYS	11,462.91	7,378.68	1,688.02	1,590.60	17.327	CC

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

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
Rasmussen 37-29 - KMG WELL - SURVEYS	11,500.00	7,379.29	1,688.43	1,590.50	17.241	ES
Rasmussen 37-29 - KMG WELL - SURVEYS	11,700.00	7,382.60	1,704.58	1,604.37	17.010	SF
Rasmussen 39-29 - KMG WELL - SURVEYS						Out of range
Rasmussen Fed 35-29 - KMG WELL - SURVEYS	11,479.51	7,423.75	1,165.17	1,068.43	12.045	CC, ES
Rasmussen Fed 35-29 - KMG WELL - SURVEYS	11,600.00	7,422.64	1,171.38	1,073.84	12.009	SF
Ray Nelson 0-4-32 - CPR WELL - SURVEYS						Out of range
Ray Nelson 12-32 - CPR WELL - GYRO						Out of range
Ray Nelson 13-32 - CPR WELL - SURVEYS	1,490.78	1,507.12	1,027.55	1,014.62	79.450	CC
Ray Nelson 13-32 - CPR WELL - SURVEYS	1,500.00	1,512.95	1,027.56	1,014.55	78.953	ES
Ray Nelson 13-32 - CPR WELL - SURVEYS	4,500.00	4,500.00	1,579.88	1,535.45	35.557	SF
Ray Nelson 14-32 - CPR WELL - SURVEYS	219.66	206.00	1,045.95	1,044.66	808.672	CC
Ray Nelson 14-32 - CPR WELL - SURVEYS	300.00	277.70	1,046.17	1,044.29	555.255	ES
Ray Nelson 14-32 - CPR WELL - SURVEYS	4,600.00	4,392.00	1,694.31	1,656.77	45.133	SF
Ray Nelson 23-32 - CPR WELL - GYRO	1,149.32	1,023.47	363.10	357.99	71.059	CC
Ray Nelson 23-32 - CPR WELL - GYRO	1,200.00	1,073.66	363.18	357.82	67.663	ES
Ray Nelson 23-32 - CPR WELL - GYRO	8,100.00	7,240.37	465.27	429.09	12.858	SF
Ray Nelson 24-32 - CPR WELL - SURVEYS	6,610.86	6,617.02	773.06	706.44	11.605	CC, ES
Ray Nelson 24-32 - CPR WELL - SURVEYS	6,700.00	6,708.18	774.06	706.98	11.539	SF
Ray Nelson 2-4-32 - CPR WELL - SURVEYS	8,895.93	7,450.71	1,090.72	1,037.31	20.421	CC
Ray Nelson 2-4-32 - CPR WELL - SURVEYS	8,900.00	7,450.78	1,090.73	1,037.25	20.396	ES
Ray Nelson 2-4-32 - CPR WELL - SURVEYS	9,100.00	7,454.33	1,109.64	1,053.26	19.682	SF
Ray Nelson 33-32 - CPR WELL - SURVEYS	8,227.25	7,541.78	942.71	885.43	16.458	CC, ES, SF
Ray Nelson 34-32 - CPR WELL - SURVEYS	6,870.77	6,852.20	1,001.19	962.02	25.563	CC, ES
Ray Nelson 34-32 - CPR WELL - SURVEYS	7,000.00	6,984.12	1,007.17	967.57	25.430	SF
Ray Nelson 44-32 - CPR WELL - SURVEYS						Out of range
Ray Nelson 4-4-32 - CPR WELL - SURVEYS	8,690.26	7,391.15	91.67	20.18	1.282	Level 3, CC
Ray Nelson 4-4-32 - CPR WELL - SURVEYS	8,700.00	7,391.30	92.19	19.96	1.276	Level 3, ES, SF
Ray Nelson 4-6-32 - CPR WELL - SURVEYS	7,382.11	7,246.27	109.66	46.65	1.740	CC, ES, SF
Ray Nelson 8-8-32 - CPR WELL - SURVEYS						Out of range
Regnier Farms 32-19 - CPR WELL - GYRO						Out of range
Regnier Farms 33-19 - CPR WELL - GYRO						Out of range
Regnier Farms 42-19 - CPR WELL - GYRO						Out of range
Regnier Farms 43-19 - CPR WELL - SURVEYS						Out of range
Regnier Farms B 2 - CPR WELL - GYRO						Out of range
Regnier Farms B Unit 1 - CPR WELL - GYRO						Out of range
Sawdey Unit 2 - KMG WELL - GYRO						Out of range
Schriner 11-5 - KMG WELL - GYRO						Out of range
Schriner 12-5 - KMG WELL - GYRO						Out of range
SEC Four 12-4 - KMG WELL - SURVEYS						Out of range
SEC Four 13-4 - KMG WELL - SURVEYS						Out of range
SEC Four 14-4 - KMG WELL - SURVEYS						Out of range
SEC Four 21-4 - KMG WELL - SURVEYS						Out of range
SEC Four 22-4 - KMG WELL - SURVEYS						Out of range
SEC Four 31-4 - KMG WELL - SURVEYS						Out of range
SEC Four 32-4 - KMG WELL - SURVEYS						Out of range
SEC Four 33-4 - KMG WELL - SURVEYS						Out of range
SEC Four 3-4 - KMG WELL - SURVEYS						Out of range
SEC Four 35-4 - KMG WELL - SURVEYS						Out of range
SEC Four 4-4 - KMG WELL - SURVEYS						Out of range
SEC Four 5-4 - KMG WELL - SURVEYS						Out of range
SEC Four 6-4 - KMG WELL - SURVEYS						Out of range
Shaw 11-29A - KMG WELL - SURVEYS	13,468.84	7,329.82	467.51	353.80	4.111	CC, ES
Shaw 11-29A - KMG WELL - SURVEYS	13,500.00	7,329.95	468.55	354.51	4.109	SF

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

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	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)		
S32-T2N-R68W						
Shaw 12-29A - KMG - GYRO						Out of range
Shaw 15-20 - KPK - SURVEYS						Out of range
Shaw 16-20 - KPK - SURVEYS						Out of range
Tallgrass 1-8 - KMG - SURVEYS						Out of range
Tallgrass 2-8 - KMG - SURVEYS						Out of range
Tallgrass 3-8 - KMG - SURVEYS						Out of range
Tallgrass 4-8 - KMG - SURVEYS						Out of range
Tallgrass 5-8 - KMG - SURVEYS						Out of range
Tallgrass 6-8 - KMG WELL - SURVEYS						Out of range
Williams 10-20 - KMG WELL - SURVEYS						Out of range
Williams 11-20 - KMG WELL - SURVEYS						Out of range
Williams 13-20 - KMG WELL - SURVEYS						Out of range
Williams 14-20 - KMG WELL - SURVEYS						Out of range
Williams 16-20 - KMG WELL - SURVEYS						Out of range
Williams 18-29 - KMG WELL - SURVEYS						Out of range
Williams 23-20 - KMG WELL - SURVEYS						Out of range
Williams 24-20 - KMG WELL - SURVEYS						Out of range
Williams 24-20X - KMG WELL - SURVEYS						Out of range
Williams 25-20 - KMG WELL - SURVEYS						Out of range
Williams 35-20 - KMG WELL - SURVEYS						Out of range
Williams 36-20 - KMG WELL - SURVEYS						Out of range
Williams 39-20 - KMG WELL - SURVEYS						Out of range
Williams 4-29 - KMG WELL - SURVEYS						Out of range
Williams 7-20 - KMG WELL - SURVEYS						Out of range
Williams 8-20 - KMG WELL - SURVEYS						Out of range
Williams 9-20 - KMG WELL - SURVEYS						Out of range
Woolley 41-7 - CPR WELL - GYRO						Out of range
Woolley 42-7 KPK - KPK WELL - SURVEYS						Out of range

Cathedral Energy Services

Anticollision Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well FILE 3T-32H-K268
Project:	DJ BASIN	TVD Reference:	23' KB @ 4993.00usft
Reference Site:	S32-T2N-R68W	MD Reference:	23' KB @ 4993.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	FILE 3T-32H-K268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #2	Offset TVD Reference:	Offset Datum

Offset Design S32-T2N-R68W - Anderson 22-32 - KPK WELL - NO SURVEYS												Offset Site Error:	0.00 usft
Survey Program: 100-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
0.00	0.00	0.00	0.00	0.00	0.00	6.86	1,670.96	201.14	1,683.54				
100.00	100.00	58.00	58.00	0.14	0.06	6.86	1,670.96	201.14	1,683.02	1,682.82	0.20	8,557.329	
200.00	200.00	158.00	158.00	0.50	0.23	6.86	1,670.96	201.14	1,683.02	1,682.29	0.73	2,311.863 CC, ES	
300.00	299.98	257.98	257.98	0.84	0.46	-131.05	1,670.96	201.14	1,684.16	1,682.87	1.30	1,295.938	
400.00	399.84	357.84	357.84	1.20	0.68	-131.13	1,670.96	201.14	1,687.61	1,685.73	1.87	900.545	
500.00	499.45	457.45	457.45	1.56	0.90	-131.27	1,670.96	201.14	1,693.36	1,690.90	2.46	688.395	
600.00	598.70	556.70	556.70	1.94	1.13	-131.45	1,670.96	201.14	1,701.45	1,698.39	3.06	556.723 SF	